theme: accounting in self-employment subject: economics
school: Gewerbliche Schule Schwäbisch Hall Germany
goals: The pupils are able to

- understand and explain the terms fixed and variable costs and overhead costs
- use the principles to calculate a given scenario.

phase	content	method	material
Introduction	Accounting is the systematic and comprehensive recording of financial transactions pertaining to a business. Accounting also refers to the process of summarizing, analyzing and reporting these transactions to oversight agencies, regulators and tax collection entities. If you want to open up your own business, you have to know about accounting.	Teacher talk	
preparation	Students work in groups of four. Two students read the information text on fixed and variable costs, two students read the information text on overhead costs. Both teams prepare a short presentation to summarize and present their information text to the other group members.	Group work	Information texts
saving the results	Students fill out the work sheet and explain the principles to one another.	Group work	Work sheet
transfer	Students work in groups and fill out A1 and A2.	Group work	Work sheet

Worksheet

Accounting in self-employment

Fixed and variable costs

The prerequisite for a company to make a profit is a precise cost overview as a basis for the price determination of their products (calculation).One differentiates between fixed and variable costs. Fill in accordingly.

__________ cost: - are independent of the scope of production
- e.g. ____
__________ costs: - change according to the scope of production
- e.g. ____

A1 In a company there are fixed costs of 24,000 € every month. The variable costs per produced piece amount to 2 €.
Using the table, find out how the unit costs develop at different production ends and then fill in the text below.

production volume	fixed costs per month	variable costs	total cost	unit costs
0	**24.000**	**-**	**24.000**	**-**
1.000	**24.000**	**2.000**	**26.000**	**26,-**
2.000	**24.000**			
3.000	**24.000**			
4.000	**24.000**			

The higher the production volume, the lower the share of _____________ costs to the ___________________, the more the unit costs decrease, the lower the _________. This relationship is called the law of industrial mass production.

Individual and overhead costs

Since not all costs can be directly assigned to the product during the production of a product, a distinction is made between individual and overhead costs. Fill in accordingly.
_____________________ (= direct costs):
- can be assigned directly to a product
- e.g. ____
_____________________ (= indirect costs):
- can not be assigned directly to a product, since they are also produced for other products
- e.g. ____

A2 The production of 6,000 toy cars resulted in the following costs: production material € 6,800, machine costs € 200, administration costs € 10,000, production wages € 15,000, rent for workrooms € 1,000, depreciation € 4,000, interest on the loan € 2,000.
a) Submit the specified cost types in individual and overhead costs.
b) What are the fixed, how high are the variable costs?
c) Determine the unit cost of a toy car.

Information text:

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Variable Cost vs. Fixed Cost: What's the Difference?

By Steven Nickolas Updated Apr 25, 2019

Variable Cost vs. Fixed Cost: An Overview

In economics, variable costs and fixed costs are the two main costs a company has when producing goods and services. A variable cost varies with the amount produced, while a fixed cost remains the same no matter how much output a company produces.

Variable Cost

A variable cost is a company's cost that is associated with the amount of goods or services it produces. A company's variable cost increases and decreases with its production volume. When production volume goes up, the variable costs will increase. On the other hand, if the volume goes down, so too will the variable costs.

Variable costs are generally different between industries. Therefore it's not useful to compare the variable costs between a car manufacturer and an appliance manufacturer because their product output isn't comparable. So it's better to compare the variable costs between two businesses that operate in the same industry, such as two car manufacturers.

Variable costs can be calculated by multiplying the quantity of output by the variable cost per unit of output. So, suppose company ABC produces ceramic mugs for a cost of $2 a mug. If the company produces 500 units, its variable cost will be $1,000. However, if the company does not produce any units, it will not have any variable cost for producing the mugs. Similarly, if the company produces 1000 units, the cost will rise to $2,000. This calculation is simple and obviously does not take into account any other costs such as labor or raw materials.

Examples of variable costs include labor costs, utility costs, commissions, and the cost of raw materials that are used in production.

Companies may have what are called semi-variable costs, which are a mixture of both variable and fixed costs.

Fixed Cost

A fixed cost is the other cost incurred by businesses and corporations. Unlike the variable cost, a company's fixed cost does not vary with the volume of production. It remains the same even if no goods or services are produced, and therefore, cannot be avoided.

Using the same example above, suppose company ABC has a fixed cost of $10,000 per month for the rent of the machine it uses to produce mugs. If the company does not produce any mugs for the month, it would still have to pay $10,000 for the cost of renting the machine. On the other hand, if it produces one million mugs, its fixed cost remains the same. The variable costs change from zero to $2 million in this example.

The more fixed costs a company has, the more revenue a company needs in order to break even, which means it needs to work harder to produce and sell its products. That's because these costs occur regularly and rarely change.

The most common examples of fixed costs include lease and rent payments, utilities, insurance, certain salaries, and interest payments.

While variable costs tend to remain flat, the impact of fixed costs on a company's bottom line can change based on the number of products it produces. So, when production increases, the fixed cost drops. The price of a greater amount of goods can be spread over the same amount of a fixed cost. A company can, therefore, achieve economies of scale.

For example, ABC has a lease of $10,000 a month on its production facility and it produces 1,000 mugs per month. It can spread the fixed cost of the lease at $10 per mug. If it produces 10,000 mugs a month, the fixed cost of the lease goes down, to the tune of $1 per mug.

Key Takeaways

- Companies incur two types of costs: variable costs and fixed costs.
- Variable costs vary based on the amount of output, while fixed costs are the same regardless of production output.
- Examples of variable costs include labor and the cost of raw materials, while fixed costs may include lease and rental payments, insurance, and interest payments.

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Overhead costs

Reviewed by Will Kenton Updated Feb 23, 2019

What is Overhead?

Overhead includes all ongoing business expenses not including or related to direct labor or direct materials used in creating a product or service. A company must pay overhead on an ongoing basis, regardless of how much or how little the company is selling. It is important for budgeting purposes, but also for determining how much a company must charge for its products or services to make a profit. For example, a service-based business with an office has overhead expenses, such as rent, utilities, and insurance that are in addition to direct costs of providing its service. Overhead is any expense that supports the making or selling of a product or service.

Breaking down Overhead

Overhead expenses can be fixed, meaning they are the same amount every time, or variable, meaning they increase or decrease depending on the business's activity level. For example, a business's rent payment may be fixed, while shipping and mailing may be variable.

Overhead expenses can also be semi-variable, meaning the company incurs some portion of the expense no matter what, and the other portion depends on the level of business activity. For example, many utility costs are semi-variable with a base charge and the remainder of the charges being based on usage.

Overhead can also be general, referred to as company overhead, meaning it applies to the company's operations as a whole. A company can allocate overhead to a specific project or department as well. For example, a service-based business may allocate overhead expenses based on the activities completed within each department, such as printing or office supplies.

Categorizing Overhead Expenses

Overhead expenses may apply to a variety of operational categories. Administrative overhead traditionally includes costs related to basic administration and general business operations, such as the need for accountants or receptionists. Selling overhead relates to activities involved in marketing. This can include printed materials and television commercials, as well as the salaries of administrative-support professionals.

Depending on the nature of the business, other categories may be appropriate, such as research overhead, maintenance overhead, manufacturing overhead or transportation overhead.

Overhead Reporting

Expenses related to overhead typically appear on a company's income statement, as they directly play into the overall profitability of the business. The company must account for overhead expenses to determine its net profit, also referred to as the bottom line. Removing the associated expenses from the gross revenues, referred to as the top line, along with other production-related expenses, accomplishes this purpose.