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Swiss Confederation

Federal Department of Home Affairs FDHA
Federal Statistical Office FSO

Swiss statistics on the costs and funding of transport

A full cost approach to measure the social
cost of transport
Alexandra Quandt, Swiss Federal Statistical Office
ITF statistical meeting, 15 March 2017, Paris



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Contents

1. Introduction
2. Methodological framework
3. Results
4. Outlook



1. Introduction

Main objectives

- Measuring the social costs of transport
- Measuring compliance with the polluter pays principle

Demands concerning the methodology

- Coherent methodology for all modes of transport
- Scientific state of the art

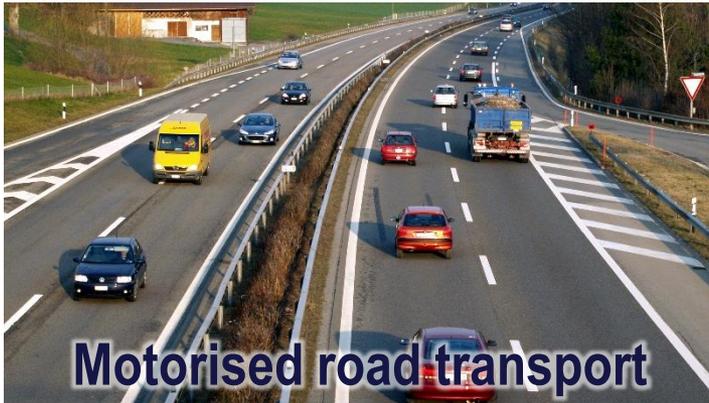
Modes of transport

- Motorised road and rail transport
- Walking & cycling
- Civil aviation
- Transport on inland waterways



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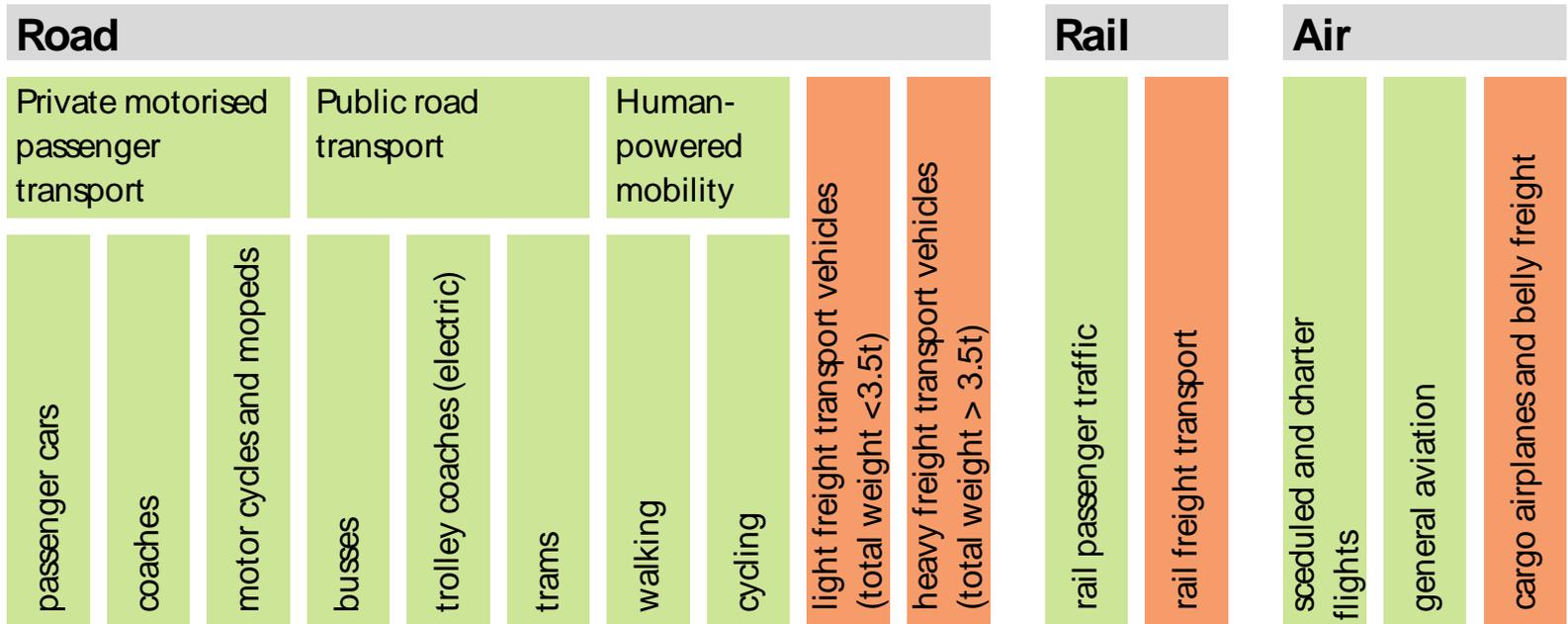
2. Transport modes





