



# **WP1: Synthesis report**

*Ex post evaluation of Cohesion Policy programmes  
2007-2013, focusing on the European Regional  
Development Fund (ERDF) and the Cohesion Fund (CF)*

## **Task 3 Country Report Luxembourg**

**September 2016**



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**WP1: Synthesis report  
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**Task 3 Country Report  
Luxembourg**

September 2016

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## List of abbreviations

AIR	Annual Implementation Report		
ERDF	European Regional Development Fund		
EU	European Union		
GDP	Gross Domestic Product		
GDFCF	Gross Domestic Fixed Capital Formation		
MA	Managing Authority		
NSRF	National Strategic Reference Framework		
NUTS	Nomenclature of Territorial Units for Statistics		
OP	Operational Programme		
R&D	Research and Development		
RTD	Research and Technological Development		
SME	Small and Medium Enterprise		
TEN-T	Trans-European	Transport	Network



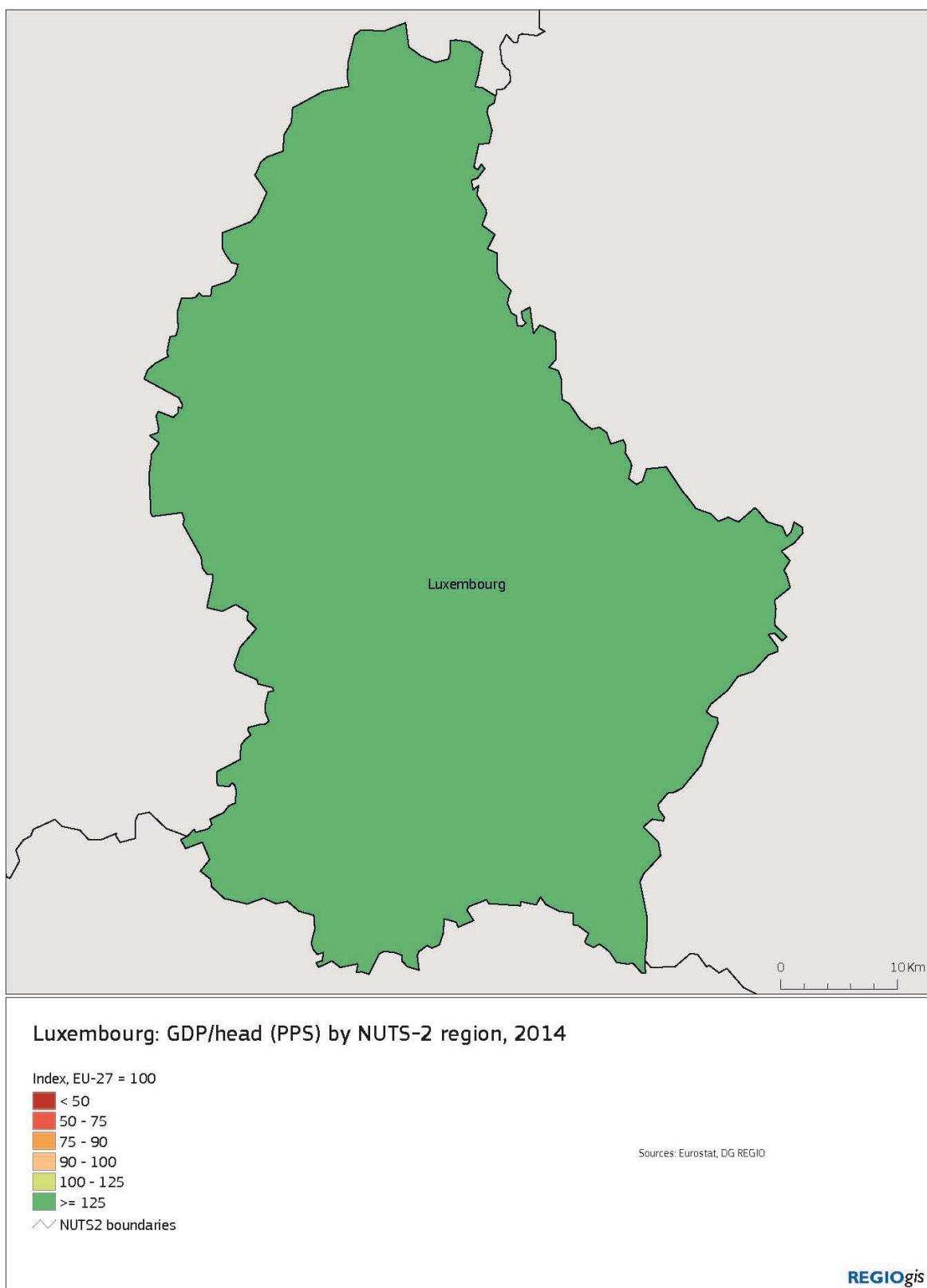
## List of programmes and link to beneficiaries of ERDF and Cohesion Fund support

