



A Green-Social Investment Plan

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ECLM – the Economic Council of the Labour Movement

Both private and public investment levels are low across the European countries. Now is the time for the governments to step in and help the economies back on a growth-track with a starting point in public investments. To increase investments and secure future growth this paper recommends a Green-Social Investment Plan. The effects of the investment plan are calculated based on FEPS-ECLM International Input-Output Model. The Green-Social Investment Plan will have large positive effects on job creation and GDP directly in the sectors the investments are made in and indirectly in the entire economy.

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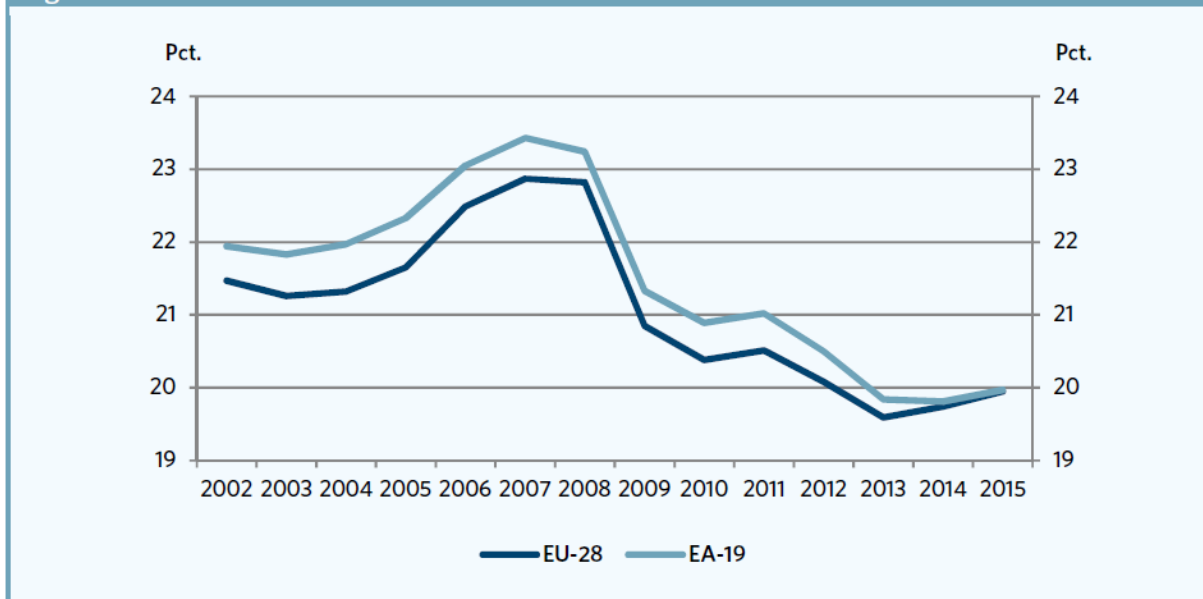
Historically low investment levels in the EU

Since the economic crisis started almost 10 years ago, many European countries have faced a number of severe economic problems, among these low levels of investment. Both public and private investments have decreased the last decade. In times of crisis, the national governments should step in and help the economy back on track with fiscal policies and public investments, but this has not been the case. It leaves us in a situation where there is a major need to increase the European growth potential in the medium and long run for Europe to regain momentum in growth.

The fall in investment is connected to a fall in demand, an increase in insecurity and low growth expectations for the future. Some fear that it is the start of a vicious circle. If the necessary investments to secure future economic growth are not made, it is hard to see how the economy can reach its full growth potential. This can lead to further insecurity, which in the worst case means a continuation of the low level of investments. On the other hand, the government can take the first step to ensure future growth because public investments can lay the foundation for private investment and growth in general. Unfortunately, this has not been the case. The European countries lead different fiscal policies of which most have been and are still biased towards austerity at a national level. This is not the way to go to secure a strong economy in Europe in the future.

To dig further into the concrete numbers on investment, figure 1 is considered, where the investment level as a percentage of GDP is depicted. After the fall in investment in relation to the crisis, the investments have remained at a low level. Generally, the euro area has been at a slightly higher level than the EU, but the levels are almost identical in 2015. From the beginning of the 00's, the investment ratio rose in both areas until 2007. Hereafter, there was a steep decrease and it is only from 2013 to 2015 that there seems to be a slight increase again. When considering the last decade, the EU and the EA are at notably low levels. In 2015, both have investment levels that are around 3 percentage points smaller than they were at the peak in 2007.

Figure 1. Total investment to GDP ratio



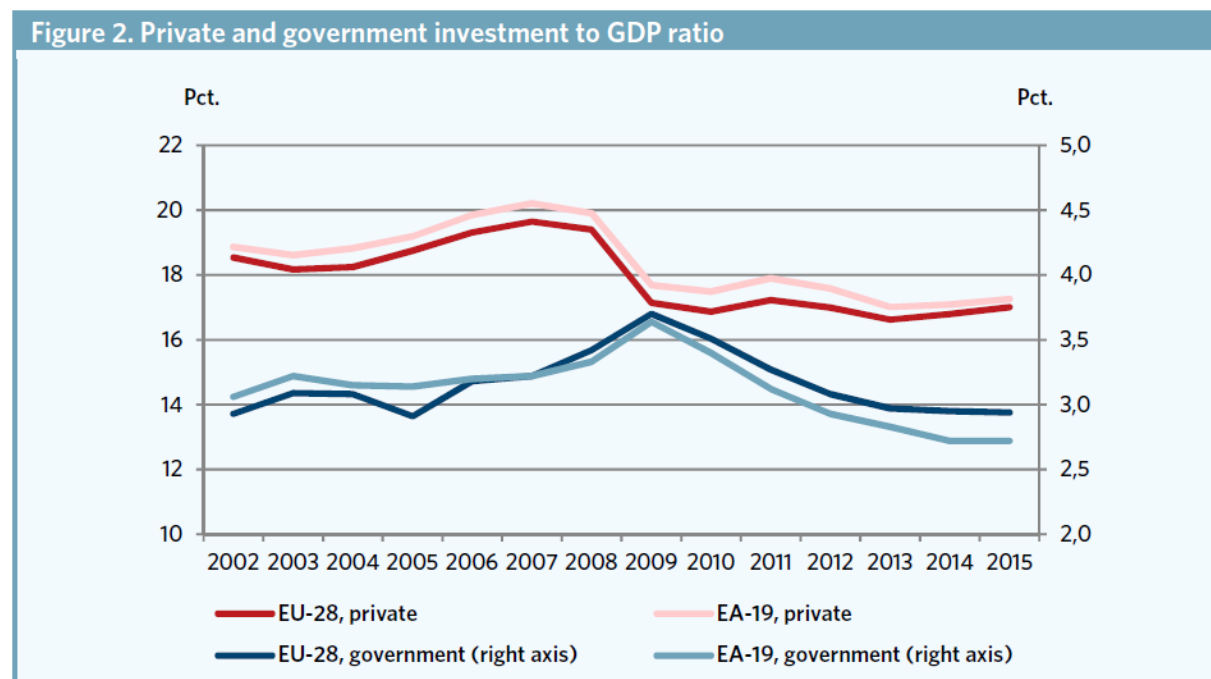
Source: ECLM on the basis of data from Eurostat.

Both private and public investments are low

The low levels of investment can cause the economic growth to be lower on a long-term basis. If needed investments are not made, the economy will struggle more to achieve growth.

Decomposing the total investments into private and public investments, we see the same picture as in figure 1. Figure 2 shows the separate ratio of government investment and private investment to GDP. Of course, there is a level difference compared to the overall economy, but figure 2 confirms the story: investment has fallen and is currently at a very low level. In the case of government investment, the euro area was at a higher level than the EU, but since 2007, it has been on a lower level. The distance between the two has increased since 2007, which shows that the euro area has been hit harder in terms of decreasing government investments after the crisis.

Private investment relative to GDP increased until 2007 and from 2007 to 2009, there was a sharp decrease. Since then the investments have been relatively stable around 17 pct. of GDP. Private investment relative to GDP is at a much higher level than government investment, but has evolved quite similarly. However, it is seen that private investments started declining when the crisis hit in 2008, while the government investments started declining when austerity hit in 2010. While there have been no increases in government investments the last couple of years, there has been a slight increase in private investment since 2013.



Note: Private investments are depicted on the left axis, while government investments are depicted on the right axis.

Source: ECLM on the basis of data from Eurostat.

A Green-Social Investment Plan

Whereas in some cases, the national government is to be blamed for the lack of public investment, the EU has been the limiting factor in other cases. Currently, the interest rates are at very low levels, but this has not been sufficient to stimulate private investments. Since the low interest rates of course also apply to public borrowers, it is a good time for a public investment initiative across Europe – both nationally and across countries.



We suggest an investment plan that specifically focuses on green investments and investments in education and childcare. These specific areas of investments are very important for future growth. There is general agreement and concern about the climate changes and at the same time actions is required to change to a production based on a high degree of green energy. Education is key for future growth in any country and by also investing in childcare, the point is to ensure children's well-being and also encourage women to enter the labour market. Small children who spend a high degree of their early years in high quality day-care will do better later in life both in primary school and further education, especially if they grow up in less fortunate surroundings (Havnes and Mostad, 2009). Also, they tend to have a higher degree of labour market attachment and a lower crime rate. Since professionals who are educated to take care of more children are in charge in institutions, both parents are able to work and that will boost productivity because the parents can make use of their education.

The potential of Europe to build a new and inclusive welfare society is large. If Europe launches an investment strategy with active investments in people, research and development and the environment, the return will be positive and large. Such a strategy will draw Europe in the right direction towards its historical growth path as well as increase the growth potential in the medium and long run.

