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The fiscal and financial viability of an independent Catalonia

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1. Purpose

The purpose of this report is to analyse the viability of Catalonia as a state from the perspective of its public finances.

Catalonia is a high income region in Spain and the European Union. Specifically, according to IDESCAT (Statistical Institute of Catalonia) in 2013 its *per capita* GDP was 23% above the average for Spain and 17% above the EU average in terms of purchasing power parity (PPP) [1]. Table 1 shows that Catalonia as a state would be in ninth position in the ranking of EU countries by *per capita* GDP in PPP. This situation gives it enough potential to be economically viable as an independent state. Several studies demonstrate this point[2].

Studies of Catalonia's fiscal balance with the Spanish central public sector have historically highlighted the spending capacity the Catalan public sector would have if it could access all of the resources generated by Catalonia. The fiscal deficit balance is on average about 8% of Catalan GDP (€16 billion) and shows that if Catalonia were an independent state, its public administration would have sufficient resources to meet its spending needs.

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[1] GDP per inhabitant. In purchasing power parity (PPP). Methodology: http://www.idescat.cat/pub/?id=aec&n=356&m=m

[2] For example see: Bosch, N. and Espasa, M. (2014), "*12 arguments econòmics per a la independència*", Ed. Pòrtic, Barcelona. Guinjoan, M. and Cuadras, X. (2011), "*Sense Espanya (Balanç econòmic de la independència)*", Barcelona, Ed. Pòrtic. Guinjoan, M., Cuadras, X. and Puig, M. (2013), "*Com Àustria o Dinamarca. La Catalunya possible*". Ed. Pòrtic, Barcelona. Various authors, "*Economia de Catalunya. Preguntes i respostes sobre l'impacte econòmic de la independència*", Col·legi d'Economistes de Catalunya and Profit Editorial, Barcelona, 2014.

Table 1

GDP *per capita.* In purchasing power parity (PPP) in EU countries, 2013

	Euros	Index on the average
Luxembourg	67,900	264
Austria	33,200	129
Sweden	32,700	127
Netherlands	32,600	127
Ireland	32,500	126
Denmark	32,000	125
Germany	32,000	125
Belgium	30,500	119
Catalonia	**29,992**	**117**
Finland	28,700	112
France	27,800	108
United Kingdom	27,200	106
Italy	25,200	98
Spain (including Catalonia)	24,500	95
Malta	22,500	88
Cyprus	22,100	86
Slovenia	21,300	83
Czech Republic	20,600	80
Slovakia	19,600	76
Portugal	19,400	75
Greece	19,200	75
Lithuania	19,100	74
Estonia	18,600	72
Poland	17,500	68
Latvia	17,300	67
Hungary	17,200	67
Croatia	15,700	61
Romania	13,900	54
Bulgaria	12,000	47
EU-27 average	**25,700**	**100**

Source: Eurostat and IDESCAT for Catalonia

However, the fiscal deficit does not precisely reflect the fiscal gain that independence for Catalonia would mean for the Catalan Government's treasury even though it does give a good idea. This is so firstly because the fiscal balance includes some spending that an independent Catalonia would not have to bear as it is doubling-up on the powers currently exercised by the Catalan Government. It also recognises transfers currently made by the Spanish Government to the Catalan Government and local government, even though these transfers would no longer be received after independence. Secondly, because new state structures would have to be set up which the fiscal balance does not include in full, while it also does not recognise fiscal flows generated with the European Union, as the majority of Catalans wish to remain in the EU after Catalonia becomes an independent state.

Likewise, Catalonia might become independent with or without an agreement with the Spanish government. In the former case, it is not likely that the Catalan Government would have transitional financing problems when taking on new responsibilities and services as a state, as it would also acquire property and rights as a result of the distribution of assets between the Catalan and Spanish governments[3]. However, if there is no agreement it might be the case that in the first few months Catalonia's tax authorities would still not be fully operational and the Catalan Government's budget would have to cover this transitional cash gap with funding from other sources.

Hence while this report is based on fiscal balance studies, it also analyses in greater detail the fiscal gain that the independence of Catalonia would bring and further examines the Catalan Government's financing in the first few months in a scenario of no agreement with Spain.

The report is divided into five sections and the first of them is this introduction. The second section records the additional spending and revenue that the Catalan Government would have as an independent state along with the fiscal gain generated by independence for Catalonia. The third section examines the impact of the fiscal gain on the Catalan economy. The fourth section looks at the Catalan Government's funding sources in the first months of independence in a scenario of no agreement with Spain. Finally, the fifth section contains a summary and conclusions.

[3] See the CATN (Advisory Council on the National Transition) reports: "*La distribució d'actius i passius*" and "*La successió d'ordenaments i administracions*".

2. The Catalan Government's budget after independence. Quantitative change

Catalonia's independence would have a significant impact on the Catalan Government's budget. Firstly, because it would have to take on new powers, create new at present nonexistent state structures and improve current administrative structures. All of this would be clearly reflected in the Catalan Government's budget as an increase in public spending.

Secondly, the budget would also change on the revenue side with a rise in tax revenues since taxation at present paid by Catalans to the Spanish central government would stay in Catalonia.

Thus the aim of this section is to quantify the revenue and spending change in the Catalan Government's budget following the independence of Catalonia.

One way of quantifying this change is based on the information yielded by Catalonia's fiscal balance with the central public sector which is regularly calculated by the Catalan Government. Firstly, the fiscal balance quantifies spending in Catalonia by Spain on centrally-provided government services, such as social security (payment of pensions and unemployment benefit, etc.) and foreign affairs, and which the new state would have to take on. Hence these figures can be taken as an indicator of the cost of the new powers it would have to assume. In addition the fiscal balance also sets out the tax revenue Catalonia would have as a state if none of it went to Spain.

Although it is a relatively easy to use the fiscal balance to learn the additional spending and revenue in the Catalan Government's budget in the case of an independent Catalonia, this method does have some drawbacks:

- It assumes that spending on the new public services to be taken on would be the same as current spending by Spain, which would not necessarily be the case since the new state could change the amount and level of public services to be delivered.
- The quantification of additional public expenditure will vary by year depending on central government economic policy. However, drawing a distinction between

structural spending, which is what would have to be counted, and what is conjunctural is beyond the scope of this analysis.

- It is assumed that the same tax system and level of taxation that exist in Spain today are maintained, an assumption which might not be met in an independent Catalonia.

The quantification is done for 2011, as studies of Catalonia's fiscal balance with the central public sector only go up to 2011[4] and, as mentioned, the analysis is based on the information provided by these studies.

Thus the exercise performed here consists of quantifying the additional spending and revenue the Catalan Government's budget would have had in 2011 had Catalonia been an independent state and: a) it had delivered the new public services required as a state at the same level of public spending as Spain did; b) it had levied the same taxes and maintained the same tax burden that Spain did in the period analysed.

2.1. Additional spending

As noted, the information provided by Catalonia's fiscal balance with the central public sector in Spain, which furnishes information about expenditure in Catalonia for each of the central public sector's sub-sectors, is used to quantify the additional spending that the budget of the Catalan Government would have in the case of the independence of Catalonia: central government; autonomous bodies, central government agencies and other public bodies; Social Security administration and public enterprises.

