



НАЦИОНАЛЬНЫЙ ИССЛЕДОВАТЕЛЬСКИЙ
УНИВЕРСИТЕТ

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Studies, Higher
School of Economics

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FOOD WASTE IN THE RETAIL SECTOR IN RUSSIA AND GERMANY

EKATERINA GALAKTIONOVA

Food Loss and Waste

- Roughly one-third of edible parts of food produced for human consumption globally was lost or wasted, corresponding to about 1.3 billion tons of food per year

The 2030 Agenda for Sustainable Development: Target 12.3

By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.

- FAO - Food Loss Index (FLI) - 14 per cent
- UNEP - Food Waste Index (FWI) - is calculated

Food Loss and Waste

Food loss is the decrease in the quantity or quality of food resulting from decisions and actions by food suppliers in the chain, excluding retailers, food service providers and consumers.

Food waste refers to the decrease in the quantity or quality of food resulting from decisions and actions by retailers, food service providers and consumers.

- Food loss – supply oriented, mainly caused by the (mal)functioning of the food production and supply system, which tend to affect lower income countries.
- Food waste – demand oriented, mainly caused due to economic or social behavior, which is more characteristic of higher income countries with high consumption levels.

Food Supply Chain

(i) agricultural production and harvest/slaughter/catch;

(ii) post-harvest/slaughter/catch operations;

(iii) storage;

(iv) transportation;

(v) processing;

(vi) wholesale and retail;

(vii) consumption by households and food services.

Retail

Retail is a major driver of the global economy, but also as the most crucial link between suppliers and consumers. (UNEP)

- a key link between producers and consumers,
- a major driver of production and consumption patterns
- great influence on producers, suppliers and consumers