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2. Level of detail



Colour coding





2. Methodological framework

Territoriality principle

- Costs caused by transport on Swiss territory (even though the costs arise outside Switzerland, e.g. climate change)
- Exception: 'halfway principle' used for aviation; half of the costs allocated to land of departure respectively destination

Social costs

- Social costs = private costs ('self-borne costs') + external costs
- Including non-monetary costs (such as suffering/harm due to accidents)



2. Cost types



Health and environment

Accidents

Infrastructure Means of transport



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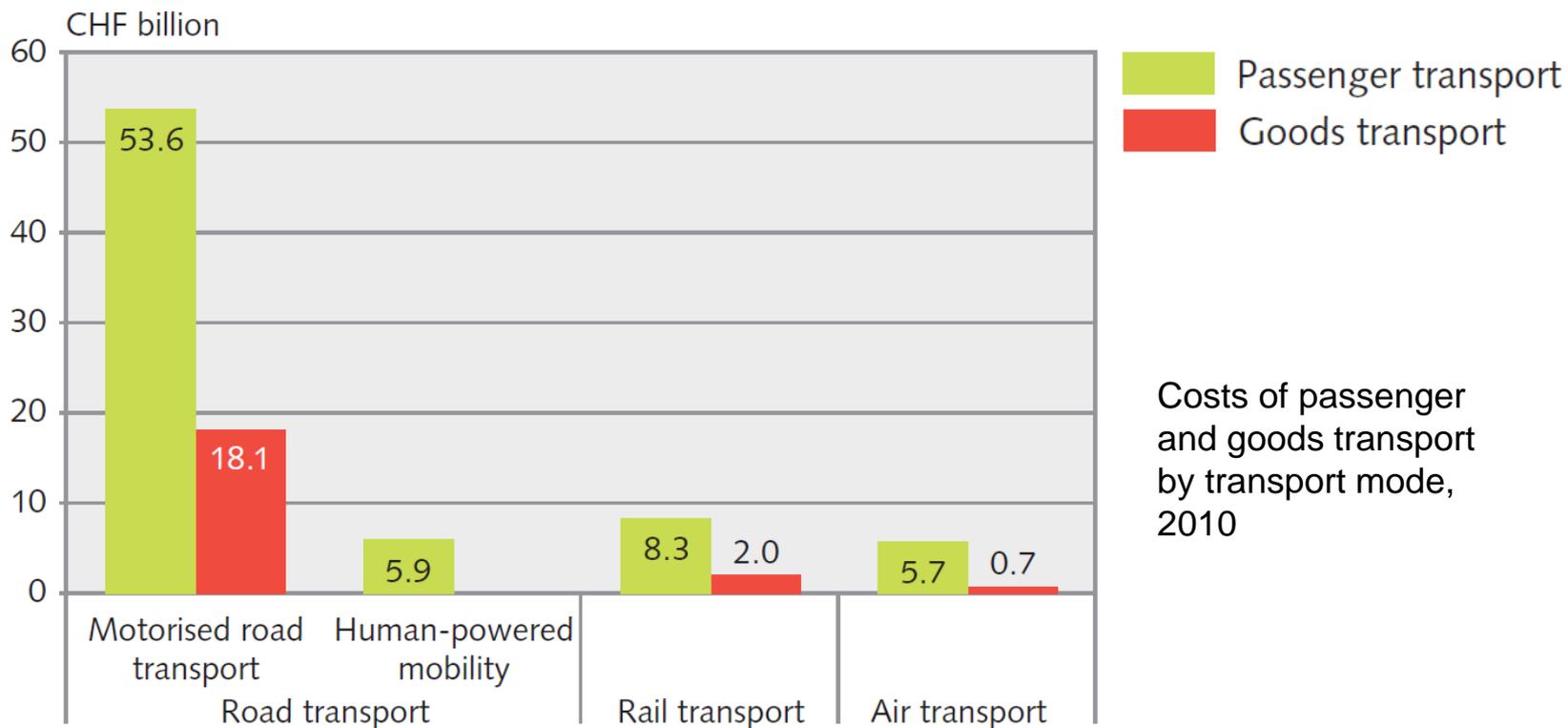
2. Data sources and methods

