

Online Appendix to:
The Output Effects of Tax Changes:
Narrative Evidence from Spain

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Contents

A Overview of Legislated Tax Changes in Spain	2
B List of Legislated Tax Changes	9

A Overview of Legislated Tax Changes in Spain

In this section, we provide a brief overview of the tax changes recorded in our narrative dataset. We put special emphasis on the motivation behind the measures, as well as the macroeconomic conditions under which they were adopted. Macro figures correspond to initial estimates, taken from the Monthly Bulletin of Banco de España and other sources. See Figure I in the main text for a timeline of the recorded tax changes in the period 1986-2015.

1986

The first measure recorded in our dataset is the introduction of the value added tax (VAT) in 1986q1. It replaced a large and complex set of taxes (for example, a tax on firm operations in force since 1964), hence it simplified enormously the system of indirect taxes in Spain. The introduction of the value added tax was a requirement to join the European Economic Community, which provided rules to harmonize the indirect taxation system across member states. The accession took place in 1986.

1990-1991

No significant changes in the tax code were implemented until 1990. In 1990-1991 there were some small changes in the personal income tax stemming from the automatic extension of the 1989 budget law (due to the the early general elections of October 1989, which prevented the 1990 budget to be approved), and the adjustment of tax brackets and withholdings. There were also two increases in duties on fuels, one in 1990q3, aimed at compensating the loss in revenue from the liberalization of the oil industry, and another in 1991q1. Overall, taxes increased by 0.2% of GDP in 1990 and decreased by 0.1% in 1991.

1992

In 1992 there were significant tax reforms. In June 1991 the government passed a reform on the personal income tax, to be implemented in 1992. It was motivated by a sentence of the Constitutional Court, that deemed unconstitutional some articles of the original law of 1979 and 1985. The reform had a negative (ex-ante) impact on revenue of around 0.2% of GDP in 1992 and 0.5% in 1993. The government also passed two increases in the value added tax, one in the budget law of 1992 and another in 1992q3. These two increases were adopted in the context of the Treaty on European Union (TEU) or Maastricht Treaty, drafted in December 1991 and approved in February 1992. The treaty established convergence criteria to be fulfilled by 1996 in order to fit in the third and last phase of the Economic and Monetary Union (EMU), to start between 1997 and 1999, leading to the creation of the single currency. These convergence criteria comprised

inflation, public debt, public deficit, exchange rates and interest rates. Therefore, the 1992 budget law was drafted to help achieve these convergence criteria, and, given a slippage of public deficit in the first semester of 1992, the government approved an additional increase of the value added tax in July 1992. Although at the time of the TEU GDP was decelerating (annual growth was around 2.5%), the main motivation behind the value added tax increase of 1992q3 was to bring down the public deficit, as stated in the motivation of the law. In fact, the convergence plan presented by Spain in 1992 projected GDP growth to be 3.5% in 1992-1996, above the European average of 2.5%. The 1992 budget law introduced two additional tax increases: on fuels and on social contributions paid on behalf of the unemployed. Overall, the 1992 measures increased tax liabilities by 0.6% of GDP.

1993

In 1993q1 there were several tax changes. First, as a consequence of the process of harmonization of the European indirect tax codes, the government reduced the value added tax and, at the same time, created a new tax on transports. It also kept unchanged the real rates on fuels, leading to a decrease in revenue in a context of high inflation (6.5%). The government also increased social contributions in the 1993 budget law. Finally, the personal income tax reform of 1991 had an effect in 1993q1. These measures were implemented in a context of falling activity, both in Spain and in Europe. GDP growth in Spain averaged 4.5% in 1988-1990, 1% in 1991-1993, and GDP fell by 1% in 1993. However, they were not taken with an explicit counter cyclical motive. Rather, they responded to European directives, past reforms, and the needs of the Social Security. Policy makers used mainly the monetary policy to foster activity (successive currency devaluations and reductions in interest rates). The government adopted an additional fiscal measure in 1993q3: an increase in duties on fuels, due to a perceived deterioration of revenues.

1994-1995

In 1994-1995, as Spain emerged from the recession, four tax measures were taken, all introduced in the corresponding budget laws. These four measures annihilated each other, hence their impact on revenues was very low. The 1994 budget kept unchanged the rate on fuels, leading to a revenue loss, and it introduced a new levy on unemployment benefits. In 1995, Spain underwent a process of fiscal devaluation. The value added tax increased and social contributions were decreased by the same amount, therefore the ex-ante effect on the budget was neutral.