In line with the methodology used in general internationally, the fiscal balance uses two methods to work out the territorial allocation of central public sector spending in Catalonia: the tax-benefit incidence and monetary flow methods. Under the tax-benefit incidence method spending is allocated to the territory where the beneficiary lives, regardless of where the public service is delivered or the investment made. By contrast, in the monetary flow method spending is allocated to the territory where it occurs, regardless of the geographic

[4] See: Department of Economy and Knowledge, Government of Catalonia (2014): "*Metodologia i càlcul de la balança fiscal de Catalunya amb el sector públic central l'any 2011"*, June 2014

location of the final beneficiaries of this decision. Therefore the spending is allocated to the place where personnel are located, goods and services used, transfers received and investments made[5].

The methodological approach that best serves the goal of the exercise conducted here is monetary flow, except for defence and foreign policy where territorialised spending is used based on the tax-benefit incidence method as these services are delivered jointly and their price cannot be established. These features mean that theoretically all citizens benefit equally from them regardless of where they live and where the troops or foreign policy services are located. Hence it is considered that the estimate which best reflects the cost these services may entail in an independent Catalonia is the calculation made using the tax-benefit incidence method.

The data used come from the budget outturns for the central government, autonomous bodies, central government agencies and public bodies, the Social Security system and public enterprises. Specifically, the territorialised data for the central government and autonomous bodies come from the SICOP (Accounting and Budgetary Information System) produced by the IGAE (Government Comptroller's Office). The information is presented by spending programmes, and for each programme there is the organic section that executes it, the budget chapters and articles that make it up and its territorialisation in the various regions.

In the case of the Social Security system, the information used comes from the SICOSS (Social Security Accounting System). Data for shared Social Security management organisations and services are presented by budget chapter and programme, and data for mutual insurers covering work-related accidents and illnesses by chapter.

Sometimes such information systems do not have the data completely territorialised depending on the item. We have then used additional information (reports, statements,

[5] These two methods are used in other countries to calculate fiscal balances. For an international overview of the methodology and calculation of fiscal balances, see Bosch, N., Espasa, M. and Solé-Ollé, A. (Ed.) (2010), "*The political economy of inter-regional fiscal flows*", Edward Elgar Publishing Ltd, Cheltenham, and Montasell Piñol, G. and Sánchez Rata, E. (2012), "*Comparació internacional de les balances fiscals de les regions amb el sector públic central: una anàlisi de l'efecte redistributiu*", Papers de Treball, no. 1/2012, Barcelona: Government of Catalonia, Department of Economy and Knowledge.

statistical yearbooks, etc.)[6].

Finally, information on territorialised investment by public enterprises comes from the Statistical Yearbook of the Ministry of Works while the territorialised operating revenue of airport authority AENA and the State Ports comes from the accounts they publish every year.

2.1.1. Central government

As mentioned earlier, the analysis conducted is based on the fiscal balance, which territorialises central government budget spending programmes in Catalonia. This information is used to examine whether in the case of independence the Catalan Government would have to meet the cost of each programme, and if so whether it would do so in part or in whole. Put another way, the expenditure entailed by each programme if the Catalan Government took it over is examined. It should be noted that many powers cannot be relevantly translated in terms of expenditure or budgets. Hence only those that would have a significant impact on the Catalan Government's budget are assessed. Likewise many central government spending programmes would not have to be included in the Catalan Government's budget as it already performs the same functions and if counted as new spending there would be clear duplication.

Table 2 shows the main Spanish central government expenditure policies. Each policy includes various spending programmes from the central government budget. The first policy contains the basic public services provided by the Spanish central government and which would have to be taken on by the Catalan Government in the event of independence. These services include justice, defence, foreign policy, and public safety and prisons. It should be noted, however, that in the latter cases the Catalan Government already has powers over policing and prisons.

[6] To learn more about what is done in these cases, see Department of Economy and Knowledge, Government of Catalonia (2014): "*Metodologia i càlcul de la balança fiscal de Catalunya amb el sector públic central l'any 2011*", June 2014, pp. 55-56.

Table 2

Additional expenditure Catalonia would have had as an independent state, 2011

	€ million	% of total additional spending
Central government spending policies		
Basic public services	**1,774**	**4.49**
Justice	123	0.31
Defence	1,206	3.05
Public safety and prisons	312	0.79
Foreign policy	133	0.34
Social welfare and promotion	**291**	**0.74**
Pensions	0	0.00
Social services and social promotion	70	0.18
Housing assistance and support for construction	202	0.51
Social Security management and administration	19	0.05
Production of priority public goods	**283**	**0.72**
Health (armed forces hospital care)	33	0.08
Education (grants and other financial assistance)	250	0.63
Culture	0	0.00
Economic activities	**982**	**2.49**
Agriculture, fisheries and food	34	0.09
Industry and energy	37	0.09
Trade, tourism and SMEs	16	0.04
Transport subsidies	193	0.49
Infrastructures	442	1.12
Research, development and innovation	245	0.62
Other economic activities	15	0.04
General measures	**4,918**	**12.45**
Senior leadership	0	0.00
General services	0	0.00
Financial and tax administration	0	0.00
Transfers to local government	2,521	6.38
Public debt interest	2,397	6.07

TOTAL CENTRAL GOVERNMENT	**8,248**	**20.88**
Public agencies and bodies		
Central Government Tax Agency	450	1.14
Spanish National Research Council (CSIC)	124	0.31
TOTAL PUBLIC AGENCIES AND BODIES	**574**	**1.45**
Social Security and its agencies		
GTSS and management bodies	20,202	51.14
OA and OD mutual insurers	1,332	3.37
Public Employment Service	6,186	15.66
Wage Guarantee Fund	363	0.92
General Judicial Mutual Insurer	9	0.02
Armed Forces Social Institute	22	0.06
Mutual Insurer for Central Government Public Employees	138	0.35
Civil service pensions	1,009	2.55
TOTAL SOCIAL SECURITY	**29,261**	**74.07**
Investing public enterprises		
AENA	138	0.35
Aigües de la Conca de l'Ebre (ACESA)	77	0.19
Aigües de la Conca del Mediterrani (AQUAMED)	61	0.15
Gestor d'Infrastructures Ferroviàries (GIF/ADIF)	792	2.00
State Ports	147	0.37
Societat Estatal d'Infraestructures Agràries del Nord-Est SA	5	0.01
Societat Estatal d'Infraestructures de Transport Terrestre (SEITTSA)	209	0.53
TOTAL INVESTING PUBLIC ENTERPRISES	**1,424**	**3.60**
TOTAL ADDITIONAL SPENDING	**39,507**	**100.00**

Source: Department of Economy and Knowledge, Government of Catalonia (2014): "*Metodologia i càlcul de la balança fiscal de Catalunya amb el sector públic central l'any 2011*", June 2014, and authors' own compilation

As for justice, the main programme in terms of spending volume that has not been transferred to the Catalan Government so far is "courts and Office of State Counsel". The main bulk of this programme is paying salaries of staff not transferred to Spain's regions, i.e. judges, court clerks and prosecutors, etc. The monetary flow method used to calculate the fiscal balance includes direct spending by the Spanish government in Catalonia in this programme, so the amount of this expenditure has been taken as the sum the Catalan

Government would have to pay in the event of independence when taking over these responsibilities. It stood at €123 million in 2011.