CCI	Name of OP	Link beneficiaries	Number of projects
2007LU162PO001	OP Compétitivité régionale et Emploi 2007-2013	<a href="http://www.fonds-europeens.public.lu/catalogue-publications/cre/cre-rapports/FEDER-rapports/rapp-annuel_14.pdf">http://www.fonds-europeens.public.lu/catalogue-publications/cre/cre-rapports/FEDER-rapports/rapp-annuel_14.pdf</a>	67

Note: The web links above are to websites of the respective Managing Authorities who, under the rules governing the 2007-2013 programmes were required to publish the names of the beneficiaries of the funding allocated. The number of projects supported has been estimated on the basis of the information published on the website at the time when the data were downloaded. In the meantime the data concerned may have been updated. It may also be that the data have been moved to another part of the website, in which case the link may not work. If this is the case, those who wish to locate the data concerned will need to go to main OP website, as indicated by the beginning part of the link and search from there.



Map 1 Luxembourg and NUTS 2 regions, GDP/head (PPS), 2014





## **Preliminary note**

*The purpose of the country reports is to provide for each Member State a short guide to the findings of the ex post evaluation of Cohesion policy programmes 2007-2013 undertaken by DG Regional and Urban Policy and an overview of the context in which the programmes were carried out. It is based on information produced by Task 1 and Task 2 of WP1 and on the country specific findings from the various WPs that form the ex post evaluation. These are listed below with an indication in brackets of the case studies carried out in the Member State concerned.*

*WP0 – Data*

*WP1 – Synthesis*

*WP2 – SMEs, innovation and ICT*

*WP3 – Venture capital, loan funds*

*WP4 – Large enterprises*

*WP5 – Transport*

*WP6 – Environment*

*WP8 – Energy efficiency*

*WP9 – Culture and tourism*

*WP10 – Urban development and social infrastructure*

*WP11<sup>1</sup> – European Territorial Cooperation*

*WP12 – Delivery system*

*WP13 – Geography of expenditure*

*WP14 – Impact modelling*

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<sup>1</sup> The findings from WP11 – European Territorial Cooperation are summarised in a separate report as part of Task 3 of WP1.





## Executive summary

In part because of the exceptional weight of the financial sector in Luxembourg, the economic and financial crisis caused a large reduction in GDP in 2008-2009. However the economy recovered quickly, with growth of 4% a year in 2009-2011. In the next two year, growth slowed down but picked up again in 2014 and 2015 to well above the EU average. The employment rate remained slightly above 70% of population aged 20-64 over the period, though this was not enough to absorb the increase in the participation rate and unemployment edged up continuously from 2008 on to reach 7% of the labour force in 2015, which, though lower than in most other Member States, is historically high for Luxembourg.

The measures taken to counter the effects of the crisis together with the downturn in economic activity itself led to budget moving into deficit in 2009, though from 2011 on, partly as a result of renewed growth though also because of fiscal consolidation measures, it moved back into surplus again.