1996-1998

Between 1996 and 1998 several tax measures were adopted, increasing revenue by 1% overall. The main goal was to modernize the tax system and to adapt it to the European standards. In

December 1995 the corporate income tax was reformed, with the aim of improving the computation of the tax base, adapting it to the 1991 personal income tax reform, and dealing better with an increasing capital influx. Moreover, the new government elected in 1996 increased corporate tax payments on account in the 1997 budget law. Both measures increased revenue by 0.8% of GDP. Also, the new government approved in June 1996 an update on the book value of assets held by firms, leading to a small increase in revenue in 1997. It also created a new tax on insurance premia in September, in order to fulfill European requirements. This tax had a first impact in 1997q1, and was increased one year later. In 1998, the cabinet introduced a new tax on electricity in order to fund the mining industry.

1999

In December 1998 the government passed an important overhaul of the personal income tax, following an experts' commission who had been gathered in February 1997. The reform affected both residents and non-residents, and was adopted in the context of the accession to the third phase of the EMU, starting in January 1999, that would lead to the implementation of the common monetary policy and the introduction of the euro. The most important measure was the introduction of an exempt minimum income, with an overall decrease in revenues of 0.6% of GDP.

2000-2002

In 2000-2001 the government implicitly adopted small tax decreases, stemming from the failure to update the rates on fuels, which were applied on real quantities in the context of inflation rates above 3%. In 2002 the government passed four measures. First, it created a new duty on fuels, compensating the revenue losses of the previous two years. This new duty was transferred to the regions, and had the aim of financing health expenditure, after the completion in 2001 of the process of decentralization of the health system. Later on in 2014 the Court of Justice of the European Union would invalidate this new duty, and would order the reimbursement of collections. Second, it reduced social contributions of workers above 60 years old, following a social agreement in April 2001, motivated by the need to extend the working career of individuals. Third, it reduced corporate income taxes. This reform was introduced in the same bill as the new duty on fuels, partly with a counter-cyclical motivation. The bill stated that this tax change was aimed at fostering growth and employment, in order to counter an economic slowdown. Indeed year-on-year GDP growth was mildly decelerating, from 4.1% in 2000 (the same rate as in 1999), to 3.2%, 2.9%, and 2.6% in 2001q1, 2001q2, and 2001q3, respectively. Moreover, this deceleration of activity prompted the government to approve a labor market reform in May 2002, which increased flexibility in the labor market and reduced unemployment benefits. However, it was overturned in October 2002 after a general strike the month after it was passed.

2003-2004

In 2003 the cabinet approved a second major reform of the personal income tax, following the one of 1998. The goal of the reform was to increase long-run growth and adapt the tax code to the introduction of the physical euro in January 2002. The reform consisted mainly of a reduction in marginal tax rates and in the number of tax brackets, an increase in the exempt minimum income, a widening of some deductions, and a modification of withholdings. The macroeconomic conditions at the time were benevolent. GDP growth, at around 2%, was below the average of previous years, but the perception was that it was behaving comparatively well in an uncertain environment. For instance, euro area growth in 2002 was expected to be below 1%. The reform of the personal income tax had differential effects in 2003 and 2004, and also had a mild impact on the corporate income tax, due to the linkages between both taxes. On the Social Security, the government adopted a small increase in social contributions of the self-employed in 2004q1. Overall, the changes on direct taxation negatively impacted revenues by 0.3% of GDP in both 2003 and 2004.

2005-2006

The new government elected in March 2004 approved small changes in indirect taxation in 2005 and 2006. In 2005 it adopted two measures on the value added tax. First, it modified the tax code on deductions, due to a sentence of the Court of Justice of the European Union. And second, it approved a front-loading of value added tax rebates. In 2006, for public health reasons, the government raised the duties on tobacco, in order to induce a price increase.

2007

The main reform during the first term of the government elected in 2004 was a significant overhaul of direct taxation, implemented in 2007. It affected both personal and corporate income taxes, and it was passed in a single bill in November 2006. On the personal income tax, the reform reduced the income thresholds and the tax rates, and increased the savings tax rate. On corporate taxation, it reduced gradually marginal tax rates in 2006 and 2007. The motivation of the reform, as stated in the bill, was to increase equity, achieve sustainable growth, homogenize the tax rate on savings, and improve the competitiveness of Spanish firms. The economic conjuncture was benign. GDP growth was close to 4% and the unemployment rate reached a floor at 8.3% in September 2006. Also in November 2006 the cabinet passed a bill aimed at preventing fiscal fraud. The law created a new regime on value added tax for holdings, and was implemented in 2008q1. In November 2007 the government introduced an income tax deduction on births and adoptions, in order to tackle the population aging and provide support for families. Overall, tax liabilities were decreased by 0.5% of GDP in 2007.