By implementing a simultaneous investment strategy across the European Union, we can obtain higher economic growth, productivity and prosperity. The strategy suggested in this paper focus on the following two pillars:

1. Green investments and investments in R&D

Europe has a huge potential for increases in growth and employment by investing in the environment. This could be investments in infrastructure such as road and public transportation, or environmental investments and energy renovations. Investments in R&D are also important as a large proportion of Europe's energy is being wasted, mainly because of ineffective equipment.

2. Social investments in education and childcare

By increasing the education level and making sure that the European labour force hold the skills that are required by society, we do not only increase employment and cut unemployment, we also improve productivity for greater future prosperity. By investing in childcare, we can both invest in the children of Europe and also improve the frame conditions for increasing the female participation in the labour market. Thereby, we can increase employment and create more equal opportunities for men and women. One way to make it more likely for women to participate in the labour force is to develop and substitute the public childcare system.

Generating resources according to the above-mentioned lines can be done in several ways – and each European country will have to find its own way and pace depending on the fiscal development, the nature of the changes required and the current status on relevant parameters. The thoughts behind the two pillars mentioned above are described in more detail in the sections below.

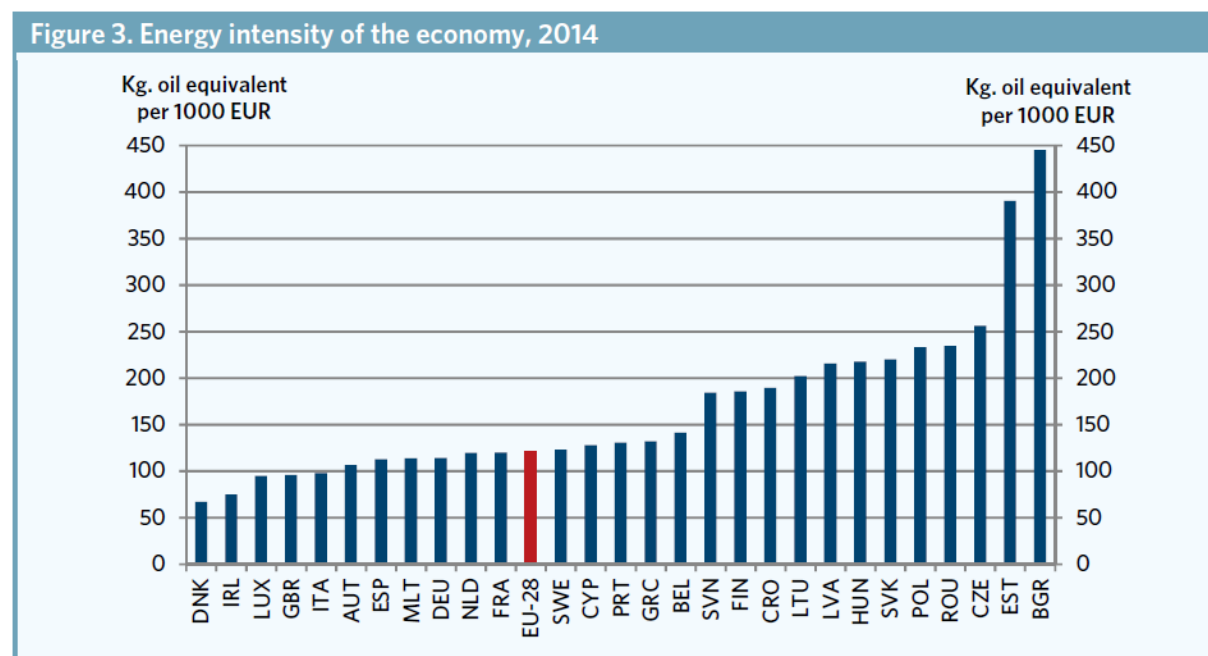
1. Investments in Green technology and R&D

Green technology

The last couple of years the challenge and the awareness of climate changes have increased and it has become clear that action must be taken to secure sustainable development.

The path to sustainability begins with improving energy efficiency. According to the International Energy Agency (IEA), energy efficiency levels in of IEA member countries improved by 14 pct. on average between 2000 and 2015. This is equivalent to an energy saving of 450 million tonnes of oil equivalent, which is enough to power Japan for a year (IEA, 2016). Even with the improvement, energy efficiency is far from fulfilling its potential. Progress must accelerate to ensure that the global energy system is sustainable. For now, 70 pct. of the worlds energy use takes place outside efficiency performance requirements and this is just one example of an area, where improvements are required (IEA, 2016). Accelerating energy efficiency has the greatest potential for carbon dioxide (CO₂) savings with immediate results and at a low or negative cost.

Figure 3 shows the energy intensity in different European countries as well as the EU-28. Energy intensity is the ratio between the gross inland consumption of energy and GDP and it can be interpreted as a measure of the energy consumption of an economy and its overall energy efficiency. While the EU-28 is at a level of 121 kg. of oil equivalent per 1000 EUR, Bulgaria and Estonia have remarkably high levels 390 and 445, respectively. In the other end of the scale, countries such as Denmark and Ireland have levels as low as 66.



Note: The energy intensity is calculated as gross inland consumption of energy divided by GDP.
Source: ECLM on the basis of data from Eurostat.

Figure 3 shows that quite a lot can be done to increase the energy intensity in some countries. Also, in the countries that are currently at a low level, improvements are of course possible even if some of the low-hanging fruits have already been picked.



Environmental friendly investments can take various forms. First, there are investments in infrastructure. Investments in public transportation increase the incentive to use public transportation rather than transportation by car. This is one way of helping the pollution-levels down because public transportation is less polluting than transportation by private car. Also, investments in infrastructure reduce the transport time and costs for transport of both labour and goods. Finally, a well-functioning infrastructure system makes it easier and faster to transport goods and increases the mobility of the labour force leading to a better functioning labour market.

Environmental friendly investments can also take form as energy renovations in e.g. schools, private homes and other private or public buildings. Not only do these kinds of investments reduce energy consumptions, they are also typically labour intensive investments, which means that they create more jobs compared to other investment types.

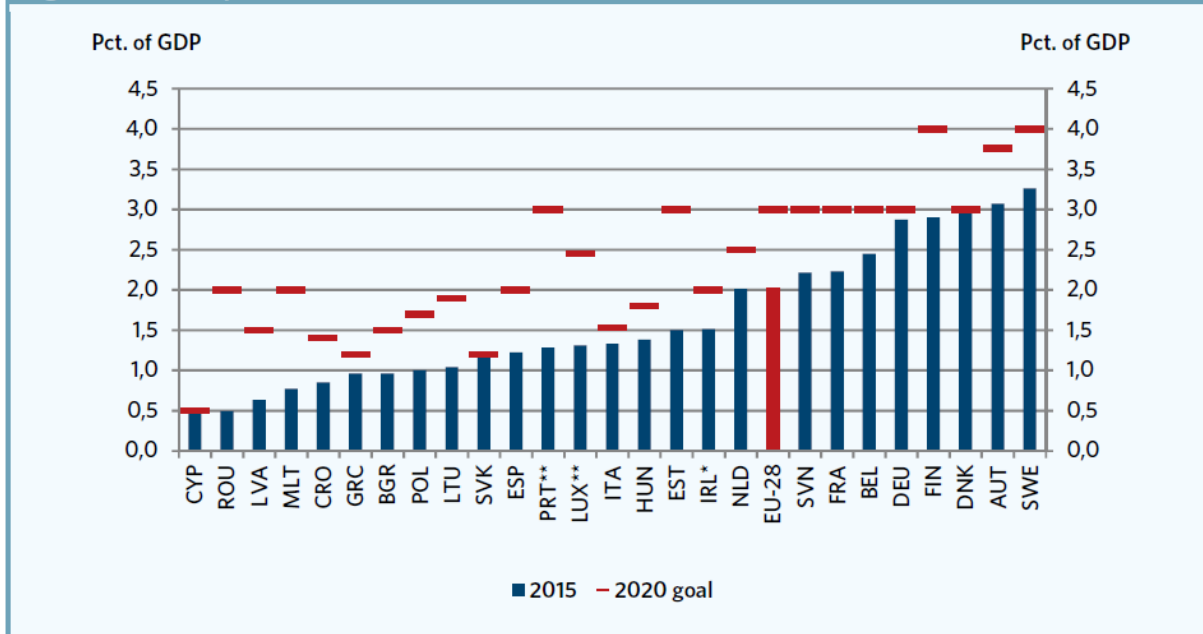
Investments in R&D

A large proportion of Europe's energy is being wasted, mainly because of ineffective equipment. Energy efficiency depends on the available technology. An effort to increase research and development (R&D) can therefore contribute to higher productivity, higher employment and an environmental sustainable development. There is a consensus that R&D is vital to increase productivity and employment but estimates on the rate of return on research and development vary a lot between countries and sectors (Hall et al, 2009).

Figure 4 shows R&D expenditures relative to GDP in a number of European countries in 2015 and it also includes the goal of R&D expenditures in 2020 for comparison of the present level with the level that should be reached 5 years later. In general, there are big differences in the level of actual R&D expenditures across countries in 2015. Compared to other European countries, there is a huge potential for improvement of R&D in several of Southern and Eastern European countries. As for the 2020 goals, almost all countries have ambitions of a higher level of R&D expenditures. This is positive and hopefully, the sufficient measures are and will be taken within the countries to reach these goals.

In general, it is claimed that the R&D investment in Europe is low compared to the US. The latest data for the US is from 2013. However, at that time the US invested 2,7 pct. of GDP in R&D, while the EU-28 average was 2 pct. – quite a large difference.