Luxembourg is a single NUTS 2 region with GDP per head of nearly 2.5 times the EU average, though it is pushed up by the distorting effects of large-scale inward commuting from neighbouring countries. ERDF funding was allocated to one single OP under the Competitiveness and Employment Objective.

ERDF funding, of EUR 25 million, was concentrated on innovation and RTD and to a lesser extent on the environment and energy. The implementation rate, as reflected in payments of the ERDF from the EU relative to the funding available, was relatively stable over the period and all the funding was spent by the end of 2015.

The measures co-financed led directly to the creation of 297 jobs, 118 of them in research. Support was provided to 22 RTD projects and 12 projects to assist cooperation between SMEs and research centres.

The investment supported by the Structural Funds and regional development policy is estimated to have a positive effect on the economy, even allowing for the contribution made by Luxembourg to the financing of the two. In particular, GDP in 2023 is estimated to be 0.1% higher than it would be in the absence of the additional investment concerned.



## 1. The policy context and background

### 1.1. Macroeconomic situation

The strong expansion of the banking sector over the past 30 years is the main driver of economic growth in Luxembourg. Financial and banking services account for a third of the value added of the economy. Given this, it is to be expected that the financial crisis would have affected the economy severely. In the event, GDP declined by 3% a year over the 2007-2009 period (Table 1). In order to counter the recession, the *Programme Conjoncturel* was initiated in 2009 as part of the European Recovery Plan with a total cost of EUR 1.2 billion (3% of Luxembourg GDP). Partly as a result, GDP increased by 4% in 2009-2011. Growth slowed down over the next two years but rose again to over 4% a year in 2014-2015, over double the EU28 average.

Despite the recession in 2008-2009, the employment rate remained at around 70% of the population aged 20-64. It remained around this level throughout the period irrespective of fluctuations in the growth rate. It was, however, not sufficient to prevent unemployment from increasing to almost 6% by 2013 and nearly 7% by 2015 as the jobs created failed to keep pace with the rise in the rate of participation in the labour force. Although the rate was lower during the period than in most other Member States, it was significantly higher than the historical norm for the country.

**Table 1 GDP growth, employment and unemployment, Luxembourg and the EU, 2000- 2015**

	2000-07	2007-09	2009-11	2011-13	2013-2014	2014-15
<b>GDP growth</b>	<i>(Annual average % pa)</i>					
Luxembourg	4.0	-3.1	4.1	1.7	4.1	4.7
EU average	2.3	-2.0	1.9	-0.1	1.4	1.9
	2000	2007	2009	2011	2013	2015
<b>Employment rate (% 20-64)</b>						
Luxembourg	67.5	69.6	70.4	70.1	71.1	70.9
EU average	66.5	69.8	68.9	68.6	68.4	70.1
<b>Unemployment rate (% lab force)</b>						
Luxembourg	2.3	4.1	5.1	4.9	5.8	6.7
EU average	9.2	7.1	8.9	9.6	10.8	9.3

Source: Eurostat, National accounts and Labour Force Survey

The measures taken to combat the effects of the recession, together with the effects on public finances of the reduction in economic activity, pushed the budget into deficit in 2009, though this was short-lived as the recovery and the fiscal consolidation measures taken resulted in a return to surplus by 2011 (Table 2). As part of the measures concerned, public investment was reduced in relation to GDP, though it remained well above the EU average and in 2015 was much the same as in the pre-crisis period.