Another basic public service is defence. The features of this service mean all citizens benefit equally regardless of where they live and where the troops are located. If it is assumed that the government of a future independent Catalonia would act in a way similar to Spain's and allocate the same amount of *per capita* resources to defence, the most appropriate way of recognising the cost of this service in an independent Catalonia would be to take as a reference defence spending in Catalonia based on the fiscal balance tax-benefit incidence method under which defence spending is territorialised in Catalonia based on population. This comes to €1.21 billion.

Public safety and prison services are also a basic central government public service. The Catalan Government already has powers in these spending programmes, such as prison services, so it would not need to take them over in the event of independence and they would not entail any extra cost. Consequently an independent Catalonia would have to defray part of public safety spending, namely current expenditure on police forces and Spain's civil guard. The monetary flow method in calculating the fiscal balance recognises direct spending by the central government in Catalonia in this area, which mainly consists of staff costs. This would be the additional expenditure to be accounted for in the case of an independent Catalonia, given that responsibility for police has already been transferred to Catalonia, and would come to €312 million.

The Spanish central government's budgetary programmes in foreign policy mainly involve spending abroad given the special features of this type of expenditure. Therefore accounting for the cost of this service in an independent Catalonia, and on the assumption that the Catalan Government would have the same foreign policy spending patterns as the current Spanish government, is based on the cost resulting from applying the tax-benefit incidence method to the fiscal balance, which allocates central government spending for these programmes by population. It comes to €133 million.

The second large group of spending policies currently implemented by the Spanish government and which in the event of independence the Catalan Government would have to take over are in social welfare and promotion, including the following programmes: social services and social promotion, access to housing and support for construction, and Social

Security management and administration. Most of these programmes take shape in direct transfers to the aforementioned groups or transfers to the Catalan Government, such as funding for dependent persons. If the Catalan Government took over these programmes and the obligations of the Spanish central government to all these groups, the resulting additional expense would be derived from the application of the monetary flow method to the fiscal balance which measures the amount of such transfers and comes to €291 million.

Policies for the production of priority public goods are the third group of spending programmes, which include health, education and culture. Because authority in these areas has already been fully transferred to the Catalan Government, it does not seem appropriate to consider that an independent Catalonia would have to assume part of the costs currently met by the Spanish central government in these areas except in two cases. Firstly, in education an independent Catalonia would need to take over the grants and other financial assistance programme as this has not been transferred to the Catalan Government. To estimate this expenditure we have directly considered the amount of the grants and other financial assistance the Spanish central government gives to Catalan students, which is measured by the monetary flow approach to the fiscal balance. We have also recorded some transfers currently provided by the Spanish central government to excellence campuses and for early school leaving on the assumption that the Catalan Government would take on these commitments. The total for grants and transfers is €250 million. The second exception is the spending programme for hospital care in the armed forces. To be consistent with the approach taken with other defence-related programmes, we have estimated the additional cost this service would entail for the Catalan Government in case of independence in the same way as for other defence programmes, i.e. the additional spending is equivalent to the spending allocated to Catalonia by this programme using the tax-benefit incidence method for the fiscal balance, and it amounts to €33 million.

A fourth group of Spanish central government expenditure policies are financial ones, which include programmes such as infrastructure, transport, and research, development and innovation. The additional spending these programmes might entail for the Catalan Government in the case of independence would be that which Spain is now directly carrying out in Catalonia. It would therefore be derived from the territorial allocation of expenditure based on the monetary flow method in the fiscal balance, because this spending is mainly on direct subsidies and investments, and it comes to €982 million.

Finally, there is a fifth group of spending policies classified as general actions which include programmes for senior leadership, general services, financial and tax administration, transfers to other levels of government and public debt.

Senior leadership includes the following expenditure programmes: head of state, legislative activity, external control of the public sector and the presidency of the government. The Catalan Government would not have to take over these programmes in the event of independence as it already has a governmental organisation with executive, legislative and regulatory powers. However, there might be an additional expense resulting from a strengthening of these functions.

The largest spending programme in "general services" is the central government's regional and provincial offices. Again we would argue that these programmes would not seem to entail any additional cost for an independent Catalonia when its government takes over work now done by Spain, since the Catalan Government already has its own offices throughout Catalonia. The same applies to expenditure programmes for financial and tax administration. As mentioned above, at most there might be a strengthening of the services.

"Transfers to other levels of government" encompasses current transfers from the Spanish central government to the Catalan Government and local government. In the event of the independence of Catalonia, transfers that currently go to the Catalan Government would lose their *raison d'être*. However, the Catalan Government would have to take on the transfers the Spanish central government currently makes to Catalan local government. They have therefore been counted as additional expenditure for the government of an independent Catalonia. In 2011 they came to €2.52 billion.

Finally, public debt spending includes interest payments. As mentioned in the Advisory Council on the National Transition report on the distribution of assets and liabilities[7], in the case of a separation of Catalonia agreed with Spain, the Catalan government would have to take on some of Spain's public debt. The volume would depend on the criteria used to distribute the liabilities. Consequently the financial burden will depend on the amount of debt assumed. In this exercise the financial burden of the debt is calculated using the same criteria as used in the Catalan Government's calculation of the fiscal balance. Since debt

[7] See the CATN "*La distribució d'actius i passius*" .

interest payments are nothing more than higher costs incurred in order to bring forward specific spending, they are distributed geographically according to the pattern of geographical distribution of Spanish central government spending using the monetary flow method. Furthermore, since they are the result of spending that occurred in the past, the average of the percentage of Spanish central government spending in Catalonia over the last six years is taken in line with the average life of Spanish government debt[8]. Their amount is recorded at €2.4 billion. Other criteria for calculating the burden resulting from interest payments on Spain's debt could be the population or GDP of Catalonia, as mentioned in the Council report mentioned above.

2.1.2. Autonomous bodies, central government agencies and other public bodies

We have also analysed whether with independence the Catalan Government would have to take over part of the spending by autonomous bodies, central government agencies and other Spanish central government public bodies. There are more than 70 of them but they do not all operate in Catalonia. Likewise, despite the mix of organisations, they only account for 5% of the total expenditure of the central public sector, of which more than half is by the Spanish Agricultural Guarantee Fund (FEGA) whose function is to distribute EAGGF-Guarantee funding to Spain's regions. Since the mission of this Fund is to manage the resources of the Common Agricultural Policy, it has not been recorded as an additional cost for a possible future Catalan state.

