


Food Balance Sheets (FBS) - Module2

1. Module2

1.1 Welcome

The Basic Identity and Approach



Food Balance Sheets (FBS)

Lesson 2
The Basic Identity and Approach

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Notes:


1.2 Lesson objective

The Basic Identity and Approach

Lesson objective

In this lesson we will learn about the Food Balance Sheet (FBS) with respect to:

1. Basic underlying identity in compiling FBS;
2. Relevant concepts involved in compiling FBS.



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Notes:

1.3 Outline

The Basic Identity and Approach

Outline

- Basic identity
- Supply and use variables
- Additional variables



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Notes:

1.4 Basic Identities

The Basic Identity and Approach

Basic Identities

Food balance sheets are built on the basic premise that within a given country in a given year, the sum of all aspects in the **supply** of a given food product must be equal to the sum of **utilizations** for that product.

This concept is commonly expressed in two different basic identities

1. Total domestic supply = Total domestic utilization

Opening stocks + production + imports – Exports = Food + Feed + Seed + Tourist Food + Industrial Use + Loss + Residual Use + Closing Stocks

2. Total supply = Total utilization

Opening stocks + production + imports = Exports + Food + Feed + Seed + Tourist Food + Industrial Use + Loss + Residual Use + Closing Stocks

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Notes:

1.5 Basic Identities

The Basic Identity and Approach

Basic Identities

The only difference between the two equations is the placement of exports. In first equation, supply is defined in terms of net trade (imports minus exports). In the second equation, imports are registered as a supply variable, while exports are recorded as a utilization variable. Countries are free to choose the conceptualization that makes the most sense for their own FBS.

Domestic Supply	Domestic Utilization
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Opening Stocks	<input type="checkbox"/> Food
<input type="checkbox"/> Production	<input type="checkbox"/> Feed
<input type="checkbox"/> Imports	<input type="checkbox"/> Seed
<input type="checkbox"/> Exports	<input type="checkbox"/> Tourist Food
	<input type="checkbox"/> Industrial Use
	<input type="checkbox"/> Loss
	<input type="checkbox"/> Residual Use
	<input type="checkbox"/> Closing Stocks

Total Supply	Total Utilization
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Opening Stocks	<input type="checkbox"/> Exports
<input type="checkbox"/> Production	<input type="checkbox"/> Food
<input type="checkbox"/> Imports	<input type="checkbox"/> Feed
	<input type="checkbox"/> Seed
	<input type="checkbox"/> Tourist Food
	<input type="checkbox"/> Industrial Use
	<input type="checkbox"/> Loss
	<input type="checkbox"/> Residual Use
	<input type="checkbox"/> Closing Stocks

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Notes:

1.6 Basic Identities

The Basic Identity and Approach

Basic Identities

The *supply = utilization* identity is often expressed using some estimate of the change in stock levels during the reference period.

Many countries do not collect data on stock levels for the majority of products. For this reason, the supply=utilization identity is often expressed instead using some estimate of the change in stock levels during the reference period (i.e., either a stock buildup or a stock drawdown) rather than including estimates of absolute opening and closing stock levels.

1. Domestic supply = Domestic utilization
Production + imports – Exports – Δ Stocks = Food + Feed + Seed + Tourist Food + Industrial Use + Loss + Residual Use
Where Δ Stocks = Closing Stocks – Opening Stocks

2. Total supply = Total utilization
Production + imports – Δ Stocks = Exports + Food + Feed + Seed + Tourist Food + Industrial Use + Loss + Residual Use
Where Δ Stocks = Closing Stocks – Opening Stocks

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Notes:

1.7 Basic Identities

The Basic Identity and Approach

Basic Identities

The basic identity can also be specified with an additional utilization variable—Food Processing— as below :

Total supply = Total utilization
Production + imports – Δ Stocks = Exports + Food + **Food Processing** + Feed + Seed + Tourist Food + Industrial Use + Loss + Residual Use
Where Δ Stocks = Closing Stocks – Opening Stocks

The reason food processing is not always included in expressions of the basic underlying identity is that this variable is typically **dropped** in the final stages of FBS compilation (standardization and aggregation) in order to avoid double-counting. However, food processing should be included as a utilization variable in the specification of the preliminary individual commodity balances.

