INTERREG IVC Project:

OSAIS –
Observatory on State Aid Impact

Component 3: Analysis results
Impact of State Aid Schemes on regional companies
by all OSAIS partners

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with support by IDEUM and Economica

Status: February 2013

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1 Selection of samples for data gathering and impact analysis

All OSAIS partners have decided to gather at least 30 complete data sets with the compulsory indicators and to gather as many data as possible also for the optional indicators for a minimum of 3 state aid schemes (SAS) managed by their own region or on national level. This agreement was done in coherence with the developed joint OSAIS methodology for impact analysis of state aid schemes.

Every partner was responsible for the quantity and quality of the own gathered data.

Data gathering has started in January 2011 and was carried out for 12 months during the whole year 2011. Finally the minimum requirement of 30 complete data sets for compulsory indicators was only fulfilled for 11 State Aid Schemes instead for all 33 selected SAS. Veneto, Lower Austria and Cyprus have fully matched the requirements for 3 SAS each, 1 SAS from Trencin and 1 SAS from Saxony are also fulfilling these requirements. Regarding the optional indicators the sample shows even larger gaps.

There are several reasons for the relative low data quantity of the selected state aid schemes:

- Companies are not used to contribute to such an impact analysis by providing information about the results of the funded projects. Usually there is no obligation for the beneficiary to participate in such impact assessment activities and to give response.
- For some SAS only very few projects have been approved so far.
- In some partner regions like Opolskie and Lisbon/Tagus Valley the responsibility of the OSAIS relevant SAS was transferred from national to regional level only with the current structural funds period from 2007 on, with first approved projects in 2008.
- Not all OSAIS partner organisations are managing the respective SAS or have direct access to the data. The formal request for permission to get access to the required SAS data and to carry out interviews with the beneficiaries is a time consuming process – and not always crowned with success.
- Furthermore it seems that not all partners were following the agreement among all OSAIS partners to gather also as many optional data as possible. Thus several partners have gathered only very few optional impact indicators

This analysis is based on OSAIS partners' provided data with status from 10th of January 2012 and an update by 26th of November 2012.

C3 Coordinator Lower Austria has merged the 10 individual partner data bases into one data base for the joint analysis by the statistical experts and by every partner.

The limited data quantity is in fact hampering the interregional comparison seriously. The eligibility of numerous SAS for the TOP Ranking lists is very limited. And also the calculated averages in the PIVOT tables are based on very few data

points in single cases with a very limited explanatory power. The restrictions for the inductive analysis of at least 70 complete data sets were not fulfilled. So the experts from Lower Austria agreed on to run a limited inductive analysis also for SAS with at least 30 completed data sets.

We are also facing problems with limited data quality: e.g. “maintained jobs” through the funded project was interpreted by OSAIS partners and the responding companies in different ways with the consequence that the indicator “maintained jobs” has no explanatory power for the interregional comparison at all.

Due to these data limitations the complementary personal exchange about the experiences with the State Aid Schemes and the background of the SAS became very crucial for the impact analysis. Therefore Staff exchanges and workshops for comparison of SASs during the Study Visits were organised. Unfortunately workshops have seen a lot of no shows of several partners due to different reasons.

2 TOP Ranking Lists: Quantitative impact indicators in relation to the grant equivalent

The TOP Ranking lists give a comprehensive overview over the impact of different state aid schemes under different state aid topics or for different types of beneficiaries in terms of size or age.

2.1 Indicators, selection criteria and pre-conditions

TOP 5 Ranking lists are generated for the **quantitative impact indicators in relation to the grant equivalent.**

This section gives a list of the seven indicators (e.g. "additional turnover / 1.000 Euro GE"), the three different points in time at which these indicators are measured, and the selection-criteria of the companies:

- Additional turnover / 1.000€ GE,
- Maintained jobs / 1.000€ GE
- New jobs / 1.000€ GE
- Maintained R&D jobs / 1.000€ GE
- New R&D jobs / 1.000€ GE
- Additional R&D budget /1.000€ GE
- Additional export / 1.000€ GE

for the **time stamps:**

- Expected
- Impact at project end
- Impact after two years after project end.

The **selection criteria** are:

- size of companies (micro – small – medium) (3)
- Age of company (<= 2, >2 ... =5, > 5 ... =10, >10 years) (4)
- SA topic: 6 as agreed on, but only for 5 SA topics schemes selected (5)
- All companies without filter (1)

No combination of selection criteria is applied. Note that only one selection criterion can be applied per list as there is usually not sufficient number of project cases per analysed state aid scheme. E.g. we don't calculated the TOP Ranking for "small" companies which are "<=2" years old as these are already two criteria!

There were 7 (indicators) x 3 (time stamps) = 21 variables considered for 13 TOP Ranking Lists (=1 TOP Ranking List per selection criteria) for

- All types of companies and all State Aid Topics
- Single State Aid Topics
    - Investment in commerce and industry
    - Investment in tourism
    - Research & Development & Innovation
    - SME
    - Other
- Company age categories
    - Less than or equal to 2 years
    - Older than 2 years and less than or equal to 5 years
    - Older than 5 years and less than or equal to 10 years
    - Older than 10 years
- Company size categories
    - micro
    - small
    - medium-sized

In each list, the **average impact value / 1.000 Euro GE** on the indicator was calculated for each of the 33 SAS. In many cases however, an SAS covered no or only few projects given the selection and time stamp. As averages are only meaningful if the are taken over several values, it was required that at least 10 projects are covered by an SAS in order to be eligible.

Eligibility for single ranking requires a minimum of 10 values of the SA required for chosen selection.

Zero Values (= no impact) are not considered for ranking.

2.2 Ranking information and methodology, Confidence intervals

Each TOP Ranking includes information about

- Selection criteria
- Total number of eligible state aid schemes for the respective criteria
- Name of state aid scheme with

- Rank
- Region
- SA topic
- regulation article
- average impact value
- average project costs
- average grant equivalent
- impact per 1.000 Euro grant equivalent
- number of values
- confidence interval

An example: the SAS "Fondo di Rotazione per l'Artigianato Regionale" of Veneto had 12 entries of "maintained R&D Jobs / 1.000 Euro GE" at "2 years after project end" if companies "older than 10 years" were asked. Thus the average number of maintained R&D jobs per 1.000 Euro GE was calculated (resulting in a value of 0.15).

As just said, averages are likely to move around a lot if there are only few values behind. There are statistical methods to estimate the interval within which the "true" average is found at a certain probability.[1] These are the so-called "**confidence intervals**". The 95%-confidence-interval calculated here is the range within which the true average lies. In the above example (average of 0.15), the true average is the interval from -0.13 to +0.43 with a probability of 95%. Thus it could easily be 0.35 (or 0.08 or any number within the interval) and only by (randomly) selecting the projects used in this study, we came up with a value of 0.15.

The limits of the interval are affected by two factors:

- Variation of the impact values: if we have three projects with impact values of 0.01, 0.95 and 1.17, the interval will be much wider than if the impact values were 0.14, 0.15 and 0.17.
- Number of impact values: If we have the three impact values 0.14, 0.15, and 0.17, we can say that the average is certainly close to 0.15, but we cannot be sure whether these are just unfortunate outliers. If we have a hundred impact values and they are all between 0.14 and 0.17, we can be very sure, that the real average is within this interval ("law of large numbers").

[1] Note for the very interested reader: although this explanation of the confidence interval is sloppy (it interprets the true average as a random variable) it servers our purpose here much better.

The confidence interval thus gives an approximation of the uncertainty of the estimated average. That the true average is outside the interval is very unlikely, the probability for that is approximately 5%.

Excursion for the interested reader: the method used to calculate the confidence interval is a standard and almost always used. However, it relies on the assumption of normally distributed impact data ("Gaussian Bell Curve"). This implies that impact values are

- symmetric around their average and
- can take on any number from – infinity to + infinity.

At least the second assumption is wrong in our case, as a subsidy has to have at least no impact on a project. There is no plausible explanation that an SAS could have substantial negative effects on a project. The negative lower limit of -0.13 thus cannot be interpreted in the standard of "not rejecting the Null-Hypotheses" as this Null-Hypotheses must be rejected for economic reasoning. End of the excursion

The eligible averages (average over at least 10 projects) were compared to rank the values. In the above example, four more SAS were eligible, all of them showing lower averages. For the first place, the winner usually gets 10 points, the second place gets 9 points, the third 8 points, and so on. But if there are less eligible SAS, competition is smaller. In the extreme case, there would be only one SAS, getting all 10 points, which is of course a meaningless distortion.

To get around that problem, the maximum number of points was capped at either 10 or the number of eligible SAS. So if there are only three SAS in play, the first one would get three points, the second two, and the third one point. This leads in the above example to "Fondo di Rotazione per l'Artigianato Regionale" being the winner, but only receiving five points, as there are just five eligible SAS competing.

The sums of the points over all seven indicators and three time-stamps of a given selection (thus over 21 values) are calculated. Thus the points given to e.g. "Fondo di Rotazione per l'Artigianato Regionale" when applied to companies older than 10 years are summed up. This results in 56 points, which is the third Rank of all SAS for companies older than 10 years.

Please note: due to the lower number of eligible state aid schemes for the combination of selection criteria/impact indicator the deduction of the overall ranking for one selection criteria over all 21 impact indicators has unavoidable weaknesses due to strongly differing number of eligible state aid schemes per impact indicator. Lower Austria has run some tests in order to figure out what ranking calculation is the most meaningful one. And we decided to sum up the single TOP Points which is slightly preferring state aid schemes with a high number of eligible rankings results. But if we would use the average over the TOP Points these state aid schemes with a high number of eligible rankings results are massively discriminated.

Note that each list contains "average impact values / 1.000 Euro GE" and "average impact values". Only the normalised, first ones were used to calculate

the Top Lists as the average impact highly depends on grant equivalent. After normalising by dividing by the grant equivalent, we know how efficient the grant was used in the project and small subsidies can have a, relatively, large impact.

2.3 Analysis results

For every of the 13 selection criteria you find one TOP Ranking in a separate sheet with the Ranking for the 21 quantitative impact values (7 indicators, each with 3 time stamps) and additional information per state aid scheme. For example the data sheet “Tour” includes all rankings for the state aid schemes linked to the state aid topic "Investment in tourism". Every data sheet (except the overall “overview” over all 13 selection criteria) has the same structure in order to facilitate the orientation.

The first data sheet “Overview” of the file “TOP Ranking List” provides for all 33 state aid schemes the rankings for all 13 selection criteria. You can easily sort the state aid schemes according to their ranking for every of the selection criteria by using the auto filter.

The EXCEL file “TOP Ranking List 20121124” includes all TOP Rankings and is uploaded onto the OSAIS intranet under “OSAIS PROJECT / COMPONENT 3 / DESCRIPTIVE ANALYSIS / JOINT ANALYSES”.

			State Aid Topics					Company age				Company size		
Region	State Aid Scheme	All companies	Investment in commerce and indust	Investment in tourism	Research & Development & Innovati	SME	Other	<=2	2<age<=5	5<age<=10	10<age	Micro	Small	Medium
P01 Veneto	DOCUP OB. 2 2000-2006 misura 1.5 BANDO 2006, LETT. D MIGLIORAMENTO	7				2					1	4	5	
P01 Veneto	FONDO DI ROTAZIONE PER LA CONCESSIONE DI FIZIAMENTI AGEVOLATI	4	2								1		3	
P01 Veneto	Fondo di Rotazione per l'Artigianato Regionale - LR 2/2002	3	3								3	2		
P02 Murcia	"Information and Communication Technologies"	6			2	3								
P02 Murcia	"PCCP Innoempresa"	16			7									
P02 Murcia	Innovation Programme	11			4						6			2
P03 Cyprus	Program for Enhance the Competitiveness of SMEs in the	23				10						10	13	
P03 Cyprus	Program for Promoting and Encourage the Improvement and Development of	12				4						8		
P03 Cyprus	Program for Promoting and Improvement of the Development Manufacturing and	23				8						7	8	
P04 West Romania	Investment Industry de Minimis													
P04 West Romania	SME	22				9				1				
P04 West Romania	Investment Art.13	23	12											
P05 Lisbon and Tag	Sistema de Incentivos à Inovação													
P05 Lisbon and Tag	Sistema de Incentivos à Investigação e Desenvolvimento Tecnológico	15	10	3	5								13	
P05 Lisbon and Tag	Sistema de Incentivos à Qualificação e Internacionalização PME	8	5	2	3	7	1						12	
P06 Saxony	Forschung und Entwicklung - Projektförderung	23			8								13	
P06 Saxony	GA "Verbesserung der reg. Wirtschaftsstrukt."	23	7										10	5
P06 Saxony	MF "Verbesserung der unternehmer. Leistungsfähigkeit - Messen,	12				6							7	
P08 Trencin	Scheme for boost of existing and beginning enterprises (aid scheme de	17	6										9	4
P08 Trencin	Scheme for support of international cooperation (aid scheme de minimis)													
P08 Trencin	State Aid Scheme for encouragement of enterprise activities in a tourism													
P08 Trencin	State Aid Scheme for encouragement of small and medium enterprises	23	11											
P09 Opolskie	de minimis investments	19	7									6		
P09 Opolskie	de minimis tourism	17		4								9		
P09 Opolskie	regional investment and employment aid	20	9								10		11	6
P09 Opolskie	turism regional aid	23		5								12		
P10 Lower Austria	F&E Förderung	5			1			2	1		4	3	4	3
P10 Lower Austria	Internationalisierung	1				1								
P10 Lower Austria	Investition Tourismus	9		1							5	4	2	
P10 Lower Austria	Investition Wirtschaft	2	1					1			8	1	1	1
P11 Champagne-A	business transfer regional aid	14	4								7		6	
P11 Champagne-A	innovation regional aid	21			6									
P11 Champagne-A	International development regional aid	10				5					9	11		

As the overview shows the single state aid scheme can have a very different number of ranking positions due to large variety in gathered cases per state aid scheme and due very different level of missing values per case. The expected number of ranking over all sate id schemes is 3.4 what means that in average every of the 13 state aid schemes has 3,4 ranks within the 13 TOP ranking lists. Due the largest number of gathered data the Lower Austrian state aid schemes have up to 8 out of 13 possible ranks. As usually one SAS is allocated to one SA topic, 9 ranks is the maximum achievable in this case. Also Veneto's state aid schemes have considerable more ranking positions than the average. 2 out of 3 SAS of Lisbon and Tagus Valley have also 5 and 7 positions, but this relative high number is mostly determined by allocation of the SAS to several state aid topics while the other OSAIS partners have categorised their SAS usually under exact one state aid topic.

4 out of the in total 33 SAS have no ranking position at all (two from Trencin, one from Lisbon/Tagus Valley and one from West Romania) because they haven't matched the pre-condition of at least 10 values per indicator in combination with the selection criteria.

The TOP Ranking overview shows a higher efficiency for the SAS from Veneto Region and Lower Austria (TOP 5 for all companies) than from other OSAIS partners regarding the applied methodology and indicators. As the efficiency is depending on the Gross Grant Equivalent the absolute impact of the state aid schemes can differ as the reader can see in the explanation of some PIVOT analysis in the chapter 3. For single selection criteria also SASs from Murcia Region and Lisbon/Tagus Valley have single TOP 3 Rankings with more than 3 eligible SAS for the respective TOP Ranking.

These TOP Rankings should be taking for identification of differences and possible Good Practices as point of departure for further and necessary in-depth interregional comparison of the analysed state aid schemes, but results should not be taken for granted. The different framework conditions in the OSAIS partner regions or the missing opportunity of selection of a (partly) representative sample for the SAS might are also having influence on the analysis results, not only the SAS projects and impact assessment by the beneficiaries themselves.

On the next pages an example for the TOP Ranking for the selection criteria "company age > 10 years" with the SAS of Lower Austria and Champagne-Ardenne is depicted:

Selection criteria:	10 < age	P10 Lower Austria				P11 Champagne-Ardennne		
Eligible SAS with 10 or more valid values	10	F&E Förderung	Internationalisierung	Investition Tourismus	Investition Wirtschaft	business transfer regional aid	innovation regional aid	International development regional aid
Impact type	time stamp of impact							
Additional turnover / 1.000 Euro GE	expected at project start	1		4	2			
	realised at project end	2		3	1			
	realised 2 years after project	2		3	1			
Maintained jobs / 1.000 Euro GE	expected at project start	9		7	10	6		2
	realised at project end	9		7	10	6		2
	realised 2 years after project	8		7	9	5		2
New jobs / 1.000 Euro GE	expected at project start	9		5	6	4		8
	realised at project end	9		6	7	2		10
	realised 2 years after project	10		4	8	2		6
Maintained R&D jobs / 1.000 Euro GE	expected at project start	4		3	6			
	realised at project end	4		3	5			
	realised 2 years after project	3		4	5			
New R&D jobs / 1.000 Euro GE	expected at project start	1			4			
	realised at project end	1			3			
	realised 2 years after project	1			2			
Additional R&D budget / 1.000 Euro GE	expected at project start	1			3			
	realised at project end	1			3			
	realised 2 years after project	1			2			
Additional export / 1.000 Euro GE	expected at project start	1			2			
	realised at project end	1			2			
	realised 2 years after project	1			2			
Additional turnover / 1.000 Euro GE	expected at project start	4		1	3			
	realised at project end	3		2	4			
	realised 2 years after project	3		2	4			
Maintained jobs / 1.000 Euro GE	expected at project start	2		4	1	5		9
	realised at project end	2		4	1	5		9
	realised 2 years after project	2		3	1	5		8
New jobs / 1.000 Euro GE	expected at project start	2		6	5	7		3
	realised at project end	2		5	4	9		1
	realised 2 years after project	1		7	3	9		5
Maintained R&D jobs / 1.000 Euro GE	expected at project start	3		4	1			
	realised at project end	2		3	1			
	realised 2 years after project	3		2	1			
New R&D jobs / 1.000 Euro GE	expected at project start	4			1			
	realised at project end	3			1			
	realised 2 years after project	2			1			
Additional R&D budget / 1.000 Euro GE	expected at project start	3			1			
	realised at project end	3			1			
	realised 2 years after project	2			1			
Additional export / 1.000 Euro GE	expected at project start	2			1			
	realised at project end	2			1			
	realised 2 years after project	2			1			
	Sum of Top Points:	52		43	38	40		35
	Rank over Top Points:	4		5	8	7		9

For the selection criteria "10 < age" in total 10 out of the OSAIS sample of 33 SAS are eligible, which means that 10 SAS have at least 10 cases with companies older than 10 years.

On the left side the 7 impact indicators with the 3 time stamps "expected at project start" – "at project end" – 2 years after project end" are listed. The first table shows the ranking position of the 7 selected SAS. E.g. the SAS "Investition Wirtschaft" is the 7th best SAS in terms of the indicator "new jobs / 1.000 Euro GE" at the time stamp "at project end" while the SAS "business transfer regional aid" is the 2nd best (see upper table). These rankings lead to 9 points for the SAS from Champagne-Ardenne and 4 for the SAS from Lower Austria because at 10

eligible SAS exists for this particular combination indicator "new jobs / 1.000 Euro GE" at the time stamp "at project end" for selection criteria "10 < age" (bottom part in the depiction above) (see table below on previous page).

Those state aid schemes which are not matching the selection criteria or not having minimum of 10 valid values per respective impact indicator under the selection criteria have blank cells.

The sum over all 21 indicator combinations is 38 points in case of SAS "Investition Wirtschaft" and 40 points in case of "business transfer regional aid". Thus the French SAS is ranked on Position 7 while the Austrian SAS is on position 8.

Due to the unbalanced number of cases and filled in values per case among the 33 selected SAS those SAS with higher number of filled in values have a slight advantage as we can see in this example. In the direct comparison of Lower Austria's SAS "Investition Wirtschaft" with CA's SAS "business transfer regional aid" CA's SAS is usually ranked better for the eligible indicators. But as "Investition Wirtschaft" is eligible for more indicators than CA'S SAS the sum over all ranking points is nearly the same for both SAS. This issue could have been be solved only by a more balanced quantity of all selected SAS.

The depiction below on the next page is listing the average values for the 7normalised impact indicators with the 3 time stamps "expected at project start" – "at project end" – 2 years after project end" (upper part). These averages are the basis for the ranking positions. The "95% Confidence Intervals Upper Limit" (middle part) and "95% Confidence Intervals Lower Limit" (bottom part) are also listed. For further explanations see chapter "2.2 Ranking information and methodology, Confidence intervals".

Selection crite	10 < age	P10 Lower Austria				P11 Champagne-Ardennne		
Eligible SAS with 10 or more valid values	10	F&E Förderung	Internationalisierung	Investition Tourismus	Investition Wirtschaft	business transfer regional	innovation regional aid	International development regional aid
	Averages							
Additional turnover / 1.000 Euro GE	expected at project start	8.502		763	8.434			
	realised at project end	3.517		1.826	11.492			
	realised 2 years after project	19.114		2.347	21.010			
Maintained jobs / 1.000 Euro GE	expected at project start	0,07		0,99	0,06	1,53		6,20
	realised at project end	0,08		0,98	0,07	1,54		5,16
	realised 2 years after project	0,09		0,19	0,07	1,82		5,19
New jobs / 1.000 Euro GE	expected at project start	0,02		0,05	0,05	0,07		0,02
	realised at project end	0,03		0,06	0,05	0,09		0,02
	realised 2 years after project	0,03		0,12	0,06	0,34		0,08
Maintained R&D jobs / 1.000 Euro GE	expected at project start	0,01		0,01	0,00			
	realised at project end	0,01		0,01	0,00			
	realised 2 years after project	0,01		0,01	0,00			
New R&D jobs / 1.000 Euro GE	expected at project start	0,01			0,00			
	realised at project end	0,01			0,00			
	realised 2 years after project	0,01			0,00			
Additional R&D budget / 1.000 Euro GE	expected at project start	1.032			65			
	realised at project end	969			74			
	realised 2 years after project	582			38			
Additional export / 1.000 Euro GE	expected at project start	5.593			1.440			
	realised at project end	1.854			1.393			
	realised 2 years after project	11.869			10.231			
	95% Confidence Interva							
Additional turnover / 1.000 Euro GE	expected at project start	13.412		1.318	13.021			
	realised at project end	6.497		2.901	17.168			
	realised 2 years after project	44.039		3.494	40.843			
Maintained jobs / 1.000 Euro GE	expected at project start	0,16		2,55	0,10	2,32		15,54
	realised at project end	0,17		2,55	0,12	2,32		12,53
	realised 2 years after project	0,18		0,34	0,13	3,08		12,56
New jobs / 1.000 Euro GE	expected at project start	0,04		0,09	0,07	0,19		0,04
	realised at project end	0,05		0,10	0,07	0,24		0,03
	realised 2 years after project	0,05		0,17	0,08	0,75		0,18
Maintained R&D jobs / 1.000 Euro GE	expected at project start	0,02		0,03	0,01			
	realised at project end	0,02		0,03	0,01			
	realised 2 years after project	0,03		0,03	0,01			
New R&D jobs / 1.000 Euro GE	expected at project start	0,01			0,00			
	realised at project end	0,02			0,00			
	realised 2 years after project	0,02			0,00			
Additional R&D budget / 1.000 Euro GE	expected at project start	2.178			164			
	realised at project end	1.764			174			
	realised 2 years after project	992			83			
Additional export / 1.000 Euro GE	expected at project start	9.980			2.764			
	realised at project end	4.030			2.859			
	realised 2 years after project	29.863			24.600			
	95% Confidence Interva							
Additional turnover / 1.000 Euro GE	expected at project start	3.592		207	3.847			
	realised at project end	536		751	5.815			
	realised 2 years after project	-5.812		1.200	1.176			
Maintained jobs / 1.000 Euro GE	expected at project start	-0,01		-0,58	0,02	0,74		-3,14
	realised at project end	-0,01		-0,59	0,02	0,75		-2,21
	realised 2 years after project	0,00		0,03	0,02	0,55		-2,19
New jobs / 1.000 Euro GE	expected at project start	0,00		0,02	0,03	-0,06		0,01
	realised at project end	0,01		0,02	0,03	-0,06		0,00
	realised 2 years after project	0,01		0,06	0,03	-0,08		-0,03
Maintained R&D jobs / 1.000 Euro GE	expected at project start	0,00		-0,01	0,00			
	realised at project end	0,00		-0,01	0,00			
	realised 2 years after project	0,00		-0,01	0,00			
New R&D jobs / 1.000 Euro GE	expected at project start	0,00			0,00			
	realised at project end	0,00			0,00			
	realised 2 years after project	0,00			0,00			
Additional R&D budget / 1.000 Euro GE	expected at project start	-114			-34			
	realised at project end	173			-26			
	realised 2 years after project	171			-6			
Additional export / 1.000 Euro GE	2 years earlier	1.205			117			
	at project end	-321			-73			
	2 years after project end	-6.125			-4.139			

The number of case in the depiction above gives an overview about the number of existing values for the 7 impact indicators with the 3 time stamps "expected at project start" – "at project end" – 2 years after project end" for the single SAS. We see that Lower Austria's SAS "F&E Förderung", "Investition Tourismus" and "Investition Wirtschaft" have more values than the two eligible SAS "business transfer regional aid" and "international development regional aid" from Champagne-Ardenne.

The depiction below is the bottom part of the TOP Ranking List and is listing the averages for several impact indicators in absolute values in order to give an impression of the effectiveness of the SAS at a glance. You also find the average project costs and the average grant equivalent.

Selection crite	**10 < age**	P10 Lower Austria				P11 Champagne-Ardennne		
Eligible SAS with 10 or more valid values	**10**	F&E Förderung	Internationalisierung	Investition Tourismus	Investition Wirtschaft	business transfer regional	innovation regional aid	International development regional aid
	Number of cases							
Additional turnover / 1.000 Euro GE	expected at project start	26		33	41			
	realised at project end	26		35	43			
	realised 2 years after project	26		34	40			
Maintained jobs / 1.000 Euro GE	expected at project start	28		36	44	14		11
	realised at project end	28		36	44	14		11
	realised 2 years after project	28		35	41	12		11
New jobs / 1.000 Euro GE	expected at project start	28		36	44	14		11
	realised at project end	28		36	44	14		11
	realised 2 years after project	28		35	41	12		10
Maintained R&D jobs / 1.000 Euro GE	expected at project start	28		34	44			
	realised at project end	28		34	44			
	realised 2 years after project	28		33	41			
New R&D jobs / 1.000 Euro GE	expected at project start	28		34	44			
	realised at project end	28		34	44			
	realised 2 years after project	28		33	41			
Additional R&D budget / 1.000 Euro GE	expected at project start	25		34	44			
	realised at project end	25		33	44			
	realised 2 years after project	25		33	41			
Additional export / 1.000 Euro GE	expected at project start	27		34	44			
	realised at project end	27		33	44			
	realised 2 years after project	27		33	41			
	Averages							
Additional turnover	expected at project start	452.500		57.879	839.747			
	realised at project end	221.163		128.731	1.105.367			
	realised 2 years after project	867.878		159.772	1.503.713			
Maintained jobs	expected at project start	3,07		3,11	6,41	35,57		43,27
	realised at project end	4,50		3,11	6,70	36,00		38,09
	realised 2 years after project	4,73		2,57	6,73	36,83		37,64
New jobs	expected at project start	0,86		1,56	3,26	0,79		0,41
	realised at project end	1,27		1,61	3,80	1,07		0,45
	realised 2 years after project	1,29		2,70	4,70	4,33		0,82
Maintained R&D jobs	expected at project start	0,39		0,03	0,32			
	realised at project end	0,43		0,03	0,34			
	realised 2 years after project	0,50		0,03	0,24			
New R&D jobs	expected at project start	0,32			0,09			
	realised at project end	0,50			0,11			
	realised 2 years after project	0,46			0,10			
Additional R&D budget	expected at project start	41.089			19.545			
	realised at project end	56.008			20.500			
	realised 2 years after project	31.060			4.634			
Additional export	expected at project start	234.630			206.906			
	realised at project end	74.444			243.475			
	realised 2 years after project	482.407			655.121			
	Average project costs	257.207	58.051	437.840	1.633.537	1.166.321	126.113	44.420
	Average grant equivalent	69.683	17.468	67.264	153.371	45.520	30.201	19.339

3 TOP Ranking Lists: Qualitative impact indicators

3.1 Indicators, selection criteria and pre-conditions

The TOP Ranking Lists are also generated for the qualitative impact indicators (not normalised by the grant equivalent of the respective project) following the same methodology as applied for the TOP ranking for the quantitative impact indicators.