However, in this exercise we have considered spending by the Central Government Tax Agency (AEAT), since as has already been discussed in the Council's report on tax administration[9] Catalonia as a state would need the means to cope with managing and collecting taxes. The monetary flow method in calculating the fiscal balance includes expenditure incurred by AEAT in Catalonia which in 2011 came to €235 million. The Report on the Tax Administration of Catalonia estimated it at between €260 million and €280 million, a fairly accurate figure bearing in mind the cost of central services. Moreover, this Report

[8] See Department of Economy and Knowledge, Government of Catalonia, "*Metodologia i càlcul de la balança fiscal de Catalunya amb el sector públic central l'any 2011*", June 2014, pp. 64-65.

[9] See the CATN report: "*L'Administració tributària de Catalunya*".

estimated that the new tax administration in Catalonia would have running costs of between €350 million and €500 million following the merger of AEAT and the current Catalan Tax Agency (ATC), which has a budget of about €30 million per year. The Council's Report also estimated an initial investment in ICT coming to €100 million. Therefore we have assumed that taking on full powers for tax administration could mean an extra cost of €450 million for the Catalan Government: €100 million on ICT and €350 million in additional operating costs that would be incurred by the current ATC over current spending by AEAT in Catalonia because it is believed that the service would have to be improved.

Also recognised as an additional expense is spending in Catalonia today by the Spanish National Research Council (CSIC), since it is considered that Catalonia should continue to invest in research. The volume of this expenditure is €124 million.

In addition to the abovementioned organisations there are others that also operate in Catalonia but whose spending is minimal and in many cases the Catalan Government already has a similar agency or organisation in place. Hence they would not have to be replaced after independence and what happens now is that the Catalans have to bear the cost of this duplication. This would be the case, for example, with the Institute for Women and the National Institute of Statistics. Hence no additional cost to the Catalan Government for these bodies in case of independence has been recorded.

2.1.3. Social Security administration

The Social Security administration is entirely centralised. Consequently the independence of Catalonia would mean that the Catalan Government would have to fully assume the functions performed by this administration today.

Following the hypothesis that the new Catalan state would maintain the current level of benefits provided by Spain (retirement, sickness and survivor pensions, unemployment benefit, etc.), the additional cost to the Catalan Government would be equal to the expense recorded for the fiscal balance using the monetary flow method relating to the Social Security administration and its agencies in Catalonia, which comes to €29.26 billion.

2.1.4. Public enterprises

Finally, state-owned enterprises which contribute significantly to increasing the stock of public capital are taken into consideration. In the event of independence it is assumed that the Catalan Government would have to replace the investment of these public enterprises. Consequently direct investment by these enterprises in Catalonia is recognised as an additional expense for the Catalan Government coming to €1.43 billion.

Table 2 shows the quantification of the various spending programmes and items mentioned above. Under our assumptions, the additional spending the Catalan Government would have had to assume had it been an independent state in 2011 would have been €39.51 billion. Three quarters of this spending (74.07%) is for the Social Security system, i.e. its benefits. Next by quantitative importance are transfers to local government (6.38%) and debt interest payments (6.07%). These three spending items alone account for 87% of the additional expenditure.

They are followed in terms of monetary volume by defence spending (3.05%), assuming that the new state had an army at a cost comparable to the current Spanish one. All other spending programmes and items are of lesser quantitative importance. It should be reiterated that the new state would not necessarily have to meet these spending levels which are the outcome of the economic policy of the current Spanish government. However, this assumption is made here as an approach to calculating the amount of additional spending of the new state with respect to current spending.

2.2. Additional revenue

If an independent Catalonia retained the same tax system and tax burden which it currently has as part of Spain, the additional revenue that the Catalan Government would have would be equal to the tax revenue that now originates in Catalonia and ends up in central government coffers net of transfers it receives from the central public sector.

As in the case of spending, recognising the additional revenue that the Catalan Government would have in the event of independence is based on studies of Catalonia's fiscal balance with the central public sector, as these provide us with the tax revenue originating in

Catalonia and going to the Spanish central government.

As we mentioned above, the two existing approaches for calculating the fiscal balance record the tax revenues of the central public sector in Catalonia differently. Tax-benefit incidence recognises revenue in the territory where the people who ultimately pay the tax live. For example, taxes on Catalan companies, such as VAT, can be translated into price increases for their products and this means that the actual incidence of the tax falls on the end consumers of such products. This effect is important when consumers and businesses reside in different territories. Thus according to this criterion, VAT revenue should not be assigned entirely to Catalonia if some consumers paying it live outside the region. Hence tax revenue should be recognised in the territories where consumers live.

The monetary flow method recognises revenue in the territory where the economic capacity being taxed is located, i.e. where the taxable object is, regardless of where the people who ultimately bear the tax burden live. For example, in the case of a company which has its registered offices in Madrid, and therefore pays corporation tax to the tax authorities in Madrid, but has its production factory in Catalonia, the corporation tax it pays is recognised in Catalonia where the taxable object is located. In the case of VAT, the tax burden supported by the citizens of other regions would be allocated to Catalonia if it comes from production, trade or services whose taxable object is in Catalonia[10].

To record the additional revenue that the Catalan Government would have in case of independence, revenue recognised in the fiscal balance by the monetary flow method is used as it best calculates tax revenues that might be generated in Catalonia based on its level of income, consumption and wealth. This is irrespective of who ultimately bears the tax burden or where the tax revenue is collected.

Table 3 shows the additional revenue that the Catalan Government would have had in 2011 had it become an independent state and maintained the structure of revenue, tax system and tax burden of Spain in that year. The additional revenue amounts to €45.32 billion, of which 54.29% is Social Security contributions. By order of quantitative importance, this is followed by taxes which generate 41.49% of the additional revenue. The remaining revenues are of

[10] To see in detail how the fiscal balance territorialises public revenue in Catalonia, see the Department of Economy and Knowledge, Government of Catalonia, "*Metodologia i càlcul de la balança fiscal de Catalunya amb el sector públic central l'any 2011*", June 2014, pp. 14-52.

little significance: charges and other revenue (2.48%), other Social Security revenue (charges and fees for privately-rendered public services (0.57%), earnings of public enterprises (AENA and the State Ports) (1.55%) and revenue from autonomous bodies, central government agencies and other bodies, primarily charges and fees for privately-rendered public services (0.46%). It should be noted that even though the fiscal balance records the asset revenue of the central government and its bodies and the Social Security administration, which basically consists of lottery revenue (€228 million), dividends from the Bank of Spain (€463 million) and return on the Social Security reserve fund (€612 million), as revenue contributed by Catalonia to Spain, the analysis conducted here has not counted it as future revenue for the Catalan Government. Finally, net transfers the Catalan Government receives under the regional funding model (€382 million)[11], which would obviously disappear with independence, have to be subtracted.

Table 3

Additional revenue Catalonia would obtain as an independent state, 2011 (in the case of maintaining the current tax burden and system)

	Millions of euro	% of total
Taxes	**18,802**	**41.49**
Direct taxes	**11,517**	**25.41**
Personal income tax	7,553	16.67
Corporation tax	3,660	8.08
Non-resident income tax	281	0.62
Other	23	0.05
Indirect taxes	**7,285**	**16.08**
VAT	5,468	12.07
Special taxes	1,200	2.65

[11] The financing model means that the Catalan Government now has positive and negative resource transfers. For example, the Global Sufficiency Fund is a positive transfer for the Catalan Government, whereas the Basic Public Services Guarantee Fund is a negative transfer. Therefore in 2011 net transfers from the central to the Catalan Government under the funding model came to €382 million.