2008-2009

In the second half of 2007 there started to appear the first signs of a change in the business cycle. Year-on-year GDP growth in the second half of 2007 averaged around 3.6%, slightly less than the 4% growth in the first half of the year. The economic situation deteriorated during the first months of 2008, amid a slowdown of activity in the United States, turbulences in financial markets, rising commodity prices and difficulties in the construction sector. Activity decelerated to 0.3% in 2008q1 with respect to the previous quarter, versus the growth of 0.8% posted in the last quarter of 2007. In the 2008 budget law, the government introduced small tax decreases in the personal income tax and the value added tax. However, it did not adopt counter cyclical measures until April 2008, when it approved a fiscal stimulus package of around 1% of GDP. It consisted mainly of four changes, having an effect in 2008 and 2009. First, a tax rebate of €400 for labor income earners. Second, a modification of corporate income taxes to increase the liquidity of firms. Third, the repeal of a tax on wealth. And fourth, a front loading of value added tax rebates also in order to improve firms' liquidity. Additional to this stimulus package, in March 2009 the cabinet approved a temporary reduction in employers' social security contributions in order to support employment. This measure responded to a sharp worsening of the labor market. Indeed, the unemployment rate had reached 14.8% in January 2009, up from 9.0% one year earlier. Apart from the stimulus package, several tax measures approved in previous years had an impact in this period, namely the reform on direct taxation and the bill preventing fiscal fraud. Overall, in 2008 and in the first quarter of 2009 taxes decreased by around 2.1% of GDP. In the remaining quarters of 2009, taxes increased by close to 0.4% of GDP. This was the result of the temporary nature of some of the measures to improve the liquidity of firms, and of an increase in excise duties (tobacco and fuels), justified by health and environmental reasons.

2010

2010 was a year of overall tax increases, due to the expiration of some of the stimulus measures adopted in 2008, and two tax increases passed in the budget law as a consequence of growing concerns on the public deficit. Indeed, since March 2009 there were some signs of stabilization in global financial markets and in the pace of falling activity in Spain, which prompted a slight upward revision of expectations towards the last quarter of 2009. For example, in Autumn 2009 the European Commission revised up its forecast of Spanish GDP growth to -0.8% in 2010, from the -1% projected in Spring. It also projected positive GDP growth of 1% in 2012. However, the notorious deterioration of the public finances was a matter of increasing distress. For instance, in October 2009 the Monthly Bulletin of Banco de España projected public deficit to be around 10% of GDP at year-end (vs. 3.8% in 2008), due to the stimulus packages of the previous years, the recession and the lower tax receipts from the construction industry. This worsening of the budget balance prompted the government to change the course of fiscal policy. In the 2010 draft

budget it adopted two austerity measures: the suppression of the tax rebate of €400 for labor income earners, and an increase in the VAT to be implemented in July 2010. These, added to the reversion of some of the stimulus measures implemented in 2008-2009 (on favoring the liquidity of firms and supporting the labor market) led to an overall tax increase of 1.3% of GDP in 2010. The further deterioration of the public deficit, a sharp increase in the risk premium, and pressures stemming from euro area partners, led the government to adopt further measures in May 2010, namely a decrease in public wages, a pension freeze, and the suppression of the deduction on births and adoptions approved in 2007. As a result of the 2010 measures, taxes increased a further 0.3% of GDP in early 2011.

2011

Economic activity in the first half of 2011 showed signs of recovery, although at a slow pace. Quarter-on-quarter GDP growth in 2010q4 and 2011q1 was 0.2% and 0.3%, respectively. Global activity was also recovering, although several uncertainties remained. In the euro area, despite a gradual stabilization of global financial markets, several countries were under financial distress, especially Greece, Ireland and Portugal. Business conditions deteriorated significantly in July, when the financial turmoil extended to Italy and Spain. Indeed, the Spanish risk premium jumped to close to 400 basis points in July, amid concerns on the budget balance and the public debt. The worsening of the financial crisis prompted the European governments to improve the fiscal framework of the euro area, as well as to approve a new program for Greece. Later on, in August, the European Central Bank (ECB) started to buy Italian and Spanish bonds, in order to prop up prices. In this context, the Spanish government approved a fiscal package in August, after increasing pressure from the ECB. On the revenue side, two measures were adopted: a front loading of corporate tax payments of large firms, and a temporary reduction in taxes associated to home purchases in order to sustain the construction sector. On the expenditure side, it approved a reduction on pharmaceutical spending. Moreover, before a general elections due in November, the government approved the restoration of a tax on wealth, repealed in 2008, in order to raise revenue. On the institutional side, the main political parties agreed in early September to introduce the principle of budget stability in the Constitution. Overall, tax changes in 2011 amounted to 0.4% of GDP.

