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# A Change in Private Consumption Expenditure and its Consequences for the Economy — How Important is the Purchase of Cars?

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# **1 Aim of the study**

**Change in private consumption  
expenditure for purchase of vehicles and  
impact on**

**Automotive industries**

**Intermediate demand**

**Macroeconomic variables (GDP, total output,  
employment, income etc.)**

**No assessment or valuation of economic  
policy programmes**

## 2 The significance of vehicles

### Manufacturing – the 10 most important economic branches in 2007

Manufacturing (economic branches)	Gross Production		GVA		Employees	
	bn Euro	share in %	bn Euro	share in %	in Thsd.	share in %
WZ-34 M. of motor vehicles, trailers and semi-trailers	364.9	20.2	74.1	14.8	838	13.4
WZ-29 M. of machinery and equipment	221.6	12.3	74.2	14.8	997	16.0
WZ-24 M. of chemicals and chemical products	176.1	9.8	49.5	9.9	441	7.1
WZ-15 M. of food products and beverages	150.8	8.4	32.4	6.5	618	9.9
WZ-23 M. of coke, refined petroleum products and nuclear fuel	120.0	6.7	36.0	7.2	20	0.3
WZ-27 M. of basic metals	112.3	6.2	24.8	4.9	253	4.1
WZ-28 M. of fabricated metal products	104.5	5.8	36.0	7.2	609	9.8
WZ-31 M. of electrical machinery and apparatus n.e.c	100.5	5.6	31.4	6.2	446	7.2
WZ-25 M. of rubber and plastic products	69.9	3.9	21.1	4.2	356	5.7
WZ-32 M. of radio, television and communication equipment and apparatus	53.9	3.0	12.8	2.5	146	2.3

Source: German Federal Statistical Office and own calculations

## 2 The significance of vehicles

### The 10 most important individual consumption purposes in 2008

<b>Individual consumption by purpose (COICOP)</b>	<b>bn Euro</b>	<b>Share in %</b>
Food	132.0	9.9
Imputed rentals for housing	128.4	9.6
Actual rentals for housing	93.8	7.0
Operation of personal transport equipment	85.0	6.4
Electricity, gas and other fuels	71.0	5.3
<b>Purchase of vehicles</b>	<b>65.2</b>	<b>4.9</b>
Catering services	61.5	4.6
Clothing	58.5	4.4
Insurance	44.4	3.3
Recreational and cultural services	42.5	3.2

Source: Germand Federal Statistical Office and own calculations

## 2 The significance of vehicles

What do you think of the introduction of tolls?