	Road transport			Rail transport	Air transport
	Private motorised transport	Public road transport	Human-powered mobility		
Infrastructure costs	Exhaustive survey of infrastructure costs of the public sector; allocation between vehicle types based on empirical studies of infrastructure projects			Exhaustive survey of expenses and income of railway enterprises	Partial survey of expenses and income of airlines, airports and air traffic control services
Costs for means of transport	Extrapolation based on kilometre rates of model cars, lorries, vans etc.	Exhaustive survey of expenses and income of transport enterprises	Extrapolation based on expenditures per household		
Accident costs	The model calculations of external costs required the calculation of social costs first. The social costs for accident, health and environment are taken over from the external cost calculations executed by the Swiss Federal Office for Spatial Development.				
Costs for health and environment					



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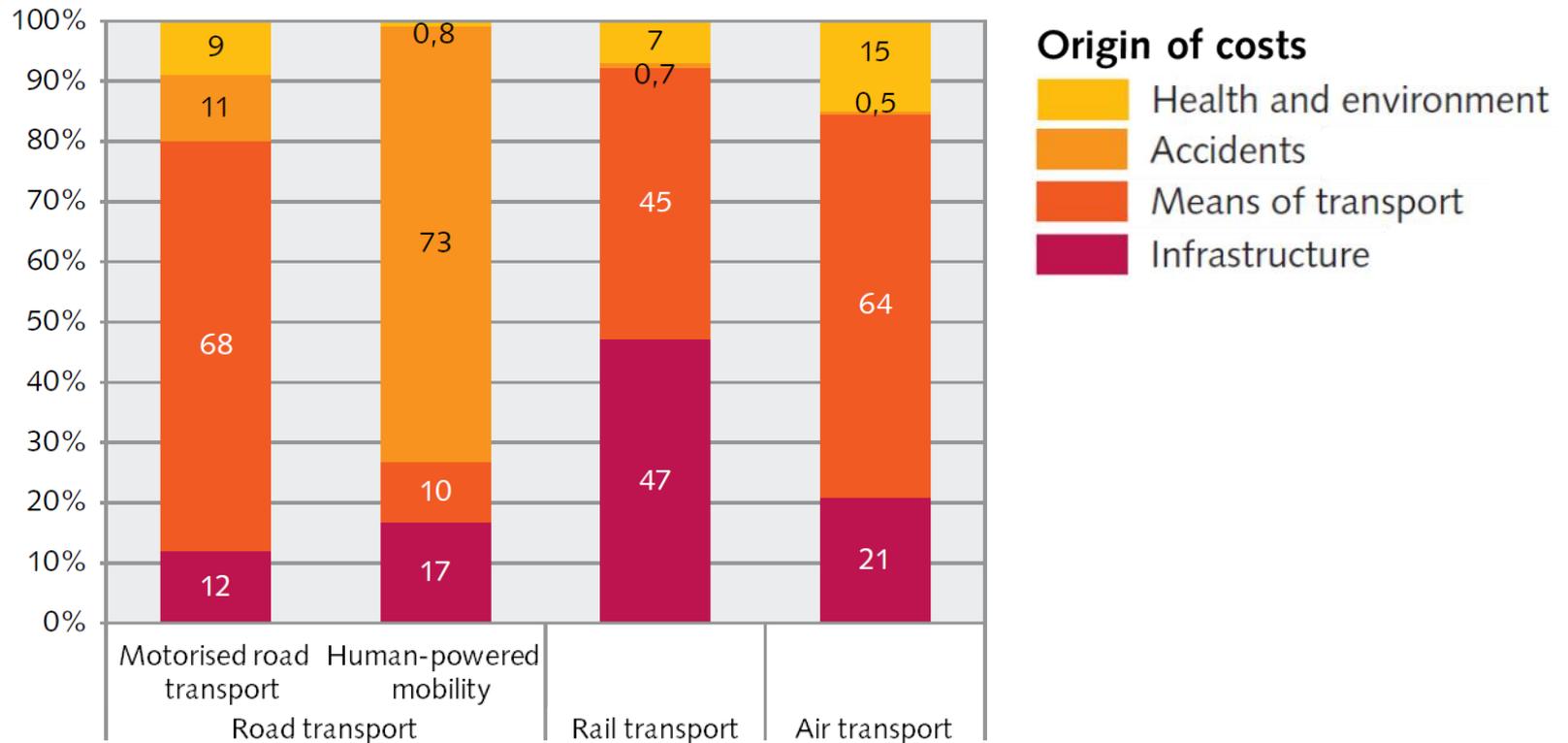
3. Results 2010





