

## Sample Productivity Calculation

This sample calculation illustrates how value added (or output achieved) is calculated using either the Subtraction Method (see page 4) or Addition Method (see page 8).

Value added is then used as a base measurement of output in indicators such as:

- labour productivity
- capital productivity
- labour cost competitiveness
- profit-to-value added ratio

### SCENARIO

Jennifer runs a food manufacturing business dealing with chocolate. Although it has been performing relatively well for the past few years, she has no idea if the company is being productive.

She learns about the Productivity Calculator at a seminar and decides to find out how productive her business is against the industry average.

### What This Sample Includes

1. Sample Profit & Loss Statement
2. Calculation of Value Added Using Subtraction Method
3. Calculation of Value Added Using Addition Method
4. Key Productivity Indicators

### Who To Ask For Help

If you need help understanding this sample calculation, please call the EnterpriseOne Hotline at:

Tel: (65) 6898 1800  
Opening hours: 8:30am – 5:30pm (Mon – Fri)

Jennifer pulls out her last profit & loss statement for the year ended 31 August 2009.

## SAMPLE PROFIT & LOSS STATEMENT

		<b>2009</b>
		<b>\$</b>
<b>Revenue</b>		300,000
<b>Less: Cost of Sales</b>		
	Opening Stock	120,000
	Purchases	80,000
	Less: Closing Stock	(40,000)
<b>Gross Profit</b>		<b>140,000</b>
<b>Less: Operating Expenses</b>		
	Administrative Expenses	
	Accountancy services	2,500
	Bank charges	200
	Central Provident Fund	9,000
	Director's remuneration	30,000
	General expenses	10
	Insurance	250
	Internet wire services	800
	Medical expenses	300
	Professional fees	3,500
	Printing and stationery	400
	Repairs and maintenance	2,000
	Salaries and bonus	40,000
	Skill Development Levy	200
	Depreciation	2,000
	Telephone	430
		<i>91,590</i>
	Marketing and Distribution Expenses	
	Advertising and promotion	2,000
	Entertainment	300
	Transport	2,300
		<i>4,600</i>
	<b>Total Operating Expenses</b>	<b>96,190</b>
<b>(Loss)/Profit Before Income Tax</b>		<b>43,810</b>
<b>Income Tax</b>		2,000
<b>(Loss)/Profit After Income Tax</b>		<b>41,810</b>

Jennifer pulls out her last balance sheet for the year ended 31 August 2009.

## SAMPLE BALANCE SHEET

		<b>2009</b>
		<b>\$</b>
<b>Current Assets</b>		
	Stocks	40,000
	Trade receivables	100,000
	Cash at bank	178,810
		<i>318,810</i>
<b>Less: Current Liabilities</b>		
	Trade payables	45,000
	Accruals	20,000
		<i>65,000</i>
<b>Net Current Assets</b>		253,810
<b>Non-Current Assets</b>		
	Plant and machinery	38,000
		<b>291,810</b>
<b>Equity</b>		
	Share capital	200,000
	Accumulated surplus	91,810
		<b>291,810</b>

## CALCULATION OF VALUE ADDED USING SUBTRACTION METHOD

The Subtraction Method calculates value added (VA) using the difference between what your customer pays for the goods/services (sale price) and what your company pays to produce them (cost price).

**Formula:**

Value Added = **Total Output – Total Cost** of producing that output (e.g. sum of material costs + operating expenses)

Jennifer fills in the form using information from her Profit & Loss Statement and Balance Sheet.

### What Is Your Industry?

\*Industry

\*Sub-Sector

### Fill In The Figures

Fill in the year and its financial figures (where applicable) to calculate your company’s value added. \*Denotes compulsory fields.

*Year	<input style="width: 90%;" type="text" value="2009"/>
*Number of Employees in [2009]	<input style="width: 90%;" type="text" value="20"/>
*Fixed Assets at Net Book Value in [2009]	<input style="width: 90%;" type="text" value="38,000"/>
*Labour Cost	<input style="width: 90%;" type="text" value="49,300*"/>
	* Labour costs comprise: <ul style="list-style-type: none"> <li>• salaries &amp; bonus \$40,000</li> <li>• CPF \$9,000</li> <li>• medical expenses \$300</li> </ul>
*Operating Profit/Loss After Tax	<input style="width: 90%;" type="text" value="41,810"/>

**Sales of Output**

Sales	<input type="text" value="300,000"/>
Opening Stocks of Finished Goods	<input type="text" value="120,000"/>
Closing Stocks of Finished Goods	<input type="text" value="40,000"/>

**Total Cost of Producing That Output – Materials Used**

Direct Raw Materials	<input type="text" value="80,000"/>
Indirect Raw Materials	<input type="text" value="0.00"/>
Stock Obsolescence	<input type="text" value="0.00"/>
Others	<input type="text" value="0.00"/>

**Production Expenses**

Freight and Handling	<input type="text" value="0.00"/>
Casual Labour	<input type="text" value="0.00"/>
Insurance	<input type="text" value="0.00"/>
Transport Charges	<input type="text" value="0.00"/>
Water and Electricity	<input type="text" value="0.00"/>
Maintenance of Factory Building	<input type="text" value="0.00"/>
Maintenance of Plant and Machinery	<input type="text" value="2,000"/>
Hire of Plant and Machinery	<input type="text" value="0.00"/>
Rental	<input type="text" value="0.00"/>
Others	<input type="text" value="0.00"/>

