

Foreword

This resource material provides teachers with examples of cost accounting cases for reference and is by no means exhaustive. Teachers are advised to adapt the materials according to the diverse learning needs of students if deemed necessary.

WMY Furniture Ltd

WMY Furniture Ltd (WMY) is a small-sized antique furniture manufacturer, which was established in Hong Kong in 1993. With the aim to provide well-designed and high-quality antique furniture at affordable prices, the company targets on middle-class families in the Greater Bay Area.

The head office of WMY is located in Shatin and is responsible for designing, marketing, public relationship management, accounting & finance, human resources management and other administrative activities. Due to high labour and property costs in Hong Kong, WMY rents a factory in Guangdong to conduct manufacturing activities. Its major products are dining sets and wardrobes. The company purchases materials, including wood, metals, water-resistant glue and other materials from its suppliers in Guangdong. WMY's factory usually receives the ordered materials several hours after a purchase order is placed by the head office. Just-in-time¹ manufacturing is adopted, which means WMY produces for orders. Therefore, materials are ordered when needed and they are sent to WMY's factory just in time for use. Dining sets and wardrobes are produced when ordered and they are delivered to customers immediately after production has been completed.

The manufacturing process of dining sets and wardrobes starts with receiving materials. Incoming materials are carefully inspected to ensure the consistency in quality. In the second step, wood is sent to the Cutting Department for cutting. A computer numerically controlled (CNC) router machine is used to cut wood into different shapes for further use. Since the CNC router machine can only do rough cutting, craftsmen use special tools to carefully shave and sculpt the roughly cut wooden planks and blocks into their characteristic curves. When all furniture components are ready, they are sent to the Assembly Department. Dining sets and wardrobes are manually assembled there. Before the Assembly Department transfers the assembled dining sets and wardrobes to the Finishing Department, workers in the Assembly Department carefully inspect and sand the work in process². In the Finishing Department, dining sets and wardrobes are stained, spray polished, fine sanded and waxed. Then fittings such as handles are added. Packaging is the last step of the manufacturing process. In the Packaging Department, dining sets and wardrobes are carefully inspected, packaged and finally sent to customers.

Major cost items involved in WMY's operation are listed below:

	Item	Description
1	Head office rent	It is determined by price per square foot and square feet rented. The tenancy agreement is signed on an annual basis.
2	Depreciation of cars and facilities used by the head office	The depreciation is charged on a straight-line basis.
3	Salaries paid to employees working in the head office	The employment is under a fixed term contract.
4	TV advertisement expense	Assume the advertisement promotes WMY brand only. The advertising expense is determined by the length of the advertisement, the broadcast time slot and the

¹ Just-in-time (JIT) is an inventory management method aiming at reducing waste. By ordering materials for immediate use and producing goods for immediate delivery, JIT minimizes level of material inventory and finished goods inventory. As a result, it helps companies minimize inventory-related costs.

² Work in process is used to describe a partially completed product. Work in process here means dining sets and wardrobes which are partially completed but require further processing.

		frequency of broadcast. A 1-year service contract with unchanging terms has been signed.
5	Selling expenses	They include basic salaries paid to sales teams and sales commission determined by units sold. Commission on each dining set sold is the same as commission on each wardrobe sold.
6	Factory rent	It is determined by price per square foot and square feet rented. The tenancy agreement is a 5-year contract and can be renewed.
7	Wood	It is used in the production of dining sets and wardrobes.
8	Incoming wood inspection costs	The wood is carefully scaled and checked for moisture content. Failing to control the moisture content may result in cracking when the wooden furniture is exposed to different climatic conditions. WMY conducts inspection on every piece of wood received to prevent possible quality failure.
9	Depreciation of CNC router machine	The depreciation is charged on a straight-line basis.
10	Utility costs	They are determined by usage incurred in the factory.
11	Wages of workers who operate and maintain the CNC router machine	These workers are paid according to machine hours used.
12	Wages of craftsmen	They are determined by crafting hours. Two separate teams of craftsmen work on dining sets and wardrobes as different crafting skills are required.
13	Wages of assembly workers	They are determined by assembly hours.
14	Wages of finishing workers	They are determined by finishing hours.
15	Costs of materials used during the finishing process	They include metals, water-resistant glue, wood-stain materials and handles. Since values of these materials are low compared to furniture cost, it is not cost-beneficial to trace them to a particular product directly.
16	Wages of packaging workers	They are determined by packaging hours.
17	Costs of packaging materials	They are determined by output units.
18	Delivery costs	They are determined by number of rides with a weight limit on each ride. All WMY's customers are located in the Greater Bay Area, thus the logistics vendor charges WMY a standard price for each ride but requires a weight limit of no more than 200 kg per ride.

