

Unit F: Effectively Managing Business Transactions

Lesson 1: Understanding Business Expenses

Student Learning Objectives: Instruction in this lesson should result in students achieving the following objectives:

1. Distinguish between fixed and variable costs.
2. Realize the importance of minimizing expenses.
3. Understand the concept of cooperatives.

Recommended Teaching Time: 1 hour.

Recommended Resources: The following resources may be useful in teaching this lesson:

Ricketts, Cliff & Kristina. *Agribusiness Fundamentals and Applications*. Clifton Park, NY: Delmar Cengage Learning. 2001.

List of Equipment, Tools, Supplies, and Facilities:

Writing surface
PowerPoint Projector
PowerPoint Slides

Terms:

Board of Directors
Break-Even Quantity
Cooperative
Fixed Costs
Marginal Cost
Marketing Cooperative
Service Cooperative
Supply Cooperative
Variable Costs

Interest Approach:

Summary of Content and Teaching Strategies

Objective 1: Distinguish between fixed and variable costs.

Anticipated Problem: What is the difference between fixed and variable costs?

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- I. A business has numerous production expenditures that are called costs.

[Type a quote from the document or the summary of an interesting point. You can position the text box anywhere in the document. Use the Text Box Tools tab to change the formatting of the pull quote text box.]

- A. **Fixed costs** are those costs that are constant regardless of level of production.
 - 1. Examples of fixed costs include land, buildings, equipment, and tools.
 - 2. No matter how much product is produced, these items cost the same.
 - a. For example, two farmers raise cucumbers. Farmer A and Farmer B both own $\frac{1}{2}$ hectare, each farmer paid 25,000 Afghani for his land. Farmer A raises 10 kilograms of cucumbers per year, and Farmer B raises 50 kilograms of cucumbers per year. Even though they produce different amounts of cucumbers, their fixed cost is the same because the land.....

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- b. The fixed cost is divided by the number of units of production to find the fixed cost price per unit.
 - i. Fixed costs per unit of production decreases as more product is produced.
 - ii. The lower the fixed cost per unit, the more efficient the business is.

PowerPoint Slide #5

- B. **Variable costs** are those costs that change as production levels change.
 - 1. Examples of variable costs include fertilizer, seed, feed, fuel, and hired labor.
 - 2. As more units are produced, variable costs will increase.
 - a. For example, two farmers raise cucumbers. Farmer A raises 10 kilograms of cucumbers per year, and Farmer B raises 50 kilograms of cucumbers per year. Farmer B will have higher variable costs because he will have to purchase more seed to plant more cucumber vines in order to produce more cucumbers.
 - b. Total variable costs increase as production increases.

*****To add some variation, ask students to stand beside another student (students should be standing in pairs) Then ask them to discuss the differences between fixed and variable costs and to think of one example of each.**

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- C. Total cost is variable costs plus fixed costs. Total cost increases as variable costs increase.
- D. Average variable cost is calculated by dividing total variable costs by total output at any given point.
- E. Average fixed cost equals total fixed costs divided by total output at any given point.
- F. Average total cost equals total cost divided by total output at any given point.

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- G. **Marginal cost** equals change in the total cost divided by the change in output. It is the cost of producing one additional unit of product.

1. The level of production that maximizes profits is where marginal costs equal the price received for the product.
- H. **Break-even quantity** equals the total fixed costs divided by the price per unit minus the variable costs per unit.

*****Use the PowerPoint Presentation to assist students in understanding this objective. Then, have students complete WS 1-1 for further understanding.**

Objective 2: Realize the importance of minimizing expenses.

Anticipated Problem: Why should costs be minimized?

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- II. Every business that exists has expenses as well as income. Usually, businesses exist to earn a profit in order to pay the owner and workers wages. There are two main reasons for minimizing, or reducing, a business's expenses: to earn more profit and to become more efficient.
 - A. As businesses operate, the profit that is made is used to pay expenses. The net profit can be used to expand business operations or can be paid to the owner of a business. When expenses are reduced, more net income can be earned allowing for greater expansion of the business. If further expansion is not desired, the owner of the business may choose to use the money for his personal and family expenses.