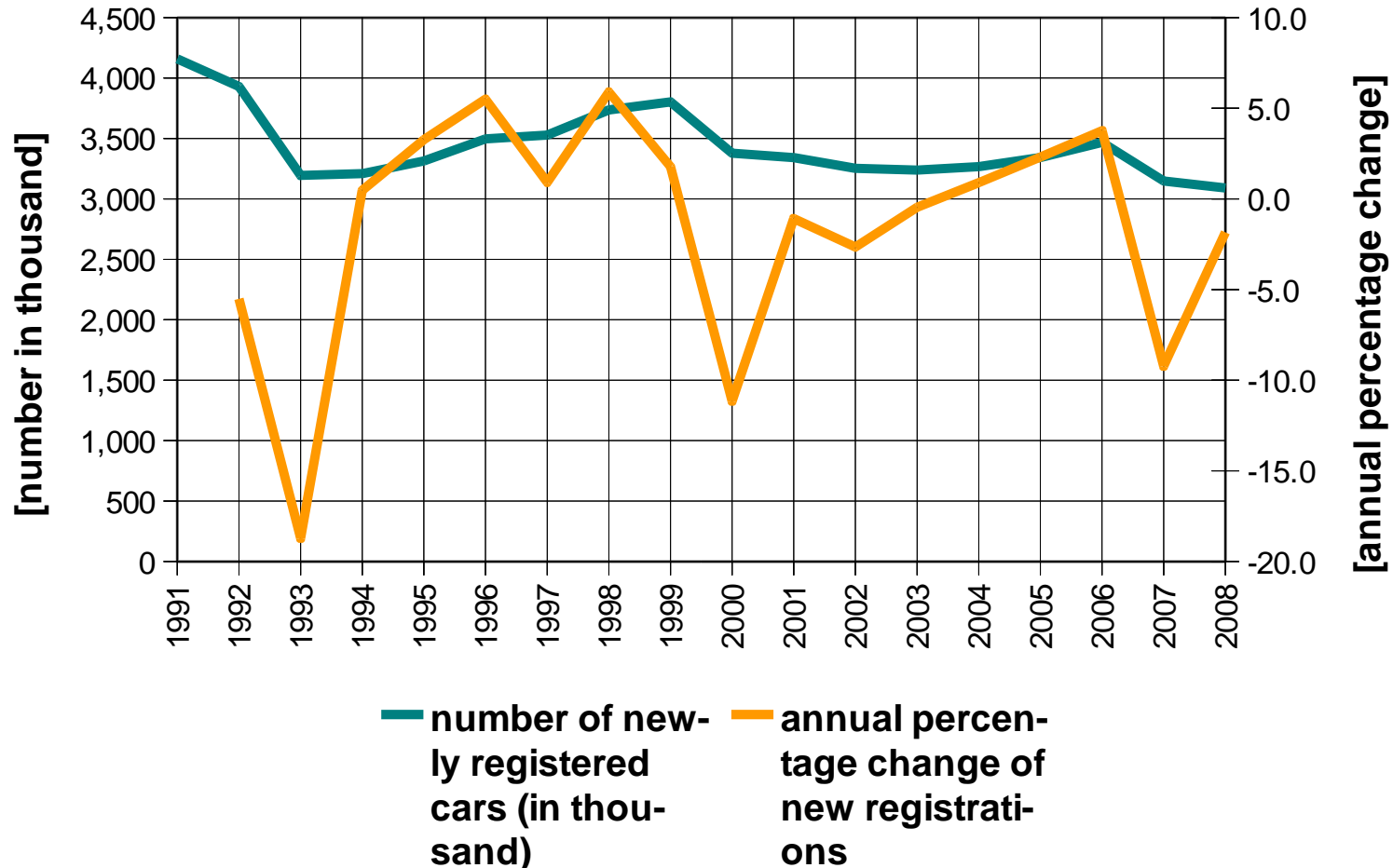


Well – in that case we probably will sell our children!

