



Hong Kong Institute of  
**Certified Public Accountants**  
香港會計師公會

# Cost-Volume-Profit Analysis

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# CVP Analysis

- Assumptions
- Methods in finding the answer
  - Equation
  - Graph
  - Breakeven formula
  - Computer



## Major Costs

- Major costs in running a business in Hong Kong?
  - For a restaurant?
  - For an airline?



## Example – A Noodle Shop under planning

- Monthly Rent = \$150,000
- Food Cost = 30% of revenue
- Staff Cost = 30% of revenue
- Kitchen equipment = \$600,000
- Renovation = \$500,000
- Lease term = 2 years
- 30 seats, average occupancy 60%, each customer stays for 20 minutes, open 14 hours a day



**CONSOLIDATED INCOME STATEMENT  
FOR THE YEAR ENDED 31 MARCH 2014**

	<i>Note</i>	<b>2014</b> <i>HKS'000</i>	2013 <i>HKS'000</i> (Restated)
<b>Revenue</b>	6	<b>6,990,463</b>	6,394,089
Cost of sales	8	<b>(5,971,366)</b>	(5,485,896)
Gross profit		<b>1,019,097</b>	908,193
Other gains, net	7	<b>19,099</b>	61,319
Administrative expenses	8	<b>(358,683)</b>	(329,003)
<b>Operating profit</b>		<b>679,513</b>	640,509
Finance income	9	<b>12,989</b>	10,966
Share of profit/(loss) of associates		<b>213</b>	(4,243)
Share of loss of joint venture		<b>(3,958)</b>	(5,987)
<b>Profit before income tax</b>		<b>688,757</b>	641,245
Income tax expense	10	<b>(106,677)</b>	(100,282)
Profit for the year		<b>582,080</b>	540,963
Allocated as:			
Profit attributable to non-controlling interests		<b>884</b>	1,000
<b>Profit attributable to equity holders of the Company</b>		<b>581,196</b>	539,963



## 8 EXPENSES BY NATURE

Expenses included in cost of sales and administrative expenses are analysed as follows:

	<b>2014</b> <i>HK\$'000</i>	2013 <i>HK\$'000</i> (Restated)
Cost of raw materials and consumables used	<b>2,273,687</b>	2,090,196
Amortisation of leasehold land and land use rights	<b>3,017</b>	3,014
Amortisation of intangible assets	<b>8,730</b>	9,742
Depreciation of property, plant and equipment	<b>262,055</b>	243,837
Operating lease rentals in respect of rented premises (including contingent rentals of HK\$52,220,000 (2013: HK\$43,100,000))	<b>759,569</b>	709,485
Exchange gains, net	<b>(985)</b>	(4,191)
Employee benefit expense	<b>1,862,229</b>	1,693,371
Auditor's remuneration	<b>5,591</b>	5,109
Electricity, water and gas	<b>400,472</b>	375,042
Advertising and promotion expenses	<b>86,052</b>	82,231
Provision for impairment of trade receivables	<b>-</b>	55
Other expenses	<b>669,632</b>	607,008
	<b><u>6,330,049</u></b>	<u>5,814,899</u>



## More Examples

- Ferry
- Clinic
- Concert....



## Example – B777-300ER from HK to Seoul

- Round-trip air ticket for one passenger is HK\$3,800 (all inclusive) and the fuel cost is 50% of revenue, staff cost 14% of revenue, each meal costs \$80 per passengers. By including the airport charges of landing at Hong Kong International Airport and at Incheon International Airport, calculate the profit margin in HK\$ for a round-trip B777-300ER full-loaded flight from Hong Kong to Seoul and return?
- What is the breakeven number of passengers?
- What are some of the invalid assumptions?