PowerPoint Slide #9

- B. When expenses are minimized, the business become more financially efficient. The more financially efficient a business is, the healthier it is.

*****Use the PowerPoint Presentation to discuss the information. If possible, ask a local farmer or agribusiness owner to speak to the class about how he has reduced his production costs. Another way to help students understand this objective is to challenge students to think about how various types of businesses could reduce their costs. You might do this by naming a type of business and calling upon students to answer how they could minimize costs.**

Objective 3: Understand the concept of cooperatives.

Anticipated Problem: How does a cooperative work?

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- III. A **cooperative** is a business that is formed to provide goods and services to members at a low cost.
 - A. A group of businesses or individuals with similar interests join together to form the cooperative. These businesses and individuals are considered the members of the cooperative.

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1. Being a member of a cooperative is voluntary. Some cooperatives may require that members pay a small fee per year. The fee collected by the cooperative may be used to transact business that provides each member with benefits.
2. Cooperatives are controlled by their members. The members make decisions regarding the cooperative.
 - a. Large cooperatives may elect a **board of directors**. A board of directors is

made up of members of the cooperative that are selected to represent all the members. Additionally, the board of directors is responsible for making decisions and policies for the corporation.

3. Cooperatives may transact business, but do not exist to earn a profit. Any profits that are made are paid back to the members of the cooperative.

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- B. There are three types of cooperatives: supply cooperatives, marketing cooperatives, and service cooperatives.
 1. A **supply cooperative** purchases supplies, such as feed, seed, fertilizer, and fuel, in large amounts to be resold to their members.
 - a. Because supplies are bought in such large quantities, the cooperative may receive a better (lower) price.
 - b. A major advantage to members is that they can lower their own variable costs for production. If they were not members, they would be forced to purchase their supplies from a company. The cooperative, however, was able to purchase the large amount of supplies at a lower price, the cooperative will resell these supplies to its members at the low price. As a result, members are able to save money.

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2. A **marketing cooperative** assists farmers and business owners by marketing their agricultural products. These cooperatives strive to find the buyers that will pay the highest price for the product.
 - a. Marketing cooperatives sell products directly to consumers or to stores who will resell the products.
 - b. Some marketing cooperatives also process agricultural products, such as milk and almonds, and place them in packages or containers to be resold.

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3. A **service cooperative** provides its members with a specific service that they might not be able to afford without the cooperative.
 - a. Some service cooperatives may be made up of members that live in rural areas and provide them with electricity, telephone, or other communication services.
 - b. Other examples include farm credit (loan) services, irrigation cooperatives or artificial breeding services.

*****Use the PowerPoint Presentation to assist students in understanding this objective. Then divide students into three groups. Assign each group one type of cooperative. Ask students to work together with their group to brainstorm types of cooperatives that would be useful to this area of the country. As students are doing this ask them to complete the following:**

- Name the cooperative. (example: Rural Electric Cooperative, Southwest Irrigation Cooperative)
- What is the purpose of the cooperative?
- Who would be members of this cooperative?

*-How would members benefit from this cooperative?
Upon completion of the group activity, ask each group to select a spokesperson and share their ideas with the entire class. If desired, this activity can be extended with more planning and research into one of the cooperative ideas then the class may present to local community members or extension specialists.*

Review/Summary: Ask students to develop open-ended questions using the information learned in this lesson and other information discussed in class. Students may record these questions and turn them in to the instructor. The instructor should ask each student one question. Another option is to have one student ask the other students one question that he developed. Students can take turns doing this.

Application:

Evaluation: A sample written test is attached.