Source: Perscheid

## 2 The significance of vehicles

### Change in individual consumption?



Source: Germand Federal Statistical Office and own calculations

## 3 The model INFORGE

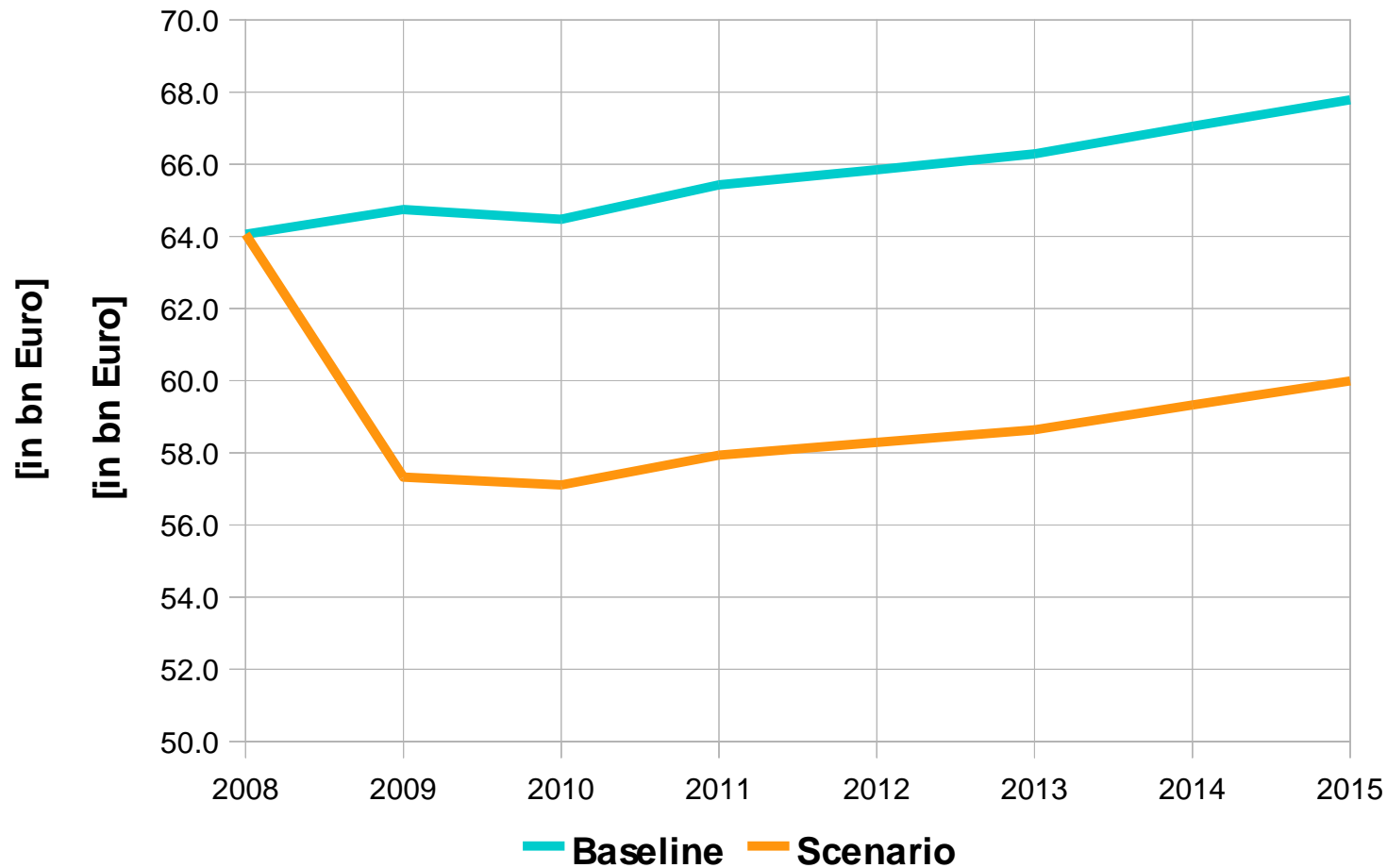
Experience in using this model for simulations and forecasting

Confirmed ability of the model to simulate even detailed scenarios (Eurostat 2008, p.527 ff)