The considered qualitative impact indicators are:

- positive impact on the environment
- supported gender aspects
- innovation culture in the company improved
- facilitated access to information and external partners
- increased (any kind of) staff qualification
- increased the technology know-how / position of the company
- improvement of organisational (not technical) structures or processes
- improved the technical manufacturing process and/or increased flexibility
- increased the productivity or reduced the costs
- increased the production capacity
- contributed to the business/innovation strategy
- new products/services stemming from the project
- improved the quality of products/services
- opened new markets and/or enlarged existing market positions of the company

3.2 Ranking information and methodology, Confidence intervals

See chapter 2.1

3.3 Analysis results

The overview over the analysis results of the TOP Rankings for the qualitative impact indicators is depicted in the following table:

			State Aid Topics					Company age				Company size		
Region	State Aid Scheme	All companies	Investment in commerce and industry	Investment in tourism	Research & Development & Innovation	SME	Other	<=2	2<age<=5	5<age<=10	10<age	Micro	Small	Medium
P01 Veneto	DOCUP OB. 2 2000-2006 misura 1.5 BANDO 2006, LETT. D MIGLIORAMENTO	14				5					8	4	10	
P01 Veneto	FONDO DI ROTAZIONE PER LA CONCESSIONE DI FIZIAMENTI AGEVOLATI	15	6								9		8	
P01 Veneto	Fondo di Rotazione per l'Artigianato Regionale - LR 2/2002		8									6		
P02 Murcia	"Information and Communication Technologies"	8			6	1					4		6	3
P02 Murcia	"PCCP Innoempresa"	6			3									
P02 Murcia	Innovation Programme	9			4						5		4	4
P03 Cyprus	Program for Enhance the Competitiveness of SMEs in the													
P03 Cyprus	Program for Promoting and Encourage the Improvement and Development of													
P03 Cyprus	Program for Promoting and Improvement of the Development Manufacturing and													
P04 West Romania	Investment Industry de Minimis													
P04 West Romania	SME	17				6				1				
P04 West Romania	Investment Art.13	12	7											
P05 Lisbon and Tagu	Sistema de Incentivos à Inovação													
P05 Lisbon and Tagu	Sistema de Incentivos à Investigação e Desenvolvimento Tecnológico	5	3	1	4								5	
P05 Lisbon and Tagu	Sistema de Incentivos à Qualificação e Internacionalização PME	10	4	3	7	2	1						7	
P06 Saxony	Forschung und Entwicklung - Projektförderung													
P06 Saxony	GA "Verbesserung der reg. Wirtschaftsstrukt."													
P06 Saxony	MF "Verbesserung der unternehmer. Leistungsfähigkeit - Messen,													
P08 Trencin	Scheme for boost of existing and beginning enterprises (aid scheme de													
P08 Trencin	Scheme for support of international cooperation (aid scheme de minimis)													
P08 Trencin	State Aid Scheme for encouragement of enterprise activities in a tourism													
P08 Trencin	State Aid Scheme for encouragement of small and medium enterprises													
P09 Opolskie	de minimis investments													
P09 Opolskie	de minimis tourism													
P09 Opolskie	regional investment and employment aid	1	1											
P09 Opolskie	turism regional aid													
P10 Lower Austria	F&E Förderung	2			1			1	1		2	1	2	2
P10 Lower Austria	Internationalisierung	11				3								
P10 Lower Austria	Investition Tourismus	6		2							3	3	3	
P10 Lower Austria	Investition Wirtschaft	2	2					2			1	2	1	1
P11 Champagne-Ard	business transfer regional aid	16	5								6		11	
P11 Champagne-Ard	innovation regional aid	4			2									
P11 Champagne-Ard	International development regional aid	13				4					7	5	9	

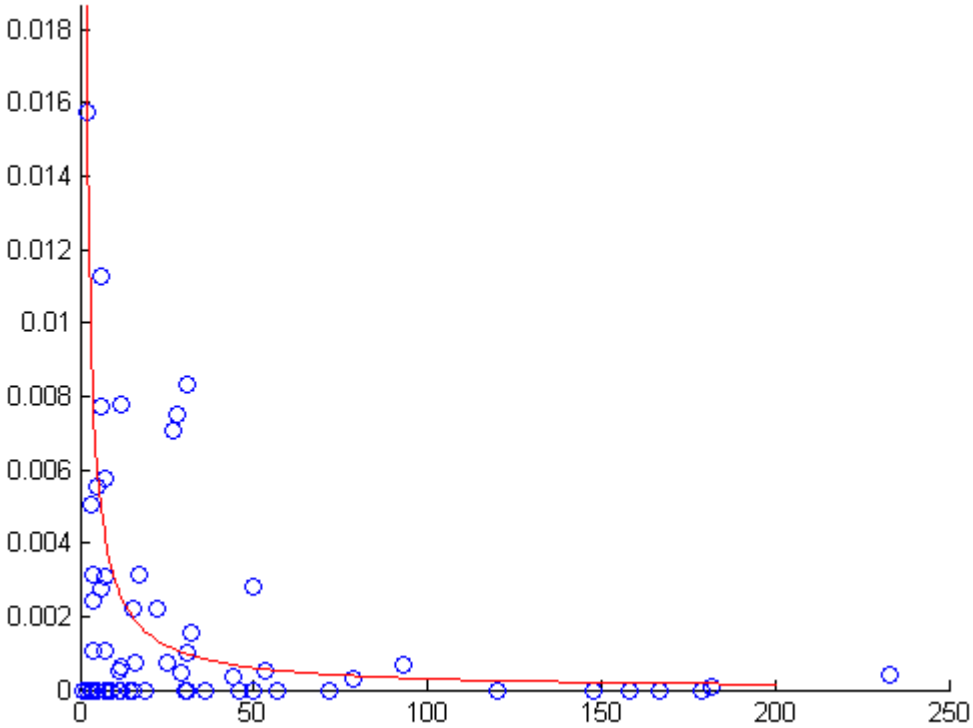
Detailed results are available as MS EXCEL file "TOP Ranking List qual 20121207" in the intranet under "OSAIS PROJECT / COMPONENT 3 / DESCRIPTIVE ANALYSIS / JOINT ANALYSES".

4 The limited explanatory power of the composed normalised relative indicators

In order to take into consideration the size of the beneficiaries the partners decided to introduce another composed indicator measuring the quantitative effects of the funded projects normalised on 1,000 Euro Grant Equivalent and in relation to the number of employees at project start:

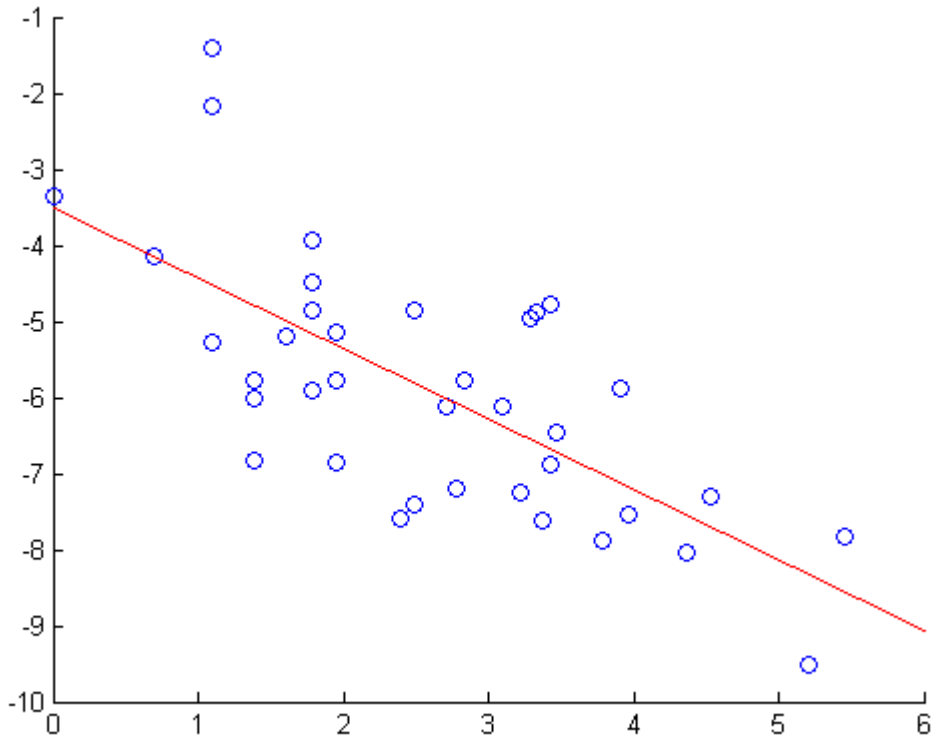
The respective function is:
Y = [(new jobs / FTE at project start) / total GGE] * 1000 Euro for time points "expected at project start" – "at project end" – "2 years after project end"

This composed normalised indicator in relation to the beneficiary's size is dominated by the beneficiary's size: the value is quite small for medium-sized companies, for micro companies it is getting extraordinarily large.



The red line is depicting the function y = 0.03 / FTE which is a pretty good approximation. This equation has only the company size left as variable, the effect of new jobs and the GE is not playing any role.

In the second figure the logarithm of both values (log of combined indicator on the vertical axis, log of company size on the horizontal axis) is depicted:



The linear regression line in red can be transformed into the equation:
y = 0.0297 / (0.9228 * FTE).
The share of the variance which can be explained by the model is nearly 50% which means that the FTE is the dominating explaining variable. The number of created jobs and the GE don't play a significant role.

But the number of FTE is already known. Thus this finding has no additional value for analysing the effect of the funded projects. Thus this composed indicator has no relevant explanatory power in terms of quantitative effect of a funded project in relation to the size of the funded company. Therefore it is recommended to use the normalised indicators new jobs/1,000 GE and to consider the company size as a potential explanatory variable as it is done in the inductive analyses, explained and documented in chapter 6.

5 Pivot applications

Component 3 Coordinator Lower Austria has together with its external experts developed several EXCEL PIVOT applications for the merged OSAIS data base. Due to the large number of data sets and indicators per data set the PIVOT applications require MS EXCEL 2007 or younger version.

Every OSAIS partner can use these powerful PIVOT applications and adapt them by copying single sheets and amending them PIVOT tables according to further own needs for analysis of the own SAS and for comparison with SAS from the other OSAIS partner regions.

For interregional comparison of SAS Lower Austria has installed SA topics, company size categories and company age categories as standard filter in several PIVOT tables, for comparison of State Aid Schemes or detailed analysis of a single State Aid Scheme. E.g. for comparison of SAS for different financial types these types can be selected as filter.

The PIVOT applications are allowing a simple exchange of filters as well as simple adaptation of the table by exchanging the indicators in lines and columns.

For further information about development and application of PIVOT functions we refer to the MS EXCEL manual.

The following pages will give some more explanation for application of PIVOT tables and summarising overall findings.

5.1 OSAIS data base – confidential data base and data base for publication

There are two data bases: **"OSAIS DB 20121126 confidential"** and **"OSAIS DB 20121126 public"**.

OSAIS DB 20121126 confidential is the confidential data base for the OSAIS partners for further analysis. It includes all individual data sets gathered by the 10 OSAIS partners. The confidential data base is not protected and all sheets are open according to the decision by the majority of the OSAIS Steering Committee members from 22nd of March 2012 in Opole.

OSAIS DB 20121126 public is the data base for publication and dissemination including the individual data sets. As the government of Lower Austria pointed out that the gathered data of the Lower Austrian SAS projects are confidential, all Lower Austrian data sets are eliminated in this data base. This is the difference to the confidential data base "OSAIS DB 20121126 confidential".

5.2 Structure of the OSAIS data base

The sheet **"dat orig"** includes the original data in the original structure with approx. 140 additional composed indicators, deducted from the original indicators. This sheet must not be amended at any time.

The source for the PIVOT application is the table in the sheet **"PIVOT DATA BASE"**. All PIVOT tables are directly based on the information in this sheet. Additional data sets of new gathered data can be inserted into this table before the last line of the existing table by inserting a new line and then filling in the data. In case of inserting new data the "update" function under the PIVOT menu has to be executed in order to update all PIVOT tables according to the extended data base.

All other 13 data sheets beside the already mentioned sheets "dat orig" and "PIVOT DATA BASE" include PIVOT applications and are briefly explained in the next chapters.

5.3 Compulsory indicators

Region / Allaire of State Aid Scheme	# 40 Name of the state aid scheme	# 53 Year of project approval by state aid organisatio n	# 55 Project duration	# 12 Main sector of company (two digit NACE code)	# 16 Company size	# 17-36 b 1 Number of employees (in full Time Equivalent (FTE))	# 14 The subsidised unit of the company	# 14a b at project start	# 61 Granted eligible project costs [EURO]	# 68 Actual eligible project costs documented	# 150. - 167. R1 How many jobs are maintained (not fired)? (FTE)	# 150. - 167. E1 How many jobs are maintained (not fired)? (FTE)	# 150. - 167. A1 How many jobs are maintained (not fired)? (FTE)	# 150. - 167. E2 How many jobs are created? (FTE)	# 150. - 167. A2 How many jobs are created? (FTE)	# 190. - 5 Are you satisfied with the overall results of the funded project?	# 191a - 1 How was the relationship with the managing authority of the state aid scheme?	# 193a Was the administrative effort in relation to the gained results?	# 193 b Was all requested information by the managing authority really necessary?	# 193 c Are the templates easy to read and to understand?	# 195 a Is the scheme oriented towards the needs of the company?	# 195 b Is the state aid scheme providing the right support?	# 200 Would you have carried out the project without state aid support?
▼ Italy																							
	DOCUP Ob. 2 2000-2006 misura 1.5 BANDI	1999	48	55	23	350	300	37	535	535	35	35	35	35	35	34	36	36	36	36	36	36	36
	Fondo di Rotazione per l'Artigianato Re	2002	62	14	37	15	264	37	15	15	37	37	37	36	36	34	36	36	36	36	36	36	36
	FONDO DI ROTAZIONE PER LA CONCESSI	2002	62	14	39	15	39	39	15	15	35	35	35	34	34	33	34	35	34	33	35	35	34
▼ Poland		2004	71	72	71	71	71	71	71	71	32	32	31	32	31	31	32	35	32	33	32	35	34
	"Information and Communication Techn	2004	30	30	30	30	14	30	30	30	12	12	12	12	12	12	30	30	30	30	27	30	30
	"PCCP Innovative"	2004	11	11	11	11	11	11	11	11	8	8	8	8	8	8	11	11	11	11	11	11	11
	Innovation Programme	2004	30	30	30	30	19	30	30	30	18	19	18	19	18	18	30	30	30	30	29	30	30
▼ Romania		2005	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51	51
	Program for Enhance the Competitive ne	2006	68	68	41	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
	Program for Promoting and Encourage t	2006	32	32	31	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32
	Program for Promoting and Improvemer	2006	31	31	31	19	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31	31
▼ Nord Romania		2007	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
	Investment Art.13	2007	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Investment Industry de Minimis	2007	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	SME	2007	19	19	19	17	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
▼ Pollution and Taxes Valley		2008	65	65	65	65	65	65	65	20	42	42	23	42	24	1	30	31	31	31	31	31	30
	Sistema de Incentivos à Inovação	2008	5	5	5	5	5	1	5	1	3	3	2	3	2	1	4	4	4	4	4	4	4
	Sistema de Incentivos à Investigação e D	2008	30	30	30	30	23	30	30	4	19	19	8	19	8	1	15	15	15	15	15	15	14
	Sistema de Incentivos à Qualificação e In	2008	30	30	30	30	30	30	30	8	19	20	19	20	14	1	11	12	12	12	12	12	12
▼ Sachsen		2008	96	96	96	96	96	96	96	96	80	96	96	96	96	96	85	86	84	85	86	86	85
	Forschung und Entwicklung - Projektförd	2008	31	31	31	31	31	31	31	31	26	31	31	31	31	31	26	26	26	26	26	26	26
	GA "Verbesserung der reg. Wirtschaftsst	2008	33	33	33	33	33	33	33	33	24	33	33	33	33	33	27	28	27	27	27	28	29
	MF "Verbesserung der unternehmer. Lei	2008	32	32	32	32	32	32	32	32	30	32	32	32	32	32	32	32	31	32	32	32	31
▼ Trencin		2008	76	57	57	57	57	58	58	57	57	57	57	57	57	57	58	58	58	58	58	58	58
	Scheme for boost of existing and beginn	2008	36	35	35	35	35	36	36	35	35	35	35	35	35	35	36	36	36	36	36	36	36
	Scheme for support of international coo	2008	4	1	3	3	3	3	3	1	1	1	1	1	1	1	3	3	1	3	3	3	3
	State Aid Scheme for encouragement of	2008	8	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	State Aid Scheme for encouragement of	2008	28	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
▼ Podlaskie		2008	139	139	138	139	43	139	139	139	139	139	31	139	112	34	37	38	39	39	39	39	40
	de minimis investments	2008	41	41	40	41	17	41	41	41	16	16	14	41	38	15	15	15	15	15	15	15	15
	de minimis tourism	2008	17	17	17	17	2	17	17	17	2	2	1	17	14	1	2	2	2	2	2	2	2
	regional investment and employment ai	2008	51	51	51	51	17	51	51	51	15	15	11	51	43	13	15	15	16	16	16	17	17
	tourism regional aid	2008	30	30	30	30	7	30	30	30	7	6	5	30	17	3	5	6	6	6	6	6	6
▼ Bolzano / Alto Adige		2008	115	115	115	114	26	115	115	107	105	104	104	105	104	104	106	107	107	105	106	106	106
	F&E Förderung	2008	86	86	86	86	86	86	86	86	86	86	86	86	86	86	69	69	69	69	69	69	69
	Internationalisierung	2008	39	39	39	39	38	33	39	39	14	14	13	13	13	13	14	14	14	14	14	14	14
	Investition Tourismus	2008	100	100	100	100	55	55	100	100	55	55	55	55	52	52	57	56	55	54	56	56	56
	Investition Wirtschaft	2008	69	69	69	69	66	66	69	69	66	65	63	67	66	63	68	68	68	68	68	68	69
▼ Wales		2008	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
	business transfer regional aid	2008	22	22	22	22	21	21	22	22	22	20	20	21	20	19	17	18	19	19	18	19	20
	Innovation in regional aid	2008	13	13	13	13	13	13	13	12	11	11	10	10	11	11	22	8	8	22	8	10	11
	International development regional aid	2008	24	24	24	24	24	24	24	24	20	17	19	20	17	16	22	22	22	22	22	22	24
TOTAL			1526	1378	1507	1462	1198	1348	1347	1289	1507	1437	802	900	774	738	806	808	812	808	802	816	811	818

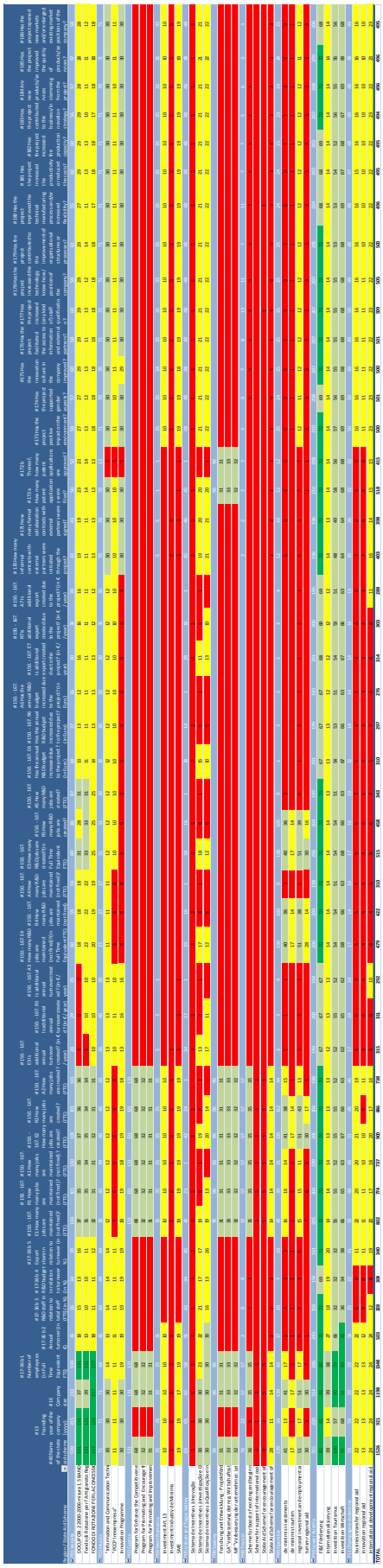
The PIVOT table (see data base sheet **"#comp data"**) gives an overview over the number of values for the compulsory indicators. The developed OSAIS methodology distinguishes several requirement degrees:

For the inductive analysis at least 70 values for every indicator per SAS are required – these indicators are marked with dark green cells. Only the Lower Austrian SAS "F&E Förderung" is almost fulfilling the defined pre-condition for the inductive analysis – for two indicators 69 values are inserted.

For further statistical regression analysis 30 data sets with complete set of compulsory are usually sufficient to get reasonable findings. The indicators with at least 30 values are marked in light green. Additional 10 SAS (3 from Veneto Region, 3 from Cyprus (with only one lower number), 1 from Saxony, 1 from Trencin and further 2 from Lower Austria) are matching this requirement.

Thus only 11 out of 33 SAS (minimum 3 per each of the 10 partners) are fulfilling the requirements of 30 data points for the compulsory indicators. But as not all data points are in the same data sets, only 10 SAS are matching the requirement of 30 complete data sets with compulsory indicators which is considerable limiting the results for regression and inductive analysis. The defined compulsory indicators are de facto treated as optional indicators in a lot of SAS.

5.4 Impact indicators



The PIVOT table on the left side gives an overview over the number of values for the (compulsory and optional) qualitative and quantitative impact indicators – the core information for an impact analysis of SAS (Sheet **"#data"** in the data base).

Like in the previous page the indicators with minimum 70 values are marked in dark green, with minimum 30 values in light green.

As requirement for eligibility for the TOP Rankings the OSAIS partners decided that 10 values of the respective indictor in combination with the selection criteria are sufficient. Indicators with minimum 10 values are marked in yellow in the left table, where no selection criteria for SA topic, company size or company age is set ("all companies"). This means that for single selection criteria the number of values is even lower.

Beside the 4 SAS from Lower Austria, which are fulfilling these requirements, only the 3 SAS from Veneto Region and 1 SAS from Murcia are almost matching the requirements.

The partners from Murcia, West Romania, Lisbon/Tagus Valley and Champagne-Ardenne have spent additional effort on gathering at least the qualitative impact indicators to get as many information about the SAS impact because the beneficiaries in these regions were quit reluctant in providing information about the quantitative impact of the carried out funding projects.

The colour schema indicates clearly that some partners have focussed or even limited their data gathering to the compulsory impact indicators – and thus ended up with information for 6 indicators instead for 39 indicators. This scheme can be identified for Cyprus, Saxony and Trencin.

In several cases the low number of data sets of the SAS (see "Number 40 Name of the state aid scheme" – first column right from name of SAS) was already the very limiting factor like for Murcia, West Romania and Champagne-Ardenne as well as partly for Lisbon/Tagus Valley and Trencin. The reasons for the limited data quantity are listed in chapter 1.

5.5 SAS Categorisation according SA topics and SA regulations

Region - State Aid Scheme	Number of the state aid scheme	sum 41-42 a Investment in commerce and industry	sum 41-42 a Investment and employment aid	a 2 Art. 14; Aid for newly created Enterprises	sum 41-42 a 3 Art. 15; Small and employment aid	sum 41-42 a 1 Art. 13. Regional investment aid 28.12.2006	sum Minimis L 41-42b investment in tourism	b 1 Art. 13. Regional Investment aid	sum 41-42 b 2 Art. 14; Aid for newly created Enterprises	sum 41-42 b 3 Art. 15; SME investment and employment aid	sum 41-42 b 4 de Minimis L 379/5 v. 28.12.2006	sum 41-42 c 1 Art 31; Aid for research and development projects	sum 41-42 c 2 Art 32: Aid for feasibility studies	sum 41-42 c 3 Art 33: Aid for property rights cost for SME	sum 41-42 c 4 Art 35: Aid for innovative enterprises	sum 41-42 c 5 Art 36: Aid for young innovative services	sum 41-42 c 6 Art 37: Aid for the loan of high qualified personnel	sum 41-42 c 7 Community framework for state aid for R&D&I; C 323 v. 30.12.2006	sum 41-42 (internati c.8 de onalisatio n, cyin cooperati on)	sum 41-42 d SME Aid for consultan favour of SME	sum 41-42 d 1 Art 26: sum 41-42 d Aid for 2 Art 27: Aid for participatio n in fairs	sum 41-42 d 3 de Minimis L 379/5 v. 28.12.2006	41-42 e sum Tempora ry crisis	41-42 f sum Others
P01 Murcia	139	139	0	0	143	265	0	0	0	0	0	0	0	0	0	0	0	0	0	191	191	0	0	0	0
DOCUP OB. 2 2000-2006 misura 1.5 E	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	191	191	0	0	0	0
FONDO DI ROTAZIONE PER LA CONC	157	157	0	0	143	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fondo di Rotazione per l'Artigianato	191	191	0	0	0	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P02 Murcia	71	0	0	0	0	0	0	0	0	0	0	71	2	0	0	0	70	0	0	30	30	0	0	0	0
"Information and Communication T	30	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	30	0	0	30	30	0	0	0	0
"PCCP Innoempresa"	11	0	0	0	0	0	0	0	0	0	0	11	0	0	0	0	11	0	1	0	0	0	0	0	0
Innovation Programme	30	0	0	0	0	0	0	0	0	0	0	30	2	0	0	0	29	0	29	0	0	0	0	0	0
P03 Cyprus	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	131	0	0	0	0	0
Program for Enhance the Competiti	68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68	0	0	0	0	0
Program for Promoting and Encouri	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	0	0	0
Program for Promoting and Improve	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	0	0	0	0	0
P04 Lower Austria	35	16	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	79	0	0	17	0
Investment Industry de Minimis	6	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SME	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	2	0	17	0
Investment Art.13	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P05 Lisbon and Tagus Valley	65	65	65	0	0	65	65	61	0	0	65	63	33	0	0	0	63	0	0	30	32	32	0	32	32
Sistema de Incentivos à Inovação	5	5	5	0	0	5	5	5	0	0	5	3	3	0	0	0	3	0	0	0	2	2	0	2	2
Sistema de Incentivos à Investigação	30	30	30	0	0	30	30	26	0	0	30	30	30	0	0	0	30	0	0	0	0	0	0	0	0
Sistema de Incentivos à Qualificação	30	30	30	0	0	30	30	30	0	0	30	30	30	0	0	0	30	0	0	30	30	30	0	30	30
P06 Saxony	96	33	33	0	0	0	0	0	0	0	0	31	31	0	0	0	0	0	0	0	32	0	0	32	0
Forschung und Entwicklung - Projek	31	0	0	0	0	0	0	0	0	0	0	31	31	0	0	0	0	0	0	0	0	0	0	0	0
GA "Verbesserung der reg. Wirtschi	33	33	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MF "Verbesserung der unternehme	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32	0	0	32	0	0
P08 Poland	76	53	5	29	45	7	7	5	0	2	0	0	0	0	0	0	0	0	0	0	6	0	6	0	0
Scheme for boost of existing and be	36	35	0	29	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Scheme for support of internationa	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	0	0
State Aid Scheme for encouragene	8	0	0	0	0	0	7	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
State Aid Scheme for encouragene	28	18	5	0	11	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	0	0
P09 Opolskie	139	92	51	0	0	41	47	30	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
de minimis investments	41	41	0	0	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
de minimis tourism	17	0	0	0	0	0	17	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
regional investment and employme	51	51	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
turism regional aid	30	0	0	0	0	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P10 Lower Austria	315	91	36	0	55	0	100	40	0	59	1	85	0	0	0	0	0	0	85	0	39	39	9	0	0
F&E Förderung	85	0	0	0	0	0	0	0	0	0	0	85	0	0	0	0	0	0	85	0	0	0	0	0	0
Internationalisierung	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	39	39	9	0	0
Investition Tourismus	100	0	0	0	0	0	100	40	0	59	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Investition Wirtschaft	91	91	36	0	55	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
P11 Champagne-Ardenne	59	22	6	0	16	0	0	0	0	0	0	13	0	0	0	0	0	0	0	0	24	0	24	0	0
business transfer regional aid	22	22	6	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
innovation regional aid	13	0	0	0	0	0	0	0	0	0	0	13	0	0	0	0	0	0	13	0	0	0	0	0	0
International development regiona	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	24	0
TOTAL	1526	720	206	29	259	319	219	136	0	61	83	263	66	0	0	0	0	133	0	128	30	504	294	47	73	0	32

The data sheet **"SAtopic costs time satisf"** of the PIVOT EXCEL file lists shows the allocation of the SAS schemes to the SA topics and SA regulations with the number of data sets.

Usually one SAS is belonging to one SA topic except for the regions of Lisbon/Tagus Valley and Trencin.

No SAS of the SA topic "Temporary crisis" were selected for the impact analysis,
only one SAS from Lisbon/Tagus under the category "Others".
14 SAS belong to the SA topic "Investment in commerce and industry",
7 SAS belong to the SA topic "Investment in tourism",
9 SAS to the SA topic "R&D&I" and 13 SA to the SA topic "SME (internationalisation, cooperation)".

5.6 SAS project costs and grant equivalent

The second part of the data sheet **"SAtopic costs time satisf"** depicts the absolute averages for granted eligible project costs, project budget and total grant equivalent as well as in relation to granted eligible project costs.