2012

Just a few days after a new government had taken office, in mid December 2011, the cabinet approved a set of fiscal measures in order to correct the expected deviation of the budget balance from the targets set by the European Union, of around 2 percentage points of GDP (the first estimate, released in February 2012, yielded a public deficit of 8.5% of GDP in 2011 vs. a target

of 6%). The most important tax change was an increase of the personal income tax. Later on, when the deviation materialized in March 2012, the cabinet introduced further measures on the corporate income tax, namely the suppression of deductions and an increase in taxes. Overall, the size of these two packages was approximately 0.75% of GDP in the first half of 2012. Starting in May, financial tensions increased substantially due to the growing concerns on the health of the financial sector and on the budget balance, amid the backdrop of the euro area sovereign debt crisis. In July, the Spanish risk premium soared to above 600 basis points, yields on 10-year government bonds were at around 7%, and the stock market had fallen by around 20% since the beginning of the year. On 9 June, the Eurogroup agreed to give a special loan to the government in order to recapitalize the financial sector, of up to €100 billion. On 10 July, the ECOFIN extended one year (to 2014) the deadline to bring the public deficit below 3%, setting a new target of 6.3% in 2012. The need to reduce the public deficit led the government to pass a new fiscal austerity package in July. On the tax side, it increased the value added tax, to be effective in September. It also increased the corporate income tax for large firms, reduced tax credits from previous exercises, and increased the tax base. On the personal income tax, it approved an increase in withholdings and the suppression of the deduction on house purchases from 2013 onwards. Overall, tax liabilities increased by 1.1% of GDP in the second half of 2012. These tax increases were complemented by some reductions in public expenditure, among other a decrease in public wages and a reduction in unemployment benefits.

2013-2014

In 2013 there was a further net increase of taxes of around 0.2% of GDP, although no significant measures were adopted, and the fiscal stance stopped being restrictive. The small tax increases stemmed from two sources. First, three measures adopted at the end of 2012: an increase in social contributions for high-income earners, a reduction in deductions in the corporate income tax, and a small increase in the tax base of corporate taxes. An second, the impact of measures adopted in the previous years, among others, the restoration of a tax on wealth, the suppression of the deduction on home purchases, and increases in corporate income taxes. The macroeconomic situation in 2013 improved slightly, with significant decreases in the risk premium and reductions in the volatility of financial markets. Real GDP kept contracting during the first half of the year, although at a slower pace: quarter-on-quarter GDP growth amounted to -0.4% in 2013q1 and -0.1% in 2013q2, vs -0.8% in 2012q4. Later on, it would gradually gain speed, posting +0.1% in 2013q3 and 0.2% in 2013q4. In 2014 there were additional small fiscal measures. The government approved at the end of 2013 a further increase in social contributions for high-income earners, and an increase in the tax base of social contributions by including payments in kind and by modifying the payroll taxes of the self-employed. The macroeconomic conditions in 2014 improved further, with GDP growing at around 0.5% quarter-on-quarter during the year and employment increasing

at close to 2% at year-end.

2015

In the context of the economic recovery and ahead of an electoral year, the government approved in late 2014 an important tax decrease in both the personal and the corporate income tax, to be implemented in 2015 and 2016, consisting mainly of a reduction on marginal tax rates and a modification of tax bases and deductions. Later on, in July 2015 the government brought forward the part of the reform initially set to be implemented in 2016. This decision was taken under solid growth rates (year-on-year growth approached 3% in the first half of the year) and in the context of forthcoming general elections, which would take place in December. Overall, taxes decreased by 0.9% of GDP in 2015.