Annually updated

## 4 Scenario

### Individual consumption expenditure for the purchase of vehicles – baseline and scenario





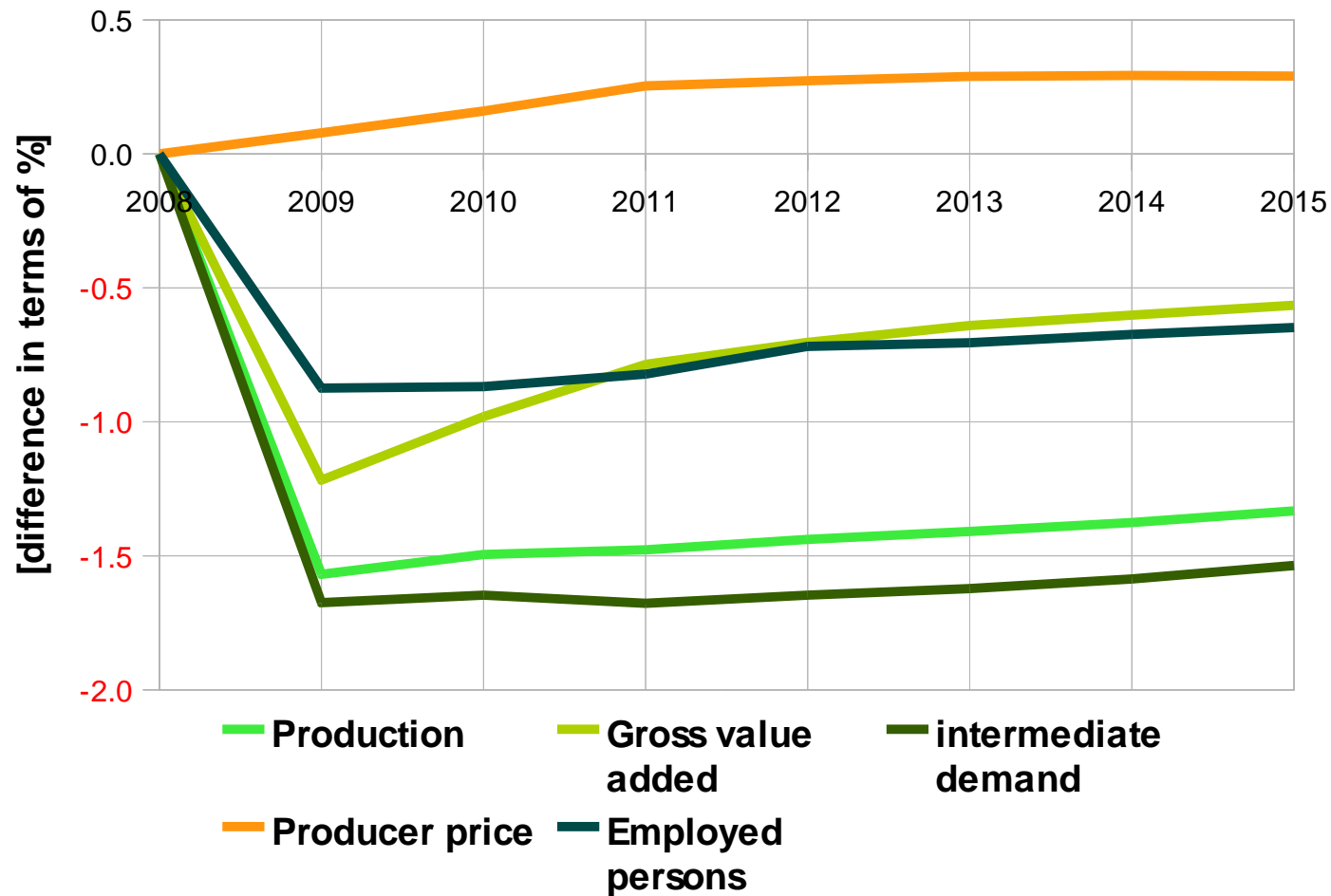
## 5 Results – overall economy

### Difference between scenario and baseline for selected macroeconomic variables

	2008	2009	2010	2011	2012	2013	2014	2015
<b>Difference in bn Euro or thsd people</b>								
Production	0.0	-1.7	-2.0	-2.7	-2.0	-2.5	-2.7	-3.2
Gross value added	0.0	1.4	1.5	1.4	1.7	1.5	1.4	1.3
intermediate demand	0.0	-3.2	-3.5	-4.0	-3.7	-4.0	-4.1	-4.5
Investment in machinery and equipment	0.0	0.1	0.5	0.4	0.4	0.4	0.2	0.3
Employed persons (thsd)	0.0	7.3	11.2	13.9	9.9	14.5	13.3	20.9
Imports	0.0	-1.4	-1.4	-1.5	-1.7	-1.5	-1.6	-1.3
<b>Gross domestic product</b>	<b>0.0</b>	<b>1.5</b>	<b>1.6</b>	<b>1.5</b>	<b>1.8</b>	<b>1.6</b>	<b>1.5</b>	<b>1.3</b>

# 5 Results – automotive industry

## Effects on automotive industry



## 5 Results – other economic branches

### Highest positive/negative deviations from the baseline regarding production

	2008	2009	2010	2011	2012	2013	2014	2015
<b>Difference in bn Euro</b>								
Real estate services	0.0	1.2	1.0	0.9	0.9	0.9	0.9	0.9
Manufacture of food products and beverages	0.0	0.5	0.5	0.5	0.5	0.5	0.5	0.4
Hotel and restaurant services	0.0	0.4	0.4	0.4	0.5	0.5	0.5	0.5
Health and social work services	0.0	0.4	0.4	0.5	0.5	0.5	0.5	0.5
Financial intermediation services	0.0	0.4	0.3	0.4	0.4	0.4	0.4	0.4
Recreational, cultural and sporting services	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Manufacture of motor vehicles, trailers and semi-trailers	0.0	-5.5	-5.4	-5.6	-5.6	-5.7	-5.7	-5.8
Retail trade services	0.0	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3
Manufacture of fabricated metal products	0.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Manufacture of electrical machinery and apparatus n.e.c.	0.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.3
Manufacture of rubber and plastic products	0.0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
Manufacture of basic metals	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
<b>Production</b>	<b>0.0</b>	<b>-1.7</b>	<b>-2.0</b>	<b>-2.7</b>	<b>-2.0</b>	<b>-2.5</b>	<b>-2.7</b>	<b>-3.2</b>