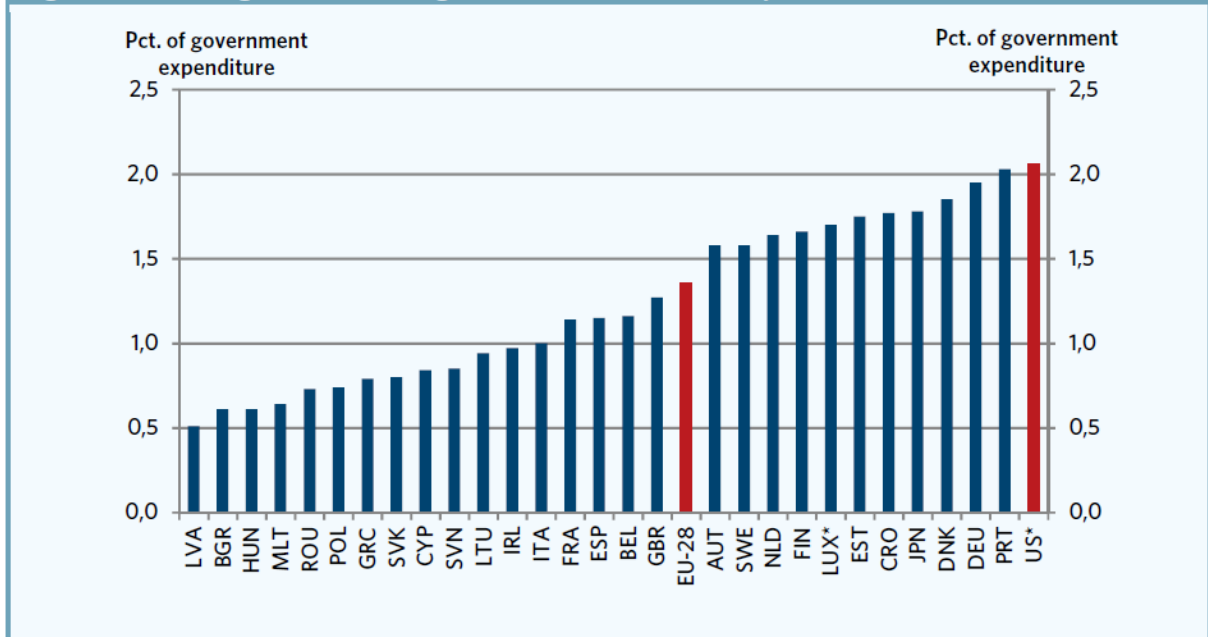
Figure 4. R&D expenditures in all sectors



Note: (*) Latest data from 2014. (**) For Luxembourg, the goal is 2.3-2.6, while it is 2.7-3.3 for Portugal. United Kingdom and Czech Republic are left out due to missing data.
Source: ECLM on the basis of data from Eurostat and Eurostat's 2020 targets.

The low priority of R&D in Europe compared to the US becomes clear in figure 5, which shows that a lower share of the government budget is spend on R&D in any European country compared to the US. If R&D is focused on environmental sound technologies, two birds can be killed with one stone; productivity can be enhanced and an environmentally sustainable development can be implemented. R&D in environmental sound technologies should for that reason not be regarded as a cost but rather as a growth and productivity generating industry. One example is R&D in new energy technologies. There are many ways to go; energy efficiency, renewable energy and clean fossil fuels. Figure 5 shows that the US spends over 0.5 percentage points more of the total government expenditure on R&D than the average among EU-28 countries. European countries such as Portugal and Germany are almost at the same level as the US, while the share of government budget for R&D in countries such as Latvia and Bulgaria are around ¼ of the level in the US.

Figure 5. Share of government budget for research and development, 2015



Note: (*) Latest data from 2014.

Source: ECLM on the basis of data from Eurostat.

Every investment decision includes a choice between more or less sustainable technologies, regardless of whether these technologies are labeled environment technologies or mainstream technologies. With this approach, all investments, in buildings and equipment, in transport systems and industries, in houses and offices represent a potential in a growth strategy for sustainable development.

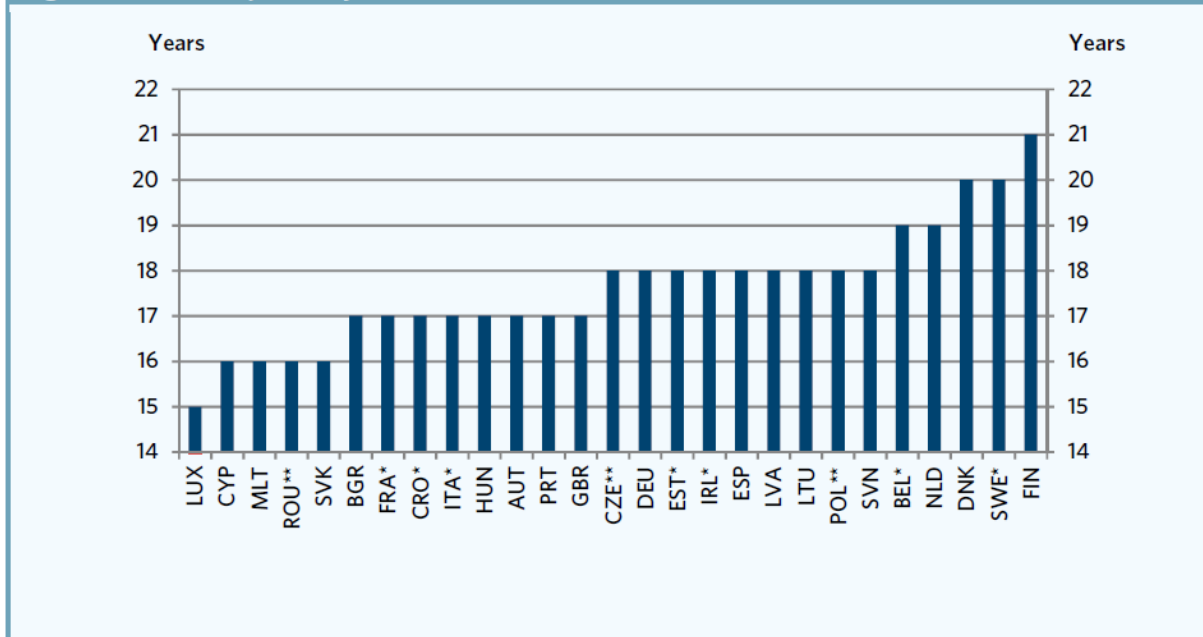
2. Social investments in education and childcare

Education

Investment in education is a sure way to increase employment, reduce unemployment, increase productivity and improve the public budget in the long run. Investments in education do not only improve labour markets and public budgets, a high and equal level of education increases equality between countries and between citizens within each country directly and/or indirectly through increased growth (Gylfason et al, 2003).

Figure 6 shows the expected years of schooling across Europe. The figure shows that especially north European countries such as Finland, Sweden and Denmark have the highest levels of expected years of schooling of up to 22 years. On the other hand, countries like Luxembourg, Cyprus, Malta, Romania and Slovakia have relatively low levels of 15-16 years of schooling.

Figure 6. School expectancy, 2015



Note: (*) Latest data from 2014. (**) Latest data from 2013. The expected school years excludes early childhood educational development.
Source: ECLM on the basis of data from Eurostat.

In addition to increasing the overall education level, Europe has a large potential for improvements of the link between universities and businesses which is the key to innovation. A lot can be done at the European universities in order to offer scientists and students attractive environments as well as stimulating student mobility in Europe. This will be beneficial for both scientists, students, businesses and the economy overall.

Childcare

The demographic changes in the EU in the years to come mean that fewer children will be born and more people will retire, all resulting in less people in the labour force. In that light, it is necessary to bring more people into work, in order for Europe to maintain its growth potential in the long run and regain momentum in growth. One way to both increase the employment rate and to promote gender equality is to enhance the public childcare system.

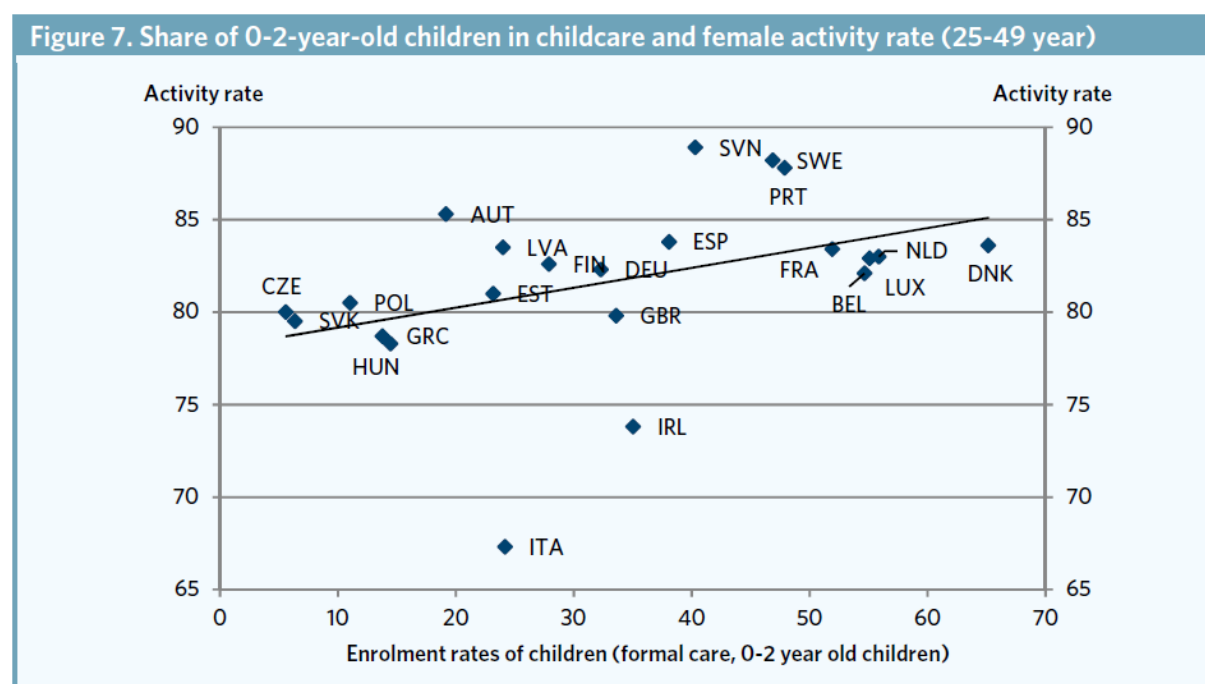
There are many reasons for the difference between male and female activity rate, but for the younger generations of women the caring responsibilities and costs of formal care for children is a mayor explanation. There are large differences among European countries, but overall around 40 pct. of the inactive female population was so for the reason of “looking after children or incapacitated adults” compared to only 4 pct. of inactive males¹.

Many studies that show that publicly subsidized childcare is a good investment (see e.g. Glavind, 2000; Buxbaum and Pirklbauer, 2013). Overall, publicly subsidized childcare increases the labour supply of women (mothers) significantly, because when the parents can send their children in childcare they can both be active in the labour market. Of course, increased childcare implies that more kindergarten teachers and other childcare personnel must be hired, but the release of labour happens because they can take care of more children at the same time thanks to their education and the institutional frameworks. The parents who work instead of taking care of their children, can make

¹ Eurostat series lfsa_igar. 25-49-year-old are considered for the EU-28.

use of their education and will thereby be more productive, which will benefit society. Public subsidized childcare will not only increase activity rate but also cause greater specialization and in this way productivity gains.

Figure 7 compares the female activity rate with the proportion of children in childcare in European countries. There seems to be a correlation between the enrolment rate in childcare and female activity rate for women that we presume could have small children. There is also a tendency that the Nordic countries have both high enrolment rates and high activity rates, while especially the Eastern European countries have both low enrolment rates and low activity rates.



Source: ECLM on the basis of data from OECD (Enrolment rates) and Eurostat (Female activity rate, 25-49 years), 2014.

Effects of the Green-Social Investment Plan

Above we have outlined the arguments of the need for green and social investments. In this section, we will model the effects of the plan.

All the examples given above will take Europe in a more sustainable direction generating higher growth. The final effect will depend on the nature and pace of the initiatives, but a simultaneous investment strategy will definitely improve the productivity, cut unemployment and create a sustainable development. The following calculations will build on the two pillars: green investments and social investments.

The Green-Social Investment Plan will bring extra resources to the labour market and stimulate the activity in the economy, which will create new jobs. The direct job creation is the jobs needed for re-insulation of buildings, constructing wind farms, increasing energy efficiency, expanding the education system, child-care or the public transportation etc. This could be jobs such as construction workers, metal workers, truck drivers, building inspectors, engineers, electricians, teachers, professors or care personnel etc. On top of these jobs there are the jobs created indirectly. These are



typical jobs connected with supplying intermediate goods for the industries directly connected with the investments.

The calculations are based on the FEPS-ECLM International Input-Output Model. It is assumed that the investment level is increased by 1 pct. of GDP in all 27 EU countries. The investment plan is decomposed into a green part and a social part that both add up to half of the invested amount, i.e. ½ pct. of GDP is invested in green investments and ½ pct. of GDP is invested in social investments. Box 1 explains the technical aspects of the investment plan into more detail.

Box 1. Technical aspect of the modelling of the Green-Social Investment Plan

The International Input-Output Model is built by the Economic Council of the Labour Movement (ECLM) in joined cooperation with the Foundation of European Progressive Studies (FEPS) in 2016. The model is used to evaluate the impact of policy changes in the global economy on global production, employment etc. in a very detailed way. The model is programmed in STATA and MATA based on data from the WIOD.

So far, the WIOD provides annual WIOTs for the global economy from 1995 to 2011 each with 35 sectors in 40 countries and a Rest-of-the-World (RoW) aggregate. Included in the 40 countries are 27 EU members (Croatia not included), Australia, Brazil, Canada, China, India, Indonesia, Japan, Mexico, Russia, South Korea, Taiwan, Turkey and the USA.

The WIOT contains information on intermediate use and output for 35 industries in each country. The industries are mainly at the UN ISIC rev. 3 level or subindustries thereof. The industries in the model include Agriculture, Mining, Construction, fourteen Manufacturing industries, Telecom, Finance, Business Services, Personal Services, eight different Trade and Transport Service industries and three Public Service industries. More information about the FEPS-ECLM International Input-Output Model, and the details of the industries and subindustries can be found in Andersen and Dahl (2016).

The Green-Social Investment Plan is modelled based on the latest available year 2011. The investment plan is decomposed into a green part and a social part that both adds up to half of the invested amount, i.e. ½ pct. of GDP is invested in green investments and ½ pct. of GDP is invested in social investments.

The green part of the investment plan is based on investments of 0,4 pct./GDP in the construction sector and 0,1 pct./GDP in the sector "Renting of M&Eq and Other Business Activities" that includes R&D.

The social part of the investment plan is based on investments of 0,3 pct./GDP in the education sector and 0,2 pct./GDP in the sector "Health and social work" that includes child-care.

Regarding the employment effect on skills and gender it is assumed that the destruction of skills and the gender shares within each sector will not change.

The effects of the investment plan calculated in the input-output model gives us detailed information about the GDP and job-creation distributed on countries, sectors, gender and educational level, but it does not take into account the multiplier-effect, meaning the effect that higher employment lead to a higher overall income level of households, and this in turn will lead to higher private consumption, which further get GDP to rise and so on. This will be discussed into more detail below.

A simultaneous investment strategy, improvement of the productivity, increasing employment, creating a sustainable development and changing the structure of public spending can and must be done differently in different countries as the different challenges must be taken into account – as well as different public budget situations. This analysis does not give a plan in detail for each country. Instead it sketches the effects of different initiatives and gives a scenario on how the effect could be.

The following sections will introduce the effects of the investment plan in terms of job creation and increase of GDP both considering what can be attributed directly to the investments and what occurs indirectly. Initially, the overall effects for the EU and the European countries are presented, and later



the effects will be broken down in a number of different ways, e.g. based on sector, gender and skill level.

The Green-Social Investment Plan creates 2.8 million jobs in EU-27

Table 1 shows the employment effects of the investment plan for the European countries divided into direct and indirect effects. The direct job creation is the jobs needed for re-insulation of buildings, constructing wind farms, increasing energy efficiency, expanding public transportation, the education system and childcare. This could be jobs for construction workers, metal workers, truck drivers, building inspectors, engineers, electricians, teachers, professors, child care personnel etc. On top of these jobs there are the jobs created indirectly. These are jobs connected with supplying intermediate goods for the industries or education or care sectors directly connected with the investments. In other words the indirect effect occurs because the different parts of the economy are connected, so when demand increases in one sector, it will increase demand for input needed from other sectors to satisfy final demand and so the positive effect spreads like ripples in a pond.

From an EU-27 perspective the table shows that the Green-Social Investment Plan will create close to 2.8 million jobs. Of these, 72 pct., i.e. almost 2 million jobs, comes from the direct effects of the investment plan, while the remaining 28 pct., i.e. almost 800,000 jobs, come from the indirect effects. For the European countries, the division of direct effects and indirect effects is close to that of the EU-27. In most cases, the direct effect accounts for almost $\frac{3}{4}$ of the total effect, while the indirect effect accounts of the remaining $\frac{1}{4}$. The direct effect is larger, but the indirect effect does account for a sizeable part of the total investments. When more people are employed, the country will become richer and consumption and investment will rise. This will further increase demand and production and so the effect spreads in the economy. This is not accounted for in the FEPS-ECLM International Input-Output Model, but it will be discussed in further detail in the end of this paper.

Lithuania stands out in one end with as much as 83 pct. of the employment effect from the investment plan created directly and only 17 pct. created indirectly. On the other hand, in Czech Republic only 63 pct. of the employment effect is created directly, while the remaining 37 pct. is created indirectly. That means a difference of 20 percentage points between the country with the biggest effect and the smallest effect created directly and indirectly. The variation in the split between direct and indirect effect between countries depends on the specific production patterns in each country, and whether the production relies on input from either other sectors within the country or sectors in other countries. Part of the indirect effect comes from other countries and in general, small economies and economies, that are very export oriented, are more integrated with other countries which contribute to larger indirect effects.

When considering the amount of new jobs, the large countries naturally experience the largest numerical effect. Germany, France, UK and Italy alone experience an increase of more than a million jobs from the direct effect, i.e. more than half of the direct job creation happen in these four countries.