Region - State Aid Scheme	avg 60 Total project budget [EURO]	avg 72 Total grant equivalent	avg 71.b What is the share of total grant equival. in relation to eligible project costs	avg 69 share actual eligible costs / granted eligible project costs	avg 61 Granted eligible project costs [EURO]	avg 62 Machinery/ equipment costs [EURO]	# 63 Building costs [EURO]	# 64 Human Capital costs [EURO]	# 65 Intangible asset costs [EURO]	# 66 Accompanying Measures costs [EURO]
P01 Veneto	57.291	5.448	20%	100%	78.266	112.621	43	0	28	143
DOCUP OB. 2 2000-2006 misura 1.5 E	47.478	10.074	50%	100%	20.400				32	
FONDO DI ROTAZIONE PER LA CONC	208.406	4.169	2%	100%	177.486	162.241	0	0	0	286
Fondo di Rotazione per l'Artigianat	62.813	1.874	4%	99%	54.575	63.000	86	0	0	0
P02 Murcia	127.375	45.382	40%	100%	125.479	49.995	9.314	89.071	21.959	25.682
"Information and Communication T	105.001	37.891	36%	100%	103.183	38.139	7.255	93.352	24.799	36.887
"PCCP Innoempresa"	20.109	8.073	44%	100%	19.505	683	0	3.294	0	20.908
Innovation Programme	189.080	66.552	43%	99%	186.632	78.290	15.000	111.744	21.200	20.047
P03 Cyprus	312.100	72.607	95%	98%	76.428					
Program for Enhance the Competiti	287.063	50.153	95%	99%	52.793					
Program for Promoting and Encour	408.258	117.651	95%	96%	123.843					
Program for Promoting and Improv	267.760	75.361	95%	98%	79.327					
P04 West Romania	208.561	86.449	77%	88%	118.867	59.855	216.530	4.190	5.563	10.204
Investment Industry de Minimis	212.898	101.151	62%	58%	180.281	95.187	216.530		2.471	23.488
SME	43.628	21.260	79%	94%	26.383	18.545		4.190	8.657	4.511
Investment Art.13	519.330	201.489	81%	96%	257.739	157.415			8.646	
P05 Lisbon and Tagus Valley	699.124	267.831	53%	29%	503.275	51.688	0	213.424	80.811	90.364
Sistema de Incentivos à Inovação	566.977	236.226	61%	0%	403.526	18.232		138.151	171.314	146.540
Sistema de Incentivos à Investigaçã	842.332	411.867	62%	0%	655.698	64.723	0	326.941	61.495	125.499
Sistema de Incentivos à Qualificaçã	577.940	129.063	42%	63%	367.478	7.587		72.315	81.462	49.211
P06 Saxony		258.067	51%	75%	807.323	246.776	257.620	192.299	12.182	20.374
Forschung und Entwicklung - Projek		252.295	60%	75%	457.082	14.562	0	288.083	269	61.999
GA "Verbesserung der reg. Wirtsch		507.541	30%	66%	1.908.585	704.215	749.439	288.793	35.187	0
MF "Verbesserung der unternehme		6.388	63%	86%	10.943	0	0	0	0	1.059
P08 Trencin		120.802	65%	98%	247.800	375.364	64.549	32.275	0	0
Scheme for boost of existing and be		56.640	65%	98%	89.629					
Scheme for support of internationa		45.481	65%	99%	93.295					
State Aid Scheme for encourageme		157.937	65%	98%	388.767				0	
State Aid Scheme for encourageme		203.447	65%	98%	625.990	375.364	64.549	32.275	0	0
P09 Opolskie	421.089	187.678	54%	73%	346.488	204.397	138.580	0	1.787	0
de minimis investments	170.129	69.642	51%	88%	141.052	123.037	16.204	0	374	0
de minimis tourism	152.072	62.337	51%	80%	121.901	37.003	83.204	0	475	0
regional investment and employme	577.522	268.067	56%	73%	481.398	376.900	99.990	0	4.305	0
turism regional aid	650.574	283.359	56%	48%	525.169	117.189	402.809	0	181	0
P10 Lower Austria	738.645	110.942	21%	88%	619.655	213.551	327.647	29.670	6.416	8.725
F&E Förderung	294.498	81.763	32%	80%	231.709	20.221	341	109.953	2.186	27.936
Internationalisierung	69.930	16.928	43%	85%	48.429	0	0	0	0	0
Investition Tourismus	710.273	121.565	11%	95%	566.093	37.359	498.576	0	18.352	3.737
Investition Wirtschaft	1.471.277	166.815	12%	90%	1.285.695	679.274	585.958	0	0	0
P11 Champagne-Ardennne	510.463	40.615	34%	85%	237.290	222.196	415.800	35.542	74.728	21.617
business transfer regional aid	1.242.886	70.442	16%	100%	536.313	276.835	415.800	0	118.102	0
innovation regional aid	116.935	30.095	39%	73%	87.590	25.498		29.036	13.902	38.434
International development regiona	52.235	18.970	48%	77%	44.273			46.254	5.433	8.002
TOTAL	**423.959**	**87.477**	**38%**	**89%**	**296.590**	**197.479**	**252.819**	**61.939**	**11.138**	**16.064**

Highest/best average values are marked in green, lowest average values in red.

The by far highest granted eligible project costs can be registered for Saxony's SAS "GA "Verbesserung der reg. Wirtschaftsstrukt." This coincides with the highest average total grant equivalent for all 33 SAS. Noticeable are the small average amounts for the total grant equivalent in the case of Veneto in comparison to the other SAS.

This table gives furthermore an overview over the eligible costs and the average amount per SAS.

5.7 SAS project process indicators and beneficiaries' satisfaction

Also part of the PIVOT table in the data sheet **"SAtopic costs time satisf"** is the overview about averages of project duration and delay, Processing time for application procedure, project closing by the beneficiaries and final payment as well as several satisfaction criteria.

Region - State Aid Scheme	avg 57 Processing time [weeks]	avg 58 Closing time by beneficiary [weeks]	avg 59 Time for final payment by Managing Authority [weeks]	avg 55 Project duration [weeks]	avg 56 Project delay: the project was finished earlier (1) / in time(0) / later (-1) than scheduled	avg 190 - S Are you satisfied with the overall results of the funded project?	avg 191.a - 1 How was your relationship with the managing authority of the state aid scheme?	avg 191.a - 2 How was your relationship with the ERDF/ESF responsible organisation?	avg 193.a Was the administrative effort in reasonable relation to the gained results?	avg 193.b Was all requested information by the managing authority really necessary?	avg 193.c Are the templates easy to read and to understand ?	avg 195.b Is the state aid scheme providing the right support?	avg 200 Would you have carried out the project without state aid support?
P01 Veneto	39	5	23	117	-0,03	3,7	3,6	3,6	3,2	3,1	3,1	3,4	2,3
DOCUP OB. 2 2000-2006 misura 1.5 E	39	5	26	48	-0,06	3,8	3,7	3,7	3,1	3,0	3,0	3,4	3,0
FONDO DI ROTAZIONE PER LA CONC			27	153	-0,05	3,4	3,5	3,5	3,2	3,2	3,2	3,2	1,5
Fondo di Rotazione per l'Artigianat			15	155	0,06	3,8	3,6	3,6	3,3	3,1	3,0	3,6	2,2
P02 Murcia	24	9	34	64	0,07	3,7	3,3	2,8	3,0	2,4	2,9	3,1	2,6
"Information and Communication T	26	9	44	61	0,07	3,8	3,2	3,7	3,0	2,5	2,9	3,1	2,6
"PCCP Innoempresa"	28	12	19	42	0,18	3,9	3,9	2,7	3,9	2,4	3,9	3,6	2,3
Innovation Programme	22	7	34	75	0,03	3,6	3,2	1,5	2,7	2,3	2,5	2,8	2,8
P03 Cyprus				96		3,3	3,3	3,0	2,9	3,1	3,0	3,4	2,5
Program for Enhance the Competiti				96		3,2	3,2	2,8	2,8	2,9	2,8	3,4	2,7
Program for Promoting and Encour				96		3,3	3,3	3,0	2,9	3,2	3,1	3,4	2,0
Program for Promoting and Improve				96		3,6	3,7	3,5	3,2	3,3	3,3	3,5	2,4
P04 West Romania	36	7	17	29	0,12	4,3	4,0	4,0	3,9	3,3	3,1	4,3	3,7
Investment Industry de Minimis	33	2	6	41	0,20	4,0	3,8	3,8	3,7	3,3	3,3	3,5	3,3
SME	38	6	25	19	0,11	4,5	4,1	4,2	4,0	3,3	3,1	4,3	3,8
Investment Art.13	44	26		42	0,10	4,1	3,9	3,7	3,7	3,1	2,8	4,8	3,8
P05 Lisbon and Tagus Valley	16	14	20	136	-0,44	4,0	4,0	3,5	2,8	2,9	2,8	3,5	2,8
Sistema de Incentivos à Inovação	16	23		167	-1,00	3,8	3,8	3,3	3,0	2,8	3,3	3,3	3,5
Sistema de Incentivos à Investigaçã	18	8		138	-0,67	4,0	3,5	3,2	2,5	2,5	2,4	3,3	2,8
Sistema de Incentivos à Qualificaçã	15	14	20	129	-0,33	4,0	4,7	4,5	3,2	3,5	3,2	3,8	2,5
P06 Saxony				90		4,3	4,2	4,2	3,4	3,4	3,7	4,3	3,0
Forschung und Entwicklung - Projek				110		4,3	4,4	4,4	3,5	3,3	3,7	4,3	3,1
GA "Verbesserung der reg. Wirtsch				123		4,4	4,0	4,0	3,4	3,2	3,5	4,4	2,9
MF "Verbesserung der unternehme				37		4,2	4,3	4,3	3,3	3,5	3,8	4,2	2,9
P08 Trencin			7	38	0,00	3,3	2,2	2,7	1,8	3,0	3,9	3,3	2,5
Scheme for boost of existing and be				28	0,00	3,3	2,0	2,7	1,9	2,9	3,9	3,3	2,4
Scheme for support of internationa				39	0,00	4,3	3,0	2,3	2,3	3,3	4,0	3,0	2,7
State Aid Scheme for encourageme				75	0,00	3,6	2,2	2,8	1,2	3,2	3,8	4,6	2,6
State Aid Scheme for encourageme			7	51	0,00	3,0	2,5	2,6	1,7	3,1	3,6	3,1	2,6
P09 Opolskie	59	18	2	52	0,00	4,5	3,9	4,0	3,3	3,3	3,2	4,4	3,1
de minimis investments	61	14	2	47	0,00	4,3	4,1	4,1	3,1	3,3	3,1	4,5	3,3
de minimis tourism	96	24	1	54	0,00	4,5	4,5	4,5	4,5	3,5	4,0	5,0	3,5
regional investment and employme	48	11	2	50	0,00	4,5	3,8	3,8	3,3	3,3	3,1	4,1	2,8
turism regional aid	53	104	3	62	0,00	4,8	3,8	4,0	3,5	3,0	3,2	4,3	3,0
P10 Lower Austria	25	27	7	59	0,06	4,1	4,4	4,4	3,4	3,3	3,7	3,9	2,7
F&E Förderung	20	33	6	63	-0,32	4,0	4,5	4,5	3,2	3,1	3,7	4,2	3,0
Internationalisierung	21	15	6	61	0,46	3,6	4,8	4,8	3,4	3,1	4,0	3,6	2,7
Investition Tourismus	27	25	5	51	0,24	4,3	4,5	4,5	4,0	3,7	3,9	3,7	2,5
Investition Wirtschaft	30	29	12	62	0,03	4,2	4,3	4,3	3,3	3,3	3,6	3,9	2,5
P11 Champagne-Ardennne	24	9	7	58	-0,27	3,7	4,3	4,3	3,8	3,4	3,7	3,5	2,6
business transfer regional aid	19	5	3	27	-0,05	4,2	4,6	4,4	4,1	3,5	3,8	3,9	2,4
innovation regional aid	26		8	68	-0,64	3,9	4,3	4,5	3,7	3,6	3,8	3,7	2,5
International development regiona	28	25	9	81	-0,30	3,2	4,1	4,2	3,5	3,2	3,6	3,2	3,0
TOTAL	**33**	**20**	**10**	**86**	**0,00**	**3,8**	**3,8**	**3,8**	**3,2**	**3,1**	**3,4**	**3,7**	**2,7**

Funded projects of the selected SAS in Veneto for the revolving funds are running nearly 3 years, which is a similar duration as the for the Lisbon/Tagus Valley SAS. Most of the funded projects of the selected SAS in Lisbon/Tagus Valley are delayed.

The satisfaction of the beneficiaries of the selected SAS overall satisfaction indicators is in West Romania, Saxony, Opolskie, Lower Austria and Champagne-Ardenne on a similar high level, while the beneficiaries in Trencin have the lowest satisfaction with their funding in comparison of all partner regions.

5.8 Windfall gains

The following PIVOT table in the data sheet **"windfall gain"** documents the answer of the beneficiaries whether they would also have carried out the funded project without funding.

Number of values	Carrying out pr				
Region - State Aid Scheme	1=Yes	2=Yes, but longer	3=Yes, but smaller	4=No	TOTAL
P01 Veneto	33	32	17	22	104
DOCUP OB. 2 2000-2006 misura 1.5 B	3	7	12	14	36
FONDO DI ROTAZIONE PER LA CONC	20	12		2	34
Fondo di Rotazione per l'Artigianat	10	13	5	6	34
P02 Murcia	15	11	29	16	71
"Information and Communication T	5	5	17	3	30
"PCCP Innoempresa"	4	3	1	3	11
Innovation Programme	6	3	11	10	30
P03 Cyprus	33	35	34	29	131
Program for Enhance the Competiti	16	12	17	23	68
Program for Promoting and Encour	12	10	9	1	32
Program for Promoting and Improve	5	13	8	5	31
P04 West Romania		4	1	30	35
Investment Industry de Minimis		2		4	6
SME		1	1	17	19
Investment Art.13		1		9	10
P05 Lisbon and Tagus Valley	1	8	18	3	30
Sistema de Incentivos à Inovação			2	2	4
Sistema de Incentivos à Investigação e Desenvolvime		3	11		14
Sistema de Incentivos à Qualificaçã	1	5	5	1	12
P06 Saxony	11	11	35	29	86
Forschung und Entwicklung - Projek	1	4	12	9	26
GA "Verbesserung der reg. Wirtsch	2	6	14	7	29
MF "Verbesserung der unternehme	8	1	9	13	31
P08 Trencin	8	23	16	11	58
Scheme for boost of existing and be	5	15	11	5	36
Scheme for support of internationa	1		1	1	3
State Aid Scheme for encouragement of enterprise ac		3	1	1	5
State Aid Scheme for encourageme	2	5	3	4	14
P09 Opolskie		8	22	10	40
de minimis investments		1	9	5	15
de minimis tourism			1	1	2
regional investment and employment aid		5	10	2	17
turism regional aid		2	2	2	6
P10 Lower Austria	30	60	68	51	209
F&E Förderung	2	17	32	19	70
Internationalisierung	1	4	7	2	14
Investition Tourismus	16	13	11	16	56
Investition Wirtschaft	11	26	18	14	69
P11 Champagne-Ardennne	6	21	13	14	54
business transfer regional aid	6	5	3	5	19
innovation regional aid		8	1	2	11
International development regional aid		8	9	7	24
TOTAL	**137**	**213**	**253**	**215**	**818**

distribution per SAS	Carrying out project without funding				
Region - State Aid Scheme	Yes (1)	Yes, but longer (3)	Yes, but smaller (3)	No (4)	score
P01 Veneto	32%	31%	16%	21%	2,6
DOCUP OB. 2 2000-2006 misura 1.5 BANDO	8%	19%	33%	39%	3,2
FONDO DI ROTAZIONE PER LA CONCESSIO	59%	35%	0%	6%	1,9
Fondo di Rotazione per l'Artigianato Regi	29%	38%	15%	18%	2,6
P02 Murcia	21%	15%	41%	23%	2,8
Innovation Programme	20%	10%	37%	33%	2,9
PCCP Innoempresa	36%	27%	9%	27%	2,5
Information and Communication Technol	17%	17%	57%	10%	2,8
P03 Cyprus	25%	27%	26%	22%	2,7
Program for Enhance the Competitiveness	24%	18%	25%	34%	2,9
Program for Promoting and Encourage the	38%	31%	28%	3%	2,3
Program for Promoting and Improvement	16%	42%	26%	16%	2,8
P04 West Romania	0%	11%	3%	86%	3,9
Investment Industry de Minimis	0%	33%	0%	67%	3,7
SME	0%	5%	5%	89%	3,9
Investment Art.13	0%	10%	0%	90%	3,9
P05 Lisbon and Tagus Valley	3%	27%	60%	10%	3,0
Sistema de Incentivos à Inovação	0%	0%	50%	50%	3,5
Sistema de Incentivos à Investigação e De	0%	21%	79%	0%	3,0
Sistema de Incentivos à Qualificação e Int	8%	42%	42%	8%	2,9
P06 Saxony	13%	13%	41%	34%	3,1
Forschung und Entwicklung - Projektförde	4%	15%	46%	35%	3,3
GA "Verbesserung der reg. Wirtschaftsstru	7%	21%	48%	24%	3,1
MF "Verbesserung der unternehmer. Leist	26%	3%	29%	42%	2,9
P08 Trencin	14%	40%	28%	19%	2,9
Scheme for boost of existing and beginnir	14%	42%	31%	14%	2,9
Scheme for support of international coope	33%	0%	33%	33%	2,7
State Aid Scheme for encouragement of e	0%	60%	20%	20%	3,2
State Aid Scheme for encouragement of s	14%	36%	21%	29%	3,0
P09 Opolskie	0%	20%	55%	25%	3,3
de minimis investments	0%	7%	60%	33%	3,3
de minimis tourism	0%	0%	50%	50%	3,5
regional investment and employment aid	0%	29%	59%	12%	3,1
turism regional aid	0%	33%	33%	33%	3,3
P10 Lower Austria					3,0
F&E Förderung	3%	24%	46%	27%	3,2
Internationalisierung	7%	29%	50%	14%	3,0
Investition Tourismus	29%	23%	20%	29%	2,7
Investition Wirtschaft	16%	38%	26%	20%	2,9
P11 Champagne-Ardennne	11%	39%	24%	26%	3,0
business transfer regional aid	32%	26%	16%	26%	2,6
innovation regional aid	0%	73%	9%	18%	3,2
International development regional aid	0%	33%	38%	29%	3,3
TOTAL	**17%**	**26%**	**31%**	**26%**	**2,9**

In the regions of West Romania and Opolskie a high percentage of the interviewed beneficiaries consider the funding as crucial for carrying out the project. No interviewed beneficiary has responded that the funded project would also have been carried out without funding in these two regions. But the (very) low number of answers (see numbers on the left side) doesn't allow a generalisation of this result.

The results indicate a high percentage of windfall gains in the case of Veneto Region's SAS "FONDO DI ROTAZIONE PER LA CONCESSIONE DI FINANZIAMENTI AGEVOLATI ALLE PMI - LR 5/2001" when 59% of the answering beneficiaries would carry out the project without funding in the same way. Also for other SAS the share of windfall gains is 30% or higher according to beneficiaries' feedback like for the SAs "Program for Promoting and Encourage the Improvement and Development of the Processing and Marketing Agricultural Products" from Cyprus with 38%, "PCCP Innoempresa" from Murcia Region with 36%, "Scheme for support of international cooperation (aid scheme de minimis) " from Trencin/West Slovakia with 33%, "business transfer regional aid" from Champagne-Ardenne with 32% as well as "Investition Tourisms" from Lower Austria and "Fondo di Rotazione per l'Artigianato Regionale – LR 2/2002 from Veneto Region both with 29%.

5.9 Direct absolute quantitative impact

Region - State Aid Scheme	# 40 Name of the state aid scheme	avg 60 Total project budget [€]	avg 61 Granted eligible project costs [€]	avg 72 Total grant equivalent	avg 150. - 167. E1 How many jobs are maintained ? (FTE) expected	avg 150. - 167. R1 How many jobs are maintained? (FTE) at project end	avg 150. - 167. A1 How many jobs are maintained (not fired)? (FTE) 2 years after	avg 150. - 167. E2 How many jobs are created? (FTE) expected	avg 150. - 167. R2 How many jobs are created? (FTE) at project end	avg 150. - 167. A2 How many jobs are created? (FTE) 2 years after	avg 150. - 167. E3 Is additional annual turnover created? (in € / year) expected	avg 150. - 167. R3 Is additional annual turnover created? (in € / year) at project end	avg 150. - 167. A3 Is additional annual turnovercreated? (in € / year) 2 years after	avg 150. - 167. E4 How many R&D jobs are maintained? (FTE) expected	avg 150. - 167. R4 How many R&D jobs are maintained? (FTE) at project end	avg 150. - 167. A4 How many R&D jobs are maintained (not fired)? (FTE) 2 years after	avg 150. - 167. E5 How many R&D jobs are created? (FTE) expected	avg 150. - 167. R5 How many R&D jobs are created? (FTE) at project end	avg 150. - 167. A5 How many R&D jobs are created? (FTE) 2 years after	avg 150. - 167. E6 Has the annual R&D budget increased due to the project? (in Euro) expected	avg 150. - 167. R6 Has the annual R&D budget increased? (€) at project end	avg 150. - 167. A6 Has the annual R&D budget increased due to the project? (in €) 2 years after	avg 150. - 167. E7 Is additional export created due to the project? (in € / year) expected	avg 150. - 167. R7 Is additional export created ? (in € / year) at project end	avg 150. - 167. A7 Is additional export created due to the project? (in € / year) 2 years after	avg 170 How many informal contacts	avg 171 How many formal collaboration contracts	avg 172 a How many patent applications were filed	avg 172 b Thereof, how many patent applications are approved
P01 Veneto	539	57.291	78.266	5.448	8,4	8,2	8,3	0,6	0,4	0,6	26.018	27.812	62.351	0,12	0,14	0,14	0,01	0,02	0,02	658	1.036	37	500	513	513	3,0	1,2	0,00	0,00
DOCUP OB. 2 2000-2006 misura 1.5 BANDO 2006, LETT. D MI	191	47.478	20.400	10.074	13,1	12,8	12,8	0,8	0,5	0,5	30.389	27.333	14.333	0,17	0,22	0,22	0,03	0,07	0,06	1.923	2.950	112	0	0	0	5,4	2,3	0,00	0,00
FONDO DI ROTAZIONE PER LA CONCESSIONE DI FINANZIAN	157	208.406	177.486	4.169	9,0	9,2	9,6	0,9	0,8	1,1	35.000	27.500	135.000	0,00	0,00	0,00	0,00	0,00	0,00	0	0	0	1.538	1.667	1.667	0,2	0,2	0,00	0,00
Fondo di Rotazione per l'Artigianato Regionale - LR 2/20(	191	62.813	54.575	1.874	2,8	2,8	2,6	0,1	0,1	0,3	11.667	28.554	32.919	0,18	0,18	0,18	0,00	0,00	0,00	0	0	0	0	0	0	2,2	0,5	0,00	0,00
P02 Murcia	71	127.375	125.479	45.382	48,8	52,1	55,0	0,3	4,7	3,4	11.111	71.250	24.359	0,81	0,93	0,89	0,23	0,06	0,17	200	200	1.867	10.000	11.000	61.000	2,5	0,6	0,06	0,31
"Information and Communication Technologies"	30	105.001	103.183	37.891	36,0	41,7	43,0	0,2	5,7	2,7	0	146.154	38.462	0,64	0,73	0,45	0,08	0,08	0,00	0	0	0	0	0	0	0,0	0,1	0,00	0,00
"PCCP Innoempresa"	11	20.109	19.505	8.073	26,9	26,9	24,9	0,3	0,1	1,0	0	45.455	0	0,13	0,25	0,38	0,00	0,00	0,10	300	300	300	0	0	75.000	2,5	1,0	0,10	0,20
Innovation Programme	30	189.080	186.632	66.552	68,3	70,6	78,1	0,4	6,3	5,0	30.769	28.125	28.125	1,75	1,88	2,00	0,67	0,11	0,50	375	375	6.625	37.500	41.250	135.000	5,0	1,0	0,10	0,60
P03 Cyprus	131	312.100	76.428	72.607	10,7	10,1	10,0	3,7	3,2	3,1																			
Program for Enhance the Competitiveness of SMEs in the I	68	287.063	52.793	50.153	1,7	0,6	0,4	1,3	0,2	0,0																			
Program for Promoting and Encourage the Improvement a	32	408.258	123.843	117.651	29,7	29,7	29,7	9,6	9,6	9,6																			
Program for Promoting and Improvement of the Developn	31	267.760	79.327	75.361	10,6	10,6	10,6	3,1	3,1	3,1																			
P04 West Romania	35	208.561	118.867	86.449	12,9	12,7	0,4	1,4	1,4	0,0	6.528	75.488	281.602													59,0	140,0	1,00	1,00
Investment Industry de Minimis	6	212.898	180.281	101.151	3,8	2,7	0,0	4,0	3,2	0,0	10.000															130,0	345,0		
SME	19	43.628	26.383	21.260	3,4	3,4	0,7	0,2	0,2	0,1	4.213	75.488	281.602													11,7	3,3	1,00	1,00
Investment Art.13	10	519.330	257.739	201.489	36,3	36,3	0,0	2,3	2,5	0,0																			
P05 Lisbon and Tagus Valley	65	699.124	503.275	267.831	13,0	18,4	13,0	4,6	3,6	13,0	1.927.764	2.187.666	80.000	3,24	5,19	7,00	2,03	2,50	7,00	119.281	84.036	300.000	465.621	394.256	0	103,3	9,5	1,42	0,00
Sistema de Incentivos à Inovação	5	566.977	403.526	236.226	5,5	5,5		3,7	3,0		306.200	274.313		2,25	2,00		2,75	2,00		21.000	11.500		25.000	31.829		70,4	32,8	10,20	
Sistema de Incentivos à Investigação e Desenvolvimento T	30	842.332	655.698	411.867	6,1	7,0	13,0	3,2	4,3	13,0	263.615	25.000	80.000	3,76	5,63	7,00	2,78	3,50	7,00	197.215	121.418	300.000	304.545	46.667	0	9,3	2,9	0,30	
Sistema de Incentivos à Qualificação e Internacionalização	30	577.940	367.478	129.063	21,5	27,4		6,1	3,3		3.581.892	3.321.972		2,83	5,67		0,67	1,33		31.864	70.833		737.492	675.295		196,1	10,4	0,35	0,00
P06 Saxony	96		807.323	258.067	21,7	21,9	18,8	4,4	4,9	3,9																		0,23	0,09
Forschung und Entwicklung - Projektförderung	31		457.082	252.295	16,2	14,3	13,6	2,8	3,1	2,0																		0,48	0,23
GA "Verbesserung der reg. Wirtschaftsstrukt."	33		1.908.585	507.541	39,7	42,0	33,6	10,0	11,3	8,8																		0,03	0,00
MF "Verbesserung der unternehmer. Leistungsfähigkeit - I	32		10.943	6.388	8,5	8,5	8,7	0,2	0,2	0,8																		0,19	0,06
P08 Trencin	76		247.800	120.802	51,4	54,9	60,2	2,4	2,1	4,8																8,0	6,0	0,00	0,00
Scheme for boost of existing and beginning enterprises (a	36		89.629	56.640	42,7	44,8	48,5	2,3	1,2	3,4																			
Scheme for support of international cooperation (aid sche	4		93.295	45.481	102,7	119,7	128,7	2,3	7,3	8,3																			
State Aid Scheme for encouragement of enterprise activiti	8		388.767	157.937	37,8	39,0	43,4	1,4	1,0	3,0																			
State Aid Scheme for encouragement of small and mediur	28		625.990	203.447	66,9	72,0	80,9	3,0	3,6	8,3																8,0	6,0	0,00	0,00
P09 Opolskie	139	421.089	346.488	187.678	24,8	26,7	22,6	5,2	4,8	10,2	41.205	488.740	1.653.018	0,06	0,03	0,56	0,06	0,06	0,56	0	2	0	0	0	461.591	19,2	18,5	0,00	0,00
de minimis investments	41	170.129	141.052	69.642	5,5	6,0	4,9	3,3	3,3	5,1	82.409	199.780	1.830.895	0,08	0,08	0,00	0,00	0,00	0,00							23,5	24,5	0,00	0,00
de minimis tourism	17	152.072	121.901	62.337	29,9	29,9	45,8	3,6	3,6	11,0				0,00	0,00		0,00	0,00											
regional investment and employment aid	51	577.522	481.398	268.067	41,9	43,0	31,1	6,5	5,7	9,0	0	633.220	1.593.726	0,10	0,00	0,83	0,16	0,15	0,83	0	2	0	0	0	461.591	14,8	9,5	0,00	0,00
turism regional aid	30	650.574	525.169	283.359	30,6	40,2	48,8	6,8	6,9	28,4				0,00	0,00		0,00	0,00										0,00	0,00
P10 Lower Austria	315	738.645	619.655	110.942	3,2	3,6	3,5	2,2	2,4	3,1	478.252	508.984	790.198	0,30	0,30	0,27	0,25	0,37	0,48	31.429	35.100	26.227	155.194	141.200	346.051	26,0	20,5	1,10	0,93
F&E Förderung	85	294.498	231.709	81.763	2,2	2,8	2,9	1,2	1,4	1,6	473.955	276.832	638.251	0,48	0,49	0,41	0,51	0,76	0,72	73.943	77.984	55.313	244.560	170.319	392.551	26,2	8,0	2,83	2,30
Internationalisierung	39	69.930	48.429	16.928	0,8	3,2	0,7	1,0	1,6	1,7	233.333	299.584	393.994	0,50	0,50	0,50	0,14	0,14	0,15	7.154	6.769	7.750	81.667	55.000	110.833	31,6	3,5	0,43	0,43
Investition Tourismus	100	710.273	566.093	121.565	3,0	3,1	3,0	2,1	2,6	3,2	47.923	105.223	170.387	0,02	0,02	0,02	0,00	0,00	0,00	0	0	0	0	0	0	5,4	55,7	0,00	0,00
Investition Wirtschaft	91	1.471.277	1.285.695	166.815	4,9	5,1	5,1	3,6	3,7	5,1	891.220	1.131.804	1.557.315	0,29	0,29	0,25	0,19	0,31	0,68	18.955	25.333	20.044	202.744	239.817	620.063	40,1	10,8	0,41	0,40
P11 Champagne-Ardennne	59	510.463	237.290	40.615	31,7	32,6	32,0	0,9	1,1	2,7	146.706	224.684	644.667	0,88	1,00	0,94	0,38	0,31	0,58	17.083	26.977	34.196	64.286	3.286	6.842	18,9	1,7	0,69	0,38
business transfer regional aid	22	1.242.886	536.313	70.442	35,4	38,1	37,1	0,7	1,2	4,3	80.000	366.667	1.545.750	0,40	0,40	0,33	0,00	0,00	0,43	0	0	4.000	0	0	0	2,3	1,2	0,11	0,11
innovation regional aid	13	116.935	87.590	30.095	21,5	19,5	19,3	2,4	1,9	2,0	333.333	186.600	187.667	1,38	1,30	1,30	0,75	0,60	1,20	60.000	96.500	123.167	0	0	0	2,1	0,3	1,50	0,25
International development regional aid	24	52.235	44.273	18.970	33,4	34,7	33,3	0,4	0,5	1,3	121.556	142.000	198.000	0,94	1,38	1,30	0,44	0,33	0,29	5.000	12.596	14.874	112.500	5.750	11.818	33,5	2,6	0,60	0,60
TOTAL	**1.526**	**423.959**	**296.590**	**87.477**	**16,8**	**17,7**	**16,9**	**2,9**	**2,9**	**3,2**	**512.966**	**477.831**	**611.309**	**0,46**	**0,46**	**0,36**	**0,28**	**0,29**	**0,37**	**31.913**	**28.900**	**21.369**	**144.749**	**117.929**	**247.591**	**27,7**	**13,8**	**0,67**	**0,53**

The PIVOT application in the data sheet **"imp quan absol"** give as an overview over the average absolute direct impact of the analysed SAS in terms of maintenance of jobs, creation of jobs, additional turnover, maintenance and creation of R&D jobs, increase of R%D budget, additional export as well as additional patent applications due the individual funding project. Except for the filed applications the estimated/ realised impact assessment is given for the three time stamps "expected at project start" – "realised at project end" – "realised two years after project end".