Insurance premium tax	345	0.76
Foreign trade	270	0.60
Sugar and isoglucose contributions	2	0.00
Charges and other revenue	**1,123**	**2.48**
Revenue from autonomous bodies, central government agencies and other public bodies	**209**	**0.46**
Revenue from social security contributions	**24,604**	**54.29**
Other social security revenue	**257**	**0.57**
Revenue from public enterprises (State Ports and AENA)	**704**	**1.55**
SUBTOTAL	**45,699**	**100.84**
(-) Net of transfers to the Catalan Government	**- 382**	**- 0.84**
TOTAL ADDITIONAL REVENUE	**45,317**	**100.00**

Source: Department of Economy and Knowledge, Government of Catalonia (2014): "*Metodologia i càlcul de la balança fiscal de Catalunya amb el sector públic central l'any 2011*", June 2014, and authors' own compilation.

2.3. The Government of Catalonia's fiscal gain

Now the additional public spending and revenue of an independent Catalonia have been quantified, we can turn to the impact that independence would have on the Catalan Government's budget. Tables 2 and 3 show that revenue is significantly higher than spending and provides a fiscal gain of €5.81 billion to the Catalan Government's coffers.

This fiscal gain has also been calculated by Bosch and Espasa (2014)[12]. While there are some minor methodological differences with respect to the calculation made in this report, Bosch and Espasa show that in 2006 and 2007 the fiscal gain would have been €18.97 and €21.07 billion respectively. However, subsequently the gain falls due to the economic crisis and came to €11.58 billion in 2008, €2.01 billion in 2009 and €6.08 billion in 2010. This means there are years of both boom and crisis in the period 2006-2011 for which information is available and hence the structural trend is better expressed by the average for this period,

[12] See Bosch, N. and Espasa, M. (2014), "*La viabilidad económica de una Cataluña independiente*", Revista de Economía Aplicada, 64, vol. XXII, pp. 135-162.

which stands at €11.2 billion in 2011 constant euro (Table 4).

Table 4

Fiscal gain of the Catalan Government*

(Millions of euro)

* Note: The fiscal gain does not reflect the fiscal deficit of Catalonia but rather is the difference between the additional revenue and spending that the Catalan Government budget would have in an independent Catalonia.

	2006	2007	2008	2009	2010	2011	Average 2011 constant euro	% of GDP
1. Additional revenue	49,270	53,915	46,920	40,877	44,363	45,317	47,509	24.38
2. Additional spending	30,304	32,844	35,339	38,870	38,282	39,507	36,311	18.63
TOTAL (1-2)	**18,966**	**21,071**	**11,581**	**2,007**	**6,081**	**5,810**	**11,198**	**5.75**

Source: Bosch, N. and Espasa, M. (2014), *“La viabilidad económica de una Cataluña independiente”*, Revista de Economía Aplicada, 64, vol. XXII, pp. 135-162 and tables 2 and 3.

In fact, the above fiscal gain would be greater because there would be the added benefit of no longer taking part in paying off the debt entailed by Spain’s budget deficit, which was significant in 2011 at 3.58% of GDP. The fact that there is a budget deficit means that the public sector has to borrow to finance it, and this is a future burden since sooner or later these borrowings will have to be repaid.

The reasoning behind this accounting is the same as used when neutralising the fiscal balance calculation. Neutralisation is required when the central government budget is not balanced, i.e. it has a deficit or surplus. If, as has been the case in recent years, there is a budget deficit, this means that Spain’s central government has had to borrow to finance it. According to public finance theory, it is most likely that the debt burden involves paying more taxes in the future (Ricardian equivalence theory). Therefore neutralisation involves computing the future tax burden for taxpayers due to debt incurred to finance the budget deficit of the central public sector in the calculation of the fiscal balance[13,14].

So if repayment of debt incurred by the central public sector deficit is taken into account when calculating the fiscal balance as a future burden which will result in higher taxes, it also has to be considered in the calculation made here as a future burden that will no longer be borne following independence. However, Catalonia would have to assume the burden of the debt inherited from the Spanish government for past debts, as is made explicit in the report of the Council on the distribution of assets and liabilities[15]. The interest burden has been recognised as part of additional spending, but not repayment, which slightly decreases the fiscal gain. The amount would depend on the outcome of the negotiations that had taken place with the Spanish government.

Therefore until Catalonia becomes an independent state, the debt incurred by Spain that Catalonia would have to assume will be that which is set in the negotiation process. Following independence, not having to meet the part of the debt arising from the financing of the Spanish central government's current budget deficit can be counted as a benefit. Thus for 2011 this benefit (a burden Catalonia would no longer have borne had it been an independent state) was estimated at €7.18 billion according to the calculation of Catalonia's fiscal balance with the central public sector[16]. So once added to the previous €5.81 billion,

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[13] Internationally, most studies on fiscal balances neutralise (balance) central budgets. Technically this can be done using three different systems: a) via revenue: if there is a deficit, the budget is neutralised by increasing revenue to the point where it matches spending, i.e. the budget is balanced by adding the amount of the budget deficit to the various regions using the guideline resulting from territorial revenue distribution; b) via spending: if there is a deficit, the budget is balanced by reducing spending to the point where it matches revenue, subtracting the budget deficit from the various regions using the guideline resulting from territorial spending distribution; c) via a combination of the above two methods. See Montasell Piñol, G. and Sánchez Rata, E. (2012), "*Comparació internacional de les balances fiscals de les regions amb el sector públic central: una anàlisi de l'efecte redistributiu*", Papers de Treball, no. 1/2012, Barcelona: Government of Catalonia, Department of Economy and Knowledge.

[14] This adjustment is also necessary to compare the evolution of the fiscal balance over time, as the central government's financial situation may be different from one year to another and consequently introduce variability in measuring the balance. A deficit (surplus) in the central budget causes a general improvement (deterioration) of the fiscal balance of all the regions and therefore the budget has to be neutralised or balanced to make uniform comparisons over a period of time.

[15] See the CATN report: "*La distribució d'actius i passius*".

[16] See Department of Economy and Knowledge, Government of Catalonia, "*Metodologia i càlcul de la balança fiscal de Catalunya amb el sector públic central l'any 2011*", June 2014, pp. 92-93. The burden has been estimated using central public sector revenue in Catalonia with respect to the

the fiscal gain amounts to €12.99 billion (6.67% of GDP) (Table 5).

Another consideration is that an independent Catalonia would have to contribute to the international organisations of which it is a member (IMF, EU, etc.). The most important quantitatively is the EU. Since the Catalan economy became part of the EU the latter has had a negative balance. Estimates by the Department of Economy and Knowledge of the Government of Catalonia put it at around 0.72% of GDP, about €1.4 billion. Hence this contribution has to be subtracted from the above fiscal gain, which would mean a fiscal gain of €11.59 billion or 5.95% of GDP.