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Notes:

1.8 Supply and Use Variables

The Basic Identity and Approach

Supply and Use Variables

Production
Imports and Exports
Stocks
Food availability
Food processing
Feed
Seed
Tourist food
Industrial use
Loss
Residual and other uses

The variables elaborated in the basic supply = utilization identity should, for the most part, be intuitive concepts to FBS compilers. However, a more exact definition of these concepts is warranted here to ensure that the scope of what is and is not included in the calculations is clear.

Countries should try to adhere to these definitions where possible in order to ensure that calculations of *dietary energy supply* derived from country-level FBS are a faithful approximation of the real food supply situation. For example, reporting of only commercial production would lead to the underestimation of the supply of some products in countries where the product is commonly grown in household gardens or, more generally, for own consumption, which in turn would cause an underestimation of total per capita availability.

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Click on the variables to explore more. ◀ Prev Next ▶

Notes:


1.9 Additional Variables

The Basic Identity and Approach

Additional Variables

Population
Nutrient estimates
Activity and productivity variables
Extraction rates
Processing shares

While the basic supply and utilization variables outlined above cover all of the aspects of the basic identity, composing the complete FBS—including estimates of per capita nutrient availability—requires several additional variables.



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Click on each tab to know more. ◀ Prev Next ▶

Notes:

The definition of population is available on UNPD's Glossary of Demographic Terms, at <https://esa.un.org/unpd/wpp/General/GlossaryDemographicTerms.aspx>

Nutrient conversion tables:

(http://www.fao.org/fileadmin/templates/ess/ess_test_folder/Food_security/Excel_sheets/Nutritive_Factors.xls)

Nutrient: Nutrients are substances that the body needs in order to function properly.

1.10 Quiz 1

(Multiple Choice, 10 points, 1 attempt permitted)

The Basic Identity and Approach

Quiz

Q 01

Additional variables needed for the estimates of per capita nutrient availability are population and nutrient estimates

Select one that apply.

☒ True

☐ False

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1.11 Quiz 2

(Multiple Choice, 10 points, 1 attempt permitted)

The Basic Identity and Approach

Quiz

Q 02

Goods that come in and exit a given country without having undergone any type of transformation are categorized separately as re-exports. In the context of the food balance sheets, re-exports should not be added to exports.

Select one that apply.

☐ True

☒ False

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Feedback when correct:

1.12 Quiz 3

(Multiple Choice, 10 points, 1 attempt permitted)

The Basic Identity and Approach

Quiz

Q 03

Food availability is defined as the quantity of any substance, whether raw, processed or semi-processed (including drinks) that is available for human consumption during a given reference period. Quantities reported here represent food available for consumption not only in households, but also in restaurants and institutions (hospitals, schools, military bases, prisons, etc.).

Select one that apply.

☒ True

☐ False

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1.13 Quiz 4

(Multiple Response, 10 points, 2 attempts permitted)

The Basic Identity and Approach

Quiz

Q 04

Compilers should also collect data on relevant variables that could be necessary for the imputation of missing values and validation of main production variables. Please select those relevant variables:

Select all that apply.

☒ Area sown and area harvested

☐ Population by gender

☒ Number of animals

☒ Crops is yield

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1.14 Quiz 5

(Multiple Response, 10 points, 2 attempts permitted)

The Basic Identity and Approach

Quiz

Q 05 Please select correct statements given below:

Select all that apply.

- ☒ Stocks are defined as the aggregate total of product allocated to storage for use at some future point in time (regardless of their intended future utilization).
- ☒ Tourist food refers to food that is available for consumption by non-resident visitors to a given country during the course of their stay.
- ☐ Industrial use is defined as any quantity of a given product used in some derived food transformation or manufacturing process.
- ☒ Extraction rates are parameters that reflect the loss in weight in the conversion (or processing) of one product into another.

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1.15 Conclusion

The Basic Identity and Approach

Conclusion

You have finished lesson 2.

In this lesson, we have discussed:

1. Basic identity of FBS;
2. Concepts in compiling FBS.



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Notes:

1.16 Thank You

The Basic Identity and Approach



Food Balance Sheets (FBS)

Thank You!

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Notes: