

REGARDS | 20

sur les gains de revenu liés à la baisse des prix du pétrole

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Oversupply and sharply falling oil prices have been seen over the last three years, with prices starting to stabilise at low levels since the beginning of 2016. From 2013 onwards households profited from falling oil prices, generating cumulated savings of around 140 mio EUR through to 2015. This amounts to (per household) 90 euro in 2013 and an estimated 330 euro in 2015. Comparing aggregate savings in 2015 with total household consumption, the gain amounts to 0.5% of disposable income.

Corporations and firms gained about 250 mio EUR since 2013. In 2015, this amounts to about 0.2% of total value added or 0.1% of total output. Some industries profit more than others: savings are biggest, in absolute terms, for the transport sector (about half of the total). However, taking into account that the main contribution to GDP comes from the financial sector, which benefits relatively little from falling oil prices, the overall conclusion is one of little impact on overall profitability from a macroeconomic point of view.

Table 1 : Gains over time by actors

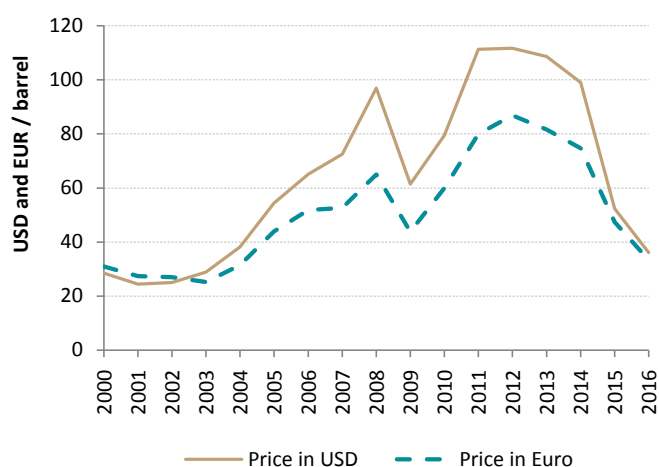
Actor	2013	2014	2015
Unit: Mio EUR			
Households	19.6	39.2	77.7
Firms	17.1	113.2	118.0

Source : STATEC

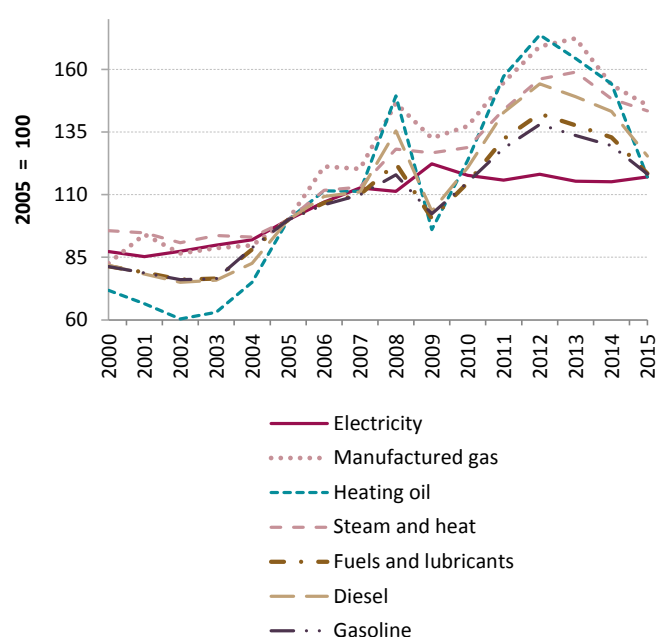
Oil prices declined sharply from 2012

From the year 2000 up to the financial crisis in 2008, prices for crude oil tripled to around 133 USD in July 2008 before dropping to 50 USD in April 2009. From that point, it took only 2 years to exceed the 100 USD threshold again. After stabilising at high levels in 2011, oil prices in USD and euro terms began to fall from 2012 onwards, with a significant drop in 2014 and 2015. At the time this study was elaborated, oil prices stabilised at a low level of around 35 USD.

Figure 1 : Evolution of crude oil prices (Brent North Sea), 2016 estimated



Source : STATEC

Figure 2 : Evolution of energy prices for consumers

Source : STATEC

The aim of this Regard¹ is to quantify the financial gains of households respectively the cost savings for the industry and service sectors caused by falling oil/energy prices². The examined sectors are households, via final consumption and corporations and public sector, via intermediate consumption³.

Sectors contributing most to Luxembourg's GDP are benefitting very little from sinking oil prices

Over the last five years, the shares of different forms of energy (at current prices) in household final consumption were relatively constant : 2% for liquid fuel, around 1.4% for electricity and 1.2% for gas. Steam only plays a subordinate role. The fact that the share of, for example, heating oil is relatively constant since the price drop in 2009 and that it remained constant despite the price increase between 2009 and 2013, could indicate that rising prices lead to efforts to reduce physical consumption to keep the share of total expenditures for energy constant.

On average the share of energy in total intermediate consumption (IC) at current prices is relatively low but constant at around 1.5%. The shares of gas and fuel are continuously decreasing since 2008. Steam and heating oil are relatively stable at a low level and electricity shows only a slight fall.

Figure 3 displays the share of energy in intermediate consumption of selected sectors. One can see that, except in the utility and transport sector, the shares of expenses for energy are less than 10%, being two to three percent on average⁴.

¹ Further details regarding this study, please refer to STATEC, Note de Conjoncture 1-2016, Mai 2016, pp. 74-81.

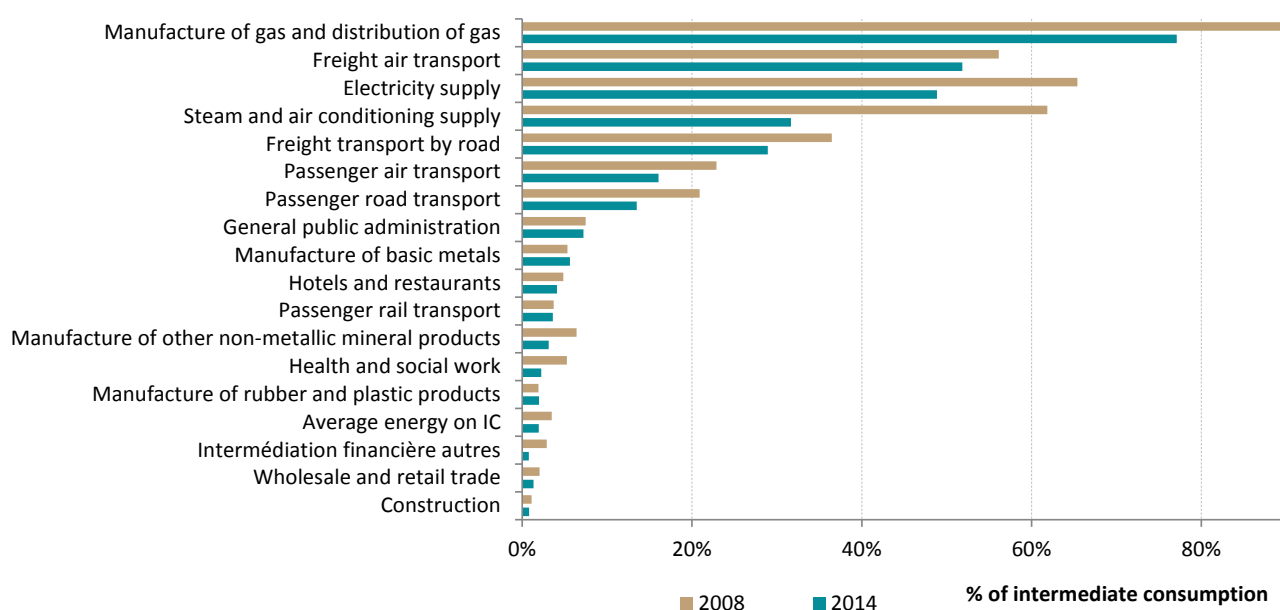
² Income gains – captured for households (HH) via cost reductions in final consumption and for industries through reductions in intermediate consumption (IC) – are defined as the difference between what a HH or industry would have spent if the prices of the previous year (PYP) still applied (given the amount of energy effectively consumed in that year) and their effective expenditures given current prices (CP). For example, the income gain for electricity (Electr) is calculated:

$$\text{Incomegain}_{\text{Electr}}^{\text{HH}} = \text{Expenses}_{\text{Electr}}^{\text{HH PYP}} - \text{Expenses}_{\text{Electr}}^{\text{HH CP}}$$

The study neglects potential changes in consumer behaviour which occur when lower energy prices would lead to a change in consumption in real terms (cubic metres, litres, kilowatt hours).

³ The study considers annual expenditure at current prices (CP) and at previous year prices (PYP) from 2000 to 2015. The data for 2015 is still preliminary. In order to be able to estimate the consumption by sector for 2015, it was assumed that the input (consumption) and output structure (production) did not change from 2014 to 2015.

⁴ Intermediate consumption does not include value added tax (VAT); household consumption is considered as final consumption of residents on home territory and abroad including VAT; the output (production) is measured at basic prices.

Figure 3 : Share of total energy in intermediate consumption in 2008 and 2014 by selected sectors

Source : STATEC

Relating this to total output or value added of industries and services, it becomes clear that the sectors contributing most to Luxembourg's GDP are benefitting very little from sinking oil prices. For example financial and insurance activities contributed to more than one quarter of value added in Luxembourg in 2014 while in these sectors only three percent of intermediate consumption was energy related. On the other hand, all transport sectors together contribute only around 3.5 percent to Luxembourg's value added but they profit the most from falling oil prices. There are sectors like manufacturing of gas and its distribution which theoretically benefit a lot as well. However, in reality, via sinking consumer prices, they hand a share of the gains to their clients in the industry and private sector, albeit with a delay.

The gains for households through 2015 totalled 140 million EUR

The first gains⁵ for households through sinking fuel and electricity prices appeared in 2013. Manufactured gas and steam showed first gains only in 2014. The gains in 2013

totalled 19.6 million euro which is around 36 euro per habitant or 89 euro per household. In 2014 there was a doubling of that saving and, according to the first estimates for 2015, it would have doubled to 78 million, mainly driven by savings for fuel and heating oil (Table 2).

Table 2 : Income gains for households

Energy items	2009	2012	2013	2014	2015
Unit: Mio EUR					
Liquid fuels (incl. heating oil)	47.3	-14.9	8.8	9.2	43.7
Fuel	43.9	-20.3	9.4	9.7	28.7
Electricity	-14.8	-3.4	4.5	0.4	-1.8
Manufactured gas	11.5	-12.8	-2.9	18.8	5.2
Steam and heat	0.1	-1.1	-0.3	1.1	1.9
Total gains	87.9	-52.5	19.6	39.2	77.7
Population (in 1000)	493.5	524.9	537.0	549.7	563.0
Number of households (in 1000)	199.6	214.8	220.7	226.9	233.3
Household disposable income	61 008	61 656	64 404	63 480	65 263
Income gain per resident (EUR)	178	-100	36	71	138
Income gain per household (EUR)	440	-245	89	173	333

Source : STATEC

⁵ Cost reductions (expressed in million euro) for industry or service sectors and savings for households are defined as current year consumption (in physical units: litre, kilowatt hour, cubic metre) at previous year's prices. National accounts produce data series at previous year's prices (PYP) which are available for most datasets even if they are not published.

Table 3 : Savings on intermediate consumption for all industries

Energy items	2009	2012	2013	2014	2015
Unit: Mio EUR					
Natural gas	23.2	-38.9	-14.1	29.1	1.9
Liquid fuels (incl. heating oil)	18.8	-6.1	4.9	0.5	3.7
Fuel	137.3	-74.3	36.8	35.8	82.2
Electricity	-3.8	-10.6	6.8	19.9	12.4
Manufactured gas	38.7	-37.9	-16.5	22.4	14.2
Steam and heat	3.9	-3.8	-0.8	5.5	3.6
Total savings	218.1	-171.6	17.1	113.2	118.0
Output	98 959	130 505	142 435	157 855	176 717
Value added	33 331	39 977	42 599	44 571	48 852
Intermediate consumption excl.	65 628	90 528	99 836	113 285	127 865
Savings as share on :	in %				
Output	0.2	-0.1	0.0	0.1	0.1
Value added	0.7	-0.4	0.0	0.3	0.2
Intermediate consumption	0.3	-0.2	0.0	0.1	0.1

Source : STATEC

Comparing current gains to the ones occurred in 2009 where households achieved savings of 87.9 million euro, the main difference is that the drop in prices from 2013 onwards is much slower but more prolonged. That is why total savings since 2013 exceed the gains for 2009 by nearly 50 million euro.

Instead of focussing on average households, gains can be assigned to only those households effectively heating with oil. Each of these households saved around 110 euro in 2013 respectively 2014, and 530 euro⁶ in 2015. Assuming the price for heating oil remains below 40 cents per litre in 2016, it could generate additional savings of around 300 euro compared to the year before. Cumulative gains would add up to around 1 050 euro over the last 4 years for households with an average consumption of around 2 500 litres per year.

Corporations and firms gained about 250 mio EUR since 2013

Concerning intermediate consumption of industry and service sectors (Table 3), the first cost reductions via sinking fuel and electricity prices occurred in 2013. In 2014, the savings increased dramatically, by more than six, compared with the previous year. This strong increase comes from savings in natural gas (29 million euro), manufactured gas (22 million) and electricity (20 million). In the preliminary data for 2015, a slight growth in savings to 118 million euro can be observed which is mainly caused by sinking fuel prices. Compared with savings of 218 million in 2009, the sum of savings over the past 3 years is only 30 million euro higher. The importance of these savings is fairly insignificant, as according to their share in output, value added or intermediate consumption never exceeded more than half of a percent between 2013 and 2015.

However the composition of the Luxembourgish industry and service sector is very heterogeneous and several sectors profit more from falling energy prices than others. In the original study in our Note de Conjoncture⁷, further details including a sectoral breakdown has been provided.

⁷ STATEC, Note de Conjoncture 1-2016, Mai 2016, pp. 74-81

⁶ Always compared to the previous year.