The top30% values per impact indicators are marked in green. In general larger projects with larger Gross Grant Equivalent show also the higher absolute impact. SAS with smaller projects or smaller GGE in average might appear less beneficial in comparison with the large projects.

Due to concentration/limitation of several OSAIS partners on the compulsory absolute impact indicators the table contains a lot of missing values as we can see for the SAS from Cyprus, West Romania, Saxony and Trencin.

5.10 Contribution of direct impact of SAS to beneficiaries' performance

The PIVOT application in the data sheet **"imp perf"** is comparing the absolute impacts expected at project start and realised at project end with the beneficiaries' performance for the time frame (2 years after project start – at project start). Also the absolute structural data of the company 2 years after project start is listed and the contribution of the SAS to the companies' structural data.

Region - State Aid Scheme	# 40 Name of the state aid scheme	avg 60 Total project budget [€]	avg 61 Granted eligible project costs [€]	avg 72 Total grant equivalent	avg Granted eligible project costs / Total project budget	avg 150. - 167. E1 How many jobs are maintained? (FTE) expected	avg 150. - 167. E2 How many jobs are created? (FTE) expected	avg 150. - 167. R1 How many jobs are maintained? (FTE) at project end	avg 150. - 167. R2 How many jobs are created? (FTE) at project end	avg 17-36 c 1 Number of employees (FTE) 2 years after start	avg Employment performance 2 years after - at project start	% New job impact at project end in relation to FTE 2 years after project start
P01 Veneto	539	57.291	78.266	5.448	97%	8,4	0,6	8,2	0,4	20,7	0,9	5%
DOCUP OB. 2 2000-2006 misura 1.5 BANDO 200	191	47.478	20.400	10.074	97%	13,1	0,8	12,8	0,5	23,1	1,0	4%
FONDO DI ROTAZIONE PER LA CONCESSIONE D	157	208.406	177.486	4.169	100%	9,0	0,9	9,2	0,8	29,7	1,4	7%
Fondo di Rotazione per l'Artigianato Regionale	191	62.813	54.575	1.874	99%	2,8	0,1	2,8	0,1	5,4	0,0	3%
P02 Murcia	71	127.375	125.479	45.382	99%	48,8	0,3	52,1	4,7	58,2	0,9	5%
"Information and Communication Technologie	30	105.001	103.183	37.891	99%	36,0	0,2	41,7	5,7	56,2	-3,6	6%
"PCCP Innoempresa"	11	20.109	19.505	8.073	98%	26,9	0,3	26,9	0,1	30,1	1,9	1%
Innovation Programme	30	189.080	186.632	66.552	100%	68,3	0,4	70,6	6,3	76,0	3,7	6%
P03 Cyprus	131	312.100	76.428	72.607	31%	10,7	3,7	10,1	3,2			
Program for Enhance the Competitiveness of S	68	287.063	52.793	50.153	30%	1,7	1,3	0,6	0,2			
Program for Promoting and Encourage the Imp	32	408.258	123.843	117.651	31%	29,7	9,6	29,7	9,6			
Program for Promoting and Improvement of th	31	267.760	79.327	75.361	32%	10,6	3,1	10,6	3,1			
P04 West Romania	35	208.561	118.867	86.449	65%	12,9	1,4	12,7	1,4	7,5	1,0	18%
Investment Industry de Minimis	6	212.898	180.281	101.151	84%	3,8	4,0	2,7	3,2	8,0	4,0	47%
SME	19	43.628	26.383	21.260	65%	3,4	0,2	3,4	0,2	7,4	0,3	12%
Investment Art.13	10	519.330	257.739	201.489	54%	36,3	2,3	36,3	2,5			
P05 Lisbon and Tagus Valley	65	699.124	503.275	267.831	73%	13,0	4,6	18,4	3,6	30,3	6,2	24%
Sistema de Incentivos à Inovação	5	566.977	403.526	236.226	64%	5,5	3,7	5,5	3,0	32,4	1,0	54%
Sistema de Incentivos à Investigação e Desenv	30	842.332	655.698	411.867	83%	6,1	3,2	7,0	4,3	20,9	5,6	31%
Sistema de Incentivos à Qualificação e Interna	30	577.940	367.478	129.063	65%	21,5	6,1	27,4	3,3	36,8	7,7	15%
P06 Saxony	96		807.323	258.067		21,7	4,4	21,9	4,9	45,6	7,1	15%
Forschung und Entwicklung - Projektförderung	31		457.082	252.295		16,2	2,8	14,3	3,1	41,6	5,5	12%
GA "Verbesserung der reg. Wirtschaftsstrukt."	33		1.908.585	507.541		39,7	10,0	42,0	11,3	55,7	11,8	29%
MF "Verbesserung der unternehmer. Leistung	32		10.943	6.388		8,5	0,2	8,5	0,2	38,7	3,6	3%
P08 Trencin	76		247.800	120.802		51,4	2,4	54,9	2,1	50,5	14,0	28%
Scheme for boost of existing and beginning en	36		89.629	56.640		42,7	2,3	44,8	1,2			
Scheme for support of international cooperati	4		93.295	45.481		102,7	2,3	119,7	7,3			
State Aid Scheme for encouragement of enter	8		388.767	157.937		37,8	1,4	39,0	1,0			
State Aid Scheme for encouragement of small	28		625.990	203.447		66,9	3,0	72,0	3,6	50,5	14,0	28%
P09 Opolskie	139	421.089	346.488	187.678	83%	24,8	5,2	26,7	4,8	25,5	5,1	40%
de minimis investments	41	170.129	141.052	69.642	84%	5,5	3,3	6,0	3,3	9,9	3,2	47%
de minimis tourism	17	152.072	121.901	62.337	81%	29,9	3,6	29,9	3,6	57,3	11,5	5%
regional investment and employment aid	51	577.522	481.398	268.067	85%	41,9	6,5	43,0	5,7	46,5	6,8	29%
turism regional aid	30	650.574	525.169	283.359	81%	30,6	6,8	40,2	6,9	12,3	5,7	53%
P10 Lower Austria	315	738.645	619.655	110.942	90%	3,2	2,2	3,6	2,4	29,6	4,2	16%
F&E Förderung	85	294.498	231.709	81.763	89%	2,2	1,2	2,8	1,4	37,2	3,7	11%
Internationalisierung	39	69.930	48.429	16.928	83%	0,8	1,0	3,2	1,6	30,2	3,0	6%
Investition Tourismus	100	710.273	566.093	121.565	92%	3,0	2,1	3,1	2,6	15,4	3,6	23%
Investition Wirtschaft	91	1.471.277	1.285.695	166.815	93%	4,9	3,6	5,1	3,7	33,5	5,6	17%
P11 Champagne-Ardennne	59	510.463	237.290	40.615	73%	31,7	0,9	32,6	1,1	31,0	-0,7	7%
business transfer regional aid	22	1.242.886	536.313	70.442	46%	35,4	0,7	38,1	1,2	34,2	2,2	8%
innovation regional aid	13	116.935	87.590	30.095	87%	21,5	2,4	19,5	1,9	20,8	-1,5	12%
International development regional aid	24	52.235	44.273	18.970	90%	33,4	0,4	34,7	0,5	33,5	-2,8	3%
TOTAL	**1.526**	**423.959**	**296.590**	**87.477**	**81%**	**16,8**	**2,9**	**17,7**	**2,9**	**32,9**	**3,7**	**14%**

The table show very high contributions of new created jobs within Opolskie's SAS and Lisbon's SAS to the number of employees (FTE) of the beneficiaries. Further investigations and comparisons to other OSAIS partners' SAS should be carried out by the partners.

The PIVOT table “imp perf” shows further additional comparisons:

% turnover impact at project end in relation to turnover 2 years after project start	avg 150. - 167. E4 How many R&D jobs are maintained? (FTE) expected	avg 150. - 167. R4 How many R&D jobs are maintained? (FTE) at project end	avg 150. - 167. E5 How many R&D jobs are created? (FTE) expected	avg 150. - 167. R5 How many R&D jobs are created? (FTE) at project end	avg 150. - 167. A5 How many R&D jobs are created? (FTE) 2 years after	avg R&D staff in FTE at project start	avg R&D staff in FTE 2 years after project start	avg 150. - 167. E6 Has the annual R&D budget increased due to the project? (in Euro) expected	avg 150. - 167. R6 Has the annual R&D budget increased? (€) at project end	avg 150. - 167. A6 Has the annual R&D budget increased? (€) 2 years after	% R&D budget impact at project end in relation to R&D budget 2 years after project start	% R&D budget impact 2 years after project end in relation to R&D budget 2 years after project start	avg 150. - 167. E7 Is additional export (in €/year) expected	avg 150. - 167. R7 Is additional export created due to the project? (in €/year) at project end	avg Export 2 years after project start	% Export impact at project end in relation to Export 2 years after project start	% Export impact 2 years after project end in relation to Export 2 years after project start	avg 170 How many informal contacts	avg 171 How many formal collaboration contracts	avg 172 a How many patent applications were filed	avg 172 b Thereof, How many patent applications are approved
4%	0,1	0,14	0,0	0,02	0,02	0,39	0,41	658	1.036	37	1%	1%	500	513	441.416	3%	3%	3,0	1,2	0,00	0,00
6%	0,2	0,22	0,0	0,07	0,06	0,39	0,40	1.923	2.950	112	1%	1%	0	0	401.829	0%	0%	5,4	2,3	0,00	0,00
2%	0,0	0,00	0,0	0,00	0,00	0,28	0,29	0	0	0	0%	0%	1.538	1.667	820.854	10%	10%	0,2	0,2	0,00	0,00
4%	0,2	0,18	0,0	0,00	0,00	0,50	0,56	0	0	0	0%	0%	0	0	1.476	0%	0%	2,2	0,5	0,00	0,00
2%	0,8	0,93	0,2	0,06	0,17	1,72	2,04	200	200	1.867	25%	2%	10.000	11.000	1.840.010	3%	43%	2,5	0,6	0,06	0,31
3%	0,6	0,73	0,1	0,08	0,00	0,97	1,04	0	0	0	120%	0%	0	0	2.252.500	0%	0%	0,0	0,1	0,00	0,00
1%	0,1	0,25	0,0	0,00	0,10	0,08	0,10	300	300	300	3%	3%	0	0	81.491	0%	100%	2,5	1,0	0,10	0,20
1%	1,8	1,88	0,7	0,11	0,50	3,21	3,90	375	375	6.625	1%	2%	37.500	41.250	2.639.667	5%	38%	5,0	1,0	0,10	0,60
41%																		59,0	140,0	1,00	1,00
																		130,0	345,0		
41%																		11,7	3,3	1,00	1,00
55%	3,2	5,19	2,0	2,50	7,00	7,42	11,00	119.281	84.036	300.000	68%	375%	465.621	394.256	1.464.357	118%		103,3	9,5	1,42	0,00
100%	2,3	2,00	2,8	2,00		11,44	11,28	21.000	11.500		100%		25.000	31.829	631.218	76%		70,4	32,8	10,20	
1%	3,8	5,63	2,8	3,50	7,00	6,28	8,17	197.215	121.418	300.000	92%	375%	304.945	46.667	704.318	38%		9,3	2,9	0,30	
74%	2,8	5,67	0,7	1,33		7,58	14,59	31.864	70.833		4%		737.492	675.295	1.957.987	158%		196,1	10,4	0,35	0,00
																				0,23	0,09
																				0,48	0,23
																					0,00
																					0,06
						0,15	0,00													0,19	0,00
						0,19												8,0	6,0	0,00	0,00
						0,00	0,00											8,0	6,0	0,00	0,00
18%	0,1	0,03	0,1	0,06	0,56	1,04	3,18	0	2	0			0	0	379.522	0%	29%	19,2	18,5	0,00	0,00
23%	0,1	0,08	0,0	0,00	0,00	0,75	0,75								0			23,5	24,5	0,00	0,00
	0,0	0,00	0,0	0,00		0,00	0,00								0						
15%	0,1	0,00	0,2	0,15	0,83	1,47	6,41	0	2	0			0	0	683.139	0%	29%	14,8	9,5	0,00	0,00
	0,0	0,00	0,0	0,00																0,00	0,00
13%	0,3	0,30	0,2	0,37	0,48	2,08	2,67	31.429	35.100	26.227	39%	27%	155.194	141.200	3.027.952	13%	25%	26,0	20,5	1,10	0,93
11%	0,5	0,49	0,5	0,76	0,72	3,24	4,14	73.943	77.984	55.313	47%	32%	244.560	170.319	4.018.914	10%	21%	26,2	8,0	2,83	2,30
8%	0,5	0,50	0,1	0,14	0,15	2,08	2,99	7.154	6.769	7.750	2%	2%	81.667	55.000	3.260.518	1,3%	25%	31,6	3,5	0,43	0,43
10%	0,0	0,02	0,0	0,00	0,00	0,00	0,00	0	0	0			0	0	0				5,4	55,7	0,00	0,00
19%	0,3	0,29	0,2	0,31	0,68	1,58	2,01	18.955	25.333	20.044	26%	19%	202.744	239.817	3.602.093	18%	32%	40,1	10,8	0,41	0,40
13%	0,9	1,00	0,4	0,31	0,58	0,79	1,13	17.083	26.977	34.196	47%	94%	64.265	3.286	1.357.288	12%	19%	18,9	1,7	0,69	0,38
5%	0,4	0,40	0,0	0,00	0,43	0,66	0,87	0	0	4.000	0%	256%	0	0	144.420	0%	0%	2,3	1,2	0,11	0,11
17%	1,4	1,30	0,8	0,60	1,20	0,65	0,92	60.000	96.500	123.167	66%	74%	0	0	3.264.776			2,1	0,3	1,50	0,25
17%	0,9	1,38	0,4	0,33	0,29	1,00	1,46	5.000	12.596	14.874	56%	41%	112.500	5.750	991.699	14%	21%	33,5	2,6	0,60	0,60
13%	**0,5**	**0,46**	**0,3**	**0,29**	**0,37**	**2,32**	**3,13**	**31.913**	**28.900**	**21.369**	**38%**	**33%**	**144.749**	**117.929**	**2.110.698**	**21%**	**24%**	**27,7**	**13,8**	**0,67**	**0,53**

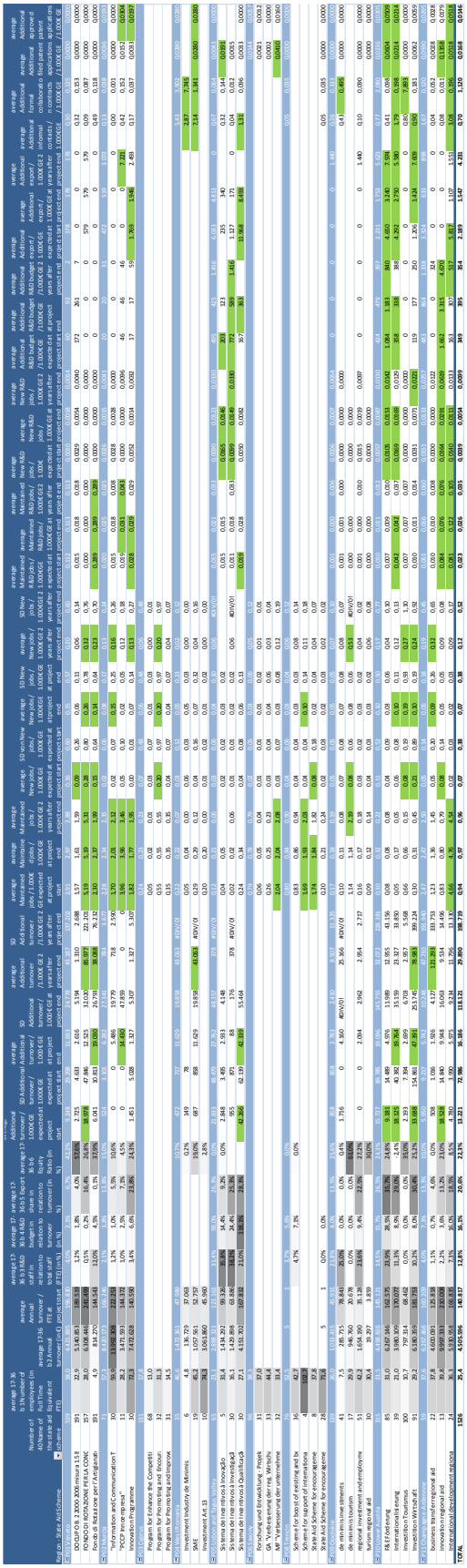
In terms of “% turnover impact at project end in relation to turnover 2 years after project start” through the funded projects (first column) the SAS of Lisbon/Tagus Valley “Sistema de Incentivos à Inovação” and “Sistema de Incentivos à Qualificação e Internacionalização PME” and West Romania “SME” can report high contribution to the beneficiaries’ turnover 2 years after project start.

The numerous missing values in the PIVOT table have again their roots in limitation of several partners on the compulsory indicators.

5.10.1 Indicator "maintained jobs" is meaningless

The PIVOT table reveals inconsistencies for the estimated impact on maintenance of jobs. In several cases like for the SAS "Innovation Programme" of Murcia Region, "GA Verbesserung der reg. Wirtschaftsstrukt." of Saxony as well as several SAS from Opolskie and Champagne-Ardenne the sum of the average maintained jobs at project end and the average new crated jobs is similar or even higher than the average number of employees (FTE) 2 years after start. Even though the time stamps "at project end" and "2 years after project start can differ slightly due to other reasons e.g. like crisis this fact is indicating that either companies in difficulties are the beneficiaries of the SAS or the interviewed entrepreneurs are not distinguishing between number of jobs at project start and actually maintained jobs due to project. As partners decided not to involve companies in difficulties into the survey the second alternative is very likely. This also coincides with experiences of Lower Austria and its experts in other impact surveys. That's why Lower Austria had already recommended not using the indicators "maintained jobs" for the OSAIS impact analysis even though numerous SAS in Europe consider these indicators as one of the most important ones.

5.11 Normalised impact



Due to the limited explanatory power of the absolute impact values because of the huge variety on project volume and amount of GGE over the partners' SAS C3 coordinator suggested to use the normalised quantitative impact indicators for TOP Ranking lists and further comparisons which was accepted by the OSAIS Partners (see PIVOT table **"imp norm SAreg"**).

For normalisation the absolute impact value is divided by total amount of GE and multiplied by 1.000. Thus the normalised indicators indicate the impact of the funded project per 1.000€ GE and are measuring the efficiency.

In comparison to the PIVOT table "imp quan absol" with the absolute impact indicators the PIVOT table "imp norm SAreg" with the normalised indicators shows large differences. While for absolute impact values the SAS from Veneto have no single TOP 30% value, Veneto's SAS are now under the most efficient ones together with the SAS of Lower Austria, Champagne-Ardenne and Lisbon/Tagus Valley (see left table). This is reflected in the TOP Ranking lists explained in former chapters.

The first part of the PIVOT table is giving an overview over the average structural data of the involved beneficiaries' for the selected SAS. C3 Coordinator Lower Austria has also added for the indicators "new jobs" and "additional turnover" the SD Standard Deviation.

The filter of PIVOT table "imp norm SAreg" consists of several SA topics and related SA regulations as selected for the OSAIS survey.

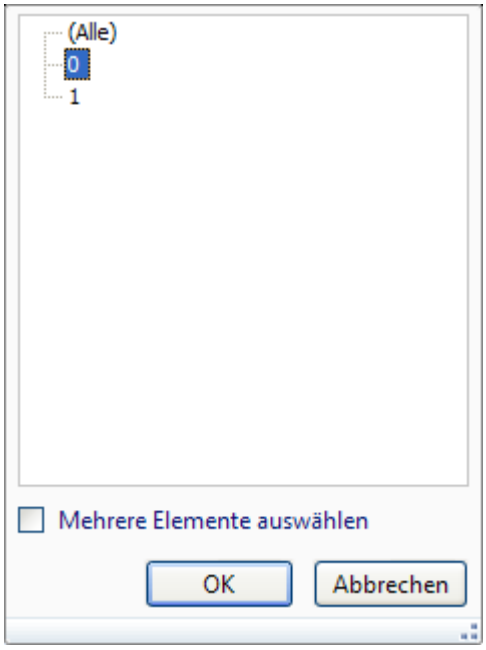
41+42 a Investment in commerce and in	(Alle)
41+42 a 1 Art. 13, Regional investment a	(Alle)
41+42 a 2 Art. 14; Aid for newly created	(Alle)
41+42 a 3 Art. 15; SME investment and e	(Alle)
41+42 a 4 de Minimis L 379/5 v. 28.12.20	(Alle)
41+42 b Investment in tourism	(Alle)
41+42 b 1 Art. 13, Regional investment a	(Alle)
41+42 b 2 Art. 14; Aid for newly created	(Alle)
41+42 b 3 Art. 15; SME investment and e	(Alle)
41+42 b 4 de Minimis L 379/5 v. 28.12.20	(Alle)
41+42 c R&D&I	(Alle)

5.12 Normalised impact – PIVOT tables with preset filters

The filter of the PIVOT table **"imp norm SAreg"** consists of the several SA topics and related SA regulations as selected for the OSAIS survey.

41+42 a Investment in commerce and in	(Alle)
41+42 a 1 Art. 13, Regional investment a	(Alle)
41+42 a 2 Art. 14; Aid for newly created	(Alle)
41+42 a 3 Art. 15; SME investment and e	(Alle)
41+42 a 4 de Minimis L 379/5 v. 28.12.20	(Alle)
41+42 b Investment in tourism	(Alle)
41+42 b 1 Art. 13, Regional investment a	(Alle)
41+42 b 2 Art. 14; Aid for newly created	(Alle)
41+42 b 3 Art. 15; SME investment and e	(Alle)
41+42 b 4 de Minimis L 379/5 v. 28.12.20	(Alle)
41+42 c R&D&I	(Alle)

The user can filter the SAS for single SA topics and/or SE regulations by setting the value on 1 like in the following example:



The values of the other filter criteria remain on "ALLE" = "ALL"

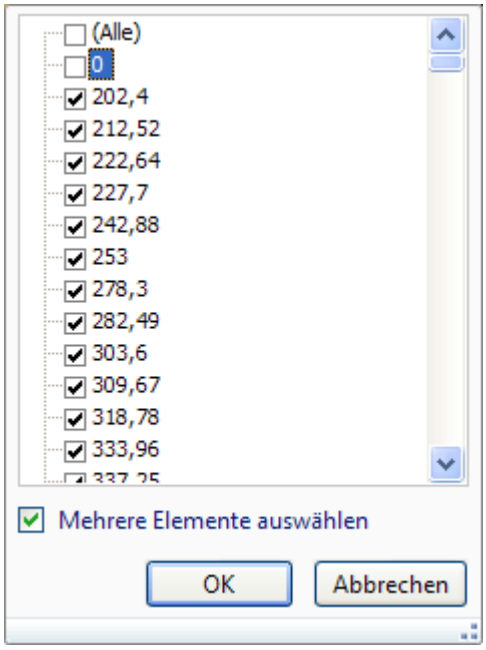
5.13 Normalised impact – comparison of types of funding

The PIVOT table **"imp norm FinType"** has the same standard structure as the former "imp norm SAreg" but a different filter for the financial type of the funding. OSAIS methodology is distinguishing between grants, loan, equity and guarantee on local – regional – national – European level. The following filters are applicable for the 33 selected SAS within the OSAIS survey:

80. - 147. R1 Grant (amount in Euro)	(Alle)
80. - 147. R5 Loan (amount in Euro)	(Alle)
80. - 147. R8 Interest subsidy (amount in	(Alle)
80. - 147. R10 Equity (amount in Euro)	(Alle)
80. - 147. R12 Guarantee (amount in Eur	(Alle)
80. - 147. N1 Grant (amount in Euro)	(Alle)
80. - 147. N5 Loan (amount in Euro)	(Alle)
80. - 147. N12 Guarantee (amount in Eur	(Alle)
80. - 147. E1a Grant (amount in Euro) ERI	(Alle)
80. - 147. E3 Repayable grant (amount in	(Alle)

The user can filter single financial types or a combination of types.

For selection of a financial type the zero-value of the respected finance type has to be deselected as the in the following example:



All SAS schemes with an amount larger 0 are listed in the PIVOT table, which means that this financial type was used in the respective funding projects. But it doesn't mean that the respective SAS is always using this financial type.

Also the combination of financial types can be identified by excluding the 0 for all the respective finance types.