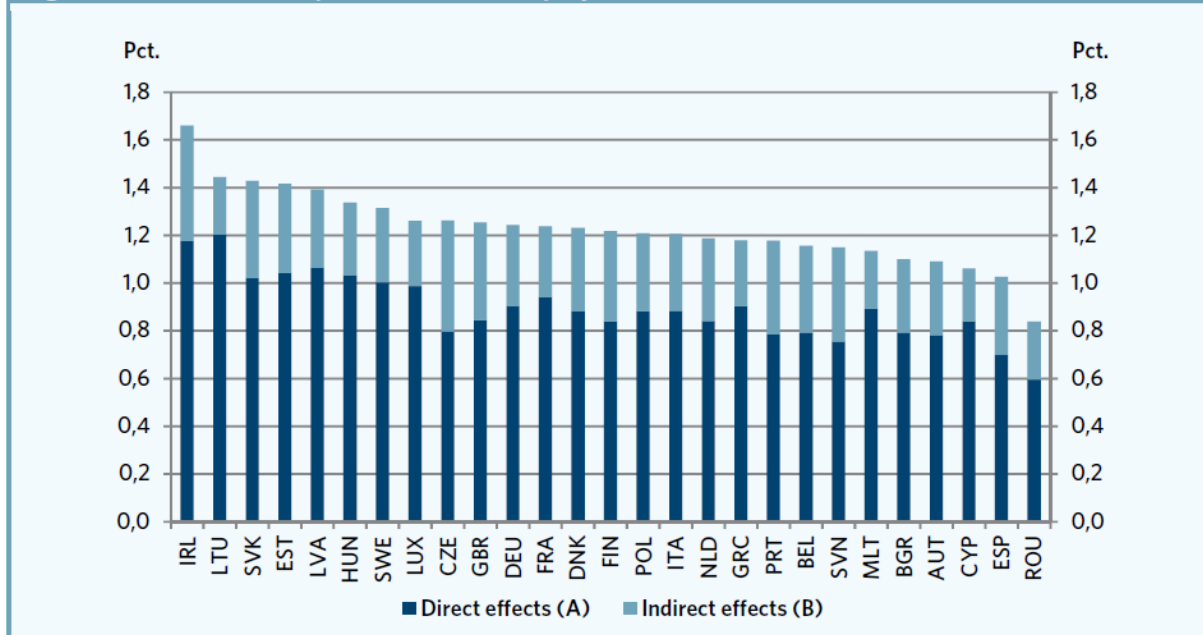


Table 1. Job creation, 1000 jobs			
	Direct effects (A)	Indirect effects (B)	Total (A+B)
AUT	34	13	47
BEL	36	16	52
BGR	27	11	38
CYP	3	1	4
CZE	41	24	65
DEU	379	143	522
DNK	24	10	34
ESP	128	60	187
EST	6	2	9
FIN	21	9	30
FRA	240	76	316
GBR	278	135	413
GRC	47	14	61
HUN	42	12	54
IRL	22	9	31
ITA	222	81	303
LTU	17	3	20
LUX	4	1	5
LVA	9	3	12
MLT	2	0	2
NLD	74	31	105
POL	139	51	190
PRT	39	20	59
ROU	64	26	89
SVK	23	9	32
SVN	7	4	11
SWE	46	14	60
EU27	1973	779	2752

Source: ECLM based on the FEPS-ECLM International Input-Output Model.

Figure 8 shows the job creation in percent of the total employment divided on the European countries. This allows us to consider the relative increases in employment. The figure confirms that most jobs are created from the direct effect of the investments, but also that the indirect effect accounts for a substantial part for all countries. While Germany, France, Great Britain and Italy had large absolute increases, these countries can now be found in the middle of the figure with relative increases close to the average. Ireland stands out with the largest job creation of 1.6 pct. of total employment. Romania can be found in the other end of the scale with a job creation of just around 0.8 pct., as the only country that experiences a job effect below 1 percent. Again, the variation between countries depends on the labour intensity in the sector, but also on the demand from other sectors both within and between countries. It is seen how Ireland and Lithuania have about the same direct effect, but the indirect effect in Ireland is much larger than the one in Lithuania, meaning that when demand increases in the green-social sectors in Ireland, it will (to a higher extent than in Lithuania) increase demand for input needed from other sectors and other countries to satisfy final demand.

Figure 8. Job creation in percent of total employment



Source: ECLM based on the FEPS-ECLM International Input-Output Model.

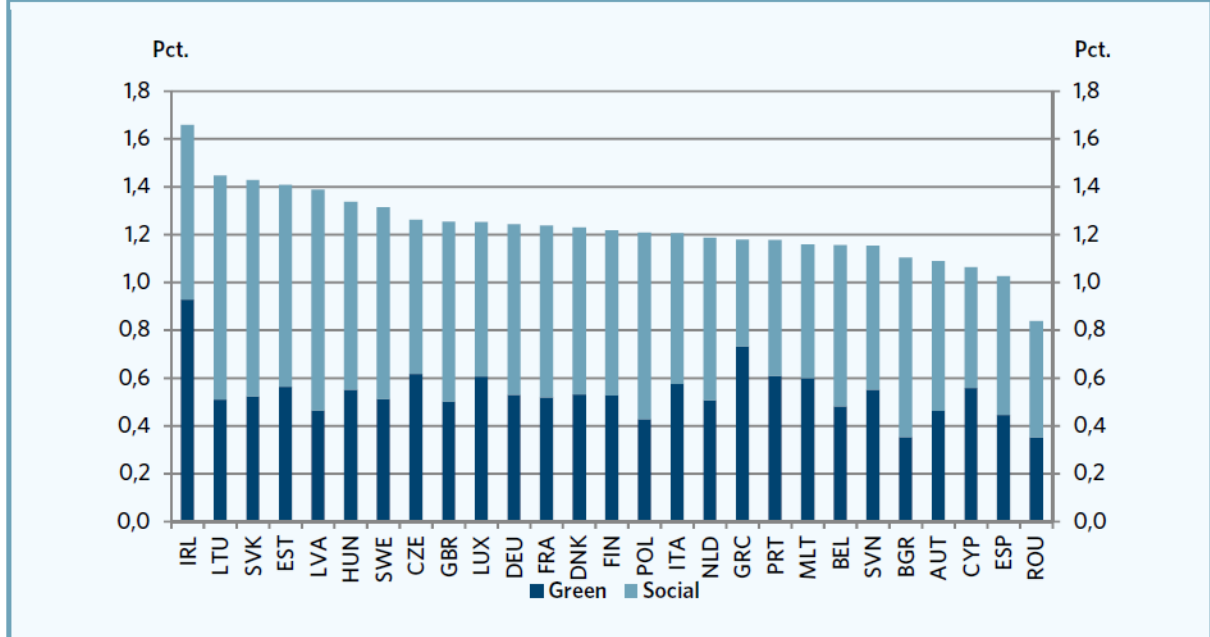
Effects from green and social investments

Above we have analyzed the Green-Social Investment Plan on an aggregated level. This section will go one step further and analyze the decomposed effects on different sectors from the green and social investments respectively.

Regarding the effects on employment, figure 9 shows the job creation in percent of total employment and divides the effect into what can be attributed to the green investments and the social investments, respectively. Ireland and Greece stand out with the largest job creation from the green investments relative to that from social investments. On the other hand, Latvia and Lithuania are examples of countries that will benefit more from the social investments than the green investments. Again, this is due to the different sector structure in the countries.

In general, the job creation from the social investments is larger than the job creation from the green investments, cf. figure 9. Regarding the direct effect this can be seen as a sign, that the green investments (construction and R&D) rely both on capital and labour in the production, whereas education and child care use relatively more labour as an input factor. As an example we could compare investments in energy renovation with investments in education. To energy renovate you need both materials (for instance isolation material, 3 glazing windows etc.) as well as construction workers to perform the energy renovation work. If you invest in the education sector you will mainly need more teachers and professors. The final job creation is of course more complex than that, and depends both on how capital-intensive the production is, and on how much is imported from non-EU countries.

Figure 9. Job creation in percent of total employment



Source: ECLM based on the FEPS-ECLM International Input-Output Model.

Effects from the Green-Social Investment Plan on a sector-level

In the following we decompose the effect of the investment plan into different sectors, and into direct and indirect effect and spillover effects to other sectors that there are not invested in directly. Table 2 and 3 consider the effects on all sectors divided into 9 groups, while table 4 consider the effects on the specific sectors in which the investments are undertaken and the spillover effects on other sectors. For further details about the direct and indirect effects on all sectors, see tables 7-9 in the appendix.

Table 2 shows the effects of the green investments on employment in 1000 jobs, on GDP in percent and on GDP in percentage points. Further, these effects are divided in direct, indirect and total effect. The direct effect of the green investments can be seen in manufacturing and construction and finance and business service. This makes perfect sense because the investments are made in the construction sector and in R&D, which is included in finance and business service. The main part of the investments take place in construction, and naturally the biggest effect on employment and GDP can be seen in that sector.

Overall 649,000 jobs are created directly from the green investments, while the direct effect on GDP is of 0.3 pct. Considering the indirect effects on e.g. employment, the table shows that even though there are no investments made directly in transport, storage and communication, there is a rather large indirect job effect. When demand increases in one sector, this sector will produce more and spur demand in sectors that deliver inputs to the final production in the first sector. This will again increase demand in other sectors for input and so the effect of the investments spreads in the economy and the interconnected sectors. Returning to the transport, storage and communication, it can be argued that the construction sector depends on transportation of materials for construction and therefore, when employment in construction increases, employment in the transportation sector will increase too. It is noted that while the direct effect only takes place in two sectors, almost all sectors are affected indirectly. Overall, the indirect job creation from the green investments is of 528,000 jobs, which is quite close to the direct job creation.



Table 2. Employment and GDP effects of the green investments

	Employment, 1000 jobs			GDP, percent (pct. change in sector)			GDP, percentage points (growth contribution to pct. change in total GDP)		
	direct effect	indirect effect	total	direct effect	indirect effect	total	direct effect	indirect effect	total
Agriculture and fishing	0	10	10	0,0	0,1	0,1	0,00	0,00	0,00
<u>Manufacturing and construction</u>	498	216	714	0,7	0,4	1,1	0,19	0,10	0,28
Trade, hotels and restaurants	0	94	94	0,0	0,2	0,2	0,00	0,03	0,03
Transport, storage and communication	0	34	34	0,0	0,2	0,2	0,00	0,02	0,02
<u>Finance and business service</u>	151	147	299	0,2	0,3	0,5	0,07	0,09	0,15
Public administration and defense	0	5	5	0,0	0,0	0,0	0,00	0,00	0,00
Education	0	5	5	0,0	0,0	0,0	0,00	0,00	0,00
Health and social work	0	17	17	0,0	0,1	0,1	0,00	0,01	0,01
Other community activities and private households	0	0	0	0,0	0,0	0,0	0,00	0,00	0,00
Total Green	649	528	1178	0,3	0,2	0,5	0,25	0,24	0,49

Note: Investments are made directly in the underlined sectors. Agriculture and fishing cover the ISIC 3 sectors A-B. Manufacturing and construction cover the ISIC 3 sectors C-F. Trade, hotels and restaurants cover the ISIC 3 sectors G-H. Transport, storage and communication cover the ISIC 3 sector I. Finance and business service cover the ISIC 3 sector JK, which includes R&D. Public administration and defense cover the ISIC 3 sector L. Education covers the ISIC 3 sector M. Health and social work cover the ISIC 3 sector N. Other community activities and private households cover the ISIC 3 sector OP.