**Table 2 Government budget balance, accumulated debt and investment, Luxembourg and the EU, 2000-2015**

	2000	2007	2009	2011	2013	2015
<b>Public sector balance</b>	<i>(% GDP)</i>					
Luxembourg	5.9	4.2	-0.7	0.5	0.8	1.2
EU average	0.0	-0.9	-6.7	-4.5	-3.3	-2.4
<b>Public sector debt</b>						
Luxembourg	6.5	7.8	16.0	19.1	23.3	21.4
EU average	60.6	57.9	73.1	81.1	85.5	85.2
<b>General Govt investment</b>						
Luxembourg	3.8	3.6	4.5	4.2	3.5	3.8
EU average	2.9	3.2	3.7	3.3	3.0	2.9

Source: Eurostat Government financial accounts

### 1.2. Regional Disparities

Luxembourg is a single NUTS 2 region with GDP per head in PPS terms around 2.5 times higher than the EU average, though this is pushed up considerable by the large scale of inward commuting from surrounding countries (see Country folder for Luxembourg). Although the country is small, there are regional differences between



the city where financial services, internal and public institutions and research centres are concentrated, the southern area, where mining and the steel industry were located and where manufacturing remains important and the northern and eastern areas which are dependent on agriculture and tourism.

## 2. Main features of Cohesion Policy implementation

### 2.1. Nature and scale of Cohesion Policy in the country

The National Strategic Reference Framework (NSRF) for the 2007-13 period identified three investment priorities: (1) promoting the setup of SMEs and re-developing urban areas that have undergone economic change; (2) improving knowledge and innovation; and (3) creating more and better jobs. The ERDF supported the national policy agenda for regional development.

Luxembourg received EUR 25 million from the ERDF under the Competitiveness and Employment Objective, equivalent to 0.2% of Government capital expenditure a year over the period 2007-2013 or EUR 7.2 per head of population, less than half the average in Competitiveness regions as a whole in the EU15. Funding was allocated to a single OP.

**Table 3 ERDF and national co-financing for the 2007-2013 period in Luxembourg, initial (2007) and last (April 2016)**

	2007				2016			
	EU funding	National public funding	National private funding	Total	EU funding	National public funding	National private funding	Total
EUR million								
Competitiveness	25.2	42.9	17.0	85.1	25.2	42.9	17.0	85.1
<i>Change, 2007-2014</i>								
Competitiveness	-	-	-	-	-	-	-	-
% GDP	0.01	0.02	0.01	0.03	0.01	0.02	0.01	0.03
% Govt. capital expend	0.2	0.3	0.1	0.6	0.2	0.3	0.1	0.6
Per head (EUR) pa in Competitiveness	7.2	12.2	4.8	24.2	7.2	12.2	4.8	24.2
<b>EU15</b>								
% GDP	0.13	0.09	0.01	0.24	0.13	0.06	0.01	0.21
% Govt. capital expend	3.1	2.0	0.3	5.5	3.1	1.4	0.3	4.8
Per head (EUR) pa in Competitiveness	16.1	15.0	3.1	34.1	15.9	12.6	3.2	31.8

*Note: EU funding relates to decided amounts as agreed in 2007 and as at 14 April 2016. The figures for % GDP and % Govt. capital expenditure relate to funding for the period as % of GDP and Govt. capital expenditure aggregated over the years 2007-2013. Govt. capital expend is the sum of General Government gross fixed capital formation and capital transfers. The EU15 figures are the total for the EU15 countries for comparison.*

*Source: DG Regional and Urban Policy, Inforegio database and Eurostat, national accounts and Government statistics*

### 2.2. Division of funding between policy areas and changes over the period

Most of the ERDF for the period, almost two-thirds of the available amount, went to support of innovation and RTD. The remaining funding went largely to ICT, the environment and energy. The limited amount of resources, therefore, was concentrated on a small number of policy areas (Table 4)<sup>2</sup>.

<sup>2</sup> The 17 categories shown in the table are aggregations of the more detailed 87 categories into which expenditure was divided in the period for reporting purposes.