**Administrative and General Expenses**

Directors' Fee	30,000
Printing, Stationery and Office Supplies	400
Insurance	250
Transport Charges	2,300
Company Vehicle Expenses	0.00
Advertising	2,000
Entertainment	300
Refreshment	0.00
Fax and Telephone Charges	430
Courier and Postage Charges	0.00
Maintenance of Office Equipment	0.00
Travelling Expenses	0.00
Audit, Secretarial and Professional Fees	6,000*
	<p>* Audit, Secretarial and Professional Fees comprise:</p> <ul style="list-style-type: none"> <li>• accountancy services \$2,500</li> <li>• professional fee \$3,500</li> </ul>
Newspapers and Periodicals	0.00
Stamp Duty, Filling and Legal Charges	0.00
Bank Charges	200
Others	810*

\* Other expenses comprise:

- general expenses \$10
- Internet wire services \$800

## RESULTS OF SUBTRACTION METHOD

**Your Industry Is:** Manufacturing > Food, Beverage & Tobacco  
**Year Indicated:** 2009  
**Calculation Method You Have Selected:** Subtraction  
**Value Added Of Your Company:** S\$95,310

### Benchmarking Your Company With The Industry

	Your Company		Industry*
Labour Productivity	S\$4,765.50	↓ 92.48%	S\$63,383.84
Labour Cost Competitiveness	1.93	↓ 6.61%	2.07
Capital Productivity	2.51	↑ 158.57%	0.97
Profit-To-Value Added Ratio	43.87%	↑ 21.85%	36%

\*Source: Report on the Census of Manufacturing Activities 2008, Singapore Economic Development Board ([www.edb.gov.sg](http://www.edb.gov.sg))

### Understanding The Indicators

- **Labour Productivity**

Your company's labour productivity is **92.48% lower** than the industry.

Labour productivity measures the value added (or output achieved) per worker. It is affected by factors such as technology, systems, processes, training, etc. adopted by the company.

- **Labour Cost Competitiveness**

Your company's labour cost competitiveness is **6.61% lower** than the industry.

Labour cost competitiveness is a ratio that indicates the company's efficiency and effectiveness in producing value added (or output) per dollar of labour cost.

- **Capital Productivity**

Your company's capital productivity is **158.57% higher** than the industry.

Capital productivity is a ratio that indicates if there are sufficient fixed assets to support the generation of value added (or output) for the company.

- **Profit-To-Value Added Ratio**

Your company's profit-to-value added ratio is **21.85% higher** than the industry.

Profit-to-value-added ratio reflects the proportion of value added retained by the company. A higher ratio means the company is able to generate high output with low input.

### How To Improve Your Company's Productivity

Visit our Quick Start Guide ([http://productivity.business.gov.sg/en/getstarted\\_1.aspx](http://productivity.business.gov.sg/en/getstarted_1.aspx)) to find out how you can further improve your business productivity.

## CALCULATION OF VALUE ADDED USING ADDITION METHOD

The Addition Method calculates value added (VA) by adding up your operating profit/loss after tax, labour cost, interest incurred from loans, depreciation and taxes.

**Formula:**

$$\text{Value Added} = \text{Operating Profit/Loss After Tax}^x + \text{Labour Cost} + \text{Interest incurred from loans} + \text{Depreciation} + \text{Taxes.}$$

<sup>x</sup> Operating Profit/Loss After Tax: Operating receipts – Operating expenditure – Interest – Tax

Jennifer fills in the form using information from her Profit & Loss Statement and Balance Sheet.

### What Is Your Industry?

<b>*Industry</b>	Manufacturing	V
<b>*Sub-Sector</b>	Food, Beverage & Tobacco	V

### Fill In The Figures

Fill in the year and its financial figures (where applicable) to calculate your company’s value added. \*Denotes compulsory fields.

<b>*Year</b>	2009
<b>*Number of Employees in [2009]</b>	20
<b>*Fixed Assets at Net Book Value in [2009]</b>	38,000
<b>*Operating Profit/Loss After Tax</b>	41,810

### Labour Cost

Salaries	40,000
Bonus	0.00
Employer’s CPF Contributions	9,000
Staff Welfare	0.00
Medical Expenses	300

Training Expenses

0.00

Others

0.00

**Interest Incurred From Loans**

Loan Interest

0.00

Hire Purchase Interest

0.00

Others

0.00

**Depreciation**

Buildings

0.00

Plant, Equipment And Machinery

2,000

Others

0.00

**Taxes**

Income Tax

2,000

Property Tax

0.00

Skills Development Fund Levy

200

Others

0.00

## RESULTS OF ADDITION METHOD

**Your Industry Is:** Manufacturing > Food, Beverage & Tobacco  
**Year Indicated:** 2009  
**Calculation Method You Have Selected:** Addition  
**Value Added Of Your Company:** S\$95,310

### Benchmarking Your Company With The Industry

	Your Company		Industry*
Labour Productivity	S\$4,765.50	↓ 92.48%	S\$63,383.84
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