Source: ECLM based on the FEPS-ECLM International Input-Output Model.

In table 3 the same effects as above are considered, but for the social investments. The table shows that the investments are made in the education and health and social work sectors. The direct effects on employment in those sectors are of 864,000 and 459,000 jobs, respectively. Again, almost all sectors are affected indirectly with increasing employment and GDP, but in opposition to before, the indirect effect is quite small compared to the direct effect. As an example, the indirect job creation is less than 1/5 of the direct job creation.

Table 3. Employment and GDP effects of the social investments

	Employment, 1000 jobs			GDP, percent (pct. change in sector)			GDP, percentage points (growth contribution to pct. change in total GDP)		
	direct effect	indirect effect	total	direct effect	indirect effect	total	direct effect	indirect effect	Total
Agriculture and fishing	0	8	8	0,0	0,1	0,1	0,00	0,00	0,00
Manufacturing and construction	0	43	43	0,0	0,1	0,1	0,00	0,02	0,02
Trade, hotels and restaurants	0	44	44	0,0	0,1	0,1	0,00	0,01	0,01
Transport, storage and communication	0	21	21	0,0	0,1	0,1	0,00	0,01	0,01
Finance and business service	0	61	61	0,0	0,1	0,1	0,00	0,04	0,04
Public administration and defense	0	4	4	0,0	0,0	0,0	0,00	0,00	0,00
<u>Education</u>	864	31	895	5,4	0,2	5,6	0,28	0,01	0,29
<u>Health and social work</u>	459	40	499	1,3	0,1	1,4	0,15	0,01	0,16
Other community activities and private households	0	0	0	0,0	0,0	0,0	0,00	0,00	0,00
Total Social	1323	251	1574	0,4	0,1	0,5	0,42	0,11	0,54

Note: Investments are made directly in the underlined sectors. Agriculture and fishing cover the ISIC 3 sectors A-B. Manufacturing and construction cover the ISIC 3 sectors C-F. Trade, hotels and restaurants cover the ISIC 3 sectors G-H. Transport, storage and communication cover the ISIC 3 sector I. Finance and business service cover the ISIC 3 sector JK,



which includes R&D. Public administration and defense cover the ISIC 3 sector L. Education covers the ISIC 3 sector M. Health and social work cover the ISIC 3 sector N. Other community activities and private households cover the ISIC 3 sector OP.

Source: ECLM based on the FEPS-ECLM International Input-Output Model.

In table 4 the effects of the Green-Social Investment Plan are considered in the specific sectors the investments are undertaken in. Further, the spillover effects on all other sectors are considered. Naturally, the direct effects only occur in the sectors, which investments are made in and these effects correspond to the ones described in table 2 and 3. Table 4 allows us to consider the indirect effects on all sectors and it turns out that indirect effect created in other sectors is much larger than the indirect effect created in the sectors that are initially invested in. This is the case for both the green and social investments. For the green investments around 60 pct. of the indirect effects on employment occur in other sectors than those initially invested in. For the Social investments, more than 76 pct. of indirect employment effects occurs in other sectors, while the remaining 24 pct. occurs in education, health and social work.

	Employment, 1000 jobs			GDP, percent (pct. change in sector)			GDP, percentage points (growth contribution to pct. change in total GDP)		
	Direct effect	Indirect effect	Total	Direct effect	Indirect effect	Total	Direct effect	Indirect effect	Total
Green Investments:									
Construction	498	97	595	3,2	0,6	3,8	0,19	0,04	0,22
Renting, R&D and other Business Activities.	151	125	276	0,5	0,5	1,0	0,07	0,06	0,12
Spillovers from green investments on all other sectors	0	307	307	0,0	0,2	0,2	0,00	0,15	0,15
Total Green	649	528	1178	0,3	0,2	0,5	0,25	0,24	0,49
Social Investments:									
Education	864	31	895	5,4	0,2	5,6	0,28	0,01	0,29
Health and Social Work (child care)	459	28	487	2,0	0,1	2,1	0,15	0,01	0,16
Spillovers from social investments on all other sectors	0	192	192	0,0	0,1	0,1	0,00	0,09	0,09
Total Social	1323	251	1574	0,4	0,1	0,5	0,42	0,11	0,54
Total investment plan (Green+Social)	1973	779	2752	0,7	0,4	1,0	0,68	0,35	1,03

Source: ECLM based on the FEPS-ECLM International Input-Output Model.

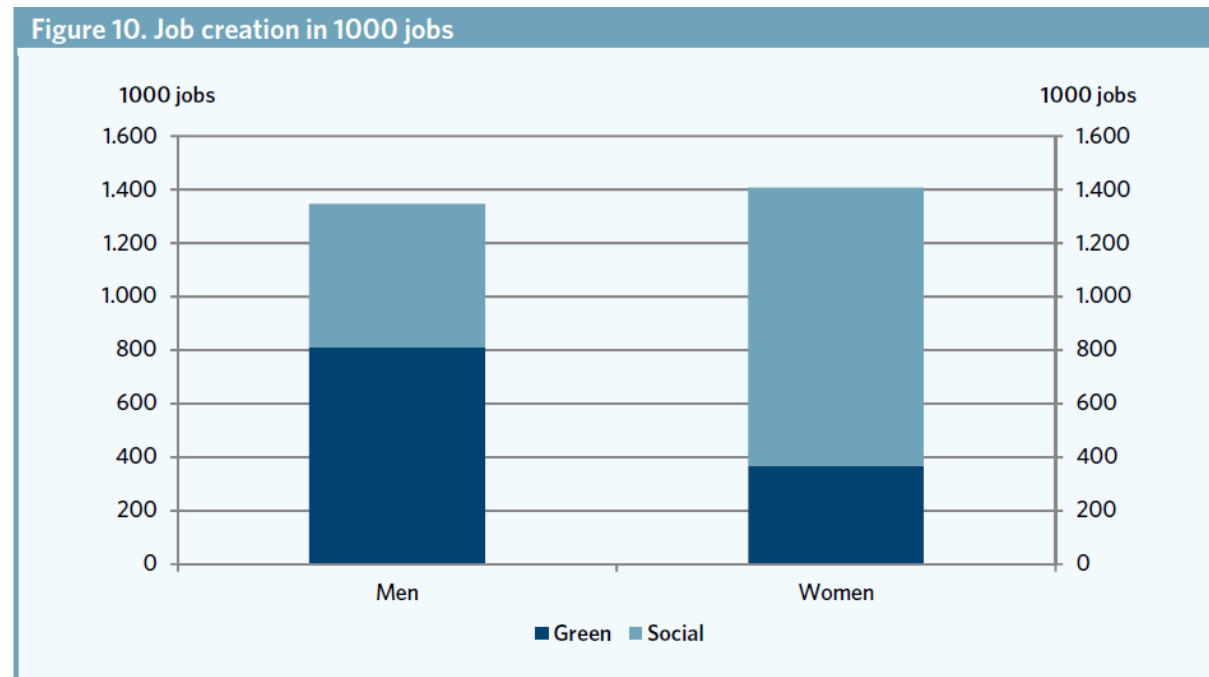
Gender and educational effect of the Green-Social Investment Plan

Below we will analyze the gender effects as well as the educational effects from the investment plan, and have a closer look at what is created by green and social investments respectively, and how the effect is distributed across sectors.

Considering the gender effect figure 10 gives an overview of how many jobs are created for men and women by the two parts of the investment plan. Overall, the table shows that while the green part of the investment plan creates most jobs for men, the social part of the investment plan creates more jobs for women than for men. The green investments create around 800,000 jobs for men, while it only creates 370,000 jobs for women. On the other hand, the social investments create 340,000 jobs for men, but more than a million jobs for women. Also, as will be discussed in further detail in

relation to table 5, the green investments are more beneficial for sectors with many male workers and the social investments are more beneficial for sectors for many female workers.

In total more than 1.3 million male jobs and 1.4 million female jobs will be created, so the investment plan will create slightly more jobs for women than for men and thereby slightly improve the gender balance on the labour market.



Source: ECLM based on the FEPS-ECLM International Input-Output Model.

Table 5 digs further into the gender effects from the green and social investments on employment by dividing them into different sectors. The result allows us to get a deeper and more detailed understanding of the mechanisms of the investment plan on a gender and sector level.

While the green investments mainly create jobs for men, they do also create some jobs for women and mainly in the same sectors as for men. The gender effects in different sectors depends on what is considered typical male and female jobs and is based on the actual split between males and females in the different sectors at the time the investment plan is implemented. Often, more men work in construction and more women work in health and social work and this can be seen quite clear in the table.

Considering the social investments, the largest effects for both men and women are found in the sectors which the investments are made in. In the sectors education and health and social work 300,000 and 121,000 male jobs were created, respectively, thanks to the social investment. For women, 594,000 and 377,000 jobs were created in these two sectors. Again, as the construction sector have more male workers, the largest effect from the social investments on the sector is for men.