**Table 4 Division of financial resources in Luxembourg for 2007-2013 by category, initial (2007) and last (April 2016) and shift between categories**

Category	EUR million					% Total	
	2007	2016	Added	Deducted	Net shift	2007	2016
1.Innovation & RTD	15.7	15.7	-	-	-	62.0	62.0
2.Entrepreneurship	0.5	0.5	-	-	-	2.0	2.0
3.Other investment in enterprises	-	-	-	-	-	-	-
4.ICT for citizens & business	1.3	1.3	-	-	-	5.0	5.0
5.Environment	3.8	3.8	-	-	-	15.0	15.0
6.Energy	2.3	2.3	-	-	-	9.0	9.0
7.Broadband	-	-	-	-	-	-	-
8.Road	-	-	-	-	-	-	-
9.Rail	-	-	-	-	-	-	-
10.Other transport	-	-	-	-	-	-	-
11.Human capital	-	-	-	-	-	-	-
12.Labour market	-	-	-	-	-	-	-
13.Culture & social infrastructure	-	-	-	-	-	-	-
14.Social Inclusion	-	-	-	-	-	-	-
15.Territorial Dimension	0.8	0.8	-	-	-	3.0	3.0
16.Capacity Building	-	-	-	-	-	-	-
17.Technical Assistance	1.0	1.0	-	-	-	4.0	4.0
<b>Total</b>	<b>25.2</b>	<b>25.2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100.0</b>	<b>100.0</b>

Note: 'Added' is the sum of additions made to resources in OPs where there was a net increase in the funding going to the category. 'Deducted' is the sum of deductions made to resources in OPs where there was a net reduction in funding. 'Social inclusion' includes measures to assist disadvantaged groups and migrants. 'Territorial dimension' includes support for urban and rural regeneration and tourist services and measures to compensate for climate conditions.

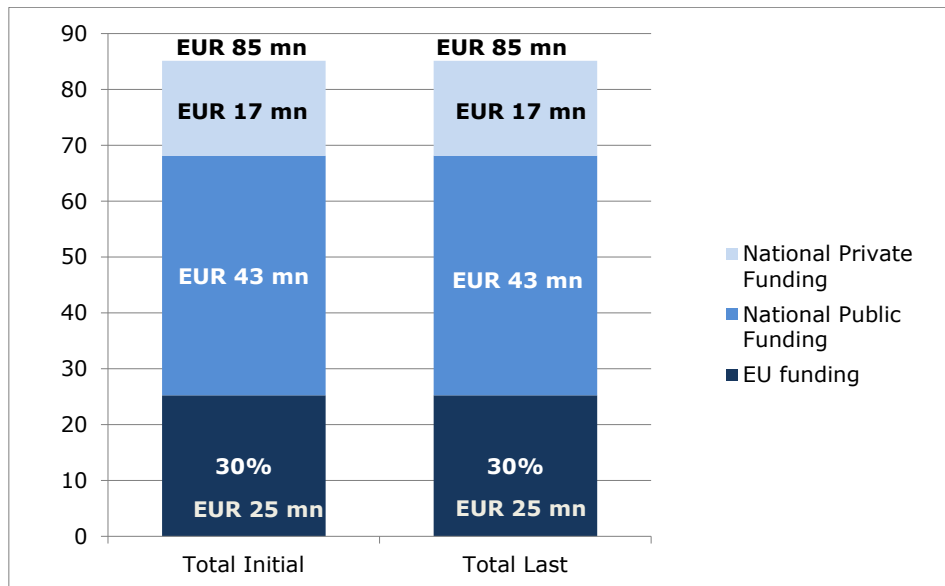
Source: DG Regional and Urban Policy, Info regio database, April 2016

The economic crisis did not lead to any change in priorities or to the allocation of the ERDF between policy areas. This, in part, is explained by the fact that support went to projects led by public or semi-public organisations (i.e. public research centres, national public agencies, local authorities), which were less affected by the economic crisis. There was, however, a change in the geographical distribution of projects, with a shift towards urban areas as a result of the crisis, which affected project selection.

### 2.3. Policy implementation

The EU co-financing rate for Luxembourg over the period was the lowest in the EU at 30% of overall funding and it remained unchanged over the period. National co-financing amounted to EUR 60 million of which EUR 43 million came from government and EUR 17 million from the private sector (Figure 1).