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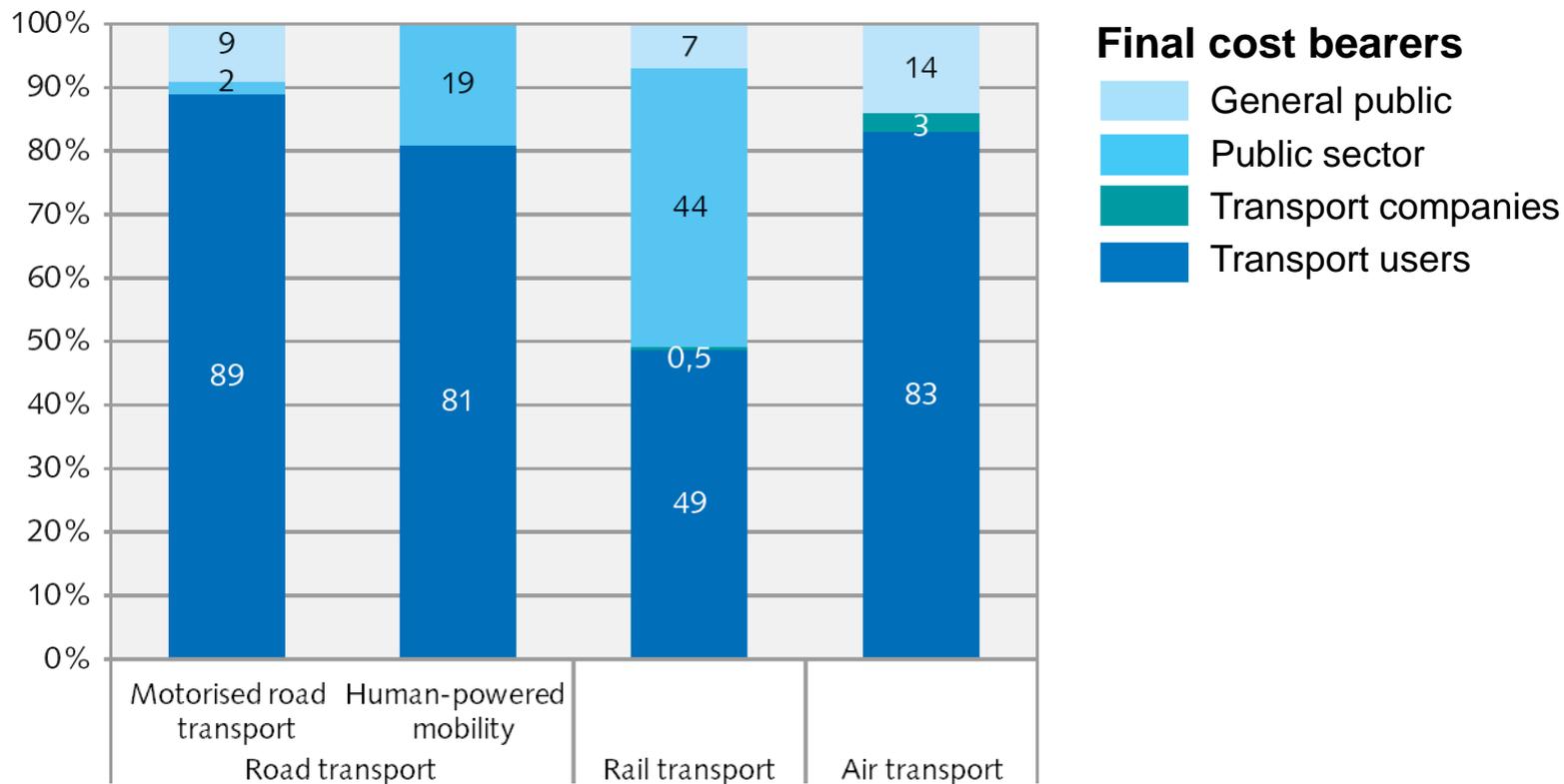
3. Results 2010, by origin of cost