5.14 Qualitative Impact Indicators

Region - State Aid Scheme	# 40 Name of the state aid scheme	avg 60 Total eligible project budget [€]	avg 61 Granted project costs [€]	avg 72 Total grant equivalent	avg 173 Has the project positive impact on the environment	avg 174 Has the project supported gender aspects	avg 175 Has the innovation culture in the company improved	avg 176 Has the project facilitated the access to information and external partners	avg 177 Has the project increased (any kind of) staff qualification	avg 178 Has the project increased the technology know-how / position of the company	avg 179 Has the project contributed to the improvement of organisational structures or processes	avg 180 Has the project improved the technical manufacturing process and/or increased flexibility	avg 181 Has the project increased the productivity or reduced the costs	avg 182 Has the project increased the production capacity	avg 183 Has the project contributed to the business/innovation strategy	avg 184 Are new products/services stemming from the project	avg 185 Has the project improved the quality of products/services	avg 186 Has the project opened new markets and/or enlarged existing market positions of the company
P01 Veneto	538	57.291	78.266	5.448	1,4	0,4	1,9	1,2	1,9	2,1	2,3	2,2	2,2	2,0	2,0	1,1	2,2	1,5
DOCUP OB. 2 2000-2006 misura 1.5 BANDO 2006, LETT. D MI	191	47.478	20.400	10.074	1,6	0,5	2,6	1,9	2,6	2,3	2,8	2,1	2,0	1,6	2,2	1,1	2,6	1,5
FONDO DI ROTAZIONE PER LA CONCESSIONE DI FINANZIA	157	208.406	177.486	4.169	1,1	0,3	1,3	0,5	1,6	2,1	1,8	2,6	2,6	2,8	2,2	1,5	2,2	1,7
Fondo di Rotazione per l'Artigianato Regionale - BLR 2/20	191	62.813	54.575	1.874	1,2	0,1	1,0	0,6	0,9	1,4	1,7	1,9	2,1	1,8	1,3	0,7	1,4	1,0
P02 Murcia	71	127.375	125.479	45.382	1,4	0,7	2,5	2,1	2,9	2,9	3,2	2,6	2,6	2,6	3,0	2,3	2,6	2,5
"Information and Communication Technologies"	30	105.001	103.183	37.891	1,5	0,6	2,4	2,4	2,8	3,1	3,2	2,6	2,8	2,5	2,9	2,2	2,6	2,4
"PCCP Innoempresa"	11	20.109	19.505	8.073	1,3	0,7	2,8	1,8	2,9	2,6	3,6	2,5	2,5	2,8	3,5	2,3	3,5	2,2
Innovation Programme	30	189.080	186.632	66.552	1,4	0,8	2,5	1,8	3,0	2,8	3,1	2,6	2,4	2,6	2,9	2,5	2,3	2,6
P03 Cyprus	183	313.370	74.428	77.627														
Program for Enhance the Competitiveness of SMEs in the I	68	287.063	52.793	50.153														
Program for Promoting and Encourage the Improvement	32	408.258	123.843	117.651														
Program for Promoting and Improvement of the Developn	31	267.760	79.327	75.361														
P04 West Romania	35	208.561	118.867	86.449	0,7	0,5	0,4	1,3	0,7	0,8	0,7	1,7	1,6	1,4	0,6	0,8	1,7	2,2
Investment Industry de Minimis	6	212.898	180.281	101.151	0,5	0,7	0,5	0,7	1,3	1,2	1,5	3,0	2,8	2,0	0,8	1,5	2,2	2,5
SME	19	43.628	26.383	21.260	0,8	0,6	0,7	2,0	0,5	0,7	0,6	0,4	0,3	0,4	0,5	0,2	0,8	2,1
Investment Art.13	10	519.330	257.739	201.489	0,6	0,1	0,0	0,2	0,7	0,6	0,5	3,6	3,4	2,9	0,7	1,4	3,2	2,2
P05 Lisbon and Tejo Valley	65	699.124	503.275	267.831	0,9	0,6	3,0	2,2	2,3	3,2	3,0	2,2	2,1	2,1	3,6	3,0	3,2	3,8
Sistema de Incentivos à Inovação	5	566.977	403.526	236.226	1,4	0,8	3,0	2,2	3,2	3,6	3,8	2,4	2,8	2,0	3,0	2,8	3,6	3,8
Sistema de Incentivos à Investigação e Desenvolvimento	30	842.332	655.698	411.867	1,0	0,2	3,5	2,0	2,5	3,9	2,8	2,2	2,2	2,1	3,9	3,6	3,3	3,7
Sistema de Incentivos à Qualificação e Internacionalizaçã	30	577.940	367.478	129.063	0,8	0,9	2,6	2,4	2,0	2,5	3,1	2,0	2,0	2,2	3,5	2,5	3,0	3,9
P06 Saxony	96	837.323	258.067															
Forschung und Entwicklung - Projektförderung	31	457.082	252.295															
GA "Verbesserung der reg. Wirtschaftsstruk."	33	1.908.585	507.541															
IVF "Verbesserung der unternehmer. Leistungsfähigkeit -	32	10.943	6.388															
P08 Trencin	76	247.800	120.802	3,0	0,0	1,9	1,9	2,4	2,6	2,6	2,6	2,4	2,6	3,0	2,6	2,0	2,7	4,3
Scheme for boost of existing and beginning enterprises (a	36	89.629	56.640		0,0	1,7	2,3	2,1	2,1	2,2	2,0	2,0	2,5	3,7	2,5	2,0		
Scheme for support of international cooperation (aid sche	4	93.295	45.481															
State Aid Scheme for encouragement of enterprise activit	8	388.767	157.937					2,0			2,0							
State Aid Scheme for encouragement of small and mediur	28	635.990	203.447	3,0	0,0	2,0	1,6	3,0	3,0	3,0	3,3	3,0	2,7	2,5	2,7	2,0	2,7	4,3
P09 Opolskie	159	421.089	346.428	137.673	2,0	1,8	2,5	1,7	2,9	2,6	2,2	3,0	3,0	3,2	2,8	3,9	4,0	3,9
de minimis investments	41	170.129	141.052	69.642	1,7	1,3	1,7	1,4	3,1	2,2	1,3	2,3	3,1	3,1	2,6	4,0	4,2	4,0
de minimis tourism	17	152.072	121.901	62.337	3,0	3,0	3,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0	3,0	3,0	4,0
regional investment and employment aid	51	577.522	481.398	268.067	2,2	1,7	3,2	1,9	2,8	2,8	2,8	3,8	3,3	3,6	3,2	3,8	4,0	3,7
turism regional aid	30	650.574	525.169	283.359	2,3	3,0	2,0	0,7	2,0	2,7	1,7	1,7	1,0	1,3	1,7	4,3	4,0	4,3
P10 Lower Austria	315	738.645	619.655	110.942	2,3	1,7	2,9	2,3	2,6	3,4	2,7	2,8	2,7	2,5	3,5	3,1	3,4	3,4
F&E Förderung	85	294.498	231.709	81.763	2,4	0,6	3,3	3,1	3,5	4,2	2,5	2,9	2,1	1,9	3,6	4,0	3,5	3,6
Internationalisierung	39	69.930	48.429	16.928	1,4	1,1	2,5	2,7	2,6	2,2	2,1	1,6	2,0	2,4	3,1	1,4	1,8	4,0
Investition Tourismus	100	710.273	566.093	121.565	2,5	1,7	2,5	1,7	1,8	2,7	2,4	2,1	2,7	2,3	3,6	2,5	3,7	3,0
Investition Wirtschaft	91	1.471.277	1.285.695	166.815	2,2	1,3	2,8	1,8	2,4	3,5	3,3	3,5	3,5	3,4	3,5	3,0	3,4	3,4
P11 Champagne-Ardenne	59	510.463	237.290	40.615	1,0	0,7	2,1	1,9	2,2	2,6	2,4	1,9	1,8	1,8	3,6	2,6	2,8	3,1
business transfer regional aid	22	1.242.886	536.313	70.442	0,8	0,7	1,7	1,6	2,0	2,1	2,4	1,8	1,9	1,9	3,2	2,4	2,2	2,8
innovation regional aid	13	116.935	87.590	30.095	2,0	0,4	2,9	1,7	2,7	3,6	3,1	3,0	2,3	2,4	4,4	2,8	3,6	3,4
International development regional aid	24	52.235	44.273	18.970	0,7	0,9	2,1	2,2	2,1	2,5	2,0	1,5	1,5	1,5	3,5	2,8	2,8	3,2
TOTAL	1.526	423.959	296.590	87.477	1,7	0,9	2,4	2,0	2,4	2,9	2,6	2,5	2,4	2,3	3,0	2,6	3,0	3,0

Beside the quantitative impact indicators the OSAIS methodology is also including the application of 14 qualitative impact indicators as listed in the PIVOT table **"imp qual"** on the left side.

Green cells indicate a high impact, red cells a low one for the respective indicator. The beneficiaries are in particular confirming relative high qualitative impact for several SAS of Opolskie and Lower Austria.

The SAS "SME" from West Romania has extremely low values, what is neither reflected by the normalised quantitative impact indicators nor by the quite positive satisfaction of the beneficiaries with the SA scheme. This response behaviour might be interlinked to requirements for the SAS.

Also for these qualitative impact indicators the partners from Cyprus, Saxony and Trencin have only or mostly missing values, even though it is usually easier to get a feedback from the SAS beneficiaries on the qualitative impact of their funding project than on the quantitative

impact.

On the contrary partners from Murcia, West Romania, Lisbon/Tagus and Opolskie were able to gather the information on qualitative impact event despite a low number of available projects for single SAS and the reluctance of beneficiaries for estimation the quantitative impact.

5.15 Relationship between single impact indicators

Beside the single impact indicators it is also of interest to learn more about the relationship among the single impacts, e.g. what additional turnover is created per new full time job. The PIVOT table "**norm ind**" below gives an insight:

Region - State Aid Scheme	avg Add R&D budget per Add R&D job at end #	avg Add R&D budget per Add R&D job 2 years after	avg Add Turnover per Add Job at end	avg Add Turnover per Add Job 2 years after	avg % Add Export / Add Turnover at end	avg % Add Export / Add Turnover 2 years after	avg % Add R&D Jobs / Add Jobs at end	avg % Add R&D Jobs / Add Jobs 2 years after	avg % Add R&D Budget / Add Turnover at end	avg % Add R&D Budget / Add Turnover 2 years after
P01 Veneto	19.172	672	25.000	169.375	5%	4%	33%	8%	0%	0%
DOCUP OB. 2 2000-2006 misura 1.5 BANDO 200	19.172	672	0	0	0%	0%	67%	25%	0%	0%
FONDO DI ROTAZIONE PER LA CONCESSIONE D			62.500	323.750	20%	13%	0%	0%	0%	0%
Fondo di Rotazione per l'Artigianato Regionale			0	30.000	0%	0%	0%	0%	0%	0%
P02 Murcia	0	5.556	10.556	1.548	37%	37%	11%	11%	0%	0%
"Information and Communication Technologie	0		25.333	4.902	0%	0%	0%	0%	0%	0%
"PCCP Innoempresa"		0	0	0			0%	13%		
Innovation Programme		8.333	0	0	73%	73%	25%	22%	0%	0%
P03 Cyprus										
Program for Enhance the Competitiveness of S										
Program for Promoting and Encourage the Imp										
Program for Promoting and Improvement of th										
P04 West Romania			237							
Investment Industry de Minimis										
SME			237							
Investment Art.13										
P05 Lisbon and Tagus Valley	27.473	42.857	685.093	6.154	38%	0%	97%	54%	9%	375%
Sistema de Incentivos à Inovação	5.750		68.578		12%		75%		4%	
Sistema de Incentivos à Investigação e Desenv	30.533	42.857	33.333	6.154	100%	0%	88%	54%	30%	375%
Sistema de Incentivos à Qualificação e Interna	35.833		1.003.924		34%		117%		6%	
P06 Saxony										
Forschung und Entwicklung - Projektförderung										
GA "Verbesserung der reg. Wirtschaftsstrukt."										
MF "Verbesserung der unternehmer. Leistung										
P08 Trencin										
Scheme for boost of existing and beginning en										
Scheme for support of international cooperati										
State Aid Scheme for encouragement of enter										
State Aid Scheme for encouragement of small										
P09 Opolskie	1		97.748	256.019		55%	1%	13%		
de minimis investments			39.956	610.298			0%	0%		
de minimis tourism							0%			
regional investment and employment aid	1		126.644	137.926		55%	4%	20%		
turism regional aid							0%			
P10 Lower Austria	81.017	53.758	159.687	276.006	21%	26%	27%	22%	25%	11%
F&E Förderung	91.475	65.667	175.741	378.111	33%	39%	63%	52%	75%	25%
Internationalisierung			139.407	152.360	43%	54%	13%	6%	5%	5%
Investition Tourismus			28.901	35.830	0%	0%	0%	0%	0%	0%
Investition Wirtschaft	43.831	29.942	218.187	370.896	18%	23%	12%	14%	3%	5%
P11 Champagne-Ardennne	79.834	82.375	169.556	139.462	20%	14%	88%	50%	108%	32%
business transfer regional aid		20.000	0	159.603		0%	0%	50%		0%
innovation regional aid	119.750	103.167	170.600	101.171	0%	0%	125%	67%	200%	83%
International development regional aid	1		224.333	157.944	33%	20%	67%	29%	17%	8%
TOTAL	**66.131**	**51.797**	**191.746**	**226.499**	**21%**	**24%**	**22%**	**22%**	**24%**	**13%**

Numerous missing values indicate that the gathered data quantity was in many cases not sufficient to such analysis as it is the case for the SAS from the partner regions Cyprus, West Romania, Saxony and Trencin.

Taking into account the number of available data points for the average calculation it has to be pointed out that the figures above are only meaningful for the three Lower Austrian SAS "F&E Förderung", "Investition Tourismus" and "Investition Wirtschaft".

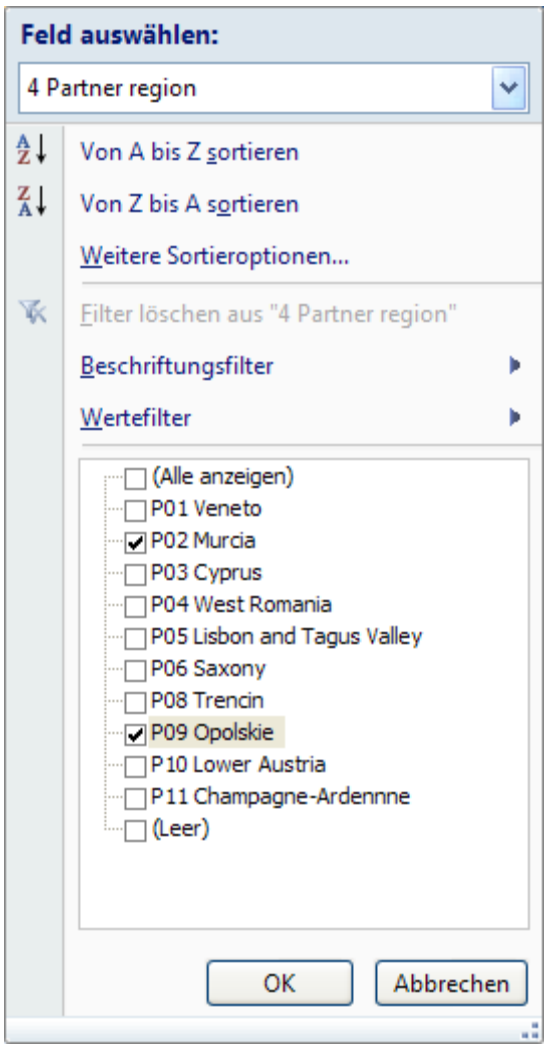
In addition also the data quality is in some cases questionable, e.g. for the Lisbon/Tagus Valley SAS "Sistema de Incentivos à Qualificação e Internacionalização PME" and the SAS "innovation regional aid" of Champagne-Ardenne more R&D jobs (in full time equivalent FTE) are created through the funded projects than new jobs in total [FTE].

5.16 Focussed comparison of specific regions or SAS

The OSAIS methodology and the elaborated PIVOT applications based on the merged data base allow also the focussed comparison of specific regions or SAS. This can be done in the elaborated PIVOT applications in the following way:

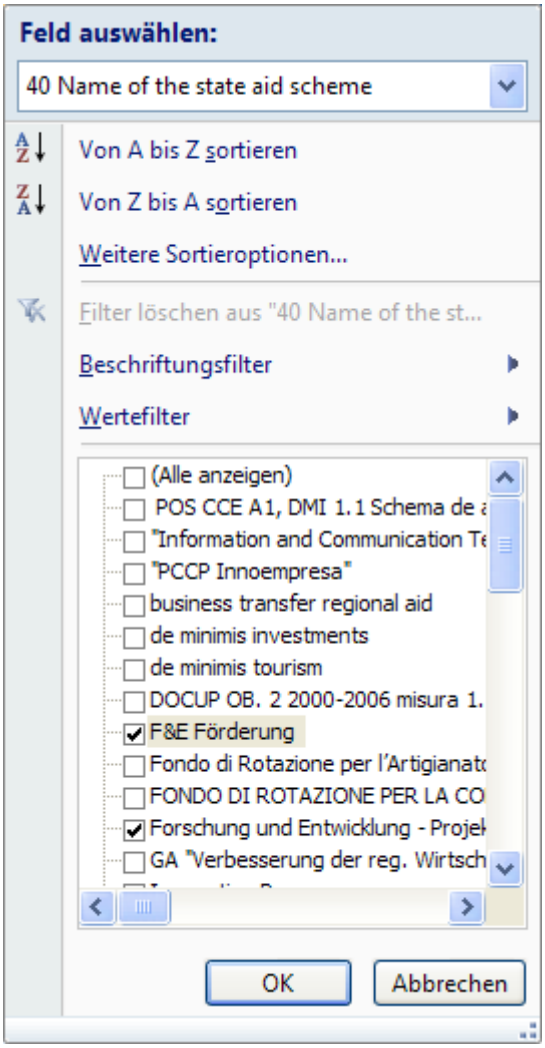
Use the pop-up menu for "Region – State Aid Scheme" as marked in green in the table below:

Region - State Aid Scheme	# 40 Name of the state aid scheme	avg 60 Total project budget [€]	avg 61 Granted eligible project costs [€]	avg 72 Total grant equivalent	avg 17-36 b 1 Number of employees (FTE)	avg 17-36 b 2 Annual turnover (in €)
P01 Veneto	539	57.291	78.266	5.448	18,0	4.421.895
DOCUP OB. 2 2000-2006 misura 1.5 BANDO 200	191	47.478	20.400	10.074	22,9	5.140.853
FONDO DI ROTAZIONE PER LA CONCESSIONE D	157	208.406	177.486	4.169	28,0	6.308.446
Fondo di Rotazione per l'Artigianato Regionale	191	62.813	54.575	1.874	4,9	814.270
P02 Murcia	71	127.375	125.479	45.382	57,3	8.420.173
"Information and Communication Technologie	30	105.001	103.183	37.891	59,9	13.992.308
"PCCP Innoempresa"	11	20.109	19.505	8.073	28,2	3.471.593
Innovation Programme	30	189.080	186.632	66.552	72,3	7.472.628
P03 Cyprus	131	312.100	76.428	72.607	17,8	
Program for Enhance the Competitiveness of S	68	287.063	52.793	50.153	13,0	
Program for Promoting and Encourage the Imp	32	408.258	123.843	117.651	31,3	
Program for Promoting and Improvement of th	31	267.760	79.327	75.361	14,5	
P04 West Romania	35	208.561	118.867	86.449	46,6	1.472.361
Investment Industry de Minimis	6	212.898	180.281	101.151	4,8	136.729
SME	19	43.628	26.383	21.260	45,2	1.057.561
Investment Art.13	10	519.330	257.739	201.489	74,3	3.061.860
P05 Lisbon and Tagus Valley	65	699.124	503.275	267.831	23,1	2.888.321
Sistema de Incentivos à Inovação	5	566.977	403.526	236.226	31,4	1.434.292
Sistema de Incentivos à Investigação e Desenv	30	842.332	655.698	411.867	16,1	1.429.898
Sistema de Incentivos à Qualificação e Interna	30	577.940	367.478	129.063	27,1	4.151.702
P06 Saxony	96		807.323	258.067	38,3	
Forschung und Entwicklung - Projektförderung	31		457.082	252.295	37,0	
GA "Verbesserung der reg. Wirtschaftsstrukt."	33		1.908.585	507.541	44,4	
MF "Verbesserung der unternehmer. Leistung	32		10.943	6.388	33,4	
P08 Trencin	76		247.800	120.802	52,5	5
Scheme for boost of existing and beginning en	36		89.629	56.640	42,7	
Scheme for support of international cooperati	4		93.295	45.481	102,7	
State Aid Scheme for encouragement of enter	8		388.767	157.937	37,8	
State Aid Scheme for encouragement of small	28		625.990	203.447	71,6	5
P09 Opolskie	139	421.089	346.488	187.678	26,0	1.033.415
de minimis investments	41	170.129	141.052	69.642	7,5	285.715
de minimis tourism	17	152.072	121.901	62.337	29,9	946.760
regional investment and employment aid	51	577.522	481.398	268.067	42,2	1.654.190
turism regional aid	30	650.574	525.169	283.359	30,4	19.297
P10 Lower Austria	315	738.645	619.655	110.942	23,5	4.498.826
F&E Förderung	85	294.498	231.709	81.763	31,0	6.267.146
Internationalisierung	39	69.930	48.429	16.928	21,0	3.980.109
Investition Tourismus	100	710.273	566.093	121.565	10,7	797.314
Investition Wirtschaft	91	1.471.277	1.285.695	166.815	29,2	6.180.359
P11 Champagne-Ardennne	59	510.463	237.290	40.615	37,6	6.267.466
business transfer regional aid	22	1.242.886	536.313	70.442	37,8	4.600.091
innovation regional aid	13	116.935	87.590	30.095	39,8	9.997.333
International development regional aid	24	52.235	44.273	18.970	36,3	5.930.958
TOTAL	**1.526**	**423.959**	**296.590**	**87.477**	**25,4**	**4.505.596**



For comparison of single partner regions choose "4 Partner region", then deselect "Alle anzeigen" = "show all" and select one or more partner region(s).

The user can also select one or several individual SAS by choosing "40 Name of the state aid scheme" and marking the respective SAS as depicted below:

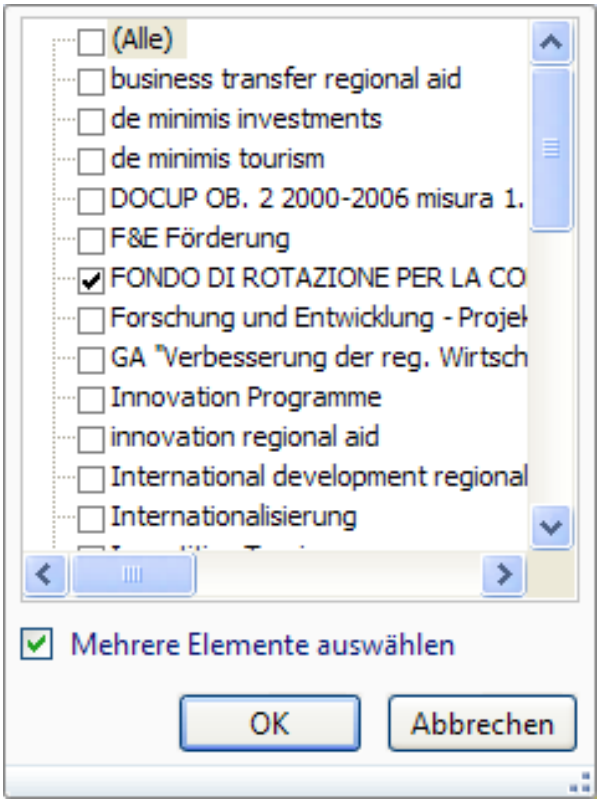


5.17 Analysis of a single SAS

The PIVOT table "**GGE NACE-Size**" can be used for in-depth analysis of a single State Aid Scheme. Therefore the user can select a single state aid schemes in the filter under "40 Name of the state aid scheme" (marked in green) as shown in the following depiction:

			explanations	
40 Name of the state aid scheme	FONDO DI ROTAZ	NE PER LA CON		lowest value
Age Category of company	(Alle)			median
41+42 a Investment in commerce and in	(Alle)			highest value
41+42 b Investment in tourism	(Alle)			
41+42 c R&D&I	(Alle)			
41+42 d SME (internationalisation , coop	(Alle)			
41+42 e Temporary crisis	(Alle)			
41+42 f Others	(Alle)			

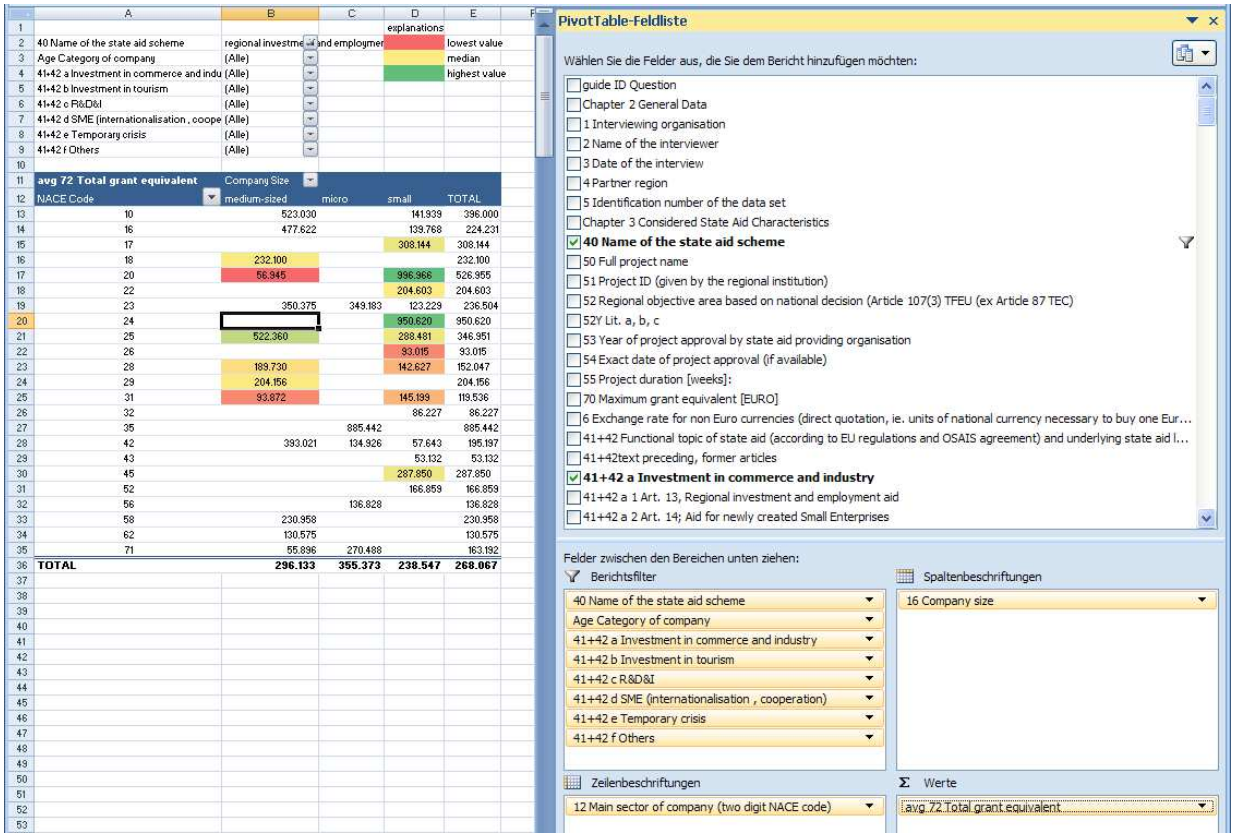
Then select one SAS:



The PIVOT application "GGE NACE-Size" gives an overview over the average total grant equivalent for the SAS "FONDO DI ROTAZIONE PER LA CONCESSIONE DI FINANZIAMENTI AGEVOLATI ALLE PMI - LR 5/2001" distinguishing the main sector and the size of the beneficiaries:

avg 72 Total grant equivalent	Company Size			
NACE Code	medium-sized	micro	small	TOTAL
15			975	975
17	4.231		7.085	6.270
18			7.747	7.747
19	1.157	0	3.999	3.315
20	451		2.130	1.570
21	3.225			3.225
22			13.464	13.464
24	3.291		1.816	2.111
25	10.866	3.288	5.415	5.765
26			3.758	3.758
27			2.959	2.959
28	2.899	1.826	5.056	4.555
29	4.338	1.679	4.820	4.477
31	685		3.445	2.985
33			1.198	1.198
34	2.632			2.632
36	839		4.804	3.218
37	1.294			1.294
45	2.637	2.142	2.590	2.563
(Leer)	1.378			1.378
TOTAL	**3.096**	**2.007**	**4.614**	**4.169**

This PIVOT application can be easily adapted according to own partner's needs by exchanging the total grant equivalent by any other indicator and by selection of another SAS.



6 Inductive Analyses

6.1 Methodology

6.1.1 Linear Regression Basics

In this chapter we estimate the determinants of an SAS's efficiency in terms of job creation. The indicators "Creation of new jobs" for our different points in time "estimated at project start", "at project end" and "two years after project end" are the only compulsory quantitative effect indicators – beside maintained jobs which have been interpreted by the OSAIS partners and even single interviewed entrepreneurs in different ways and thus are not meaningful for statistical analysis.

With the linear regression we are identifying those variables which are best in explaining an SAS's ability to create jobs. In OSAIS-language, we chose a state aid scheme (let's call it "SAS 1") and the gathered projects funded by this SAS 1 (these are e.g. 50 projects). By applying the linear regression we are identifying those indicators which can explain the differences in number of created jobs and their expected contribution to the creation of new jobs in case of value change. E.g. projects by small instead of micro companies are creating 0.05 additional new jobs per funded project. Or that projects which have been approved in the year 2009 are creating additional 0.18 new jobs compared to the years 2008 and 2010. These identified indicators are the explanatory variables. The pool for these variables consists of all compulsory indicators (except the creation of new job as explained variable) and further optional indicators which were completely filled in for the relevant data sets (in our example for all 50 projects). If single data sets are not completely filled in for all compulsory indicators these data sets are not taken into consideration for the linear regression. If there are too few data sets with values for the effect indicator "two years after project end" the effect indicator "at project end" is instead analysed. A minimum of 30 completed data sets for the relevant effect indicator is required for the linear regression. SASs with less than 30 data sets completed are not analysed due to their weak data base.

In this way we proceed with all SAS with a minimum of 30 data sets. The number of jobs created and the number of jobs created per 1.000 Euro Grant Equivalent are explained by all reasonable compulsory data. E.g. the "Year of project approval by state aid providing organisation" might reasonable information for explaining job creation, while the "Identification number of the data set" might explain job creation, although it is a compulsory indicator.