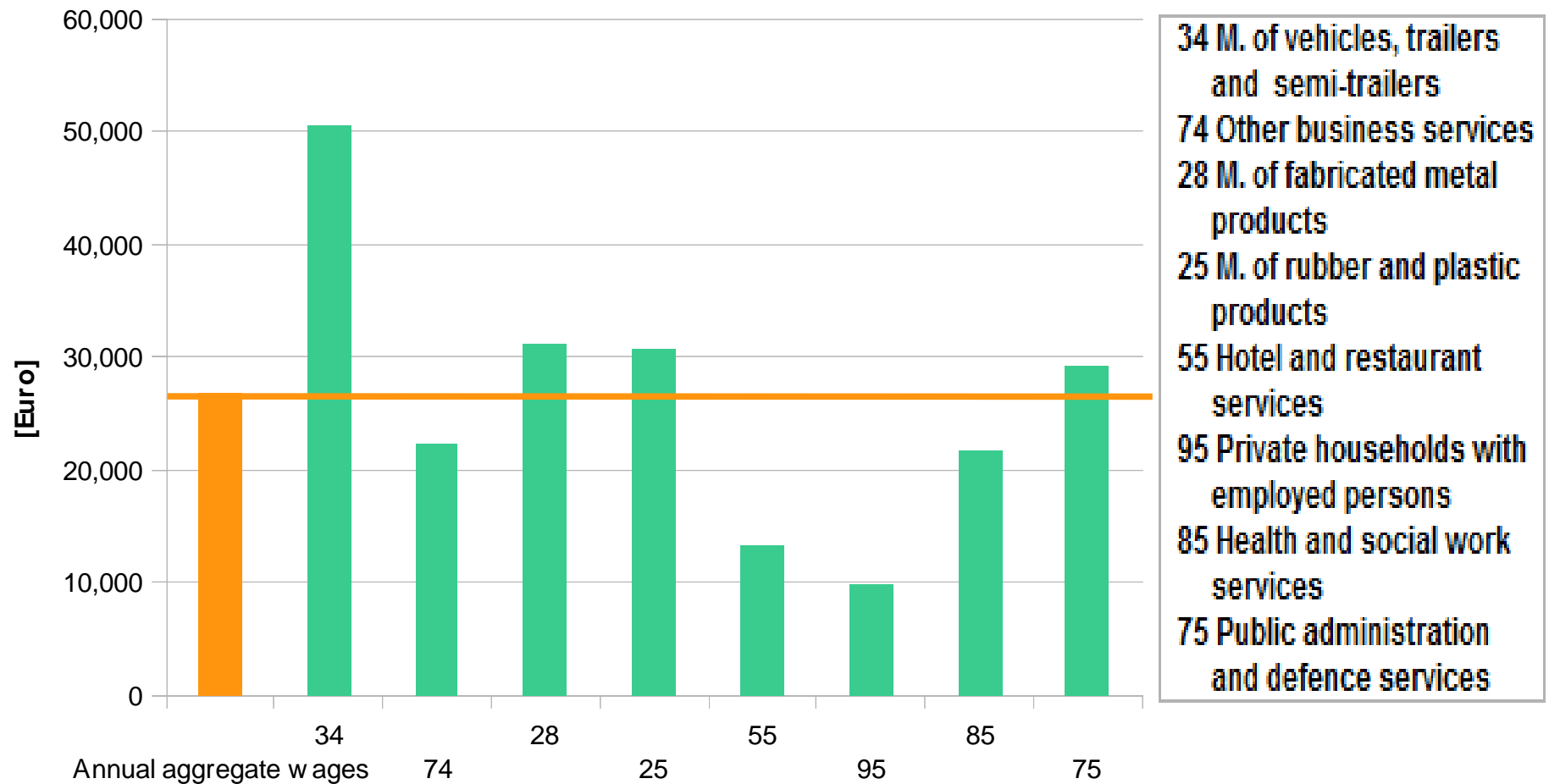
## 5 Results – employment

### Highest positive/negative deviations from the baseline regarding employment

	2008	2009	2010	2011	2012	2013	2014	2015
<b>Difference in terms of thousand persons</b>								
Hotel and restaurant services	0.0	6.9	6.9	7.1	6.5	7.4	7.4	8.4
Private households with employed persons	0.0	3.9	4.0	4.1	4.1	4.2	4.1	4.3
Health and social work services	0.0	3.2	3.8	4.5	5.0	5.4	5.4	5.6
Public administration and defence services	0.0	2.1	2.7	2.9	2.1	2.3	2.1	3.2
Financial intermediation services	0.0	1.6	1.6	1.6	1.4	1.5	1.4	1.5
Other services	0.0	1.5	1.5	1.6	1.4	1.7	1.7	2.0
Manufacture of motor vehicles, trailers and semi-trailers	0.0	-8.6	-8.6	-8.1	-7.1	-7.0	-6.7	-6.4
Retail trade services	0.0	-3.8	-3.6	-3.3	-3.5	-3.1	-3.1	-2.5
Other business services	0.0	-1.5	-1.6	-2.2	-3.4	-2.6	-3.0	-2.0
Manufacture of fabricated metal products	0.0	-0.9	-0.6	-0.5	-0.6	-0.4	-0.5	-0.3
Manufacture of rubber and plastic products	0.0	-0.7	-0.6	-0.5	-0.6	-0.5	-0.5	-0.5
Wholesale trade and commission trade services	0.0	-0.5	-0.4	-0.4	-0.3	-0.3	-0.4	-0.3
<b>Employment</b>	<b>0.0</b>	<b>7.3</b>	<b>11.2</b>	<b>13.9</b>	<b>9.9</b>	<b>14.5</b>	<b>13.3</b>	<b>20.9</b>

## 5 Results – income

### Gross salaries and wages per employed person for the year 2006



## 5 Results – income

### Deviation of aggregate wages and disposable income from the baseline

	2008	2009	2010	2011	2012	2013	2014	2015
<b>Aggregate wages</b>								
Difference in bn Euro	0.0	0.5	0.3	0.1	0.1	0.2	0.2	0.4
Difference in percent	0.00	0.05	0.02	0.01	0.01	0.02	0.01	0.03
<b>Disposable income</b>								
Difference in bn Euro	0.0	0.4	0.6	0.5	0.9	0.6	0.6	0.2
Difference in percent	0.00	0.03	0.04	0.03	0.05	0.04	0.03	0.01

## 6 Concluding Remarks

Positive and negative deviations from the baseline in terms of bn Euro and absolute numbers

Looser			Winner		
	2009	2015		2009	2015
<b>Economic sectors (bn Euro)</b>					
Manufacture of vehicles	-5.5	-5.8	Real Estate Services	1.2	0.9
<b>Macroeconomic variables (bn Euro)</b>					
Production	-1.7	-3.2	GDP	1.5	1.3
Intermediate Demand	-3.2	-4.5	Disposable income	0.4	0.2
<b>Employment (number of people)</b>					
Manufacture of vehicles	-8,640	-6,420	Hotels and restaurant services	6,910	8,360
			Overall	7,340	20,860



**Thank you very much for your attention!**

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