At the end of each month, WMY predicts costs for the coming month so that resources can be better allocated and financing activities can be better planned. For selling expenses in item 5, WMY collected data for the first 10 months of the year and planned to use these data to predict selling expenses for November. WMY predicts that it will be able to sell 800 units of dining sets and wardrobes in November because sales usually boost before Christmas.

Months	Units Sold	Selling expenses (HKD)
		\$
Jan	450	480,000
Feb	600	630,000
Mar	550	585,000
Apr	580	620,000
May	630	660,000
Jun	710	760,000
Jul	540	570,000
Aug	620	645,000
Sep	720	750,000
Oct	640	668,000

REQUIRED:

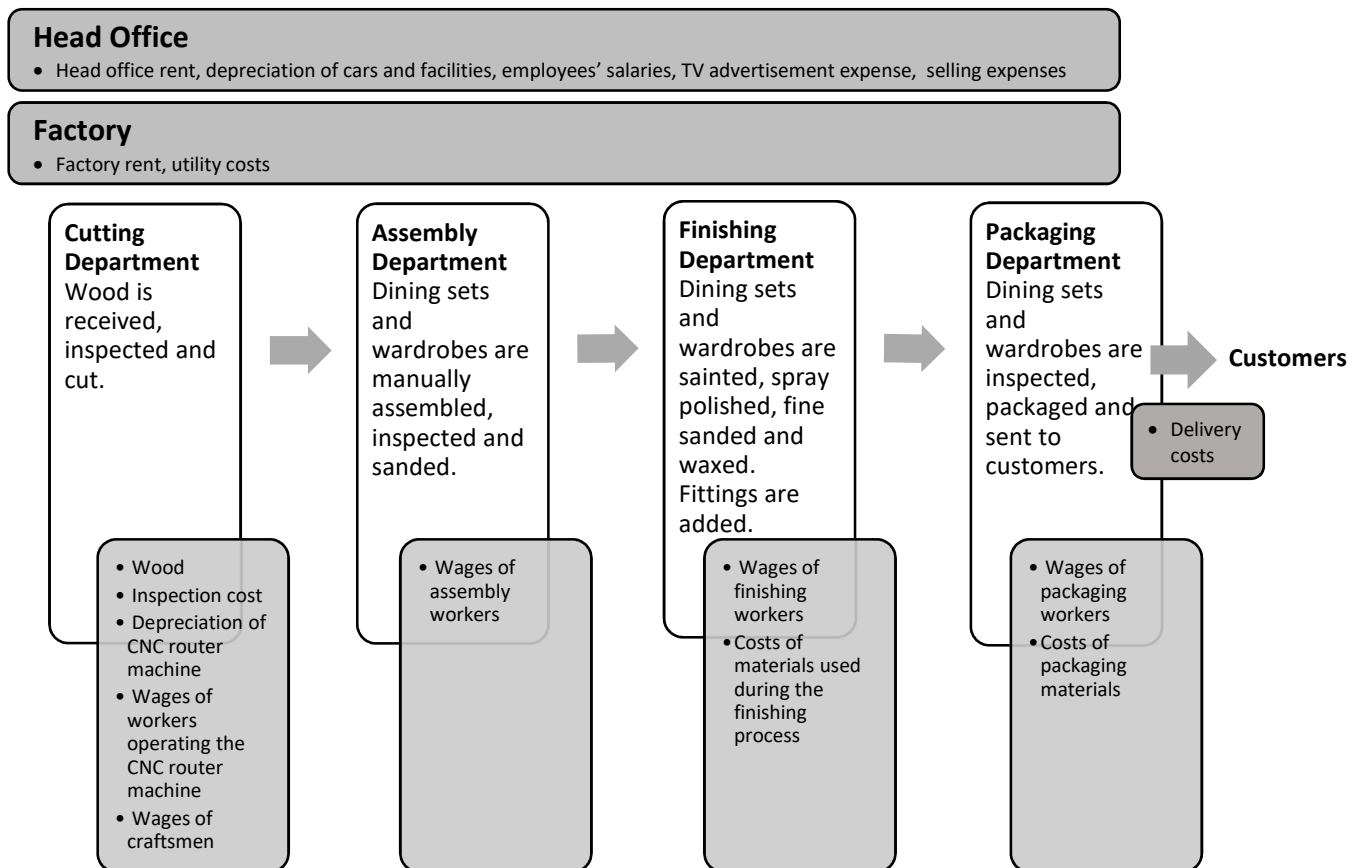
- (a) Classify each cost item (1-18) as production or non-production cost. (9 marks)
- (b) Classify each production cost item identified in requirement (a) as direct materials, direct labour or factory overheads. (6 marks)
- (c) Classify each cost item (1-18) as fixed, step, semi-variable or variable cost depending on how total cost changes as the total units of output change. (9 marks)
- (d) Estimate selling expenses (item 5) for November by using the high-low method. (3 marks)