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3. Results 2010, by cost funding

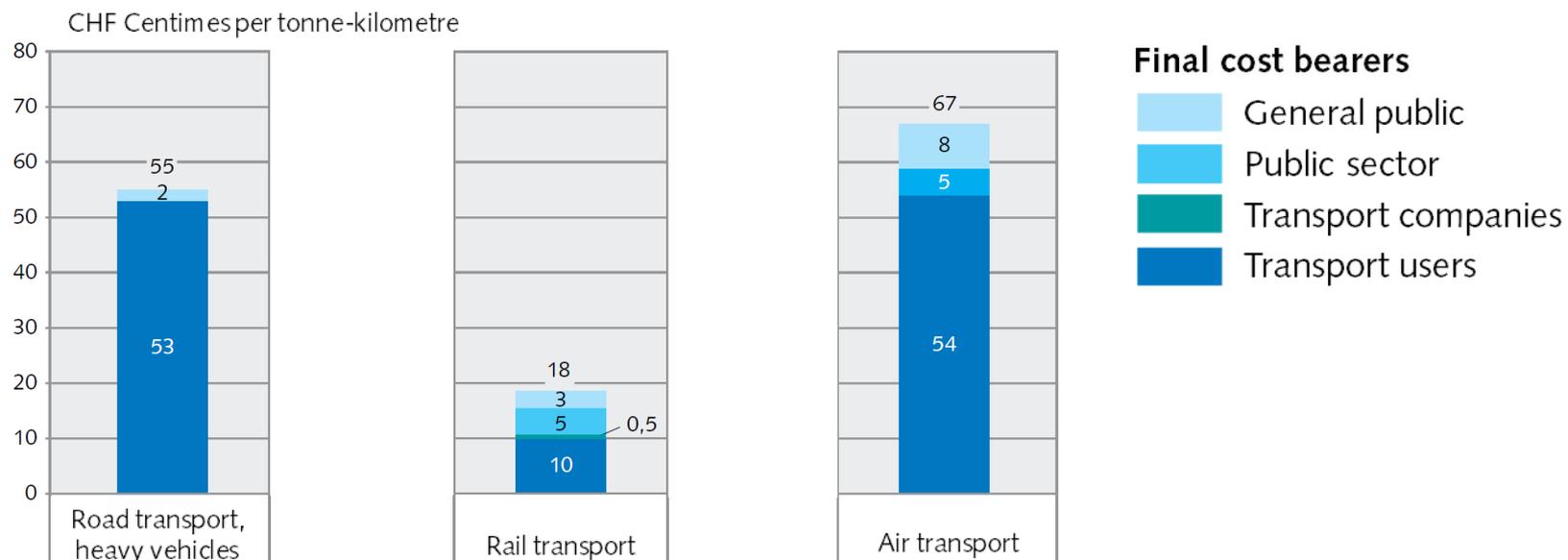


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3. Results 2010: kilometre costs





4. Outlook

	Periodicity of publications
Motorised road transport	annual
Rail transport	annual
Walking and cycling	5 years
Civil aviation	5 years
Inland navigation	5 years

Further Information

<https://www.bfs.admin.ch/bfs/en/home/statistics/mobility-transport/costs-funding.html>

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