

## Group Activity

For this activity, you have been hired as a team of consultants on a multi-year basis for a global washer and dryer manufacturer. They currently offer two core washer and dryer sets: a high-end model and an economic model. You are tasked to complete several calculations and present your findings to the company stakeholders. You may use any presentation software (Google Slides, Prezi, PowerPoint, etc.) and your completed presentation should consist of 8 – 12 slides. A copy of the final presentation will be submitted by **each member** of the group in Unit 7.

1. For your first assignment, management has provided the following revenue and cost information:

	<b>High-End Set</b>		<b>Economical Set</b>	
Sales price	\$3,500	per unit	\$1,000	per unit
Labor	\$875	per unit	\$250	per unit
Materials	\$1400	per unit	\$300	per unit
Direct fixed costs	\$25,000	per month	\$16,500	per month
Allocated fixed costs	\$85,000	per month	\$85,000	per month

They want a better understanding of their business to make budgeting and sales goals decisions and have asked you to determine their:

1. Contribution Margins for each product line
2. Break-even quantities for each product line
3. Break-even quantities to earn \$500,000 per year margin on the high-end line (at the current sales price)
4. Break-even quantities to earn \$300,000 per year margin on the economical line (at the current sales price)

They expect the product lines to fully absorb the costs allocated to them. They have also asked that you show each step in your calculations so that they can understand your analysis. (Note: you will be graded on your intermediary values.)

**Once you have determined these amounts, they have asked that you:**

- present the information
- describe how you performed your calculations
- and explain what the results mean

2. Later, the company is considering the purchase of machinery and equipment to set up a line to produce a combination washer-dryer. They have given you the following information to analyze the project on a 5-year timeline:

- Initial cash outlay is \$150,000, no residual value.

- Sales price is expected to be \$2,250 per unit, with \$595 per unit in labor expense and \$795 per unit in materials.
- Direct fixed costs are estimated to run \$20,750 per month.
- Cost of capital is 8%, and the required rate of return is 10%.
- They will incur all operational costs in Year 1, though sales are expected to be 55% of break-even.
- Break-even (considering only direct fixed costs) is expected to occur in Year 2.
- Variable costs will increase 2% each year, starting in Year 3.
- Sales are estimated to grow by 10%, 15%, and 20% for years 3 - 5.

They have asked you to calculate:

- The product's contribution margin
- Break-even quantity
- NPV
- IRR

Once you have determined these amounts, they have asked that you present the information, describe how you performed your calculations, and explain what the results mean.

After you have completed the calculations and presented your work, management makes the investment.

- Explain how the project analyses do or do not support this decision.
- In either case, what are the factors that should have been considered in management's decision?

3. After the combo washer-dryer has been in production for a few years, you are asked to perform another analysis. You must evaluate the performance of all three product lines as management is concerned with the viability of the washer-dryer combination product. They provide you with the latest annual information by product:

	<b>High-End Set</b>	<b>Economical Set</b>	<b>W/D Combo</b>	<b>Total</b>
Sales	\$4,700,000	\$4,060,000	\$880,000	<b>\$9,640,000</b>
Labor	\$(1,250,000)	\$(1,015,000)	\$(235,000)	<b>\$(2,500,000)</b>
Materials	\$(1,885,000)	\$(1,220,000)	\$(315,000)	<b>\$(3,420,000)</b>
Direct fixed costs	\$(325,000)	\$(220,000)	\$(250,000)	<b>\$(795,000)</b>
Allocated fixed costs	\$(650,000)	\$(650,000)	\$(650,000)	<b>\$(1,950,000)</b>
Net Income	\$590,000	\$955,000	\$(570,000)	<b>\$975,000</b>

You are asked to perform an analysis to determine whether to drop or keep the washer-dryer combination product and present your findings, including the steps taken to make

your determination. You are also asked to evaluate if the costing methodology is appropriate and, if not, recommend alternative methods.

Please describe the circumstances of the case study and make the required recommendations. Explain your approaches to the problems, perform relevant calculations and analyses, and justify your recommendations. Evaluate the results and explain what each calculated value means. Ensure your work and conclusions are thoroughly supported.

Superior presentations will:

- Describe the circumstances.
- Perform all calculations correctly.
- Articulate how the calculations were performed.
- Evaluate the computations and explain their meanings.
- Make recommendations, supported by well-thought-out rationale and considering various factors that could impact the recommendations.

You have been provided with two areas in the course to discuss and collaborate: A group discussion forum and a wiki collaboration area. Group members and instructors have access to these areas and can see the discussions and the work you do within these areas. This communication is not graded. You are also free to use tools outside of the course, such as Google Docs, Yammer, etc. if your group chooses to do so.

Your presentation is **due in Unit 7**. Be sure to use APA formatting in your presentation and ensure it looks professional. As a reminder, the Purdue OWL website can be accessed here: <http://owl.english.purdue.edu/owl/resource/560/01/>