It was checked for every possible variable of an SAS whether it "correlates" with the number of jobs created or not. If there is a strong linear pattern between job creation and the variable, it is selected into the model. If not, it was left out. The more complex details of the calculation are described below.

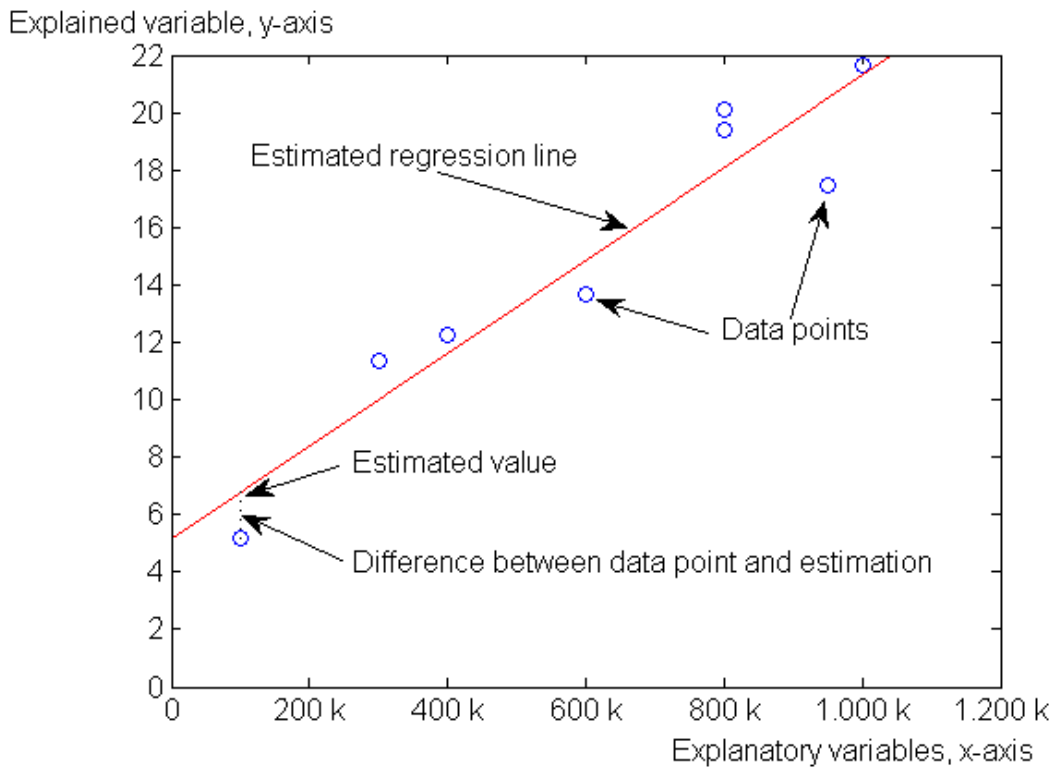
The result of this procedure is a set of variables for each SAS which explains the number of jobs created in absolute figures and per 1.000 Euro Grant Equivalent) best. This set of variables can be interpreted as the "driving force" of job creation in the SAS and should firstly be economically reasonable and secondly be checked

and interpreted with real-life experiences by the responsible SAS operating organisation.

Now imagine a graph where along the horizontal x-axis one can draw the grant equivalent of each project and on the vertical y-axis the number of jobs created. The more GE invested, the more jobs should be the result. Thus one can expect a cloud of data points from the lower left to the upper right of the graph. Figure 1 can serve as a simplified example with data points drawn from random numbers inserted as blue circles. The smallest GE was 100.000 Euro and resulted in 5 jobs. This can be seen in the lower left corner. The more GE was invested, the further right we move in the graph. As we do so, the number of created jobs increases, sometimes more, sometimes less. The highest investments above 800.000 Euro resulted in at least 17 new jobs, depicted by the cluster of four data points in the upper right corner.

In this case there is a strong relation between the GE on the x-axis and job creation on the y-axis. Thus we say that "GE invested explains the number of jobs created". Note that one cannot turn around this causality: the number of jobs created in a project does not affect the GE invested before into this project!

Figure 1: **Figure 1: Exemplary linear regression**



Source: Economica, 2012

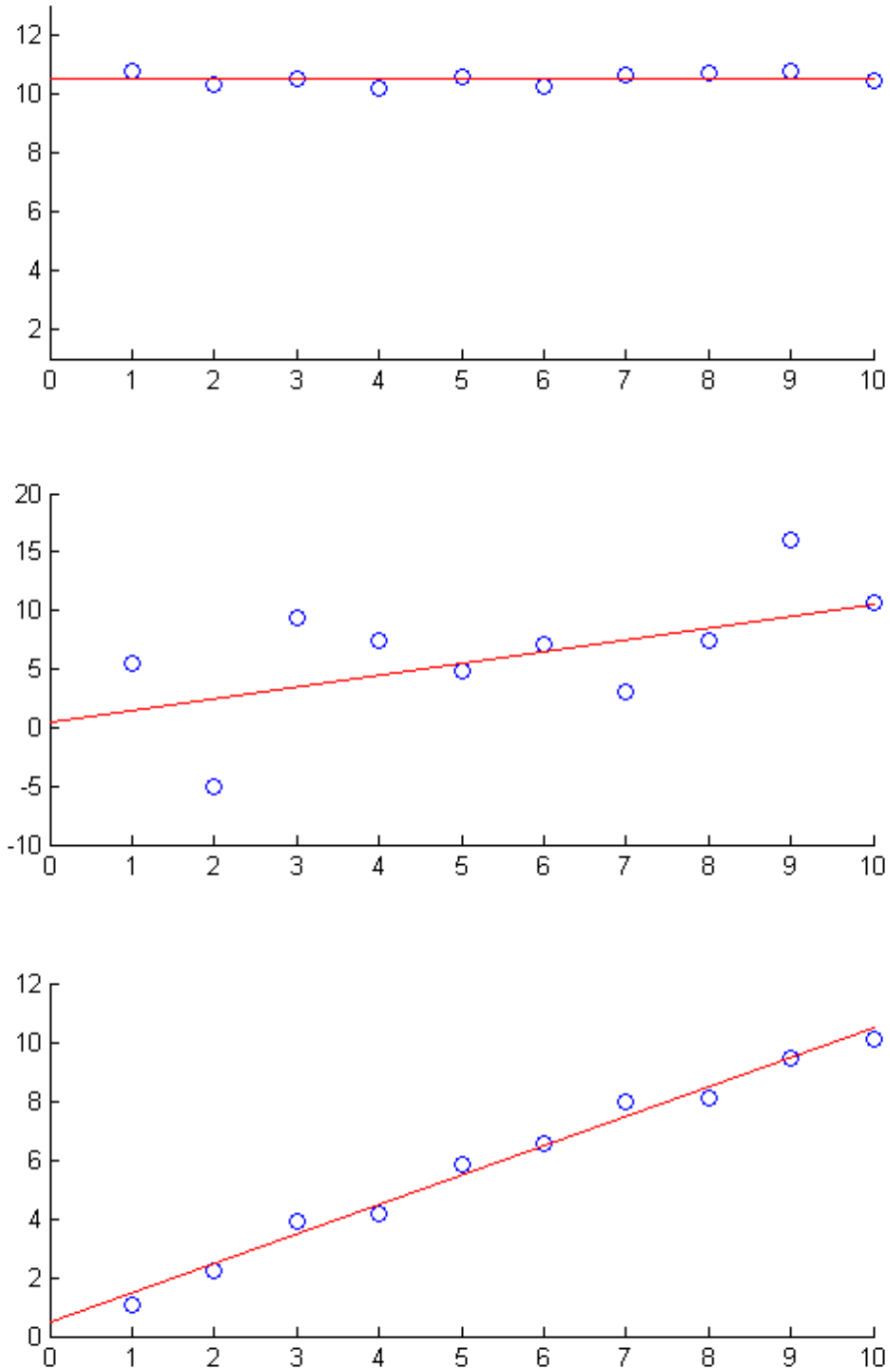
We can try now to draw a straight line "describing the data points". That is, we try to draw a line in such a way that it comes close to all data points. Such a line is called a "regression line" and can be useful in many different ways (see below). To see how such a line is calculated, note that the first data point in the lower left corner is a little below the red line. This red line is a good approximation for all data points. So if we invest 100.000 Euro GE, we would expect a value exactly on

the red line, with some deviation up or down (but a 50%-chance of up or down). So our estimated or expected value would be around 7 jobs created, not just 5. The dotted vertical line between the data point and the red line is thus the difference between the value estimated by the model and the real-life data point. Of course we want that difference to be as small as possible. A well know method for minimizing these distances is "ordinary least squares", OLS, which puts the line in such a way that the sum of the squared differences between all data points and the red line is minimised. Other methods, like the Teil-Sen estimator, minimise the median of the differences to deal with outliers. Still other methods use additional knowledge about the data (e.g. that they are equally distributed instead of normally around the line or that data points are "cut off" above or below certain values). All these methods are linear regressions with the Lasso, used in this project, being a special case. These methods' many similar features are explained in the following paragraphs. The reason for our choice being the Lasso is explained in the according chapter.

The regression line, however calculated, can be used for forecasting, as it represents the expected values for each value of subsidies: at e.g. 500.000 Euro on the x-axis as GE, the line has a y-value of around 13 which thus the expected number of created jobs for such an investment as depicted in the upper figure. The interpretation goes even further as the slope of the line has a very convenient interpretation too: the slope here takes on a value of 0.000016 which is the number of jobs created of each additional Euro GE. So if GE is increased by 100.000 Euro, the number of jobs created is increased by 1.6. The slope thus tells us the effect of additional investments. Its reciprocal 1/0.000016 = 62.000 Euro is the amount of GE necessary for one additional job.

Such a regression is thus a particularly powerful tool for data analysis. However, there is one more advantage of this method: it can make statements about the strength of an explanatory variable's impact on the explained variable.

Figure 2: **Figure 2: Different linear regressions**



Source: Economica, 2012

In the upper graph of Figure 2 one can see a regression line which explains the data points in a particularly close manner. On the first glance one could imagine this to be a very strong relation between the explaining x and the explained y. However, this is not the case: if x is increased from 1 to 10, y does not change at all! Therefore there is absolutely no relation between these two variables. This is

also expressed in the slope, which is 0.0, thus if x is increased by an arbitrarily large amount, y does neither increase nor decrease.

The second case looks better as the slope is positive: increase x and y is increased too. The relation however is not very strong as the line does not represent the data points very well. This means that one can expect y to increase if x is increased, but one also has to expect large deviations from this rule.

The best case is the third graph. There is a clear positive relation and all data points can be approximated very well by the regression line. In this case one would assume that y depends heavily on x.

These three examples show that using a linear regression one can say how much a variable affects another one: the steeper the slope and the closer the points are to the line, the stronger is the relation. This is valid for positive and negative relations in the same way. The calculation also takes the number of data points into account as more data points allow a more precise estimation.

6.1.2 Interpreting Linear Regression Results

Thus one can check several explanatory variables whether they significantly affect the explained variable or not. Mathematics allows doing that in parallel, which is called a "multivariate regression analysis". If there are two explanatory variables x1 and x2, and one explained variable, y, there is a three-dimensional-space as there is an additional axis "coming out of the paper" in the above graphs. Data points then form a 3d-cloud hovering in this space and a plane replaces the line. Everything else is as before. Imagine e.g. that the slope of the plane along the grant-equivalent-axis equals 0.000012 and number of employees is the second explanatory variable with a slope of -0.01. Then we have something like this as result:

	Coefficient
Grant equivalent	0.000012
Number of employees	-0.01

"Coefficient" is the statistical term for the slope of the plane or line. As before, GE increases number of jobs, this time we get 1.2 jobs for 100.000 Euro GE. It is a standard result that coefficients change if the set of explanatory variables is changed. The number of employees has a coefficient of -0.01, which has to be interpreted that for 100 employees one additional job is created. In other words, smaller companies benefit more from the same amount of GE.

The precise interpretation actually says that if there are two companies which differ only in the number of employees, GE and everything else being perfectly equal, then for each employee more one must expect 0.01 less additional jobs created by the project. Thus the coefficient tells us about the expected effect of a variable if just this one variable is altered and everything else being held constant.

Example 1: There are two companies. Company A has 150 employees, company B has 100 employees. Everything else is perfectly equal. Both get subsidies with equal GE.

The difference between company A and B is 150 – 100 = 50 employees. Thus company A has to expect a difference of-0.01 x 50 = -0.5 jobs due to the subsidised project compared to company B's additional jobs.

Example 2: There are two companies. Company A has 150 employees and gets a subsidy with 100.000 Euro GE. Company B has 100 employees and gets a subsidy worth 70.000 Euro GE. Everything else is perfectly equal.

Due to the difference in employees, company A again has to expect 0.5 jobs less from the subsidy. However, it gets 30.000 Euro GE more, so it gets 30.000 x 0.000012 = 0.36 new jobs from this source. Thus the net-effect in this case is just -0.5 + 0.36 = -0.14 jobs for company A compared to company B.

A good check for the quality of a regression is the share of the original values' variance the model can explain. In Figure 2 in the middle graph one can see quite some variance around the regression line. The vertical distances between the line and the data points are large, so there is still a lot of variance which remains unexplained. In the lower graph, these distances nearly disappeared. As almost all variance can thus be explained, the respective share is close to 100%.

The share of variance which can possibly be explained depends very much on the problem. Certain models (panel estimations) usually report a share of more than 90% while (economic) behavioural data of single persons is very hard to explain showing shares of 10% to 30% only. Companies should be somewhere in the middle, as they are units of aggregated human behaviour and should be rational. As companies are still rather heterogeneous, especially the creative, innovative forerunners, the share of explained variance is probably not much higher than that of single persons.

6.1.3 Model Selection

Multivariate regression analysis combined with statements about the importance of a variable's impact (see above) is the "working-horse for economic analysis". This leads to results like the following:

	Coefficient	Significance
Grant equivalent	0.000013	yes
Number of employees	-0.011	yes
Project duration (weeks)	0.00037	no

Here we have three explanatory variables, but only two are found to be significant. The third one, project duration in this example, is classified as "insignificant" by the calculations (thus it can be imagined to be similar to the upper graph in Figure 2 or to the middle graph with much more variation around the line). This result tells us that although "project duration" shows a positive

coefficient, it is not considered to be important as it cannot explain enough variation (this is calculated in the course of the linear regression). We should therefore not use it in our model. This statement is very useful for our purpose as we could in theory run such a linear regression with all complete and reasonable explanatory variables. The method would indicate the insignificant variables which would be eliminated from the set of explaining variables and the regression would be run again. After some iterations, only significant variables would remain which would be those to explain the SAS's effect on job creation best.

There are two strong framework conditions: the first one is that at least thirty data points more than explanatory variables used in the model are required. This condition is nowhere satisfied as we usually have at least 50 variables but less than the thus required 80 data points. The second issue is even more restraining: as mentioned above, changing the set of explanatory variables changes the resulting coefficients. This also holds true if even only one insignificant variable is deleted from the set of variables. Then it can occur that those variables, which were significant before, suddenly no longer are. Therefore we cannot use the most obvious way of reducing the set of explanatory variables by the least significant one and run a re-calculation until only significant variables remain. This solution almost always leads into a dead-end street, far away from the real optimum. Enlarging the set by the next-best variable shows the same problem.

In principle one could calculate linear regressions with all possible combinations of explanatory variables: at first, only the 98 compulsory variables are tried alone. Then all combinations of two compulsory variables are tried, these are 4,753 combinations. Then all combinations of three compulsory variables are calculated and so on. In the end this researcher would pick the one model which explains the data points in the best way. The problem here is that we have to calculate all combinations! In the above table we have one combination of three variables. However, there are 152,096 such combinations! With four variables there are 3,612,280 combinations, with eight variables it is already 157,366,449,604 combinations.

6.1.4 Tibshirani's Lasso

Therefore we need another solution. The most appropriate methods nowadays is Tibshirani's Lasso (Tibshirani, 1996), which uses a very elegant trick to get around this explosion of combinations. He does not say "we use a variable or we do not", but he uses "slices of variables". In the beginning he is looking for the best single explanatory variable. But instead of adding it completely to the set of used explanatory variables, he only uses a small piece of it. This is used to calculate an intermediate result. In doing so, the explained variable "jobs created" is explained to a small degree and the explanatory variable loses some explanation power. This is repeated until a second variable is as good as the first one. Then slices of these two variables are used to explain "jobs created". In this process, more and more is explained while the explaining variables lose more and more explanatory power. At some point, the method has to be stopped and the result can be used.

The question is when to stop this process. The method used here is cross validation. The data set is cut into two pieces and Tibshirani's Lasso calculates results on only one. As the data points are different, the resulting model of the

first half will always be worse when applied on the second half. The one model is used where this difference is minimised. This reduces the problem of overfitting the model on the data. If e.g. one tries to estimate a pricing-model for cars from the US, this model probably finds that the size of the car is very important. Applying that model on European cars leads to wrong estimates, as use of gas is a more important factor here. Thus the model is overfitted onto the US-data, on which it was calibrated. Using cross validation reduces this threat and thus leads to more generally useable results.

The result is the same as with other methods of linear regression: a set of variables and their coefficients which are interpreted as described above.

6.1.5 Data

The projects of each of our selected 33 SAS were seen as a group of data points. Therefore there were 33 sets of data points which were analysed to find the underlying determinants of jobs created and jobs created per 1.000 Euro GE. Both values are interesting and worth a close examination. Two years after the project end was chosen as standard point in time for measuring job creation. This can be seen as the long-term or sustainable effect of the project's subsidy. This also reduces the threat of a wrong causality as the explained variable is measured after almost all explanatory variables and can thus not affect them. If two years after project end was not possible for any reason, the time stamp "at project end" was chosen as relevant time point.

For each SAS the number of completely filled out compulsory variables was counted. If there are 30 or more such projects, the linear regression analysis was performed. Although this is clearly below the number required for a proper inductive analysis (at least 70), it was performed to give the responsible regions some rough insights into their SAS. The advantage compared to the descriptive analysis is that with an inductive analysis structures and mechanisms within and behind the data can be identified; conclusions about how an SAS affects companies are thus much clearer.

Variables which were also completed in addition to the compulsory variables were also used for the estimation if they were reasonable.

Variables which showed no variation had to be excluded from the calculations. If e.g. all projects were approved in 2009, one cannot ask how much better this year was compared to 2008, as there is not data for the latter. This was often the case for variables like "Art. 15; SME investment and employment aid" as many SAS were constructed to support only projects of this category.

For the inductive analysis the answers to question 200 "Would you have carried out the project without state aid support?" originally are "Yes", "Yes, but smaller", "Yes, but longer", and "No". The first three were combined into "Yes" and treated as 0. The answer "No" was coded as 1. Thus we have only 2 values: 0 or 1.

An interpretation of the results is given for each regressions analysis. These interpretations are purely data-driven and no background knowledge was used. The responsible SAS managing organizations are invited to come up with additional in-depth/alternative explanations of the results. Please note that if

variables show only small variations or only 30 or a few more data points were available, the results are very sensible to the single data points.

6.1.6 Interpretation Examples

In this section we give a few examples of how to interpret results. The most important rule is that the coefficient is the amount by which the explained variable increases if the explanatory variable increases by one unit.

Example 1: If the explained variable is jobs created and the explanatory variable is Grant Equivalent (GE) in Euro, the units are "jobs" and "Euro". If the coefficient equals 0.00001, we create 0.00001 jobs for each Euro GE. As GE usually is much higher, say 20.000 Euro, the GE's effect on jobs equals 20.000 x 0.00001 = 0.2.

Example 2: The explained variable again is jobs created, the explanatory variable is "share of exports in turnover", and assume the coefficient to be 1.2. The units are therefore "jobs" and "percent". Note that percent are values from 0 to 1! If a company reports a share of 20%, the expected effect on jobs is 0.2 x 1.2 = 0.24.

Below are more examples directly applicable to the OSAIS questions.

Example A:

Variable Number	Description	Coefficient
14a b	at project start – the subsidised unit of the company accounts for approx. xy% to the whole company and its structural data	-0.1353

Variable number 14a b: The relative size of the subsidized part of the company decreases created jobs per 1,000 Euro GE. The values of this variable range from 0.1 to 0.3 with an average of around 0.28. If this share increases from its minimum to its maximum by the given 20 percent-points, one can expect 0.0271 (= 0.2 x -0.1353) jobs less per 1,000 Euro GE.

As above, the share is measured in values from 0 to 1. Only if a company would report a share of 100%, thus having a value of 1.0, the full coefficient of -0.1353 would come to bear. The values however take on values between 0.1 and 0.3 only, so the effect is accordingly smaller.

Example B:

Variable Number	Description	Coefficient
16	Company size	0.2942

Variable number 16: Company size is measured in categories "micro", "small", and "medium". Each step is considered as an increase of 1.0 of the explanatory variable. Company size thus affects job creation in such a way that each larger category increases the number of jobs by 0.2942. Funded projects in medium-sized companies create 0.2942 more jobs than in a small company and 0.5884 = 2 x 0.2942 more jobs than in a micro company.

Example C:

Variable Number	Description	Coefficient
69	share actual eligible costs / granted eligible project costs	2.2683

Variable number 69: The higher the actual eligible costs in relation to the granted eligible costs the more jobs could be created. Units of variable 69 are shares reaching theoretically from 0 to 1. However, one must note that the real values of this variable only range from 0.8347 to 1.0 with an average of 0.98. The variation is thus quite small and the impact accordingly lower; e.g. if the variable increases from its minimum to its maximum, an additional 0.375 jobs can be expected (2.2683 x (1.0 - 0.8347)). This finding can be interpreted in the following way: the better the actual project costs are estimated the higher is the effect of the project on new jobs. Projects which are not carried out in the same intensity as planned (e.g. due to change of priorities or unforeseen obstacles) have a lower impact on new created jobs.

Example D:

Variable Number	Description	Coefficient
72	Total grant equivalent	0.000038

Variable number 72: Total grand equivalent has a very small coefficient, but it is multiplied by large values: For every additional Euro Grant Equivalent additional 0.000038 new jobs are expected. The coefficient points out that for each 26,315 Euro Grant Equivalent one additional job can be expected. (1 divided by 0.000038)

Example E:

Variable Number	Description	Coefficient
175	Has the innovation culture in the company improved?	0.0325

The increased innovation culture is considerably influencing more additional jobs in a positive way. As again, each step increases variable 175 by a value of 1.0, one can expect 0.0325 jobs for each step of the six categories. A beneficiary which estimates the project's impact on the company's innovation culture with "5=essential impact", creates more new jobs that a funded company which assess the impact on the innovation culture with"2=some impact". As the difference in the variable are 3 points, the expected difference in jobs equals (5 - 2) x 0.0325 = 0.0975.

Example F:

Variable Number	Description	Coefficient
190 – S	Are you satisfied with the overall results of the funded project?	0.0015

Variable number 190 – S: As can be expected, overall satisfaction goes hand in hand with created jobs. One step on the six-categories-scale adds 0.0015 expected jobs per 1,000 Euro GE. This must of course not be interpreted in this way that by increasing the companies' satisfaction artificially (by whatever means) automatically increases jobs, but that the companies very well assess the meaningfulness of the SAS.

If therefore a beneficiary reports a value of 5 and another one a value of 3, the expected difference in jobs calculates as (5 – 3) x 0.0015 = 0.0030.

Example G:

Variable Number	Description	Coefficient
200	Would you have carried out the project without state aid support?	0.0168

Variable number 200: This variable indicates the existence of windfall gains. for the inductive analysis the answers "yes, but smaller" and "Yes, but longer" were coded as 0 like the answer "Yes". The answer "No" was coded as 1. Thus we have only 2 values: 0 or 1. The coefficient is thus either applied completely for

those beneficiaries who answered "No" or not applied at all for those who reported some kind of "Yes".
Those companies which would not have undertaken the project at all without funding show slightly more new jobs. If this SAS thus is applied to a project which would not have been carried out without funding, it not only triggers the project itself, but adds an additional 0.0168 new jobs compared to projects which would have been carried out even without funding.

Example H:

Variable Number	Description	Coefficient
	(year) 2009	0.1234

Year 2009: for this explanatory variable the coefficient is applied as a whole or not at all, as there are only two values for the indicator years: 1 and 0.
The best year in terms of job creation per GE was 2009. On average 0.1234 jobs more were created per 1,000 Euro GE in 2009 compared to the other years. The other years are so similar that the differences between them are considered unimportant.

Example I, several explanatory variables:

The standard case is that one finds several explanatory variables. The interpretation is exactly as before. One must only bear in mind that it is assumed that all other variables are equal! That is as if one compares two perfectly equal beneficiaries which only differ in the one property used as variable. This holds true even if all companies are very different!

Variable Number	Description	Coefficient
16	Company size	0.2942
72	Total grant equivalent	0.000038

Variable number 16: Company size is measured in categories "micro", "small", and "medium". Each step is considered as an increase of 1.0 of the explanatory variable. Company size thus affects job creation in such a way that each larger category increases the number of jobs by 0.2942. Funded projects in medium-sized companies create 0.2942 more jobs than in a small company and 0.5884 = 2 x 0.2942 more jobs than in a micro company.

Variable number 72: Total grand equivalent has a very small coefficient, but it is multiplied by large values: For every additional Euro Grant Equivalent additional 0.000038 new jobs are expected. The coefficient points out that for each 26,315

Euro Grant Equivalent one additional job can be expected. (1 divided by 0.000038)

These two above interoperations are exactly as in the one-variable-cases. However, one could assume that small companies (variable 16) also report small values in variable72. As written above, this effect is already accounted for in the results. While interpreting the results, one has to assume that two companies only differ in one of the variables – all other variables are perfectly equal! Thus the coefficients are really the pure effects of the single variables!

Imagine one wants to know the difference between beneficiary A, being a small company with a GE of 50,000 Euro and company B being a medium company receiving a GE of 30,000 Euro. The calculation has to take both effects into consideration: the difference between A and B in terms of company size is (2 – 1), the difference in GE equals (50,000 – 30,000). The combined effect on expected jobs thus
(2 – 1) x 0.2942 + (50,000 – 30,000) x 0.000038 = 0.2942 + 0.76 = 1.0542.

Categories for the share of the variance which can be explained by the model

- < 15% very little
- < 20% little
- < 25% mediocre
- < 35% satisfactory
- 35% + adequate

It is important to note that the years which are found to be important in some of the following analyses are the years in which the projects ended.

When compared to the PIVOT average calculations, the averages reported here can deviate in certain cases. The reasons are outliers, which are not problematic in the descriptive analyses (e.g. Pivot), but can bias results of inductive analyses heavily. Therefore they were excluded in this chapter leading to these deviations.

6.2 Veneto

6.2.1 DOCUP OB. 2 2000-2006 misura 1.5 BANDO 2006, LETT. D MIGLIORAMENTO PROCESSO E PRODOTTO

For this SAS there are n=32 cases available for which the compulsory data has been filled in completely. Although this is clearly below the number required for a proper inductive analysis, it is performed to give the responsible persons some rough insights into their SAS. The advantage compared to the descriptive analysis is that with an inductive analysis structures and mechanisms within and behind the data can be identified; conclusions about how an SAS affects companies are thus much clearer. Please note though that due to the small sample size the values reported here are not very reliable and are likely to react sensibly on changes.

Several variables had to be excluded as they did not show any variation. The remaining 50 variables, however, still allow a very deep analysis.

6.2.1.1 Absolute Number of Jobs Created – Two Years after Project End

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 0.47 jobs were created per funded project and could still be found after two years, with one project reporting three jobs as the maximum.

The first line of table 1 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 10% of the variations can be explained is very little, but could probably be increased by more data points. This value indicates that there are many factors contributing to new jobs after two years which are not part of the model. The explaining variables follow in the lower part of the table.

Table 1: Results of the estimation

	Share of variance explained by the model	10%
Number	Description	Coeff.
13	Founding year of the company [yyyy]:	0.0030
57	Processing time [weeks]	-0.0235
71.b	What is the share of total grant equivalent of granted eligible	0.2310
80. - 147. R2	Grant equivalent (in % of eligible costs)	0.0097
80. - 147. E2a	Grant equivalent (in % of eligible costs) ERDF	0.000012
195.b	Is the state aid scheme providing the right support?	0.1528
	2006	-0.1837

Source: Economica, 2012

Variable number 13: The year in which the company was founded gets a positive coefficient. That means that a larger number (i.e. a later year) in this variable leads to more new jobs. In more every-day-language, younger companies benefit more, around 0.0030 jobs per one year younger.

Variable number 57: Processing time is the required time from opening the file/submission of proposal to documented authorisation/approval of state aid with feedback to firm (letter of approval). The negative coefficient means that a longer processing time for the approval of the submitted proposal leads to less new jobs. Per week additional processing time one has to expect 0.0235 jobs less. An explanation could be that due to long processing times the projects fall back behind their time-schedule and become less effective. An alternative interpretation is a lower quality of the proposal requiring more clarifications and thus a longer processing time. This indicates less effectiveness of the approved funded project.

Variable number 71.b: This line shows the effect of the share of "total grant equivalent of granted eligible costs" divided by "eligible project costs". This share can vary from 0.00 to 1.00, where latter means 100%. An increase of this variable from 0.00 to 1.00 increases the expected job creation by 0.2310 jobs, which is large, considering the mean of 0.47 jobs created. An increase of 10 percent points, e.g. from 0.3 to 0.4, thus leads to an expectation of 0.0231 jobs created.

Variable number 80. -147. R2: The higher the ratio of GE to eligible costs the fewer jobs per 1,000 Euro GE are created. The efficiency of job creation per money subsidised is thus better for those projects which get less subsidies compared to their eligible costs. This finding coincides with the analysis results on the variable number 71.b.

Variable number 80. -147. E2a: The size of the loan increases the job creation per 1,000 Euro GE. The effect, however, is small, as it takes on average 85,500 Euro, for one additional job.

Variable number 195.b: The estimation of the companies concerning the SAS providing the right support correlates with number of jobs created. For each increase of the category of consensus additional 0.1528 jobs were created. Although this sounds natural at first, it indicates that the SAS is not just providing well designed folders and presentations charming the eye, but that there is a balance of impression on the company and real effects.

Project End Year 2006: The worst year in terms of job creation per 1,000 Euro GE was 2006, where this variable was on average higher by -0.1873 – substantial compared to the average of 0.47 jobs created. The difference within the other years was too small to be considered significant.

6.2.1.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

The second estimation was performed in order to explain the number of created jobs two years after the end of the projects for each 1,000 Euro Grant Equivalent. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 0.0632 jobs per 1,000 Euro GE were created and could still be found after two years, with values ranging from zero to 0.54. That indicates an average of 15,800 Euro GE per created job.

The first line of table 2 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 10% of the variations can be explained is very little, but could probably be increased by more data points. This value indicates that there are many factors contributing to the variable which are not part of the model. The explaining variables follow in the lower part of the table.

Table 2: Results of the estimation

	Share of variance explained by the model	13%
Number	Description	Coeff.
56	Project delay: the project was finished earlier/in time/later	0.0270
57	Processing time [weeks]	-0.0018
68	Actual eligible project costs at project end [EURO] according to	-0.000002
195.b	Is the state aid scheme providing the right support?	0.0111
	2006	-0.0107

Source: Economica, 2012.

Variable 56: For each of the three steps project delay "later", "in time", and "earlier", an additional 0.0270 jobs per 1.000 Euro GE could be expected. That means that the earlier the projects are finished the higher is the efficiency of job creation.

Variable number 57: Processing time is the required time from opening the file/submission of proposal to documented authorisation/approval of state aid with feedback to firm (letter of approval). The negative coefficient means that a longer processing time for the approval of the submitted proposal leads to less efficiency in job creation. Per week additional processing time one has to expect 0.0018 jobs less per 1,000 Euro GE. An explanation could be that due to long processing times the projects fall back behind their time-schedule and become less efficient. An alternative interpretation is a lower quality of the proposal requiring more clarifications and thus a longer processing time. This indicates less efficiency of the approved funded project.

Variable number 68: Actual eligible project costs (AEPC) reduce normalised job creation slightly. It takes AEPC of around 25,000 Euro to increase jobs per 1,000 Euro GE by 0.05 – which is the order of magnitude of the average job creation per 1,000 Euro GE.

Variable number 195.b: The estimation of the companies concerning the SAS providing the right support correlates with number of jobs created. For each increase of the category of consent, and additional 0.0058 jobs per 1,000 Euro GE were created. Although this sounds natural at first, it indicates that the SAS is not just providing well designed folders and presentations charming the eye, but that there is a balance of impression on the company and actual efficiency.

Project End Year 2006: All projects were finished in the years 2006 and 2007. The first was a slightly worse year in terms of job creation per GE as on average, holding everything else constant, 0.0048 jobs less were created per 1,000 Euro GE.

6.2.2 Fondo di Rotazione per l'Artigianato Regionale - LR 2/2002

For this SAS there are n=31 cases available for which the compulsory data has been filled in completely. Although this is clearly below the number required for a proper inductive analysis, it is performed to give the responsible persons some rough insights into their SAS. The advantage compared to the descriptive analysis is that with an inductive analysis structures and mechanisms within and behind the data can be identified; conclusions about how an SAS affects companies are thus much clearer. Please note though that due to the small sample size the values reported here are not very reliable and are likely to react sensibly on changes. Several variables had to be excluded as they did not show any variation. The remaining 49 variables, however, still allow a very deep analysis.

6.2.2.1 Absolute Number of Jobs Created – Two Years after Project End

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 0.28 jobs were created per funded project and could still be found after two years with values ranging from zero to 2.5 full time equivalents.

The first line of Table 3 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 20% of the variations can be explained is mediocre and points out that there are many more factors contributing to job creation. More data points can probably relieve this problem. The explaining variables follow in the lower part of the table.

Table 3: Results of the estimation

	Share of variance explained by the model	20%
Number	Description	Coeff.
52	Regional objective area based on national decision (Article 107(3) TFEU (ex Article 87 TEC)	0.0200
71.b	What is the share of total grant equivalent of granted eligible costs in relation to eligible project costs	4.7855
72	Total grant equivalent	0.000038
193.b	Was all requested information by the managing authority really necessary or have you had the feeling that you are wasting time with information providing?	0.0057
195.b	Is the state aid scheme providing the right support?	-0.0724
200	Would you have carried out the project without state aid support?	-0.0570

Source: Economica, 2012.

Variable number 52: Being located in a regional objective area results in an additional 0.02 jobs created. After all, this corresponds to around 10% of the average jobs created and indicates that aiding companies in such areas is over proportionally efficient; there really seems to be some systematic differences where state aids can be of help.

Variable number 71.b: The second line shows the effect of the share of "total grant equivalent of granted eligible costs" divided by "eligible project costs". This share can vary from 0.00 to 1.00, where latter means 100%. An increase of this variable from 0.00 to 1.00 increases the expected job creation by 4.79 jobs, which is huge, considering the mean of 0.28 jobs created. An increase of 10 percent points, e.g. from 0.3 to 0.4, thus leads to an expectation of 0.479 jobs created. However, the values filled in here differ very much from those in the other Veneto-SAS, as they only reach from 0.005 to 0.049. Thus the effect is never larger than 0.049 x 4.79 = 0.23, which is in the same order of magnitude as the mean number of jobs created. This variable can thus still be considered as very important.

Variable number 72: Total grand equivalent has a very small coefficient, but it is multiplied by large values: For every additional Euro Grant Equivalent 0.000038 new jobs are expected. The coefficient points out that for each 26,315 Euro Grant Equivalent one additional job can be expected. (1 divided by 0.000038)

Variable number 193.b: The more the companies had the feeling that the information requested from them was necessary, the more jobs were created. For each of the six steps, an additional 0.0057 jobs can be expected. Beneficiaries with a higher number of new created jobs consider the information requested by the managing authority as more necessary than beneficiaries with a lower number of created jobs through the funded project.

Variable number 195.b: Asking whether the state aid scheme is providing the right support contradicts the upper result to a certain extent. However, the mean of this variable equals 3.68 on a scale from 0 to 5, so it is well above the average compared to the other OSAIS SAS. Thus the differences appear on a very high level and the negative sign comes from small changes with companies filling in values which are still above the average grade. It would be interesting to re-examine this variable with more available data-points.

Variable number 200: The negative coefficient indicates that projects which would have been carried out without funding have generated more new jobs than other funded projects. Taking also into consideration the high share of 59% of interviewers who answered, that they would have carried out the funded project without funding in the same way, this is indicating considerable windfall gains.

6.2.2.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

The second estimation was performed in order to explain the number of created jobs two years after the end of the projects for each 1,000 Euro Grant Equivalent. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 0.23 jobs per 1,000 Euro GE were created and could still be found after two years, with values ranging from zero to 3.5566. That indicates an average of ca. 4,300 Euro GE per job.

The first line of table 4 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 8% of the variations can be explained is very little, but could probably be increased by more data points. This value indicates that there are many factors contributing to the variable which are not part of the model. The explaining variables follow in the lower part of the table.

Table 4: Results of the estimation

	Share of variance explained by the model	10%
Number	Description	Coeff.
71.b	What is the share of total grant equivalent of granted eligible	2.0075
80. - 147. R5	Loan (amount in Euro)	-5.24E-08
190 - S	Are you satisfied with the overall results of the funded project?	-0.0720
193.b	Was all requested information by the managing authority really	0.0055
193.c	Are the templates easy to read and to understand?	0.0606
	2009	0.1467

Source: Economica, 2012.

Variable number 71.b: The second line shows the effect of the share of "total grant equivalent of granted eligible costs" divided by "eligible project costs". This share can vary from 0.0047 to 0.0493. Thus the variable differs by less than 5 percent points only. An increase of this variable from its minimum to its maximum increases the expected job creation per 1,000 Euro GE by (0.0493 – 0.0047) x 2.0075 = 0.0895 jobs, which is less than half of the mean of 0.23 jobs created per 1,000 Euro GE.

Variable number 80. -147. R5: The size of the loan reduces the job creation per 1,000 Euro GE. This could be a hint that this SAS works better on small companies and/or small projects. The less money is given as loan, the more jobs are created per 1,000 Euro GE. The effect, however, is small, as the average loan given is 66,500 Euro, for which the total effect is only around - 0.0035 jobs less per 1,000 Euro GE.

Variable number 190 – S: Overall satisfaction does not go hand in hand with created jobs per 1,000 Euro GE. One step on the six-categories-scale reduces the explained variable by 0.0720 expected jobs per 1,000 Euro GE. Thus the satisfaction of the beneficiaries doesn't correlate with the project efficiency on new jobs. Even though the creation of new jobs is no direct objective of the SAS, the SAS objective "To strengthen the craftsman productive system in Veneto by granting subsidised loans to small and medium-sized enterprises that carry out significant innovation investments" should lead to new jobs.

Variable number 193.b: The more the companies had the feeling that the information requested from them was necessary, the more jobs per 1,000 Euro GE

were created. For each of the six steps in the applied scale of values, an additional 0.0055 jobs per 1,000 Euro GE can be expected. Beneficiaries with a higher number of new created jobs per 1,000 Euro GE consider the information requested by the managing authority as more necessary than beneficiaries with a lower number of created jobs per 1,000 Euro GE through the funded project.

Variable number 193.c: If templates are easy to understand, jobs created per 1,000 Euro GE are increased. For each of the six steps, 0.0606 more jobs per 1,000 Euro GE can be expected, which is a huge impact given the average value of the explained variable of 0.23!

Project End Year 2009: All projects were finished in the years 2008 to 2010. The best year in terms of job creation per GE was 2009. On average, holding everything else constant, 0.1467 jobs more were created per 1,000 Euro GE in 2009 compared the other years. This is around half the average value of the variable!

6.2.3 Fondo di Rotazione per la Concessione di Finanziamenti Agevolati alle PMI - LR 5/2001

For this SAS there are now, after transformation of some textual remarks into the respective data points for the questions with IDs from 191.a to 200, exactly n=30 cases available for which the compulsory data has been filled in completely. Although this is clearly below the number required for a proper inductive analysis, it is performed to give the responsible persons some rough insights into their SAS. The advantage compared to the descriptive analysis is that with an inductive analysis structures and mechanisms within and behind the data can be identified; conclusions about how an SAS affects companies are thus much clearer. Please note though that due to the small sample size the values reported here are not very reliable and are likely to react sensibly on changes. Several variables had to be excluded as they did not show any variation. The remaining 65 variables, however, still allow a very deep analysis.

6.2.3.1 Absolute Number of Jobs Created – Two Years after Project End

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 1.10 jobs were created per funded project and could still be found after two years with values ranging from zero to 9 full time equivalents. Note that in all but two cases the values are smaller or equal to three. These two cases (reporting 8 and 9 jobs created) deserve special attention and could be Good Practice examples. However, as all projects in the estimation (and 32 out of 34 in the data base) have reported that they would have been undertaken even without state aid these high values could be the results of these windfall gains.

The first line of Table 5 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 10% of the variations can be explained is very little, but could probably be increased by more

data points. This value indicates that there are many factors contributing to the variable which are not part of the model. The explaining variables follow in the lower part of the table.

Table 5: Results of the estimation

	Share of variance explained by the model	10%
Number	Description	Coeff.
52	Regional objective area based on national decision (Article 107(3) TFEU (ex Article 87 TEC)	-0.2204
55	Project duration [weeks]:	0.0027
41+42 a 3	Art. 15; SME investment and employment aid	-0.0196
41+42 a 4	de Minimis L 379/5 v. 28.12.2006	0.0000
193.b	Was all requested information by the managing authority really necessary or have you had the feeling that you are wasting time with information providing?	0.0986
	2008	0.9965

Source: Economica, 2012.

Variable number 52: Being located in a regional objective area results in 0.2204 less jobs created. After all, this corresponds to around 20% of the average jobs created and indicates that companies in such areas still have problems with job creation. This does, however, not imply that the SAS is ineffective as the situation without the SAS could be even worse.

Variable number 55: Project duration has a positive impact on job creation. For one year or 52 weeks more project duration, about 0.0027 x 52 = 0.1404 jobs more can be expected. Longer projects thus create more jobs, even two years after the project is over.

Variables number 41+42 a 3 and 4: As all but one case are reported to fall into Art. 15, these two variables are to be interpreted with care. According to the pure numbers, the interpretation would be that these Art. 15 projects create 0.0196 jobs less than "de Minimis" projects, but as there is only one of the latter projects, it is possible that this result is just a statistical artefact and thus does not tell anything about reality.

Variable number 193.b: The more the companies had the feeling that the information requested from them was necessary, the more jobs were created. For each of the six steps, an additional 0.0986 jobs can be expected. Beneficiaries with a higher number of new created jobs consider the information requested by the managing authority as more necessary than beneficiaries with a lower number of created jobs through the funded project.

Project End Year 2008: All projects ended in the years 2008 to 2011. The best year in terms of job creation per GE was 2008. On average, holding everything else constant, 0.9965 jobs more were created in 2008 compared the other years. This is nearly the full average value of the variable!

6.2.3.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

The second estimation was performed in order to explain the number of created jobs two years after the end of the projects for each 1,000 Euro Grant Equivalent. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 0.3470 jobs per 1,000 Euro GE were created and could still be found after two years, with values ranging from zero to 3.75. That indicates an average of ca. 3,750 Euro GE per job. This would be a very small amount of GE per job. Note that all projects in the estimation received windfall gains – it must therefore be doubted that the 3,750 Euro GE per job are real.

The first line of Table 6 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 24% of the variations can be explained is mediocre and points out that there are many more factors contributing to job creation. The explaining variables follow in the lower part of the table.

Table 6: Results of the estimation

	Share of variance explained by the model	24%
Number	Description	Coeff.
52	Regional objective area based on national decision (Article 107(3) TFEU (ex Article 87 TEC)	-0.1689
41+42 a 3	Art. 15; SME investment and employment aid	-0.3018
41+42 a 4	de Minimis L 379/5 v. 28.12.2006	0.000064
72	Total grant equivalent	-0.000020
193.b	Was all requested information by the managing authority really necessary or have you had the feeling that you are wasting time with information providing?	0.0504
	2008	0.8341

Source: Economica, 2012.

Variable number 52: Being located in a regional objective area results in 0.1689 less jobs created per 1,000 Euro GE. This does, however, not imply that the SAS is inefficient as the situation without the SAS could be even worse.

Variables number 41+42 a 3 and 4: As all but one case are reported to fall into Art. 15, these two variables are to be interpreted with care. According to the pure numbers, the interpretation would be that these Art. 15 projects create 0.3018 jobs per 1,000 Euro GE less than "de Minimis" projects, but as there is only one of the latter projects, it is possible that this result is just a statistical artefact and thus does not tell anything about reality.

Variable number 72: Total grand equivalent has a very small negative coefficient, but it is multiplied by large values: For every additional Euro Grant Equivalent 0.000020 jobs less per 1,000 Euro are to be expected. The coefficient points out

that for each 50,600 Euro Grant Equivalent one job less can be for another 1,000 Euro GE. The effect of GE is thus diminishing in larger projects.

Variable number 193.b: The more the companies had the feeling that the information requested from them was necessary the more jobs per 1,000 Euro GE were created. For each of the six steps in the applied scale of values, an additional 0.0504 jobs per 1,000 Euro GE can be expected. Beneficiaries with a higher number of new created jobs per 1,000 Euro GE consider the information requested by the managing authority as more necessary than beneficiaries with a lower number of created jobs per 1,000 Euro GE through the funded project.

Project End Year 2008: All projects ended in the years 2008 to 2011. The best year in terms of job creation per GE was 2008. On average, holding everything else constant, 0.8541 jobs per 1,000 Euro GE more were created in 2008 compared the other years. This is more than twice the average value of the variable!

6.3 Cyprus

6.3.1 Program for Enhance the Competitiveness of SMEs in the Manufacturing Sector

This SAS has 68 datasets completed for compulsory data. This allows the performed inductive analyses to be quite precise. Several variables had to be excluded as they did not show any variation. The remaining 54 variables, however, still allow a meaningful analysis.

6.3.1.1 Absolute Number of Jobs Created – At Project End

The first estimation was performed in order to explain the number of created jobs at the end of the projects as there were only three projects reporting one or more jobs created two years after project end. The results can be interpreted as the mid-term effect of the projects.

Only few projects reported at least one created job two years after project end. Thus "Jobs created at project end" was selected as explained variable, for which 9 projects listed positive entries. Although even this is not a lot, calculations were performed. But it must be noted that there is not a lot of variation in the explained variable, as most are zero, so the results depend a lot on the just 9 of all 68 data sets which were completed.

On average 0.21 jobs were created at project end per funded project with values ranging from zero to two.

The first line of Table 7 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 14% of the variations can be explained is very little, corresponding to only few varying data points which are problematic to explain. More non-zero data points will certainly enhance the situation, but this goes hand in hand with many more interviews. The explaining variables follow in the lower part of the table.

Table 7: Results of the estimation

	Share of variance explained by the model	14%
Number	Description	Coeff.
190 - S	Are you satisfied with the overall results of the funded project?	0.0380
193.b	Was all requested information by the managing authority really necessary or have you had the feeling that you are wasting time with information providing?	-0.1036
193.c	Are the templates easy to read and to understand?	-0.0278
200	Would you have carried out the project without state aid support?	0.0494
	2011	0.0942

Source: Economica, 2012.

Variable number 190 – S: As can be expected, overall satisfaction goes hand in hand with created jobs. One step on the six-categories-scale adds 0.038 expected jobs. This must of course not be interpreted in this way that by increasing the

companies' satisfaction artificially (by whatever means) automatically increases jobs, but that the companies very well assess the meaningfulness of the SAS.

Variable number 193.b: However, the more the companies had the feeling that the information requested from them was useful, the fewer jobs were created. For each of the six steps, an additional 0.1036 less jobs have to be expected. It seems as if there is some excessively felt burden for exactly that group of companies which benefit the most.

Variable number 193.c: The above finding is supported by the fact that templates are hard to understand for those companies which report the most additional jobs. For each of the six steps, 0.0278 less can be expected.

Variable number 200: Those companies which would not have undertaken the project at all without funding show more new jobs. If this SAS is applied to a project which would not have been carried out without funding, it thus not only enables the project itself, but adds an additional 0.0494 new jobs which is quite significant for an average of 0.21 created jobs per project. On the other side the relatively high share of answers (24%) for "yes the project would also have been carried out without funding in the same way" shows some windfall gains. As consequence the SAS managing authority should try to identify windfalls gains already when submitting the project proposals in order to reject them and thus to have a higher efficiency of the SAS funding in terms of new created jobs.

Project End Year 2011: All projects were approved in the years 2011 and 2012. The first one was a slightly better year in terms of job creation as on average, holding everything else constant, 0.0942 more jobs were created.

6.3.1.2 Normalised Jobs Created per 1,000€ Grant Equivalent – At Project End

The second estimation was performed in order to explain the number of created jobs at project end for 1,000 Euro Grant Equivalent.

As the variables are the same as in the estimation before, only few projects reported at least one created job two years after project end. Thus "at project end" was selected as the point in time, for which 9 projects listed positive entries. Although even this is not a lot, calculations were performed. But it must be noted that there is not a lot of variation in the explained variable, as most are zero, so the results depend in particular on the just 9 of all 68 data sets which were completed.

On average 0.0088 jobs per 1,000 Euro GE were created at project end with values ranging from zero to 0.1322. That indicates an average of ca. 113,600 Euro GE per job.

The first line of Table 8 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 15% of the variations can be explained is little, corresponding to only few varying data points which are problematic to explain. More non-zero data points will certainly enhance the situation, but this goes hand in hand with many more interviews. The explaining variables follow in the lower part of the table.

Table 8: Results of the estimation

	Share of variance explained by the model	15%
Number	Description	Coeff.
190 - S	Are you satisfied with the overall results of the funded project?	0.0015
193.b	Was all requested information by the managing authority really necessary or have you had the feeling that you are wasting time	-0.0037
193.c	Are the templates easy to read and to understand?	-0.0034
200	Would you have carried out the project without state aid support?	0.0032
	2011	0.0038

Source: Economica, 2012.

Variable number 190 – S: As can be expected, overall satisfaction goes hand in hand with created jobs. One step on the six-categories-scale adds 0.0015 expected jobs per 1,000 Euro GE. This must of course not be interpreted in this way that by increasing the companies' satisfaction artificially (by whatever means) automatically increases jobs, but that the companies very well assess the meaningfulness of the SAS.

Variable number 193.b: However, the more the companies had the feeling that the information requested from them was useful, the less jobs were created. For each of the six steps, an additional 0.0037less jobs per 1,000 Euro GE have to be expected. It seems as if there is some excessively felt burden for exactly that group of companies which benefit the most.

Variable number 193.c: The above finding is supported by the fact that templates are hard to understand for those companies which report the most additional jobs per 1,000 Euro GE. For each of the six steps, 0.0034 less jobs per 1,000 Euro GE can be expected.

Variable number 200: The last but one variable is the question for windfall gains. Those companies which would not have undertaken the project without funding show slightly more new jobs. If this SAS thus is applied to a project which would not exist without the help, it not only brings it into existence, but adds an additional 0.0032 new jobs per 1,000 Euro GE.

Project End Year 2011: All projects were finished/expected to finish in the years 2011 and 2012. The first one was a slightly better year in terms of job creation as on average, holding everything else constant, 0.0038 more jobs per 1,000 Euro GE were created.

All in all the sets of explaining variables and the signs of their coefficients (plus or minus) are more or less the same for the absolute number of jobs and the number of jobs per 1,000 Euro GE. This simplifies the decisions of the SAS-manager's, as optimising one of these two aspects optimises the other one too. The coherence of the sets of explaining variables underlines the significance of these identified explaining variables for the SAS.

6.3.2 Program for Promoting and Encourage the Improvement and Development of the Processing and Marketing Agricultural Products

For this SAS there are n=32 cases available for which the compulsory data has been filled in completely. Although this is clearly below the number required for a proper inductive analysis, it is performed to give the responsible persons some rough insights into their SAS. The advantage compared to the descriptive analysis is that with an inductive analysis structures and mechanisms within and behind the data can be identified; conclusions about how an SAS affects companies are thus much clearer. Please note though that due to the small sample size the values reported here are not very reliable and are likely to react sensibly on changes. Several variables had to be excluded as they did not show any variation. The remaining 50 variables, however, still allow a very deep analysis.

6.3.2.1 Absolute Number of Jobs Created – Two Years after Project End

Three cases had to be removed as they had at least ten times more jobs created (20, 68, and 186) as the other cases in average (1.14). Otherwise these three data points would have dictated all statistical results. Although this removal is a drawback for statistics, these projects are clear candidates for case-analyses and should be checked for outstanding differences compared to the other cases.

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 1.14 jobs were created per funded project and could still be found after two years with values ranging from zero to 8.

The first line of Table 9 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 26% of the variations can be explained is a satisfactory result, but more data points could probably be of help. The explaining variables follow in the lower part of the table.

Table 9: Results of the estimation

	Share of variance explained by the model	26%
Number	Description	Coeff.
16	Company size	0.4202
14	The subsidised unit of the company is HQ / HQ-production plant	-0.1428
60	Total project budget [EURO]	7.11E-08
61	Granted eligible project costs [EURO]	3.60E-07
191.a - 2	How was your relationship with the ERDF/ESF responsible	0.0474
193.b	Was all requested information by the managing authority really	0.3110

Source: Economica, 2012.

Variable number 16: Company size, measured in categories "micro", "small", and "medium" affects job creation in such a way that each larger category increases the number of jobs by 0.4202. That means for medium sized companies as beneficiaries further 0.4202 new jobs per funding scheme can be expected in comparison with small companies and additional 0.8404 jobs per funded project (two times 0.4202) compared with micro companies. Compared to the 1.14 jobs created on average by a funded project, this is a substantial value!

Variable number 14: If the subsidised unit is a headquarters (variable value =0) the number of jobs created is larger by 0.1428 compared to HQ-production plants (variable value =1). This indicates that a certain (hierarchical) distance to the headquarters decreases the job creation effect of the subsidies by about one tenth of the variable's average.

Variable number 60: Total project budget can be expected to create more jobs to a very limited extent. But this effect, however, is rather small, as one would need around 14 million Euro to create one additional job. All other identified factors can be considered as much more important.

Variable number 61: The higher the granted eligible project costs the smaller is their effect on jobs created per 1,000 Euro GE. For each 100,000 Euro project costs more one must expect 0.0360 jobs less. Smaller projects thus seem more effective in terms of job creation per GE.

Variable number 191.a -2: Relationship with the ERDF/ESF responsible organisation is a good indicator for job creation. One step on the six-category-scale increases expected additional jobs by 0.0474. It would be interesting to find out more about these linkages. Maybe that the good relationship with the ERDF/ESF responsible organisation increases the quality of the funded project or is more focussing on the creation of new jobs. On the other hand 38% of the interviewed beneficiaries said that they would have carried out the project without any funding in the same way. Therefore it would be of interest to analyse the SAS whether there is a linkage between the relationships of the beneficiaries with the ERDF/ESF responsible organisation and windfall gains.

Variable number 193.b: The more the companies had the feeling that the information requested from them was necessary, the more jobs were created. For each of the six steps, an additional 0.3110 jobs can be expected. Beneficiaries with a higher number of new created jobs consider the information requested by the managing authority as more necessary than beneficiaries with a lower number of created jobs through the funded project. This variable coincides with the above variable describing the satisfaction with the ERDF/ESF responsible organisation.

6.3.2.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

One case had to be removed as it had showed 5.5 jobs created per 1,000 Euro GE, while the other cases reported on average only 0.02 created jobs per 1,000 Euro GE. Otherwise this data point would have dictated all statistical results. Although this removal is a drawback for statistics, this project is a clear candidate for case-analyses and should be checked for outstanding differences compared to the other cases.

On average 0.0245 jobs per 1,000 Euro GE were created and could still be found after two years, with values ranging from zero to 0.1789. That indicates an average of ca. 40,800 Euro GE per job.

The first line of Table 10 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 26% of the variations can be explained is a satisfactory result, but more data points could probably be of help. The explaining variables follow in the lower part of the table.

Table 10: Results of the estimation

	Share of variance explained by the model	26%
Number	Description	Coeff.
16	Company size	0.0032
14	The subsidised unit of the company is HQ / HQ-production plant	-0.0044
14a b	At project start - The subsidised unit of the company is accounts	0.0769
61	Granted eligible project costs [EURO]	-4.31E-08
193.a	Was the administrative effort in reasonable relation to the	0.0021
193.b	Was all requested information by the managing authority really	0.0011

Source: Economica, 2012.

Variable number 16: Company size, measured in categories "micro", "small", and "medium" affects job creation in such a way that each higher category increases the number of jobs by 0.0032 for each 1,000 Euro GE. Funded projects in larger companies create more jobs per GE invested.

Variable number 14: If the subsidised unit is a headquarters (variable value =0) the number of jobs created per 1,000 Euro GE is higher by 0.0044 compared to HQ-production plants (variable value =1). This indicates that a certain (hierarchical) distance to the headquarters decreases the efficiency of the subsidies by about half the variable's average.

Variable number 14a b: The relative size of the subsidized part of the company increases created jobs per 1,000 Euro GE, may be due to the increasing influence of the subsidised unit on the whole company. The values of this variable range from 0.3 to 0.4 with an average of around 0.32. If this share increases from its minimum to its maximum by the given 10 percent-points, one can expect 0.00769 additional jobs per 1,000 Euro GE.

Variable number 61: The higher the granted eligible project costs the smaller is their effect on jobs created per 1,000 Euro GE. For each 100,000 Euro project costs more one must expect 0.0043 jobs less per 1,000 Euro GE. Smaller projects thus seem more efficient in terms of job creation per 1,000 Euro GE.

Variable number 193.a: The more reasonable the administrative effort was the more jobs were created by 1,000 Euro GE. The effect was 0.0021 jobs per 1,000 Euro GE for each of the six categories, so there is a strong relation between these two variables.

Variable number 193.b: The more the companies consider the requested information as necessary the more jobs per 1,000 Euro GE were created. For each of the six steps, an additional 0.0011 jobs per 1,000 Euro GE can be expected.