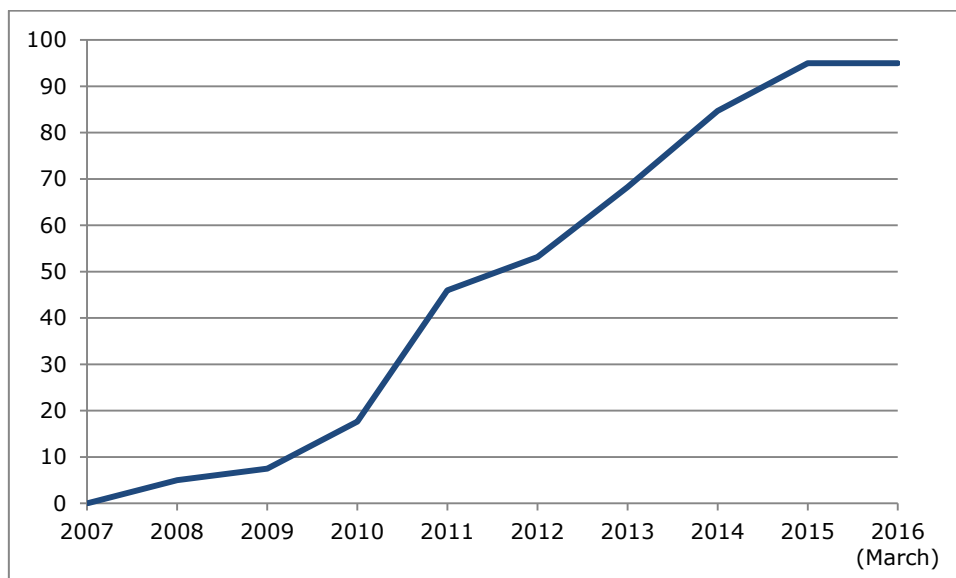
**Figure 1 Total funding going to expenditure on Cohesion policy programmes for the 2007-2013 period, initial planned amount and final amount (EUR mn)**



Source: DG Regional Policy financial data, 14 April 2016

The rate of programme implementation, as reflected in payments from the Commission to reimburse the expenditure carried out, was relatively slow at the beginning of the period mainly due to the overlap with the previous programming period, but it increased greatly in 2011, jumping from 18% of the total funding available to 46%. The rate reached 95% of available funding by the end of 2015, which means that all the funding was spent by then as required by the regulations, since 5% is held back until all expenditure is approved.

**Figure 2 Time profile of payments from the ERDF to Luxembourg for the 2007-2013 period (% of total funding available)**



Source: DG Regional Policy financial data, end-March 2016

### 3. The outcome of Cohesion Policy programmes – main findings from the ex post evaluation

The main findings summarised here come from the evaluations carried out under the Work Packages (WPs) of the ex post evaluation exercise. They covered in detail the following policy areas:



- Support to SMEs – increasing research and innovation in SMEs and SME development (WP2);
- Financial instruments for enterprises (WP3);
- Support to large enterprises (WP4);
- Transport (WP5);
- Environment (WP6);
- Energy efficiency in public and residential buildings (WP8);
- Culture and tourism (WP9);
- Urban development and social infrastructure (WP10);
- European Territorial Cooperation (WP11);
- Delivery system (WP12);
- Geography of expenditure (WP13);
- The impact of cohesion policy 2007-2013: model simulations with Quest III and Rhomolo (WP14).

Not all of these are relevant for Luxembourg. In particular, the evaluation of large enterprises (WP4) did not cover the country and no funding was allocated to financial instruments for enterprises (WP3), transport (WP5), environmental infrastructure (WP6) and culture and tourism (WP9), while only a small amount of funding went to urban development and social infrastructure (WP10). In addition, the delivery system in Luxembourg was not examined in detail by the evaluation carried out under WP12. The evaluation of ETC (WP11), it should be noted, is the subject of a separate report, while the estimates produced by WP13 on the allocation of funding and of expenditure between regions are not considered here<sup>3</sup>.