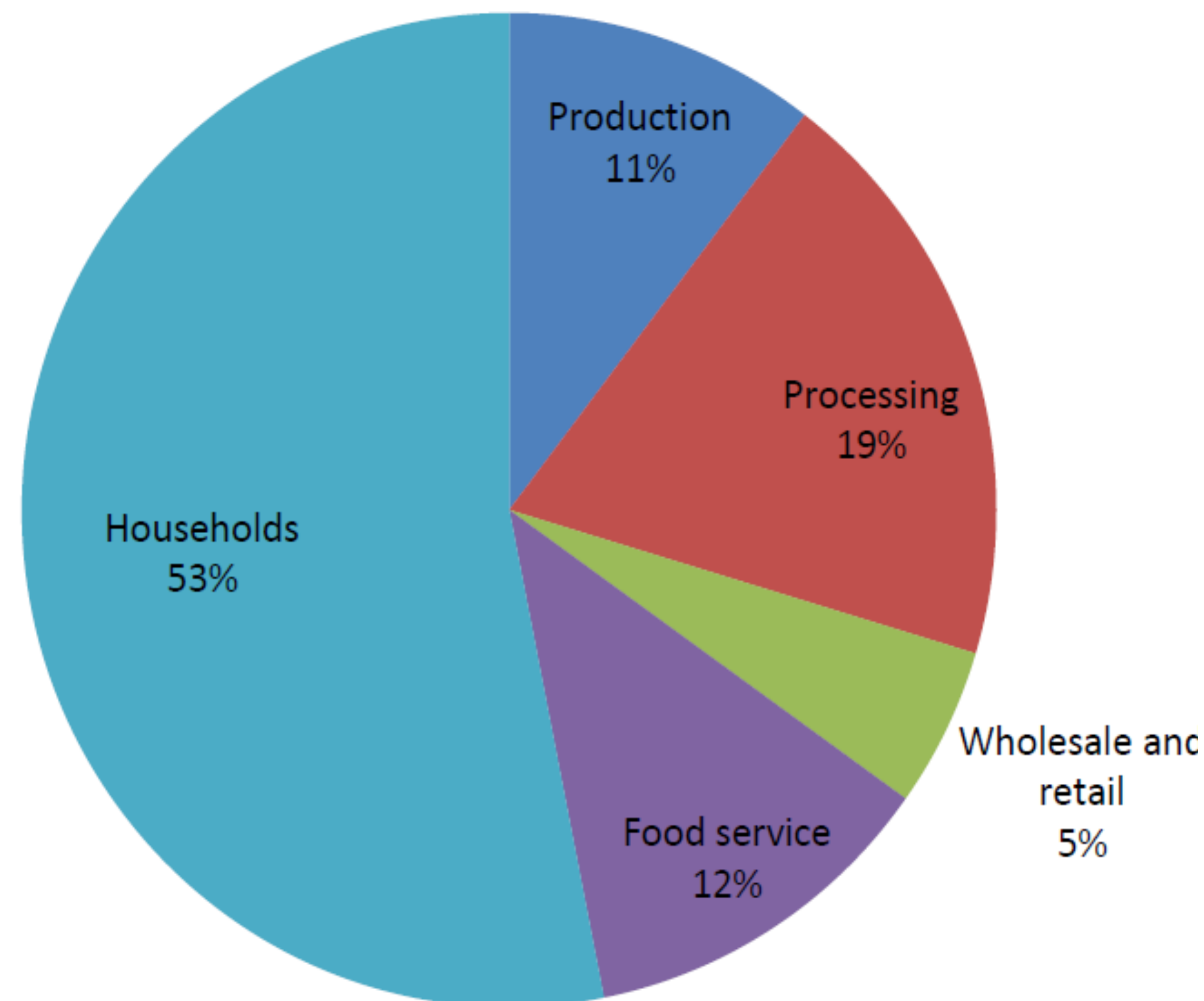


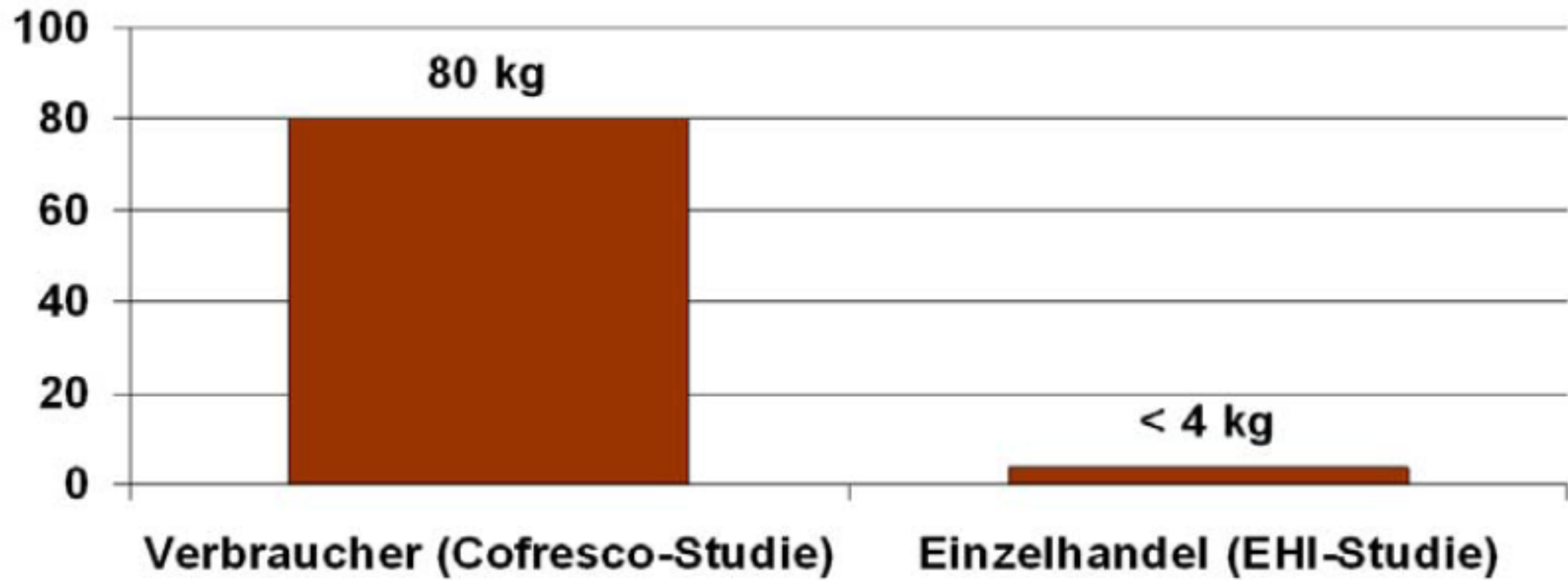


EU produces around 90 million tons of food waste yearly

Split of EU-28 food waste in 2012 by sector; includes food and inedible parts associated with food

Source: Stenmarck A. et al., 2016, p. 4.













Food waste in consumer (left) and retail (right) Sectors per capita per year (Germany)

German food retail wastes 4 kg of products per capita per year – compared to 80 kg thrown away by consumers.

Approximately 310,000 tons of food is lost yearly in the retail sector.

The annual food loss in German retail equivalents 1.2 milliard euro.

Source: EHI Study, 2011, p. 1.

	 Выращивание и сбор	 Обработка и переработка	 Транспортировка, хранение	 Реализация
Растениеводство	до 10-30%	до 10-25%	до 15%	до 30-45%
Молочное животноводство	до 10-50%	до 10-25%	до 15-35%	до 5-10%
Мясное животноводство	до 20-30%	до 1-5%	до 10-15%	до 5%
Рыболовство	до 20-30%	до 5-20%	до 10%	до 5-10%
		 <i>Средние значения</i> 		
	до 10–30% (до 45% в рыболовстве)	до 5–30% (до 50% в растениеводстве)	до 5–15% (до 30% в растениеводстве)	до 10–30%

Food waste at different stages of the food supply chain (Russia)

Crops – up to 30-45 per cent at the retail sector

Dairy farming – up to 5-10 per cent at the retail sector

Meat farming – up to 5 per cent at the retail sector

Fishing – up to 5-10 per cent at the retail sector

Source: SKOLKOVO Consumer Market Development Center, 2019. p. 31

Causes of food waste in the retail sector

- overstocking due to difficulties in forecasting the demand
- lack of incentives for higher accuracy in stock management because of take-back agreements with suppliers and the low cost of discarding food
- storage, handling, and packaging inefficiencies
- strict “appearance quality standards” from supermarkets
- common attitude shared by industrialized countries that to dispose is cheaper than to re-use