6.3.3 Program for Promoting and Improvement of the Development Manufacturing and Marketing of Agricultural Products

For this SAS there are n=31 cases available for which the compulsory data has been filled in completely. Although this is clearly below the number required for a proper inductive analysis, it is performed to give the responsible persons some rough insights into their SAS. The advantage compared to the descriptive analysis is that with an inductive analysis structures and mechanisms within and behind the data can be identified; conclusions about how an SAS affects companies are thus much clearer. Please note though that due to the small sample size the values reported here are not very reliable and are likely to react sensibly on changes.

6.3.3.1 Absolute Number of Jobs Created – Two Years after Project End

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

One case had to be removed as 30 times more jobs were created (48) as on average in the other cases (1.6). Otherwise this data point would have dictated all statistical results. Although this removal is a drawback for statistics, this project is a clear candidate for a case-analysis and should be checked for outstanding differences compared to the other cases. Several variables had to be excluded as they did not show any variation. The remaining 50 variables, however, still allow a very deep analysis.

On average 1.6 jobs were created per funded project and could still be found after two years with one project reporting six jobs as the maximum.

The first line of Table 11 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 9% of the variations can be explained is very little and points out that there are many more factors contributing to job creation. More data points can probably relieve this problem. The explaining variables follow in the lower part of the table.

Table 11: Results of the estimation

	Share of variance explained by the model	9%
Number	Description	Coeff.
16	Company size	0.1910
14a b	At project start - The subsidised unit of the company is accounts for approx. xy% to the whole company and its structural data	-0.3028
60	Total project budget [EURO]	5.07E-07
69	share actual eligible costs / granted eligible project costs	2.0636
195.b	Is the state aid scheme providing the right support?	0.2424

Source: Economica, 2012.

Variable number 16: Company size, measured in categories "micro", "small", and "medium" affects job creation in such a way that each larger category increases the number of jobs by 0.1910.

Variable number 14a b: The relative size of the subsidized part of the company decreases created jobs by 0.3028 jobs. Larger units thus seem to be less effective in creating jobs. This seems interesting in combination with the above finding that large companies create more jobs.

Variable number 60: Total project budget can be expected to create new jobs. The effect, however, is rather small, as one would need around 1.9 million Euro to create one additional job. All other factors can be considered to be much more important.

Variable number 69: The higher the actual eligible costs in relation to the granted eligible costs the more jobs could be created. At first the coefficient looks rather large, but one must note that the values of this variable range from 0.8347 to 1.0 with an average of 0.98. The variation is thus quite small and the impact accordingly lower; e.g. if the variable increases from its minimum to its maximum, an additional 0.3411 jobs can be expected (2.0636 x (1.0 - 0.8347)). This finding can be interpreted in the following way: the better the actual project costs are estimated the higher is the effect of the project on new jobs. Projects which are not carried out in the same intensity as planned (e.g. due to change of priorities or unforeseen obstacles) have a lower impact on new created jobs.

Variable number 195.b: It is good to see that the estimation of the companies concerning the SAS providing the right support correlates with number of jobs created. For each increase of the category of consent, and additional 0.2424 jobs were created. Although this sounds natural at first, it indicates that there is a balance of the impression on the funded companies and real effects of the funded projects.

6.3.3.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

The second estimation was performed in order to explain the number of created jobs two years after the end of the projects for each 1,000 Euro Grant Equivalent.

This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 0.0558 jobs per 1,000 Euro GE were created per funded project and could still be found after two years, with values ranging from zero to 0.54. That indicates an average of 17,900 Euro GE per job.

The first line of Table 11 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 18% of the variations can be explained is little, but could probably be increased by more data points. This value indicates that there are many factors contributing to the variable which are not part of the model. The explaining variables follow in the lower part of the table.

Table 12: Results of the estimation

	Share of variance explained by the model	18%
Number	Description	Coeff.
14a b	At project start - The subsidised unit of the company is accounts for approx. xy% to the whole company and its structural data	-0.2037
61	Granted eligible project costs [EURO]	-1.05E-07
69	share actual eligible costs / granted eligible project costs	0.1220
72	Total grant equivalent	-2.59E-11
190 - S	Are you satisfied with the overall results of the funded project?	0.0019
191.a - 2	How was your relationship with the ERDF/ESF responsible organisation?	0.0102

Source: Economica, 2012.

Variable number 14a b: The relative size of the subsidized part of the company decreases created jobs by 0.2037 per 1,000 Euro GE. The values of this variable range from 0.1 to 0.3 with an average of around 0.28. If this share increases from its minimum to its maximum by the given 20 percent-points, one can expect -0.0407 (= 0.2 x -0.2037) jobs less per 1,000 Euro GE, around half the explained variable's average. It is not clear what reason could cause such a behaviour that smaller company units create more jobs per 1.000 Euro GE. A case study would probably shed some light onto this result. It can, however, also be a statistical artefact as the number of observations is rather small (n=31).

Variable number 61: The higher the granted eligible project costs the smaller is the efficiency on jobs created per 1,000 Euro GE. For each 100,000 Euro project costs more one must expect 0.0105 jobs less per 1,000 Euro GE. Smaller projects thus seem more efficient in terms of job creation per 1,000 Euro GE.

Variable number 69: The higher the actual eligible costs in relation to the granted eligible costs the more jobs per 1,000 Euro GE could be created. At first the coefficient looks rather large, but one must note that the values of this variable range from 0.8347 to 1.0 with an average of 0.98. The variation is thus quite small and the impact accordingly lower; e.g. if the variable increases from its

minimum to its maximum, an additional 0.02020 jobs per 1,000 Euro GE can be expected. This finding can be interpreted in the following way: the better the actual project costs are estimated the higher is the effect of the project on new jobs per GE. Projects which are not carried out in the same intensity as planned (e.g. due to change of priorities or unforeseen obstacles) have a lower impact on new created jobs. Variable number 69 is explaining job effectiveness and job efficiency which indicates its robustness in explaining job creation.

Variable number 190 – S: The more the companies were satisfied with the project's success, the higher is the efficiency in job creation. For each of the satisfaction-steps, 0.0019 additional jobs per 1,000 Euro GE can be expected.

Variable number 191.a -2: Relationship with the ERDF/ESF is a good indicator for the efficiency in job creation. One step on the six-category-scale increases expected additional jobs per 1,000 Euro GE by 0.0102, which is a rather substantial share of the explained variable's size.

6.4 Trencin

6.4.1 Scheme for boost of existing and beginning enterprises (aid scheme de minimis)

For this SAS there are n=34 cases available for which the compulsory data has been filled in completely. Although this is clearly below the number required for a proper inductive analysis, it is performed to give the responsible persons some rough insights into their SAS. The advantage compared to the descriptive analysis is that with an inductive analysis structures and mechanisms within and behind the data can be identified; conclusions about how an SAS affects companies are thus much clearer. Please note though that due to the small sample size the values reported here are not very reliable and are likely to react sensibly on changes. Several variables had to be excluded as they did not show any variation. The remaining 62 variables, however, still allow a very deep analysis.

6.4.1.1 Absolute Number of Jobs Created – Two Years after Project End

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 3.5 jobs were created per funded project and could still be found after two years with values ranging from zero to 18.

The first line of Table 13 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 32% of the variations can be explained is a satisfactory result, but more data points could probably be of help. The explaining variables follow in the lower part of the table.

Table 13: Results of the estimation

	Share of variance explained by the model	32%
Number	Description	Coeff.
41+42 a 2	Art. 14; Aid for newly created Small Enterprises	0.6813
17-36 a 1	Number of employees (in Full Time Equivalent FTE)	0.0196
68	Actual eligible project costs at project end [EURO] according to documented costs	-0.000010
193.b	Was all requested information by the managing authority really necessary or have you had the feeling that you are wasting time with information providing?	-0.2385
200	Would you have carried out the project without state aid support?	-0.9737
	2009	2.2000

Source: Economica, 2012.

Variable number 41+42 a 2: If the project falls under Art. 14, Aid for newly created Small Enterprises, one can expect 0.6813 additional jobs. Thus funded projects under this article have obviously a higher effect on the creation of new

jobs. However, only six projects did not enter into this variable, so there is only little variation and the result might likely change substantially with more data points.

Variable number 17-36 a 1: Number of employees before project start is the variable in the second line. Its positive sign tells us that more employees at project start increase new job creation. For each full time equivalent before the project start, one can expect 0.0196 additional jobs. Stating it the other way round, for every ca. 51 employees one additional job is created.

Variable number 68: Additional actual eligible project costs (AEPC) in the range of 100,000 Euro can be expected to create one job less. This probably corrects some heterogeneity with the relation to the above mentioned number of employees (i.e. usually one can expect the two variables number of employees and AEPC to be correlated). But if there are some outliers to this rule, number of employees determines the basic effect and AEPC is used to correct this result slightly. An example from real life: geographic latitude tells us how far north we are. So we know that the higher the latitude, the colder are the winters. This is our basic effect. But if we know the height above sea level, we can make some corrections in that way that even in the south it is cold on mountain tops). Number of employees alone would thus overestimate the jobs created and AEPC is used to downscale this number. This variable would thus just serve as correction variable if number of employees alone lead to too high results.

Variable number 193.b: The more the companies consider the requested information as necessary the fewer jobs were created. For each of the six steps less, additional 0.2385 jobs can be expected. Thus in particular beneficiaries who create more new jobs in their funded projects assess the required information as less relevant, which could indicate a potential for improvement of the requested information. Beneficiaries with a higher number of new created jobs consider the information requested by the managing authority as more necessary than beneficiaries with a lower number of created jobs through the funded project.

Variable number 200: The last but one variable is the question for windfall gains. Those companies which would not have undertaken the project without funding (highest value in the variable) show considerable less new jobs: 0.9737 more new jobs are created by projects which would have been carried out without funding than by projects which were made feasible only due to the funding. These results raise the question of the actual effect on new jobs by public funding as most effective projects would have been carried out without funding.

Project End Year 2009: All projects were finished in the years 2006 to 2009. Latter was a much better year in terms of job creation as on average, holding everything else constant, 2.2 more jobs were created than in projects funded during the other years. The reasons behind these extraordinary effects on new jobs should be figured out by case studies.

6.4.1.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

The second estimation was performed in order to explain the number of created jobs two years after the end of the projects for each 1,000 Euro Grant Equivalent.

This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average **0.08 jobs per 1,000 Euro GE** were created and could still be found after two years, with values ranging from zero to 0.56. That indicates an average of 12,500 Euro GE per job.

The first line of Table 14 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 31% of the variations can be explained is a satisfactory result. The explaining variables follow in the lower part of the table.

Table 14: Results of the estimation

	Share of variance explained by the model	31%
Number	Description	Coeff.
17-36 a 1	Number of employees (in Full Time Equivalent FTE)	0.0004
68	Actual eligible project costs at project end [EURO] according to documented costs	-0.000001
193.b	Was all requested information by the managing authority really necessary or have you had the feeling that you are wasting time with information providing?	-0.0074
200	Would you have carried out the project without state aid support?	-0.0035
	2008	-0.0029
	2009	0.0460

Source: Economica, 2012.

Variable number 17-36 a 1: Number of employees before project start shows a positive sign. This tells us that more employees at project start increase job creation per 1,000 Euro GE. For each full time equivalent before the project start, one can expect around 0.0004 additional jobs per 1,000 Euro GE. Medium sized companies thus show slightly higher normalised effects on jobs than micro and small companies.

Variable number 68: Rising actual eligible project costs (AEPC) can be expected decrease job-creation-efficiency in terms of jobs per 1,000 Euro GE. This probably corrects some heterogeneity with the relation to the above mentioned number of employees (i.e. usually one can expect the two variables number of employees and AEPC to be correlated). But if there are some outliers to this rule, number of employees determines the basic effect and AEPC is used to correct this result slightly. An example from real life: geographic latitude tells us how far north we are. So we know that the higher the latitude, the colder are the winters. This is our basic effect. But if we know the height above sea level, we can make some corrections in that way that even in the south it is cold on mountain tops). Number of employees alone would thus overestimate the jobs created and AEPC is used to downscale this number.

Variable number 193.b: The more the companies think that the requested information is necessary, the less jobs per 1,000 Euro GE were created. For each

of the six steps, 0.0074 jobs less per 1,000 Euro GE have to be expected. This does not contradict the result in the above estimation of the absolute value. It says that this variable increases absolute job creation with the effect being stronger in projects with smaller jobs per GE ratio.

Variable number 200: This variable tells us that although some companies earned small windfall gains by getting help for projects they would have undertaken anyway (otherwise they would not have answered), there is some additional benefit within these projects. Aiding such projects results in an additional 0.0035 jobs per 1,000 Euro GE in comparison to other funded projects which would not have been carried out at all.

Project End Years 2008 and 2009: All projects were approved in the years 2006 to 2009. The best year in terms of job creation per 1,000 Euro GE was 2009, where this variable was on average higher by 0.046 – more than half of the variable's overall average! The previous year, 2008, however, was substantially worse, with the variable being smaller by an average of 0.0029. Projects in the other years served as basis values and were not very distinct from each other.

The set of explaining variables for the two explained variables "Absolute Number of Jobs Created – Two Years after Project End" and "Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End" show strong overlapping which indicates the significance of these explaining variables. The SAS managing authorities should deeply analyse these indicators and the respective background information in order to get further information about the behaviours of the beneficiaries and to reduce windfall gains.

6.5 Lower Austria

6.5.1 F&E Förderung

This SAS has 69 datasets completed for compulsory data. This allows the performed inductive analyses to be quite precise. Some variables had to be excluded as they did not show any variation. The remaining 139 variables, however, still allow a substantial analysis.

6.5.1.1 Absolute Number of Jobs Created – Two Years after Project End

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 1.67 jobs were created two years after the project end per funded project with values ranging from zero to 12.

The first line of Table 15 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 17% of the variations can be explained is rather little and points out that there are many more factors contributing to job creation. The explaining variables follow in the lower part of the table.

Table 15: Results of the estimation

	Share of variance explained by the model	17%
Number	Description	Coeff.
14a a	The subsidised unit of the company is accounts for approx. xy% to the whole company and its structural data	-1.6366
65	Intangible asset costs [EURO]	0.000023
175	Has the innovation culture in the company improved?	0.0323
178	Has the project increased the technology know-how / position of the company?	0.0424
190 - S	Are you satisfied with the overall results of the funded project?	0.1441

Source: Economica, 2012.

Variable number 14a: The relative size of the subsidized part of the company decreases created jobs. For each 10 percent-points more, the number of expected jobs decreases by -0.16366. This could be interpreted that in smaller company units subsidies create more jobs. The values of variable "14a a" range from 0.13 to 1.0 with an average of around 0.97. Thus these units most often represent the whole company. Only five data points deviate from 1.0, but these values can be considerably smaller. Thus one should take this result with care and probably check those companies in case studies.

Variable number 65: Intangible asset costs are mainly zero, but in eleven cases they are positive reaching values well above 50,000 Euro. Those projects create

approximately additional 0.23 jobs per 10,000 Euro intangible project costs, a substantial value compared to the average 1.67 jobs. These intangible asset costs are obviously a driving factor for high effectiveness in job creation and should be analysed in more detail.

Variable number 175: This R&D SAS increases innovation culture by 3.29 points on a scale from 0 to 5. This is not only an outstanding effect on the innovation culture, but at the same time the increased innovation culture is considerably influencing more additional jobs in a positive way. One can expect 0.0323 jobs for each of the six categories.

Variable number 178: Technology know-how is very similar to innovation culture, but the average value is a little less, reaching "just" 4.17. For each category, 0.0424 jobs were created on average, which shows the high effect of increased technology know-how/technology position on the creation of new jobs.

Variable number 190 – S: Overall satisfaction goes hand in hand with created jobs. One step on the six-categories-scale increases the explained variable by 0.1441 expected jobs.

6.5.1.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

The second estimation was performed in order to explain the number of created jobs at project end for 1,000 Euro Grant Equivalent.

On average 0.0459 jobs per 1,000 Euro GE were created and could still be found after two years, with values ranging from zero to 0.7348. That indicates an average of 21,800 Euro GE per job.

The first line of Table 16 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 13% of the variations can be explained is very little and points out that there are many more factors contributing to job creation. The explaining variables follow in the lower part of the table.

Table 16: Results of the estimation

	Share of variance explained by the model	13%
Number	Description	Coeff.
55	Project duration [weeks]:	-0.000084
56	Project delay: the project was finished earlier/in time/later than scheduled	-0.0063
61	Granted eligible project costs [EURO]	-9.8E-09
65	Intangible asset costs [EURO]	4.7E-08
80. - 147. E2a	Grant equivalent (in % of eligible costs) ERDF	0.2166
	2006	0.0168

Source: Economica, 2012.

Variable number 55: Project duration has a negative impact on job creation per 1,000 Euro GE. For one year or 52 weeks, about -0.000084 x 52 = 0.0044 jobs

per 1,000 Euro GE less are created, which could be explained as the GE is "stretched" over a longer period in time and thus less efficient.

Variable 56: For each of the three steps project delay "later", "in time", and "earlier", 0.0063 jobs less per 1.000 Euro GE could be expected. Note that this variable does not show up in the absolute results discussed above. The difference to variable 55 is that latter reports how long a project lasted, while variable 56 reports whether that time was too long or not. Of two projects lasting for e.g. 20 weeks one can thus be early, while the other one can be late. It is even possible that a 20 week project is late by 5 weeks, while a 50 weeks project is early by 5 weeks. The differences between variables 55 and 56 are therefore no contradiction.

Variable number 61: The higher the granted eligible project costs the smaller is their effect on jobs created per 1,000 Euro GE. For each 1,000,000 Euro project costs more one must expect 0.0098 jobs less per 1,000 Euro GE. Smaller projects thus seem slightly more efficient in terms of job creation per GE.

Variable number 65: Intangible asset costs are mainly zero, but in eleven cases they are positive reaching values well above 50,000 Euro. For each 1,000,000 Euro intangible project costs, those projects create approximately 0.0407 jobs per 1,000 Euro GE more. This is not just a support for the above absolute estimation, but shows that even when jobs are normalised by GE, that is, when it is about efficiency of money spent, investment in intangible assets pay off. The more one has to pay for intangible assets, the more jobs one can expect from each Euro GE.

Variable number 80. -147. E2a: The share of the ERDF in the total GE increases the efficiency of job creation. For each 10 percent points of ERDF-GE in eligible costs, 0.02166 additional jobs per 1.000 Euro can be expected.

Project End Year 2006: All projects were finished/are expected to finish in the years 2006 to 2012. The best year in terms of job creation per 1,000 Euro GE was 2006, where this variable was on average higher by 0.0168 – around one third of the variable's overall average compared to the other years. The difference within the other years was too small to be considered significant.

6.5.2 Investition Tourismus

This SAS has 50 datasets completed for compulsory data. This still allows the performed inductive analyses to be rather precise. Some variables had to be excluded as they did not show any variation. The remaining 86 variables, however, still allow a very deep analysis.

6.5.2.1 Absolute Number of Jobs Created – Two Years after Project End

Three cases had to be removed as they had many more jobs created (25, 27, and 34) as the other cases in average (2.28). Otherwise these three data points would have dictated all statistical results. Although this removal is a drawback for statistics, these projects are clear candidates for case-analyses and should be checked for outstanding differences compared to the other cases.

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 1.10 jobs were created two years after project end per funded project with values ranging from zero to six.

The first line of Table 17 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 48% of the variations can be explained is an adequate result. The explaining variables follow in the lower part of the table.

Table 17: Results of the estimation

	Share of variance explained by the model	48%
Number	Description	Coeff.
71.a	Are further state aid approved for the respective project (also non-regional)?	0.1393
80. - 147. N1	Grant (amount in Euro)	0.0000536
80. - 147. N5	Loan (amount in Euro)	0.0000025
191.a - 1	How was your relationship with the managing authority of the state aid scheme?	0.0457
191.a - 2	How was your relationship with the ERDF/ESF responsible organisation?	0.0000001

Source: Economica, 2012.

Variable number 71.a: If other state aids were approved for the respective project (0=no, 1=yes), one can expect 0.1393 additional jobs. The effect is not very large compared to the average value of 1.10 jobs created, but certainly worth to be inspected closer.

Variable number 80. – 147. N1: Grants have an average effect of increasing jobs by 5.36 per 100,000 Euro. So one would need 19,000 Euro of guarantees/loans to create an additional job. This relationship is thus very strong, especially compared to the average of 1.10 jobs created.

Variable number 80. – 147. N5: Granting loans seems to have an effect of increasing jobs by 0.2462 per 100,000 Euro. So one would need 400,000 Euro of loans to create an additional job. This relationship is thus rather weak. Although loans as well as grants show positive effects, grants seem to be much stronger.

Variable number 191.a - 1: Relationship to the managing authority is a good indicator for job creation. One step on the six-category-scale increases expected additional jobs by 0.0457, which is not a lot, but nonetheless indicates the importance of good relations for developing/submitting effective projects in terms of job creation.

Variable number 191.a - 2: Relationship to the ERDF/ESF is calculated to have a positive effect on job creation too, but the value is so small that it is likely to be a statistical artefact.

6.5.2.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

The second estimation was performed in order to explain the number of created jobs at project end for 1,000 Euro Grant Equivalent.

On average 0.13 jobs per 1,000 Euro GE were created and could still be found after two years, with values ranging from zero to 1.14. That indicates an average of 9,000 Euro GE per job.

The first line of Table 18 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 23% of the variations can be explained is mediocre. The explaining variables follow in the lower part of the table.

Table 18: Results of the estimation

	Share of variance explained by the model	23%
Number	Description	Coeff.
55	Project duration [weeks]:	-0.000087
15	Number of received state aid between 2005 and 2009	0.0112
71.b	What is the share of total grant equivalent of granted eligible costs in relation to eligible project costs	-0.5645
193.c	Are the templates easy to read and to understand?	0.0308
	2006	-0.0372
	2008	0.0817

Source: Economica, 2012.

Variable number 55: Project duration has a negative impact on job creation per 1,000 Euro GE. For one year or 52 weeks, only about 0.00454 jobs per 1,000 Euro GE less are created. Although this could be explained by the fact that the GE is "stretched" over a longer period in time and thus less efficient, it is certainly possible that this small value is just a statistical artefact.

Variable number 15: For each state aid received between 2005 and 2009, job creation is boosted by 0.0112 per 1,000 Euro GE. Since these values are measured two years after the project end, a combination of several state aids seems to have a long lasting effect on job efficiency.

Variable number 71.b: The share of "total grant equivalent of granted eligible costs" divided by "eligible project costs" decreases job creation per 1,000 Euro GE. This share has an average of 0.14 where the values can vary from 0.03 to 0.63. Thus the variable differs by 60 percent points. An increase of this variable from its minimum to its average decreases the expected job creation per 1,000 Euro GE by (0.14 – 0.03) x 0.5645 = 0.062 jobs, which is around half of the average value of jobs created per 1,000 Euro GE.

Variable number 193.c: If templates are found to be easy to understand more additional jobs per 1,000 Euro GE were created. For each of the six steps, 0.0308 more jobs per 1,000 Euro GE can be expected which is quite a lot compared to the 0.13 average value.

Project End Years 2006 and 2008: All projects were finished in the years 2006 to 2011. The best year in terms of job creation per 1,000 Euro GE was 2008, where this variable was on average higher by 0.0817 – around three quarters of the variable's overall average! The least efficient year was 2006; projects in the other years served as basis values and were not very distinct from each other.

6.5.3 Investition Wirtschaft

This SAS has 62 datasets completed for compulsory data. This still allows the performed inductive analyses to be rather precise. Some variables had to be excluded as they did not show any variation. The remaining 135 variables, however, still allow a substantial analysis.

6.5.3.1 Absolute Number of Jobs Created – Two Years after Project End

The first estimation was performed in order to explain the number of created jobs two years after the end of the projects. This can be interpreted as the mid-term effect with long-term trend of the projects, even after substantial amount of time passed.

On average 5.1 jobs were created at project end per funded project with values ranging from zero to 36.

The first line of Table 19 shows the share of the variance within the estimated variable – jobs created – which can be explained by the model. That 32% of the variations can be explained is a satisfactory result. The explaining variables follow in the lower part of the table.

Table 19: Results of the estimation

	Share of variance explained by the model	32%
Number	Description	Coeff.
70	Maximum grant equivalent [EURO]	0.0000018
60	Total project budget [EURO]	0.0000001
63	Building costs [EURO]	0.0000014
80. - 147. R10	Equity (amount in Euro)	0.0000012
174	Has the project supported gender aspects?	0.1112
184	Are new products/services stemming from the project?	0.4289

Source: Economica, 2012.

Variable number 70: The higher the maximum GE, the more jobs are created. For each million maximum GE, 1.8 additional jobs can be expected.

Variable number 60: Total project budget can be expected to create more jobs to a very limited extent. However, this effect is rather small, as for each million Euro budget, 0.1279 additional jobs can be expected. It is possible, that this variable acts together with variable number 70, described just above, to form a combined "project size"-variable.

Variable number 63: A building worth approx. 690,000 Euro goes hand in hand with one additional job in the company using this building. Since average building costs are 570,000 Euro, the average effect is substantial. An interpretation is that the extension / new erection of office and production facilities helps the beneficiaries to overcome their space limitations and to employ additional staff.

Variable number 80. – 147. R10: The more equity, the more jobs are created. One can expect one job per 840,000 Euro. However, the average equity value listed is around 20,000 Euro with only three companies reporting positive values (470,000, 250,000, and 500,000 Euro). This variable's result thus has to be expected to change when more non-zero-entries are available.

Variable number 174: There seems to be also a substantial result of gender aspects. Each step of the six categories grants 0.1112 additional jobs. The reasons for this – not explicitly formulated objective - and causality though have still to be found out. Maybe that the also explaining variable "63 Building Costs" enables the beneficiary to put more emphasis on social and gender aspects like rooms for on-site child care or stronger emphasis on women's quota when creating new jobs.

Variable number 184: The more new products were introduced due to the projects, the more jobs were created. Each of the six categories increases additional jobs by 0.4289, a really huge impact. This finding is fully in line with the SAS objective of "Innovating products, services and processes".

6.5.3.2 Normalised Jobs Created per 1,000€ Grant Equivalent – Two Years after Project End

The second estimation was performed in order to explain the number of created jobs at project end for 1,000 Euro Grant Equivalent.

On average 0.24 jobs per 1,000 Euro GE were created and could still be found after two years, with values ranging from zero to 7.17. That indicates an average of 7,200 Euro GE per job.

The first line of Table 20 shows the share of the variance within the estimated variable – jobs created per 1,000 Euro GE – which can be explained by the model. That 16% of the variations can be explained is little. This value indicates that there are many factors contributing to the variable which are not part of the model.

Table 20: Results of the estimation

	Share of variance explained by the model	16%
Number	Description	Coeff.
13	Founding year of the company [yyyy]:	0.000312
71.a	Are further state aid approved for the respective project (also non-regional)?	-0.0372
71.b	What is the share of total grant equivalent of granted eligible costs in relation to eligible project costs	-2.2793
173	Has the project positive impact on the environment?	-0.0203
193.c	Are the templates easy to read and to understand?	0.0489
	2009	0.2739

Source: Economica, 2012.

Variable number 13: The year in which the company was founded gets a positive coefficient. That means that a larger number in this variable (i.e. a later year) leads to more new jobs. In more every-day-language, younger companies benefit more, around 0.000312 jobs per 1,000 Euro GE for each year they are younger.

Variable number 71.a: If other state aids were approved for the respective project (0=no, 1=yes), the effect on jobs per 1,000 Euro GE is smaller by 0.0372. This can be explained by the law of the diminishing marginal utility: the more of something is available (here: the more state aids), the less becomes the additional benefit of it. It has to be checked however, whether these projects were really "overfunded".

Variable number 71.b: The share of "total grant equivalent of granted eligible costs" divided by "eligible project costs" decreases job creation per 1,000 Euro GE. This share can vary from 0.01 to 0.13. Thus the variable differs by a little more than 10 percent points only. An increase of this variable from its minimum to its maximum decreases the expected job creation per 1,000 Euro GE by (0.26 – 0.01) x 2.2793 = 0.57 jobs, which is more than twice the average value of jobs created per 1,000 Euro GE. Variable 71.b is thus particularly important and indicates that the highest share of GE in relation to granted eligible is not the most efficient one.

Variable number 173: Each step of the six categories [0 = no impact ... 5 = essential impact] reduces 0.0203 jobs per 1,000 Euro GE. According to the findings those projects which affect the environment in a more positive way are less efficient in job creation. Such jobs are thus slightly more "expensive".This does not mean that projects being more efficient in job creation have a negative impact on the environment; they simply have less positive impact.

Variable number 193.c: If templates are easy to understand, jobs created per 1,000 Euro GE are increased. For each of the six steps, 0.0489 more jobs per 1,000 Euro GE can be expected, which is a large impact given the average value of the explained variable of 0.24!

Project End Year 2009: All projects were finished/are expected to finish in the years 2006 to 2012. The best year in terms of job creation per 1,000 Euro GE was

2009, where this variable was on average higher by 0.2739 – more than the variable's overall average! Projects in the other years served as basis values and were not very distinct from each other.