### **3.1. Enterprise support and innovation (WP2, WP3 and WP4)**

Over the programming period, a total of EUR 16.2 million was earmarked for this broad policy area. The amount concerned represented almost two-thirds of the total ERDF allocation. Funding went almost entirely to RTD and innovation and only a small amount (EUR 0.5 million) was allocated to supporting 'entrepreneurship'.

Overall, up to the end of 2014, 22 RTD projects had received support, along with 12 cooperation projects between businesses and research institutions. An estimated 297 jobs, in gross terms, were directly created as a result of the funding, of which 118 were in research (see Table 5 at the end of this section).

### **3.2. Energy efficiency (WP8)**

Some EUR 1 million, or just 2% of the total funding available, was allocated to 'energy efficiency, co-generation and energy management'. In total two projects were supported mainly through non-refundable grants. As regards investment in energy efficiency in residential and public buildings, the focus of the WP8 evaluation, Luxembourg was one of the few countries to have identified financing mechanisms targeted specifically at the construction of new energy efficient houses through the Promotion programme for energy-efficient new buildings.

### **3.3. ETC (WP11)**

Luxembourg was involved in two programmes financed under the Cross-border Cooperation strand of the ETC Objective. These were, respectively, with France, Belgium, the Netherlands, Germany, Ireland and the UK. The ETC-funded programmes are the subject of a separate report.

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<sup>3</sup> They are available at: [http://ec.europa.eu/regional\\_policy/en/policy/evaluations/ec/2007-2013/#1](http://ec.europa.eu/regional_policy/en/policy/evaluations/ec/2007-2013/#1).



### 3.4. Impact (WP14)

In Luxembourg, investment supported by Cohesion and rural development policies in the 2007-2013 period amounted to an annual average of just 0.01% of GDP, as noted above. The investment concerned, together with that carried out in other parts of the EU, is estimated to increase GDP in the country in 2023 by 0.1% over and above what it would be without such policies. This is even after taking explicit account of the contribution made by Luxembourg to their financing and comes from the increased trade generated by the investment<sup>4</sup>.

### 3.5. Overview of achievements

Up to the end of 2014, the investment undertaken with the support of the ERDF for the period in Luxembourg resulted in the direct creation of 297 gross jobs of which 118 were in research (Table 5).

It should be emphasised that since not all MAs report all core indicators, and in some cases, only a minority, the figures tend to understate achievements, perhaps substantially. In addition, the data reported relate to the situation at the end of 2014, one year before the official end of the period in terms of the expenditure which can be financed, so that they also understate achievements over the programming period because of this.

**Table 5 Values of core indicators for ERDF co-financed programmes in Luxembourg for 2007-2013period, as at end-2014**

Core Indicator Code	Core indicator name	Value up to end-2014
1	Jobs created	297
4	Number of RTD projects	22
5	Number of cooperation projects enterprises-research institutes	12
6	Number of research jobs created	118

*Note: The figures in the table are those reported by MAs in Annual Implementation Reports. Core indicators for which no data were reported by the Member State are not included.*

*Source: Annual Implementation Reports, 2014 and DG Regional Policy post-processing of these, August 2016*

<sup>4</sup> Estimates by the Quest model, a new-Keynesian dynamic general equilibrium model in kind widely used in economic policy research, developed by DG Economic and Financial Affairs to assess the effects of policies. See The impact of Cohesion Policy 2007-2013: model simulations with Quest III, WP14a, final report, [http://ec.europa.eu/regional\\_policy/sources/docgener/evaluation/pdf/expost2013/wp14a\\_final\\_report\\_en.pdf](http://ec.europa.eu/regional_policy/sources/docgener/evaluation/pdf/expost2013/wp14a_final_report_en.pdf).