B List of Legislated Tax Changes

TABLE A.I

LIST OF LEGISLATED TAX CHANGES

Type	Announcement	First Impact	Description (in Spanish)	Exog.	Cumulative Impact	Perm/Temp	Source
VAT	02-Aug-85	1986q1	Introducción del IVA (tipos 6%, 12% y 33%) en sustitución del ITE, CGI y del impuesto sobre el lujo	External	0.30	Permanent	Ley 30/1985.
PIT	29-Dec-89	1990q1	Deflactación tarifa y retenciones	Consolidation	-0.16	Permanent	RDL 7/1989.
PIT	29-Dec-89	1990q1	Retraso en ajustar retenciones del trabajo a las modificaciones introducidas por el Real Decreto-ley 7/1989, de 29 de diciembre.	Consolidation	0.00	Temporary	RD 1009/1990.
ED	30-Dec-89	1990q1	No se modifican los tipos, excepto la introducción de gasolina sin Pb a menor tipo, (frente a una var. IPC del 6,7%) hidrocarburos	Consolidation	-0.08	Permanent	RDL 7/1989.
ED	06-Jul-90	1990q3	Incremento de los tipos de gravamen (en torno al 20%) hidrocarburos	Long-run	0.32	Permanent	RDL 3/1990.
ED	30-Sep-90	1991q1	Incremento de los tipos de gravamen (en torno al 14%, frente a una var. IPC del 5,9%) hidrocarburos	Consolidation	0.12	Permanent	Ley 31/1990
PIT	20-Dec-90	1991q1	Retraso en ajustar retenciones del trabajo a las modificaciones introducidas por el RDL 5/1990, de 20 de diciembre, de Medidas Fiscales Urgentes.	Consolidation	0.00	Temporary	R 717/1991.
PIT	20-Dec-90	1991q1	Deflactación tarifa	Consolidation	-0.18	Permanent	RDL 5/1990.
PIT	06-Jun-91	1992q1	Nueva Ley IRPF, por la sentencia del TC 45/1989 sobre tributación conjunta	External	-0.70	Permanent	Ley 18/1991.
SIC	30-Sep-91	1992q1	Subida tipo desempleo del 7,40% al 8,40%	External	0.09	Permanent	Ley 31/1991.
VAT	30-Sep-91	1992q1	Aumento de tipos impositivo: del 12% al 13% y 33% al 28%	External	0.18	Permanent	LEY 31/1991.
ED	30-Sep-91	1992q1	Incremento de los tipos de gravamen (en torno al 15%, frente a una var. IPC del 5,9%) hidrocarburos	External	0.13	Permanent	Ley 31/1991.
VAT	21-Jul-92	1992q3	Aumento del tipo impositivo: del 13% al 15%	Consolidation	0.45	Permanent	RDL 5/1992.
VAT	21-Jul-92	1993q1	Supresión del tipo incrementado (28% al 15%: se crea el impuesto determinados medios transporte) y establece un tipo superreducido del 3%	External	-0.21	Permanent	Ley 37/1992.
SIC	30-Sep-92	1993q1	Subida tipo RG del 28,80% al 29,30% y autónomos del 28,64% al 28,80%	Consolidation	0.13	Permanent	Ley 39/1992.
ED	28-Dec-92	1993q1	Crea el Impuesto sobre determinados medios de transporte, como respuesta a la supresión del tipo incrementado del IVA (28% al 15%), al tipo del 13%	External	0.18	Permanent	Ley 38/1992.
ED	30-Dec-92	1993q1	No se modifican los tipos (frente a una var. IPC del 4,6%) hidrocarburos	Consolidation	-0.07	Permanent	BdE.
ED	04-Aug-93	1993q3	Incremento de los tipos de gravamen (en torno al 9%) a partir de agosto hidrocarburos	Consolidation	0.14	Permanent	RDL 13/1993.

TABLE A.I

LIST OF LEGISLATED TAX CHANGES (CONTINUED)

Type	Announcement	First Impact	Description (in Spanish)	Exogeneity	Cumulative Impact	Perm/Temp	Source
PIT	30-Sep-93	1994q1	Sujeta a tributación las prestaciones por desempleo	Consolidation	0.08	Permanent	Ley 21/1993.
ED	30-Sep-93	1994q1	No se modifican los tipos, excepto fuéroleos (frente a una var. IPC del 4,7%) hidrocarburos	Consolidation	-0.08	Permanent	BdE. Ley 21/1993.
VAT	30-Sep-94	1995q1	Se elevan en un punto todos los tipos impositivos: 4% [3%], 7% [6%] y 16% [15%]	Long-run	0.23	Permanent	Ley 41/1994.
SIC	30-Sep-94	1995q1	Rebaja tipo RG del 29,30% al 28,30%, autónomos del 28,80% al 28,30%. Se compensa con subida IVA	Long-run	-0.26	Permanent	Ley 41/1994.
O	30-Sep-96	1997q1	Instauración del impuesto sobre primas de seguro	External	0.07	Permanent	Ley 13/1996.
CIT	27-Dec-95	1997q2	Nueva Ley IS más elevación porcentajes de pagos a cuenta al 18% [15%] ó 25% [20%], según que se tome como base la cuota del período anterior o la del ejercicio en curso	Long-run	0.75	Permanent	Ley 43/1995.. Ley 12/1996.
O	07-Jun-96	1997q3	Actualización balances	Long-run	0.00	Temporary	RDL 7/1996.
O	30-Sep-97	1998q1	Elevación del tipo del impuesto al 6% [4%] sobre primas de seguro	Consolidation	0.06	Permanent	Ley 65/1997.
ED	30-Dec-97	1998q1	Crea un impuesto (vinculado a la asunción por el Estado de un nuevo gasto en relación con el apoyo a la minería del carbón) sobre le electricidad	Endogeneous	0.10	Permanent	Ley 66/1997.
PIT	08-Dec-98	1999q1	Reforma del IRPF aproximando la base imponible a la renta disponible mediante la introducción en la base del mínimo vital	Long-run	-0.79	Permanent	LEY 40/1998.
O	09-Dec-98	1999q1	Instauración independiente de la tributación de no residentes	Long-run	0.16	Permanent	Ley 41/1998.
ED	30-Dec-99	2000q1	No se modifican los tipos (frente a una var. IPC del 3,4%) hidrocarburos	Consolidation	-0.05	Permanent	BdE.
ED	30-Dec-00	2001q1	No se modifican los tipos (frente a una var. IPC del 3,6%) hidrocarburos	Consolidation	-0.05	Permanent	BdE.
SIC	27-Dec-01	2002q1	Reducción de cotizaciones para trabajadores mayores de 60 y de 65 años y contratación de mujeres hasta 24 meses después de dar a luz	Long-run	-0.22	Permanent	RDL 16/2001.Ley 35/2002.
CIT	24-Dec-01	2002q2	Rebaja al 18% [35%] la tributación de las plusvalías empresariales acumuladas que se reinviertan en un período de 4 años	Endogeneous	-0.23	Permanent	Ley 24/2001.
ED	27-Dec-01	2002q2	Implantación del Impuesto sobre ventas minoristas (céntimo sanitario, que se integra en Especial Hidrocarburos en 2013, libro amarillo PGE2013 -pág. 38- y se devuelve como TrfCapPagos en 2014) hidrocarburos	Endogeneous	0.14	Permanent	Ley 24/2001.

TABLE A.I

LIST OF LEGISLATED TAX CHANGES (CONTINUED)

Type	Announcement	First Impact	Description (in Spanish)	Exogeneity	Cumulative Impact	Perm/Temp	Source
PIT	28-Jun-02	2003q1	Obligatoriedad del ingreso mensual de retenciones del trabajo para AAPP con presupuesto \geq 6 mill.	Long-run	0.00	Temporary	RD 594/2002.
PIT	18-Dec-02	2003q1	Reduce tramos (a 5 [6]) y tipos (máx. 45% [48%] y mín. 15% [18%]), aumenta los mínimos vitales, nuevas deducciones para \geq 75 años y transparencia fiscal	Long-run	-0.51	Permanent	LEY 46/2002.
SIC	30-Sep-03	2004q1	Subida tipo autónomos del 28,30% al 29,80%	Long-run	0.05	Permanent	LEY 61/2003.
CIT	18-Dec-02	2004q2	Traspaso del IRPF por transparencia fiscal	Long-run	0.05	Permanent	LEY 46/2002.
VAT	06-Oct-05	2005q4	No hay que aplicar la regla de prorratea por el exclusivo hecho de recibir subvenciones de capital, o de explotación no vinculadas a precios	External	0.00	Temporary	Sentencia TJCE, 6 de octubre de 2005.
ED	10-Feb-06	2006q1	Incremento de los tipos (desde 11 febrero) específico y "ad valorem" de gravamen (54,95% al 57,0%) tabaco	Consolidation	0.06	Permanent	RDL 2/2006.
VAT		2006q1	Adelanto permanente de devoluciones	Long-run	0.00	Temporary	AEAT.
PIT	28-Nov-06	2007q1	Reduce tramos (a 4 [5]) y tipos (máx. 43% [45%]), mínimos vitales no minoran la base sino van a la tarifa, se eleva el tipo (al 18%) sobre la renta del ahorro	Long-run	-0.33	Permanent	Ley 35/2006.
CIT	28-Nov-06	2007q2	Reduce gradualmente el tipo general en dos años del 35%, al 32,5% y al 30%. El tipo para PYME baja en un año al 30% (al 25% para los primeros 120.202,41)	Endogeneous	-0.68	Permanent	LEY 35/2006.
PIT	15-Nov-07	2007q4	Devoluciones anticipadas (aplicable a nacimientos desde 01/07/2007, que se suprime en 2011) del Plan CUNA	Long-run	-0.13	Permanent	Ley 35/2007.
VAT	29-Nov-06	2008q1	Se crea un nuevo régimen especial de declaración para grupos consolidados	Long-run	0.00	Temporary	Ley 36/2006.
PIT	30-Sep-07	2008q1	Deflactación de la tarifa, mínimos personales y familiares y rendm. trabajo	Consolidation	-0.09	Permanent	Ley 51/2007.
PIT	18-Apr-08	2008q2	Implanta una nueva deducción (que se suprime en 2010) de 400 para perceptores de rentas del trabajo	Endogeneous	-0.54	Permanent	RDL 2/2008.
CIT	21-Apr-08	2008q2	Opción (para GE) de efectuar los pagos fraccionados del 2008 en función de la cuota del año anterior, o tomar como referencia la parte de base imponible a lo largo del 2008	Endogeneous	0.00	Temporary	RDL 2/2008.
O	23-Dec-08	2009q1	Los tipos del Impuesto quedan en cero	Endogeneous	-0.21	Permanent	Ley 4/2008.
VAT	23-Dec-08	2009q1	Las empresas podrán optar por recibir mensualmente la devolución de IVA	Endogeneous	0.00	Temporary	Ley 4/2008.
SIC	06-Mar-09	2009q1	Bonificación cuotas empresariales por creación empleo	Endogeneous	0.00	Temporary	RDL 2/2009.

TABLE A.I

LIST OF LEGISLATED TAX CHANGES (CONTINUED)

Type	Announcement	First Impact	Description (in Spanish)	Exogeneity	Cumulative Impact	Perm/Temp	Source
CIT	23-Dec-08	2009q3	Libertad de amortización para adquisiciones en 2009 y 2010 con mantenimiento del empleo. Se extiende (sin condición de empleo) en diciembre 2011 y se elimina en 2012	Endogeneous	-0.01	Permanent	Ley 4/2008. RDL 13/2010. RDL 12/2012.
ED	12-Jun-09	2009q3	Incremento de los tipos (desde 13 junio) hidrocarburos	Consolidation	0.09	Permanent	RDL 8/2009.
PIT	30-Sep-09	2010q1	Suprime parcialmente la deducción (implantada en 2008) de 400 para perceptores de rentas del trabajo	Endogeneous	0.49	Permanent	Ley 26/2009.
VAT	26-Sep-09	2010q3	Incrementos tipos desde 1 julio 2010: 16,0% al 18,0% y 7,0% al 8,0%	Consolidation	0.63	Permanent	Ley 26/2009.
PIT	30-Sep-10	2011q1	Suprime las devoluciones anticipadas (implantado en 2007) del Plan CUNA	Consolidation	0.09	Permanent	Ley 39/2010.
CIT	19-Aug-11	2011q4	Desde el 20/08 se eleva el porcentaje de cálculo de los pagos fraccionados (para los años 2011 a 2013) para empresas que facturan más de 20 mill. y 60 mill.: se pasa a permanente	Endogeneous	0.00	Temporary	RDL 9/2011.
VAT	19-Aug-11	2011q4	Se rebaja el tipo impositivo del 8% al 4% a las entregas de viviendas realizadas entre el 20 de agosto y el 31 de diciembre 2012. Se prorroga al 2013	Endogeneous	0.00	Temporary	RDL 9/2011. RDL 20/2011.
O	16-Sep-11	2012q1	Restablece el Impuesto sobre Patrimonio	Consolidation	0.12	Permanent	RDL 13/2011. Ley 22/2013.
PIT	30-Dec-11	2012q1	En 2012 y 2013 (pasa a permanente) se introduce gravamen complementario entre 0,75 y 7,00 puntos en función del tramo de la base liquidable y la retención sobre el capital al 21%	Consolidation	0.46	Permanent	RDL 20/2011.
CIT	30-Mar-12	2012q2	Limita la deducción de los gastos financieros de créditos con entidades del grupo. Se extiende en julio la limitación para todas las sociedades	Consolidation	0.11	Permanent	RDL 12/2012. RDL 20/2012.
CIT	30-Mar-12	2012q2	Se establece (2012 y 2013) un pago fraccionado mínimo (8% del resultado contable positivo) para empresas que facturen más de 20 mill. : pasa a permanente	Consolidation	0.00	Temporary	RDL 12/2012. RDL 20/2012.
VAT	13-Apr-12	2012q3	Incrementos tipos desde 1 septiembre 2012: 18,0% al 21,0% y 8,0% al 10,0%	Endogeneous	0.94	Permanent	RDL 20/2012.
CIT	13-Jul-12	2012q4	Incrementa los tipos impositivos para las entidades con facturación mayor a 10, 20 y 60 mill.: pasan del 21%, 24% y 27%, respectivamente, al 23%, 26% y 29%	Endogeneous	0.00	Temporary	RDL 20/2012.
PIT	13-Jul-12	2012q4	En 2012 y 2013 se elevan del 15% al 21% las retenciones de actividades profesionales y rend. del trabajo derivados de la impartición de cursos conferencias, etc	Endogeneous	-0.08	Temporary	RDL 20/2012.

TABLE A.I

LIST OF LEGISLATED TAX CHANGES (CONTINUED)

Type	Announcement	First Impact	Description (in Spanish)	Exogeneity	Cumulative Impact	Perm/Temp	Source
CIT	13-Jul-12	2012q4	En 2012 y 2013 (pasa a permanente) se aumenta la limitación a la compensación de bases imponibles negativas y por inmovilizado intangible	Endogeneous	0.00	Temporary	RDL 20/2012.
CIT	13-Jul-12	2012q4	En 2012 y 2013 (pasa a permanente) aumenta la base imponible con el 25% del importe de dividendos y rentas a los que resulte de aplicación la exención por doble imposición	Endogeneous	0.00	Temporary	RDL 20/2012.
SIC	01-Jul-12	2013q1	Aumento de las bases máximas de cotización en un 5,0%	Consolidation	0.08	Permanent	Ley 17/2012.
O	30-Sep-12	2013q1	Creación impuestos sobre producción energía eléctrica, combustible nuclear y almacenamiento residuos radioactivos	Consolidation	0.19	Permanent	Ley 15/2012.
CIT	27-Dec-12	2013q2	Para 2013 y 2014 (pasa a permanente) se limita al 70% del máximo previsto en tablas la deducción de las amortizaciones del inmovilizado material para grandes empresas	Consolidation	-0.08	Permanent	Ley 16/2012.
SIC	30-Sep-13	2014q1	Aumento de las bases máximas de cotización en un 5,0%	Consolidation	0.08	Permanent	Ley 22/2013.
SIC	20-Dec-13	2014q1	Pagos en especie y autónomos	Long-run	0.10	Permanent	RDL 16/2013.
PIT	23-Jun-14	2015q1	Rebaja los tipos en dos años (2015 y 2016). También modifica deducciones	Long-run	-0.36	Permanent	Ley 26/2014.
CIT	23-Jun-14	2015q1	Rabaja tipos del 30% al 28% y 25% en dos años y amplía bases	Long-run	-0.11	Permanent	Ley 27/2014.
PIT	10-Jul-15	2015q3	Adelanta la segunda parte de la reforma de 2016 a julio de 2015	Long-run	-0.14	Permanent	RDL 9/2015.

Notes: This table shows the narrative dataset of legislated tax changes of the period 1986-2015. The type of tax changes are: value added tax (VAT), personal income tax (PIT), corporate income tax (CIT), social insurance contributions (SIC), excise duties (ED) and other (O). First impact is the quarter where the tax change triggered the first change in liabilities/payments with respect to the previous year. The announcement date corresponds generally to the date the tax change becomes law. Endogenous measures are those taken to offset macroeconomic shocks likely to affect output in the near term. The exogenous categories are as follows: long-run are tax changes aimed at increasing long-run growth; external changes are those imposed external bodies; and consolidation measures are those enacted to improve the budget balance independently of the macroeconomic situation. Note also that we exclude from the estimation of the baseline impulse-response functions those tax changes adopted during the period 2008-2013, i.e. those between RDL 2/2008 and RDL 16/2013. The cumulative impact is the yearly cumulative impact in percentage of GDP.