Finally, it should be noted that the above fiscal gain is an estimate of what an independent Catalonia would earn since, as has been indicated in this analysis, it is based on fairly restrictive assumptions. In spite of these restrictions, the analysis carried out here provides a good estimate of the fiscal gain that independence for Catalonia would generate for the Catalan Government's treasury. Furthermore, the new revenue and spending analysed here would mean that the Catalan Government's budget, currently in deficit, would go into surplus.

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amount of the deficit, since it is assumed that this revenue will increase in the future in line with Catalonia's share of total central public sector revenue.

Table 5

Fiscal gain of the Catalan Government*, 2011

* Note: The fiscal gain does not reflect the fiscal deficit of Catalonia but rather is the difference between the additional revenue and spending that the Catalan Government budget would have in an independent Catalonia.

	Millions of euro	% of GDP
1. Additional revenue	45,317	23.25
2. Additional spending	39,507	20.27
3. SUBTOTAL (1-2)	**5,810**	**2.98**
4. Gain from no longer funding the central government deficit	7,184	3.69
5. SUBTOTAL (3+4)	**12,994**	**6.67**
6. Net contribution to the EU	1,403	0.72
7. FISCAL GAIN (5-6)	**11,591**	**5.95**

Source: Tables 2 and 3; Department of Economy and Knowledge, Government of Catalonia (2014): “*Metodologia i càlcul de la balança fiscal de Catalunya amb el sector públic central l'any 2011”*, June 2014; and Department of Economy and Knowledge: “*Balança de Catalunya amb la Unió Europea”*, November 2012

3. Economic impact of independence

The independence of Catalonia, in addition to meaning the disappearance of the fiscal deficit (on average 8% of Catalan GDP and about €16 billion), would bring a clear benefit for the Catalan Government as it would have more resources each year (the fiscal gain) coming to around 6% of Catalan GDP. This would have additional effects on the economy that should not be underestimated. These effects would be due to the impact of the fiscal gain and the additional spending incurred by the Government of Catalonia.

In economic terms, an increase in consumption (private and public), investment or public spending is thought to increase the GDP, which is known as the “multiplier effect”. In other words, the multiplier effect is defined as the increase in the GDP of an economy as a result of an external increase in consumption, investment and public spending.

Thus the fiscal gain of independence might have a significant multiplier effect on the Catalan economy, as resources from it could be used for public spending increases and/or tax cuts. This would have an immediate positive effect on consumption and investment. Furthermore, the rise in public spending might lead to an increase in public employees with a positive impact on the employment rate.

In addition to the effect of the fiscal gain, the very impact of the additional spending that the Catalan Government would incur would also most likely have a positive effect on the economy. This impact would not be seen in spending on transfers to specific groups, since in this case there would only be a change in the payer government. However, setting up new state structures such as a central bank or regulatory bodies could have a positive effect on highly qualified employment.

Moreover, the generation of jobs and economic activity that these effects would have in the Catalan economy would also lead to a positive impact on tax revenue. For example, the increase in employment would increase revenue from personal income tax as more people were earning and also from VAT due to increased consumer spending. Currently in Spain it is estimated that an increase of 1% of GDP means an increase in tax revenues of around 1.2%.

So far there have been no studies of the multiplier effect of the independence gain. Nonetheless, Pons and Tremosa (2005) estimate that if in the period 2002-2010 Catalonia's fiscal deficit with the central public sector had been reduced and the gain used for infrastructure investment, there would have been a significant positive impact on GDP. In particular, if in the period 2002-2010 the fiscal deficit had been reduced annually by 1% of Catalan GDP, in 2010 the latter would have been 9.8% higher. If the reduction had been 3%, GDP would have risen by 32.1%, and an annual 5% reduction in the deficit would have meant an increase of 58.3% in GDP[17].

Finally, in addition to the above economic impact the new state would also gain by being able to decide on its economic policies and tailor them to the needs of the country. This is an intangible benefit that would have a positive bearing on economic growth. The fact that an independent Catalonia could map out its own policies (tax, labour, finance, infrastructure,

[17] Pons, J. and Tremosa, R. (2005), "*Macroeconomic effects of Catalan fiscal deficit with the Spanish State (2002-2010)*", Applied Economics, 37, pp. 1455-1463.

education, etc.) would have a direct impact on Catalan GDP[18].

4. The fiscal and financial viability of the Catalan Government after independence. Considerations concerning the first few months

The analysis conducted so far has shown that the Government of Catalonia would be fully fiscally and financially viable after the independence of Catalonia even though it had to take on new responsibilities, some as significant as the Social Security system.

However, this viability has been analysed for when Catalonia has become a fully independent state, i.e. at the end of the independence process with a Catalan Government that had already fully assumed all the powers and duties of a state with the corresponding delivery of public services and whose tax authorities had fully functioning tax collection systems in place.

Nevertheless, provision also has to be made for the financing of the Catalan Government in the initial period of independence. At this point it is important to consider the circumstances in which this independence occurs. If it comes after an agreement with Spain, there would be no problem in financing the Catalan Government in the initial period of independence. This is because the new powers to be assumed would be accompanied by funding from the taxes currently collected by Spain in Catalonia and which would be transferred to the new state.

The situation might be different if the independence of Catalonia takes place with no agreement with Spain and the latter adopts a belligerent stance. In these circumstances provision would have to be made for financing for the Catalan Government in the first months

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[18] See Castells, A. (2014), "*Sis comentaris sobre la viabilitat econòmica de la independència i dos aclariments previs*", in "*Economia de Catalunya. Preguntes i respostes sobre l'impacte econòmic de la independència*", Col·legi d'Economistes de Catalunya, Ed. Profit, pp. 29-49.

of independence, as it may be that its tax authorities had not yet reached their full capacity. Therefore there may be a short transitional period in which the Catalan Government has to resort to funding sources other than taxes.

Currently non-financial expenditure in the Government of Catalonia budget is around €25 billion a year, and if you add all the bodies, institutions and enterprises that come under it the figure reaches €29 billion. Therefore some €2 billion to €2.5 billion per month would be needed in the first few months so that current Catalan Government services could continue to function normally after independence that has not been agreed with Spain. The requirements arising from new powers that the Catalan Government would have to take on, which we have estimated at about €39 billion, would have to be added to this. However, the spending needs that would have to be met immediately in the first few months would be from the Social Security system, which stand at around €29 billion. This represents €2.5 billion per month which, added to the above, means that in the first few months of independence not agreed with Spain the Catalan Government would have monthly financing needs of from €4.5 billion to €5 billion to pay public sector salaries, pensions and unemployment benefit and its revenue expenditure.