- large quantities of products and variety of brands on display in retail stores
- consumers prefer to buy food with a longer remaining shelf life
- high opportunity costs
- incorrect understanding of labelling (i.e. “best before” and “use by”)



The REWE Group (REWE, PENNY)

Measures to reduce food waste:

- Modern forecast systems that take into account, among other things, weather forecasts and holiday times.
- Automated ordering systems, which allow to ensure the exact volume of the supply that really corresponds to the demand.
- Short transportation times between stores and shops and a cool chain uninterrupted until the shelf serve to reduce the waste rates as well.
- The employees in the shops control expiry dates of the products.
- The products (e.g., fresh meat) which shelf life will expire in several days, are often sold with an up to 30 percent discount.

Metro Cash and Carry

Main reasons for food waste in the chain:

- short shelf-life of goods,
- violation of storage transportation conditions by suppliers
- incorrect purchase order
- + (Germany) labelling problem with related to the confusion between 'use by' and 'best before'.

Measures to reduce food waste:

- The software helps to calculate the correct order, based on multiple factors, including the specific store, date, day of the week etc. Moreover, German MCC stores have their own data system – to analyze why a specific amount of ordered food cannot be sold.
- Support of suppliers.



Smaller chains of “organic” food

Smaller retail chains, like *Lavkalavka* or *Eat from the Countryside*, which work directly with the farmers – online platform between producers and consumers:

- consumers are informed about the origins of the products they buy – adding value to food
- customers can their procurements in advance

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Thank you!

Institute for Agrarian Studies

Ekaterina Galaktionova, Expert

E-mail: egalaktionova@hse.ru

www.inagres.hse.ru