One should note, that of course the initial sizes of the sectors matter for how many jobs there are created. As an example, agriculture and fishing are relatively small sectors in terms of labour demand and therefore, the job creation is quite small in those sectors.



	Men			Women		
	Green	Social	Total	Green	Social	Total
Agriculture and fishing	7	5	12	3	2	6
<u>Manufacturing and construction</u>	551	33	584	163	10	173
Trade, hotels and restaurants	48	23	71	46	22	68
Transport, storage and communication	27	16	43	7	4	11
<u>Finance and business service</u>	168	34	202	131	27	158
Public administration and defense	3	2	6	2	1	3
<u>Education</u>	2	301	302	4	594	598
<u>Health and social work</u>	4	121	126	13	377	390
Other community activities and private households	0	0	0	0	0	0
EU27 Total	809	536	1345	369	1038	1407

Note: Investments are made directly in the underlined sectors. Agriculture and fishing cover the ISIC 3 sectors A-B. Manufacturing and construction cover the ISIC 3 sectors C-F. Trade, hotels and restaurants cover the ISIC 3 sectors G-H. Transport, storage and communication cover the ISIC 3 sector I. Finance and business service cover the ISIC 3 sector JK, which includes R&D. Public administration and defense cover the ISIC 3 sector L. Education covers the ISIC 3 sector M. Health and social work cover the ISIC 3 sector N. Other community activities and private households cover the ISIC 3 sector OP.

Source: ECLM based on the FEPS-ECLM International Input-Output Model.

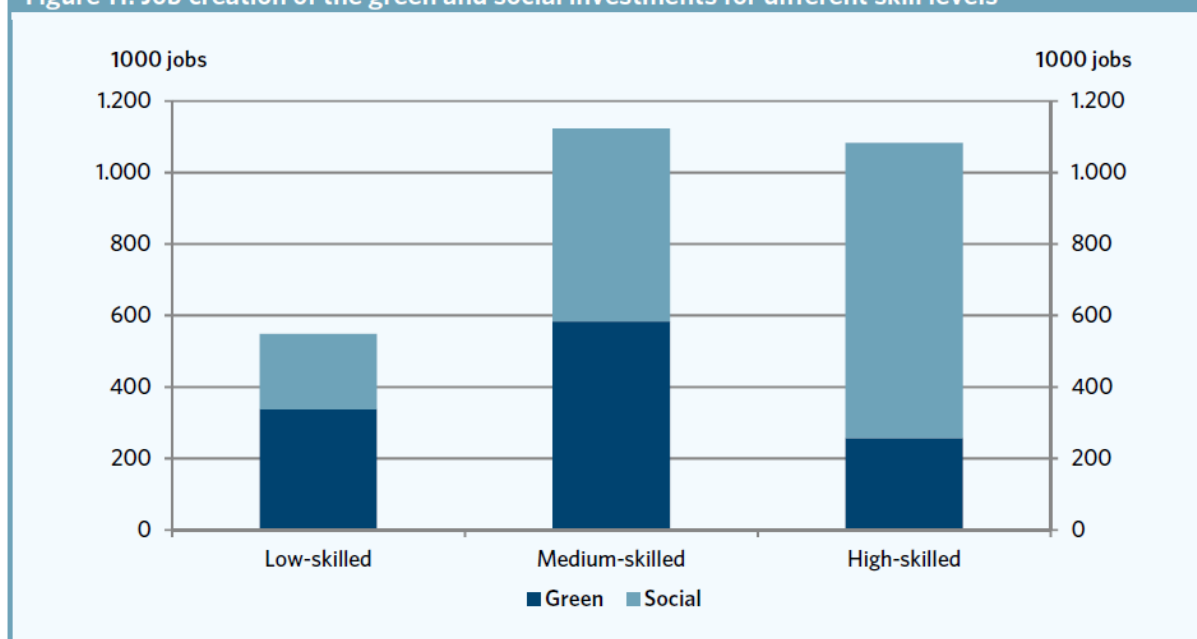
Effect of the Green-Social Investment Plan for workers with different skill-levels

In the following we divide the employment effects of the investment plan on workers with low, medium and high skills.

Figure 11 divides the job creation from the green and social part of the investment plan into jobs for workers with different skill levels. The figure shows that overall, most jobs are created for medium-skilled workers, who experience an increase of more than 1.1 million jobs. This is followed closely by the job creation for high-skilled, which is of almost 1.1 million. Finally, almost 550,000 jobs are created for low-skilled workers.

Of course, the two parts of the investment plans have different focus and create more jobs for differently skilled workers. For the low-skilled, the largest part of the jobs is created from the green investments. For the medium-skilled around half of the jobs come from green investments and the other half from social investments. Finally, for the high-skilled, almost 4/5 jobs are created thanks to the social investments. As the figure shows, most jobs are created for the medium- and high-skilled and this underlines the importance of the social part of the investment plan, where education and further training of the workers is an important element.

Figure 11. Job creation of the green and social investments for different skill levels



Source: ECLM based on the FEPS-ECLM International Input-Output Model.

Table 6 considers the job creation for different skill levels in further detail by dividing the new jobs into different sectors. The division of workers based on skill level is of course dependent on what qualifications are required to work in the different sectors, so more jobs for high-skilled are created in sectors that employ many high-skilled workers and the other way around. An example is that in the educational sector, many jobs are created for high-skilled and medium-skilled. On the other hand, the job effect for low- and medium-skilled workers is quite large in the mining, manufacturing, utilities and construction sectors, but small for the high-skilled.

	Low-skilled			Medium-skilled			High-skilled		
	Green	Social	Total	Green	Social	Total	Green	Social	Total
Agriculture and fishing	4	3	7	4	3	8	1	1	2
<u>Manufacturing and construction</u>	242	13	255	374	22	396	98	8	106
Trade, hotels and restaurants	27	13	40	52	24	77	15	7	21
Transport, storage and communication	9	6	15	18	11	30	6	4	10
<u>Finance and business service</u>	48	9	58	122	25	148	128	26	154
Public administration and defense	1	1	1	2	2	4	2	1	3
<u>Education</u>	0	78	79	1	238	239	3	579	582
<u>Health and social work</u>	5	88	93	8	213	220	5	198	203
Other community activities and private households	0	0	0	0	0	0	0	0	0
Total	337	211	548	584	539	1122	258	825	1082

Note: Investments are made directly in the underlined sectors. Agriculture and fishing cover the ISIC 3 sectors A-B. Manufacturing and construction cover the ISIC 3 sectors C-F. Trade, hotels and restaurants cover the ISIC 3 sectors G-H. Transport, storage and communication cover the ISIC 3 sector I. Finance and business service cover the ISIC 3 sector JK, which includes R&D. Public administration and defense cover the ISIC 3 sector L. Education covers the ISIC 3 sector M.



Health and social work cover the ISIC 3 sector N. Other community activities and private households cover the ISIC 3 sector OP.

Source: ECLM based on the FEPS-ECLM International Input-Output Model.

The effect of higher spending power

Above we have analyzed the detailed effects of how the Green-Social Investment Plan of 1 pct./GDP will spread into the European economy, affecting all countries and sectors in the economy. The calculated effects are based on the FEPS-ECLM International Input-Output Model. The input-output model allows for a very detailed analysis of direct- and indirect effect, country-, sector-, gender-, and educational distribution. However, the input-output model does not take the multiplier-effect into account, meaning the effect that the effect of higher employment from the investment plan will lead to a higher overall income level of households, and this in turn will lead to higher private consumption and higher investments, which will further get GDP to rise and so on.

In other words, the input-output model only illustrates the effects of what a given investment plan will create in terms of jobs and GDP, but it does not take into account that the plan will also generate extra spending power, that again will spread like ripples in the water and will create more jobs and wealth. The final overall job and GDP effect from the Green-Social Investment Plan will therefore be larger than the effects presented above.

To illustrate the effects of the extra spending power, we will compare the multiplier on the international macroeconomic model Heimdal with the result from the input-output model. By comparing the multiplier from Heimdal (that includes the effect of higher spending) with the multiplier from the input-output (that does not include the effect of extra spending power), the difference gives an idea about the size of the effect from the extra spending power. For more information about the international macroeconomic model Heimdal, see Bjørsted and Dahl (2012).

The international macroeconomic model Heimdal is not sector based, so the multiplier effect from Heimdal should not be compared to the multiplier effect of increasing the investments in specific sectors, as it is the case in the Green-Social Investment Plan. Instead we compare the multiplier from Heimdal with the multiplier from the input-output model when the investments are spread out equally on all sectors, based on the share of investment for each sector in each economy.

By comparing the two different multipliers it is seen that the final effect of the Green-Social Investment Plan might be as much as double the size when the extra spending power is included.

The results above clearly show that after a decade with falling investment levels and weak growth, implementing the Green-Social Investment Plan could be an important step in the right direction, finally raising the level of investment across the EU and improve and secure future growth.



References

Andersen, A. and Dahl, S. (2016). "FEPS-ECLM: International Input-Output Model Documentation".

Bjørsted, E. and Dahl, S. (2012). "HEIMDAL – Model description and properties".

Buxbaum, A. and Pirklbauer, S. (2013). "Social Investment Growth, Employment and Financial Sustainability Economic and Fiscal Effects of Improving Childcare in Austria." AK Position Paper. Brussels: AK Europa.

Glavind, N. (2000) "Børn i kroner og ører" Bureau (paper in Danish).

Gylfason, Thorvaldur; Zoega, Gylfi (2003). "Education, Social Equality and Economic Growth: A View of the Landscape". CESifo Working Paper, No. 876.

Hall, B., Mairesse, J. and Mohnen, P. (2009) "Measuring the Returns to R&D". Chapter from Handbook of the Economic Innovation.