Answers to Test:

Part One: Matching

1 = a, 2 = f, 3 = g, 4 = h, 5 = d, 6 = b, 7 = e, 8 = c

Part Two: Completion

1 = cooperative
2 = increase
3 = equal
4 = profit
5 = board of directors

Part Three: Short Answer

1. Use Objective 3 to score this question.
2. Use Objective 2 to score this question.

Understanding Business Expenses

Instructions. Answer the following questions. Be sure to show your work.

Joe owns an almond orchard. The following is a list of Joe's business expenses for one year.

Loan payment for land	10000 AFS
Insecticide for almond trees	150 AFS
New almond trees	675 AFS
Harvesting equipment	75 AFS
Hired Labor	200 AFS

List the fixed costs.

List the variable costs.

What is the total cost?

What is the total fixed cost?

What is the total variable cost?

What is the average fixed cost?

What is the average total cost?

If Joe's total cost last year was 10,800 AFS and his output last year was 3,500 AFS, what is the marginal cost?

Name one way Joe could minimize his expenses.

Understanding Business Expenses

Instructions. Using complete sentences, answer the following questions.

Joe owns an almond orchard. Joe's almond orchard produced 5,000 AFS worth of almonds this year. The following is a list of Joe's business expenses for this year.

Loan payment for land	10000 AFS
Insecticide for almond trees	150 AFS
New almond trees	675 AFS
Harvesting equipment	75 AFS
Hired Labor	200 AFS

List the fixed costs.

Loan payment for land 10000 AFS
Harvesting equipment 75 AFS

List the variable costs.

Insecticide 150 AFS
New almond trees 675 AFS
Hired labor 200 AFS

What is the total cost?

$$10000 + 75 + 150 + 675 + 200 = 11,100 \text{ AFS}$$

What is the total fixed cost?

$$10000 + 75 = 10,075 \text{ AFS}$$

What is the total variable cost?

$$150 + 675 + 200 = 1,025 \text{ AFS}$$

What is the average fixed cost?

$$10,075 / 5,000 = 2.015$$

What is the average total cost?

$$11,100 / 5,000 = 2.22$$

If Joe's total cost last year was 10,800 AFS and his output last year was 3,500 AFS, what is the marginal cost?

$$11,100 - 10,800 = 300 \quad 5000 - 3,500 = 1,500$$

$$\text{Marginal Cost} = 300 / 1,500 = 0.2$$

Name one way Joe could minimize his expenses.

Joe could do more of the work himself instead of hiring labor.

Other answers may be accepted; however, answers like planting fewer trees or spraying less insecticide will cause his profits to decrease.

Test Understanding Business Expenses

Part One: Matching

Instructions. Match the term with the correct response. Write the letter of the term by the definition.

- | | |
|-----------------------|--------------------------|
| a. fixed cost | e. supply cooperative |
| b. variable cost | f. service cooperative |
| c. marginal cost | g. marketing cooperative |
| d. average fixed cost | h. average total cost |

- _____ 1. Constant regardless of level of production.
- _____ 2. Provides its members with a specific service that they might not be able to afford without the cooperative.
- _____ 3. Assists farmers and business owners by selling their agricultural products.
- _____ 4. Total variable cost divided by total output.
- _____ 5. Total fixed cost divided by total output.
- _____ 6. Changes as level of production changes.
- _____ 7. Purchases items, such as feed, seed, fertilizer, and fuel, in large amounts to be resold to their members.
- _____ 8. Change in total cost divided by change in output.

Part Two: Completion

Instructions. Provide the word or words to complete the following statements.

1. A business that is formed by businesses and individuals with similar interests is called a _____.
2. Total cost _____ as variable costs increase.
3. Maximum profit is realized when marginal costs are _____ to the marginal price received.
4. Cooperatives do not exist to earn a _____.
5. A _____ is elected to determine policy of a cooperative.

Part Three: Short Answer

Instructions. Use complete sentences and correct spelling to provide the information below.

1. How might a group of agriculturists utilize a cooperative?

2. Why should expenses be minimized?