(Total: 27 marks)

Case Analysis

The pedagogical objective of this case is to provide students with an introduction to cost classification in a realistic but still fabricated business scenario. The information of furniture making process helps students understand different costs. This is useful for students to interpret the relationship between cost items and cost objects. With the information provided, students should be able to 1) distinguish between production and non-production costs; 2) distinguish between direct and indirect costs; and 3) distinguish among fixed, step, semi-variable and variable costs.

WMY Cost Flow Chart



Marking Scheme

(a)

Item	Answer	Marks
1	Non-production cost	0.5
2	Non-production cost	0.5
3	Non-production cost	0.5
4	Non-production cost	0.5
5	Non-production cost	0.5
6	Production cost	0.5
7	Production cost	0.5
8	Production cost	0.5
9	Production cost	0.5
10	Production cost	0.5
11	Production cost	0.5
12	Production cost	0.5
13	Production cost	0.5
14	Production cost	0.5
15	Production cost	0.5
16	Production cost	0.5
17	Production cost	0.5
18	Non-production cost	0.5

Explanatory Notes

Item 1-3: The costs are not related to production of furniture. They are administrative expenses.

Item 4,5,18: The costs are not related to production of furniture. They are selling and distribution expenses.

(b)

Item	Answer	Marks
1	N/A	N/A
2	N/A	N/A
3	N/A	N/A
4	N/A	N/A
5	N/A	N/A
6	Factory overheads	0.5
7	Direct materials	0.5
8	Factory overheads	0.5
9	Factory overheads	0.5
10	Factory overheads	0.5
11	Factory overheads	0.5
12	Direct labour	0.5
13	Direct labour	0.5
14	Direct labour	0.5
15	Factory overheads	0.5
16	Direct labour	0.5
17	Direct materials	0.5
18	N/A	N/A

Explanatory Notes

Item 6, 8-11, 15: The cost cannot be traced specifically to a particular product.

(c)

Item	Answer	Marks
1	Fixed cost	0.5
2	Fixed cost	0.5
3	Fixed cost	0.5
4	Fixed cost	0.5
5	Semi-variable cost	0.5
6	Fixed cost	0.5
7	Variable cost	0.5
8	Variable cost	0.5
9	Fixed cost	0.5
10	Variable cost	0.5
11	Variable cost	0.5
12	Variable cost	0.5
13	Variable cost	0.5
14	Variable cost	0.5
15	Variable cost	0.5
16	Variable cost	0.5
17	Variable cost	0.5
18	Step cost	0.5

Explanatory Notes

Item 1-4, 6, 9: The cost does not change as the total units of output change.

Item 5: The cost is partly constant and partly varies in proportion as the total units of output change.

Item 7-8, 10-17: The cost changes in proportion as the total units of output change.

Item 18: The cost is fixed within relevant range (i.e., output weight equals or less than 200 kg), but increases when output weight increases and exceeds relevant range.

(d)

Level of activity	Units Sold	Selling expenses (\$)	Marks
High	720	750,000	0.5
Low	<u>450</u>	<u>480,000</u>	0.5
Difference	<u>270</u>	<u>270,000</u>	0.5
Variable cost per unit = $\$270,000/270 = \$1,000$			0.5
Fixed cost = $\$750,000 - \$1,000 \times 720 = \$30,000$ or $= \$480,000 - \$1,000 \times 450 = \$30,000$			0.5
The estimated selling expenses for November are: $\$30,000 + \$1,000 \times 800 = \$830,000$			0.5

Explanatory Notes

Extract the figures of the highest (Sep in this case) and the lowest (Jan in this case) activity levels and compute using high-low method.