The Catalan tax authorities would need to generate these resources as soon as possible. The Council's Report on the Tax Administration of Catalonia sets out pathways for its development and full capacity, which is estimated at collecting between €70 billion and €100 billion[19]. However, as already mentioned, it is possible that in the first few months of independence not agreed with Spain the tax authorities of Catalonia would not yet be fully operational. In this case alternative ways to temporarily finance the Catalan Government to cover the difference in revenue that would be obtained under normal conditions might be the following:

- Borrow from Catalan or foreign financial institutions. Catalonia would be a state with little debt, since in the absence of an agreement with Spain it would not assume part of the latter's debt. According to figures from the Bank of Spain on 31 March 2014, Catalan Government debt was of the order of 31% of Catalan GDP. The indebtedness of Catalan local governments on 31 December 2013 totalled 3% of Catalan GDP according to the Ministry of Finance and Public Administration.

[19] See the CATN report: "*L'Administració tributària de Catalunya*", p. 84.

Hence the new Catalan state would be set up with a debt of around 34% of GDP if it did not have to assume part of Spain's debt. It should be borne in mind that the average debt of countries in the Eurozone is approximately 90% of GDP according to Eurostat. Furthermore, the creditworthiness and credit rating of the Catalan Government would substantially improve due to the fiscal gain that independence would mean for its finances. Currently the Catalan Government's system of financing does not provide the creditworthiness the Catalan Government needs to obtain financing in the usual financial markets. Hence it has to resort to the Regional Liquidity Fund, which reduces its discretion. Consequently following independence the Catalan Government would be in a situation that would make obtaining external funding easier. In addition it could borrow against collateral property of the new state (ports, buildings, airports, etc.).

- Public debt issued by the Central Bank of Catalonia.
- Issue bonds which the public can buy.
- Issue bonds that can be exchanged for future taxes receivable so as to tap the fiscal resources of the Catalans in advance[20].

However, it is important to underline that the primary source of funding should be tax revenues and that these alternative sources should be transitory and used only for a short period. Hence the CATN believes it is extremely important that the Catalan Government should put in place strategies and measures to get the Catalan tax authorities ready during the transition so that under conditions of fiscal sovereignty they can operate at full capacity as soon as possible[21].

[20] See the CATN report: "*L'Administració tributària de Catalunya*", p. 119.

[21] See the CATN report: "*L'Administració tributària de Catalunya*".

5. Summary and conclusions

5.1. Purpose

The purpose of this report is to analyse the feasibility of Catalonia as a state from the perspective of its public finances. Studies of Catalonia's fiscal balance with the Spanish central public sector have historically highlighted the spending capacity the Catalan public sector would have if it could access all of the resources generated by Catalonia. The fiscal deficit balance is on average about 8% of Catalan GDP (€16 billion) and shows that if Catalonia were an independent state, its public administration would have sufficient resources to meet its spending needs. However, the fiscal deficit does not precisely reflect the fiscal gain that independence for Catalonia would mean for the Catalan Government's treasury even though it does give a good idea.

Likewise, Catalonia might become independent with or without an agreement with the Spanish government. In the former case, it is not likely that the Catalan Government would have transitional financing problems when taking on new responsibilities and services as a state, as it would also acquire property and rights as a result of the distribution of assets between the Catalan and Spanish governments[22]. However, if there is no agreement it might be the case that in the first few months Catalonia's tax authorities would still not be fully operational and the Catalan Government's budget would have to cover this transitional cash gap with funding from other sources.

Hence while this report is based on fiscal balance studies, it also analyses in greater detail the fiscal gain that the independence of Catalonia would bring about for the Catalan Government, and further examines the Catalan Government's financing in the first few months in a scenario of no agreement with Spain. This latter point might be worthy of more attention since in a scenario of an agreement it is likely that the new powers to be assumed would be accompanied by funding from the taxes currently collected by Spain in Catalonia, which would be transferred to the new state.

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[22] See the CATN (Advisory Council on the National Transition) reports: "*La distribució d'actius i passius*" and "*La successió d'ordenaments i administracions*".

5.2. The Catalan Government's budget after independence. Quantitative change

Catalonia's independence would have a significant impact on the Catalan Government's budget. Firstly, because it would have to take on new powers, create new at present nonexistent state structures and improve current administrative structures. Secondly, the budget would also change on the revenue side with a rise in tax revenues since taxation at present paid by Catalans to the Spanish central government would stay in Catalonia.

One way of quantifying this additional spending and revenue is based on the information yielded by Catalonia's fiscal balance with the central public sector which is regularly calculated by the Catalan Government. Firstly, the fiscal balance quantifies spending in Catalonia by Spain on centrally-provided government services, such as social security (payment of pensions and unemployment benefit, etc.) and foreign affairs, and which the new state would have to take on. Hence these figures can be taken as an indicator of the cost of the new powers it would have to assume. In addition the fiscal balance also sets out the tax revenue Catalonia would have as a state if none of it went to Spain.

Although it is a relatively easy to use the fiscal balance to learn the additional spending and revenue in the Catalan Government's budget in the case of an independent Catalonia, this method does have some drawbacks: a) It assumes that spending on the new public services to be taken on would be the same as current spending by Spain; b) The quantification of additional public expenditure will vary by year depending on central government economic policy; c) It is assumed that the same tax system and level of taxation that exist in Spain today are maintained.

The quantification is done for 2011, as studies of Catalonia's fiscal balance with the central public sector only go up to 2011 and, as mentioned, the analysis is based on the information provided by these studies.

Thus the exercise performed here consists of quantifying the additional spending and revenue the Catalan Government's budget would have had in 2011 had Catalonia been an independent state and: a) it had delivered the new public services required as a state at the same level of public spending as Spain did; b) it had levied the same taxes and maintained the same tax burden that Spain did in the period analysed.

5.2.1. Additional spending

In line with the methodology used in general internationally, the fiscal balance uses two methods to work out the territorial allocation of central public sector spending in Catalonia: the tax-benefit incidence and monetary flow methods. Under the tax-benefit incidence method spending is allocated to the territory where the beneficiary lives, regardless of where the public service is delivered or the investment made. By contrast, in the monetary flow method spending is allocated to the territory where it occurs, regardless of the geographic location of the final beneficiaries of this decision.

The methodological approach that best serves the goal of the exercise conducted here is monetary flow, except for defence and foreign policy where territorialised spending is used based on the tax-benefit incidence method as these services are delivered jointly and their price cannot be established. These features mean that theoretically all citizens benefit equally from them regardless of where they live and where the troops or foreign policy services are located.

The data used come from the budget outturns for the central government, autonomous bodies, central government agencies and public bodies, the Social Security system and public enterprises. Specifically, the territorialised data for the central government and autonomous bodies come from the SICOP (Accounting and Budgetary Information System) produced by the IGAE (Government Comptroller's Office). In the case of the Social Security system, the information used comes from the SICOSS (Social Security Accounting System). Finally, information on territorialised investment by public enterprises comes from the Statistical Yearbook of the Ministry of Works while the territorialised operating revenue of airport authority AENA and the State Ports comes from the accounts they publish every year.