Havnes, T. and Modstad, M. (2009). "No Child Left Behind. Universal Child Care and Children's Long Run Outcome." IZA.

IEA (2016). "Energy Efficiency Market Report 2016". International Energy Agency.



Appendix

Table 7. Effects of the Green-Social Investment Plan on a sector level						
	Employment effects			Value added effects (pct. change)		
	Direct	Indirect	Total	Direct	Indirect	Total
Agriculture, Hunting, Forestry and Fishing	0	17	17	0,0	0,2	0,2
Mining and Quarrying	0	5	5	0,0	0,6	0,6
Food, Beverages and Tobacco	0	6	6	0,0	0,1	0,1
Textiles and Textile Products	0	3	3	0,0	0,1	0,1
Leather, Leather and Footwear	0	0	0	0,0	0,1	0,1
Wood and Products of Wood and Cork	0	13	13	0,0	1,2	1,2
Pulp, Paper, Paper , Printing and Publishing	0	12	12	0,0	0,5	0,5
Coke, Refined Petroleum and Nuclear Fuel	0	1	1	0,0	0,3	0,3
Chemicals and Chemical Products	0	7	7	0,0	0,3	0,3
Rubber and Plastics	0	11	11	0,0	0,7	0,7
Other Non-Metallic Mineral	0	24	24	0,0	1,8	1,8
Basic Metals and Fabricated Metal	0	34	34	0,0	0,6	0,6
Machinery, Nec	0	9	9	0,0	0,2	0,2
Electrical and Optical Equipment	0	13	13	0,0	0,4	0,4
Transport Equipment	0	3	3	0,0	0,1	0,1
Manufacturing, Nec; Recycling	0	5	5	0,0	0,2	0,2
Electricity, Gas and Water Supply	0	8	8	0,0	0,4	0,4
Construction	498	106	604	3,2	0,7	3,8
Sale, Maintenance and Repair of Motor Vehicles and Motorcycles; Retail Sale of Fuel	0	18	18	0,0	0,3	0,3
Wholesale Trade and Commission Trade, Except of Motor Vehicles and Motorcycles	0	43	43	0,0	0,4	0,4
Retail Trade, Except of Motor Vehicles and Motorcycles; Repair of Household Goods	0	65	65	0,0	0,4	0,4
Hotels and Restaurants	0	12	12	0,0	0,1	0,1
Inland Transport	0	26	26	0,0	0,4	0,4
Water Transport	0	0	0	0,0	0,1	0,1
Air Transport	0	1	1	0,0	0,2	0,2
Other Supporting and Auxiliary Transport Activities; Activities of Travel Agencies	0	12	12	0,0	0,3	0,3
Post and Telecommunications	0	16	16	0,0	0,4	0,4
Financial Intermediation	0	22	22	0,0	0,3	0,3
Real Estate Activities	0	11	11	0,0	0,3	0,3
Renting of M&Eq and Other Business Activities	151	175	326	0,5	0,7	1,2
Public Admin and Defence; Compulsory Social Security	0	9	9	0,0	0,1	0,1
Education	864	36	900	5,4	0,2	5,6
Health and Social Work	459	29	489	2,0	0,1	2,1
Other Community, Social and Personal Services	0	27	27	0,0	0,2	0,2
Private Households with Employed Persons	0	0	0	0,0	0,0	0,0
Total EU27	1973	779	2752	0,7	0,4	1,0

Source: ECLM based on the FEPS-ECLM International Input-Output Model.



Table 8. Effects of the green investments on a sector level

	Employment effects			Value added effects (pct. change)		
	Direct	Indirect	Total	Direct	Indirect	Total
Agriculture, Hunting, Forestry and Fishing	0	10	10	0,0	0,1	0,1
Mining and Quarrying	0	4	4	0,0	0,4	0,4
Food, Beverages and Tobacco	0	2	2	0,0	0,0	0,0
Textiles and Textile Products	0	2	2	0,0	0,1	0,1
Leather, Leather and Footwear	0	0	0	0,0	0,0	0,0
Wood and Products of Wood and Cork	0	12	12	0,0	1,1	1,1
Pulp, Paper, Printing and Publishing	0	6	6	0,0	0,2	0,2
Coke, Refined Petroleum and Nuclear Fuel	0	1	1	0,0	0,2	0,2
Chemicals and Chemical Products	0	3	3	0,0	0,2	0,2
Rubber and Plastics	0	9	9	0,0	0,6	0,6
Other Non-Metallic Mineral	0	23	23	0,0	1,7	1,7
Basic Metals and Fabricated Metal	0	31	31	0,0	0,6	0,6
Machinery, Nec	0	8	8	0,0	0,2	0,2
Electrical and Optical Equipment	0	10	10	0,0	0,3	0,3
Transport Equipment	0	2	2	0,0	0,1	0,1
Manufacturing, Nec; Recycling	0	3	3	0,0	0,2	0,2
Electricity, Gas and Water Supply	0	4	4	0,0	0,2	0,2
Construction	498	97	595	3,2	0,6	3,8
Sale, Maintenance and Repair of Motor Vehicles and Motorcycles; Retail Sale of Fuel	0	13	13	0,0	0,2	0,2
Wholesale Trade and Commission Trade, Except of Motor Vehicles and Motorcycles	0	30	30	0,0	0,3	0,3
Retail Trade, Except of Motor Vehicles and Motorcycles; Repair of Household Goods	0	45	45	0,0	0,3	0,3
Hotels and Restaurants	0	7	7	0,0	0,1	0,1
Inland Transport	0	16	16	0,0	0,3	0,3
Water Transport	0	0	0	0,0	0,1	0,1
Air Transport	0	1	1	0,0	0,1	0,1
Other Supporting and Auxiliary Transport Activities; Activities of Travel Agencies	0	8	8	0,0	0,2	0,2
Post and Telecommunications	0	9	9	0,0	0,2	0,2
Financial Intermediation	0	15	15	0,0	0,2	0,2
Real Estate Activities	0	7	7	0,0	0,2	0,2
Renting of M&Eq and Other Business Activities	151	125	276	0,5	0,5	1,0
Public Admin and Defence; Compulsory Social Security	0	5	5	0,0	0,0	0,0
Education	0	5	5	0,0	0,0	0,0
Health and Social Work	0	2	2	0,0	0,0	0,0
Other Community, Social and Personal Services	0	15	15	0,0	0,1	0,1
Private Households with Employed Persons	0	0	0	0,0	0,0	0,0
Total EU27	649	528	1178	0,25	0,24	0,49

Source: ECLM based on the FEPS-ECLM International Input-Output Model.



Table 9. Effects of social investments on a sector level

	Employment effects			Value added effects (pct. change)		
	Direct	Indirect	Total	Direct	Indirect	Total
Agriculture, Hunting, Forestry and Fishing	0	8	8	0,0	0,1	0,1
Mining and Quarrying	0	1	1	0,0	0,1	0,1
Food, Beverages and Tobacco	0	4	4	0,0	0,1	0,1
Textiles and Textile Products	0	1	1	0,0	0,1	0,1
Leather, Leather and Footwear	0	0	0	0,0	0,0	0,0
Wood and Products of Wood and Cork	0	1	1	0,0	0,1	0,1
Pulp, Paper, Paper , Printing and Publishing	0	6	6	0,0	0,2	0,2
Coke, Refined Petroleum and Nuclear Fuel	0	0	0	0,0	0,1	0,1
Chemicals and Chemical Products	0	3	3	0,0	0,2	0,2
Rubber and Plastics	0	1	1	0,0	0,1	0,1
Other Non-Metallic Mineral	0	1	1	0,0	0,1	0,1
Basic Metals and Fabricated Metal	0	3	3	0,0	0,1	0,1
Machinery, Nec	0	1	1	0,0	0,0	0,0
Electrical and Optical Equipment	0	3	3	0,0	0,1	0,1
Transport Equipment	0	1	1	0,0	0,0	0,0
Manufacturing, Nec; Recycling	0	2	2	0,0	0,1	0,1
Electricity, Gas and Water Supply	0	4	4	0,0	0,2	0,2
Construction	0	9	9	0,0	0,1	0,1
Sale, Maintenance and Repair of Motor Vehicles and Motorcycles; Retail Sale of Fuel	0	5	5	0,0	0,1	0,1
Wholesale Trade and Commission Trade, Except of Motor Vehicles and Motorcycles	0	13	13	0,0	0,1	0,1
Retail Trade, Except of Motor Vehicles and Motorcycles; Repair of Household Goods	0	20	20	0,0	0,1	0,1
Hotels and Restaurants	0	5	5	0,0	0,0	0,0
Inland Transport	0	10	10	0,0	0,1	0,1
Water Transport	0	0	0	0,0	0,0	0,0
Air Transport	0	0	0	0,0	0,1	0,1
Other Supporting and Auxiliary Transport Activities; Activities of Travel Agencies	0	4	4	0,0	0,1	0,1
Post and Telecommunications	0	6	6	0,0	0,1	0,1
Financial Intermediation	0	7	7	0,0	0,1	0,1
Real Estate Activities	0	4	4	0,0	0,1	0,1
Renting of M&Eq and Other Business Activities	0	50	50	0,0	0,2	0,2
Public Admin and Defence; Compulsory Social Security	0	4	4	0,0	0,0	0,0
Education	864	31	895	5,4	0,2	5,6
Health and Social Work	459	28	487	2,0	0,1	2,1
Other Community, Social and Personal Services	0	12	12	0,0	0,1	0,1
Private Households with Employed Persons	0	0	0	0,0	0,0	0,0
Total EU27	1323	251	1574	0,4	0,1	0,5

Source: ECLM based on the FEPS-ECLM International Input-Output Model.