Under our assumptions, the additional spending the Catalan Government would have had to assume had it been an independent state in 2011 would have been €39.51 billion. Three quarters of this spending (74.07%) is for the Social Security system, i.e. its benefits. Next by quantitative importance are transfers to local government (6.38%) and debt interest payments (6.07%). These three spending items alone account for 87% of the additional expenditure. They are followed in terms of monetary volume by defence spending (3.05%), assuming that the new state had an army at a cost comparable to the current Spanish one. All other spending programmes and items are of lesser quantitative importance. It should be reiterated that the new state would not necessarily have to meet these spending levels which are the outcome of the economic policy of the current Spanish government. However, this assumption is made here as an approach to calculating the amount of additional spending of the new state with respect to current spending.

5.2.2. Additional revenue

If an independent Catalonia retained the same tax system and tax burden which it currently has as part of Spain, the additional revenue that the Catalan Government would have would be equal to the tax revenue that now originates in Catalonia and ends up in central government coffers net of transfers it receives from the central public sector.

The two existing approaches for calculating the fiscal balance record the tax revenues of the central public sector in Catalonia differently. Tax-benefit incidence recognises revenue in the territory where the people who ultimately pay the tax live. The monetary flow method recognises revenue in the territory where the economic capacity being taxed is located, i.e. where the taxable object is, regardless of where the people who ultimately bear the tax burden live.

To record the additional revenue that the Catalan Government would have in case of independence, revenue recognised in the fiscal balance by the monetary flow method is used as it best calculates tax revenues that might be generated in Catalonia based on its level of income, consumption and wealth. This is irrespective of who ultimately bears the tax burden or where the tax revenue is collected.

The additional revenue that the Catalan Government would have had in 2011 had it become an independent state and maintained the structure of revenue, tax system and tax burden of Spain in that year amounts to €45.32 billion, of which 54.29% is Social Security contributions and 41.49% taxes. The remaining revenues are of little significance.

5.2.3. The Government of Catalonia's fiscal gain

Now the additional public spending and revenue of an independent Catalonia have been quantified, we can turn to the impact that independence would have on the Catalan Government's budget. Revenue is significantly higher than spending and provides a fiscal gain of €5.81 billion to the Catalan Government's coffers.

In fact, the above fiscal gain would be greater because there would be the added benefit of no longer taking part in paying off the debt entailed by Spain's budget deficit, which was significant in 2011 at 3.58% of GDP. The fact that there is a budget deficit means that the public sector has to borrow to finance it, and this is a future burden since sooner or later these borrowings will have to be repaid. According to public finance theory, it is most likely that the debt burden involves paying more taxes in the future (Ricardian equivalence theory). Following Catalonia's independence, this burden would no longer have to be met which can be counted as a benefit. Thus for 2011 this benefit (a burden Catalonia would no longer have borne had it been an independent state) was estimated at €7.18 billion according to the calculation of Catalonia's fiscal balance with the central public sector. So once added to the previous €5.81 billion, the fiscal gain amounts to €12.99 billion (6.67% of GDP).

Another consideration is that an independent Catalonia would have to contribute to the international organisations of which it is a member (IMF, EU, etc.). The most important quantitatively is the EU, which stands at about €1.4 billion. Hence this contribution has to be subtracted from the above fiscal gain, which would mean a fiscal gain of €11.59 billion or 5.95% of GDP.

Finally, it should be noted that the above fiscal gain is an estimate of what an independent Catalonia would earn since, as has been indicated in this analysis, it is based on fairly restrictive assumptions. In spite of these restrictions, the analysis carried out here provides a good estimate of the fiscal gain that independence for Catalonia would generate for the Catalan Government's treasury. Furthermore, if the new revenue and spending analysed here were added to the Catalan Government's budget, which is currently in deficit, it would go into surplus.

5.3. Economic impact of independence

The fiscal gain of independence might have a significant multiplier effect on the Catalan economy, as resources from it could be used for public spending increases and/or tax cuts. This would have an immediate positive effect on consumption and investment. Furthermore, the rise in public spending might lead to an increase in public employees with a positive impact on the employment rate.

In addition to the effect of the fiscal gain, the very impact of the additional spending that the Catalan Government would incur would also most likely have a positive effect on the economy. This impact would not be seen in spending on transfers to specific groups, since in this case there would only be a change in the payer government. However, setting up new state structures such as a central bank or regulatory bodies could have a positive effect on highly qualified employment.

Moreover, the generation of jobs and economic activity that these effects would have in the Catalan economy would also lead to a positive impact on tax revenue.

Finally, in addition to the above economic impact the new state would also gain by being able to decide on its economic policies and tailor them to the needs of the country. This is an intangible benefit that would have a positive bearing on economic growth. The fact that an independent Catalonia could map out its own policies (tax, labour, finance, infrastructure, education, etc.) would have a direct impact on Catalan GDP.

5.4. The fiscal and financial viability of the Catalan Government after independence. Considerations concerning the first few months

The analysis conducted so far has shown that the Government of Catalonia would be fully fiscally and financially viable after the independence of Catalonia even though it had to take on new responsibilities, some as significant as the Social Security system. However, this viability has been analysed for when Catalonia has become a fully independent state, i.e. at the end of the independence process with a Catalan Government that had already fully assumed all the powers and duties of a state with the corresponding delivery of public services and whose tax authorities had fully functioning tax collection systems in place.

Nevertheless, provision also has to be made for the financing of the Catalan Government in the initial period of independence. At this point it is important to consider the circumstances in which this independence occurs. If it comes after an agreement with Spain, there would be no problem in financing the Catalan Government in the initial period of independence. This is because the new powers to be assumed would be accompanied by funding from the taxes currently collected by Spain in Catalonia and which would be transferred to the new state.

The situation might be different if the independence of Catalonia takes place with no agreement with Spain and the latter adopts a belligerent stance. In these circumstances provision would have to be made for financing for the Catalan Government in the first months of independence, as it may be that its tax authorities had not yet reached their full capacity.

It has been estimated that in the first few months of independence not agreed with Spain the Catalan Government would have monthly financing needs of from €4.5 billion to €5 billion to pay public sector salaries, pensions and unemployment benefit and its revenue expenditure.

Therefore there might be a short transitional period in which the Catalan Government has to use funding sources other than taxation to meet these spending needs. Alternative ways to fund the Catalan Government might be the following:

- Borrow from Catalan or foreign financial institutions. Catalonia would be a state with little debt, since in the absence of an agreement with Spain it would not assume part of the latter's debt. Consequently the Catalan Government would be in a situation that would make obtaining external funding easier. In addition it could borrow against collateral property of the new state (ports, buildings, airports, etc.).
- Public debt issued by the Central Bank of Catalonia.
- Issue bonds which the public can buy.
- Issue bonds that can be exchanged for future taxes receivable so as to tap the fiscal resources of the Catalans in advance.

However, it is important to underline that the primary source of funding should be tax revenues and that these alternative sources should be transitory and used only for a short period. Hence the CATN believes it is extremely important that the Catalan Government should put in place strategies and measures to get the Catalan tax authorities ready during the transition so that under conditions of fiscal sovereignty they can operate at full capacity as soon as possible.

This report on *The fiscal and financial viability of an independent Catalonia* has been prepared by the *Consell Assessor per a la Transició Nacional* (Advisory Council on the National Transition), which is composed of the following members:

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