

The nature of scale of irrigation subsidies in Spain and Mediterranean region

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Objetives

1. Evaluate subsidies to Spanish irrigation sector
2. Establish conclusions about access to economic data
3. Make recommendations about methods to monitor economic flows linked to irrigation water management

Two methods to evaluate irrigation subsidies

GSI's methods:

1. Net cost to water supplier: cost-revenue
2. Net benefit for the user: Value-cost

Subsidies sources

- 1) Very narrowly defined subsidies: includes direct O&M costs incurred by the Government not paid for by the farmers or end users. This may include energy costs, personnel costs or costs associated with repairing and maintaining infrastructure.
- 2) Narrowly defined subsidies: includes projects with preferential financing schemes involving low interest rates or inadequate annualisation calculations—used to create new (or improve existing) irrigation infrastructure.
- 3) Broadly defined subsidies: includes subsidies defined in points a) and b) and applied to general infrastructures. Also, the provisioning of water in multi-user projects resulting in cross-subsidisation between sectors or the state being responsible for any shortfalls in meeting the cost of the project (Malik, 2008, elaborates the problems encountered with multiple-purpose facilities).
- 4) Very broadly defined subsidies: includes point c) plus nil or low returns for capital investments for irrigation infrastructure.
- 5) Economically inefficient: prioritising the use or access to water for the purpose of irrigation over uses which have a higher economic value.

Previous studies

- Martín Mendiluce (1993): nivel de subvención del 80% en Andalucía
- Berbel (2005): 71% in Guadalquivir
- Groot & Sánchez Chóliz (2006) and Bielsa et al. (2009):
 - Inflation 0, cost recovery 102%
 - Presently 52% of investments.

Previous studies

- Pérez y Barreiro (2007): 52% in Gállego (Cuenca del Ebro).
- Valsecchi et al. (2009) subsidies 165 mill €.
- MMA (2007)

previous studies

in Spain based on full supply cost principles.

TABLE 2.3: FARMERS' PAYMENTS FOR IRRIGATION WATER SERVICES IN SPAIN IN 2001–2002 (ONLY IN THE INTERREGIONAL BASINS), ALL FIGURES EXPRESSED IN EUROS

Basin	Groundwater		Surface			Surface and Groundwater		Financial cost recovery rates
	Cost per ha	Cost per m ³	Distribution (paid to WUA)	Per ha WUA and basin tariff	WUA and basin tariff per m ³	per ha	per m ³	
Duero	500	0.095	19.88	46	0.012	231	0.044	86.1%
Ebro	829	0.15	49	12	0.011	113	0.02	89.0%
Guadalquivir	744	0.15	101	70	0.035	400	0.081	97.7%
Guadiana	232	0.048	19	102	0.025	188	0.039	54.1%
Júcar	383	0.074	81	16	0.02	283	0.055	85.0%
Segura	789	0.163	34	151	0.038	463.8	0.096	n.a.
Tajo	541	0.1	36	67	0.02	199.3	0.038	n.a.
Total	500	0.09	50	56	0.021	263.5	0.051	87.1%

Source: MMA (2007b)

Sources

- MMA (2007): Precios y costes de los servicios de agua en España. Informe integrado de recuperación de costes de los servicios de agua en España.
- Informes de los Organismos de Cuenca y Gobiernos Autonómicos (DMA)
- MMA (2005): Memoria Económica del Proyecto de Reforma del Real Decreto del Reglamento del Dominio Público Hidráulico.
- Academic literature
- Documentación del PNR-H2008 y del Real Decreto 287/2006.
- Estudios diversos:
 - FENACORE (2004): Encuesta de información económica y financiera de las Comunidades de regantes.
 - INE (2004): Encuesta sobre el uso del agua en el sector agrario.
 - MAPA (2005): Estudio del Coste del Agua de Riego.
 - MMA (2003): Valoración del Coste de Uso del Agua Subterránea en España.

Difficulties

- Data not compiled for performing economic analyses
- Lack of time dimension (t)
- MMA (2007) incomplete in:
 - Sources and methods
 - Poor definition of methods
 - Highly aggregated data
- Historical methods for capital evaluation

IT IS NOT POSSIBLE TO OBTAIN ACCURATE EVALUATIONS OF IRRIGATION SUBSIDIES IN SPAIN

Resultados

Aggregate support to the irrigation sector in interregional basins

	Regulation and transportation (1) Imputed costs (per cent) Table 4.2	(2) Cost recovery (per cent) Table 4.9	(3) Water distribution subsidy rate (per cent) Table 4.14	(4) Subsidy rate (per cent)*	(5) Actual price (€/m ³) Table 4.12	(6) Full- cost rate (€/m ³)	(7) Subsidy (€/m ³) (6)-(5)	(8) Total subsidy (million Euros) **
Ebro	55.71	72.77	8.21	0.66	0.02	0.05	0.03	119.05
Duero	59.55	58.58	11.52	0.72	0.04	0.12	0.08	188.54
Tajo	82.67	100	2.33	0.17	0.04	0.05	0.01	7.29
Júcar	45.79	57.8	7.21	0.89	0.05	0.32	0.27	429.90
Guadiana	90.89	79	4.04	0.29	0.04	0.05	0.02	11.53
Guadalquivir	90.76	90.45	0.08	0.19	0.08	0.10	0.02	65.95
Segura	100	90.12	5.25	0.09	0.10	0.11	0.01	3.13
							Total	825.38

- 906 M€/YEAR IF regional basins are included
- Subsidies of water storage and transportation facilities were computed disregarding inflation

Results

A) Subsidies to diversion, storage and transport: 49 M€/year

Subsidies to regulation works: 21 M€/year

Tagus-Segura Transfer: 11 M€/year

Correcting for inflation: 17 M€/year

B) Subsidies to conveyance networks (PNR): 388 M€/year over 8 years.

C) Subsidies to distribution networks (RD 287/2006): 234 M€/year over 8 years

A) +B) +C): 671 M€/year

D) Cross-subsidies: 240 M€/year

A) +B) +C) +D): 911 M€/year

More recent estimates of the MARM (2009)

- Preliminary evaluation of annual subsidies for storage and transportation (all users) : €680 mill.
- Annual subsidies for the conveyance of irrigation water €790 mill. (subsidy rate of 48%).
- Preliminary evaluation of subsidies to irrigation €1,120 mill. (subsidy rate of 55%).

Conclusions

- Irrigation subsidies : 906-1120 mill € (55%), 1998-2008
- Two thirds of the subsidies correspond with works included in the programmes of irrigation districts' modernisation
- Administrations have made a remarkable effort in improving their information systems and making more transparent all economic data

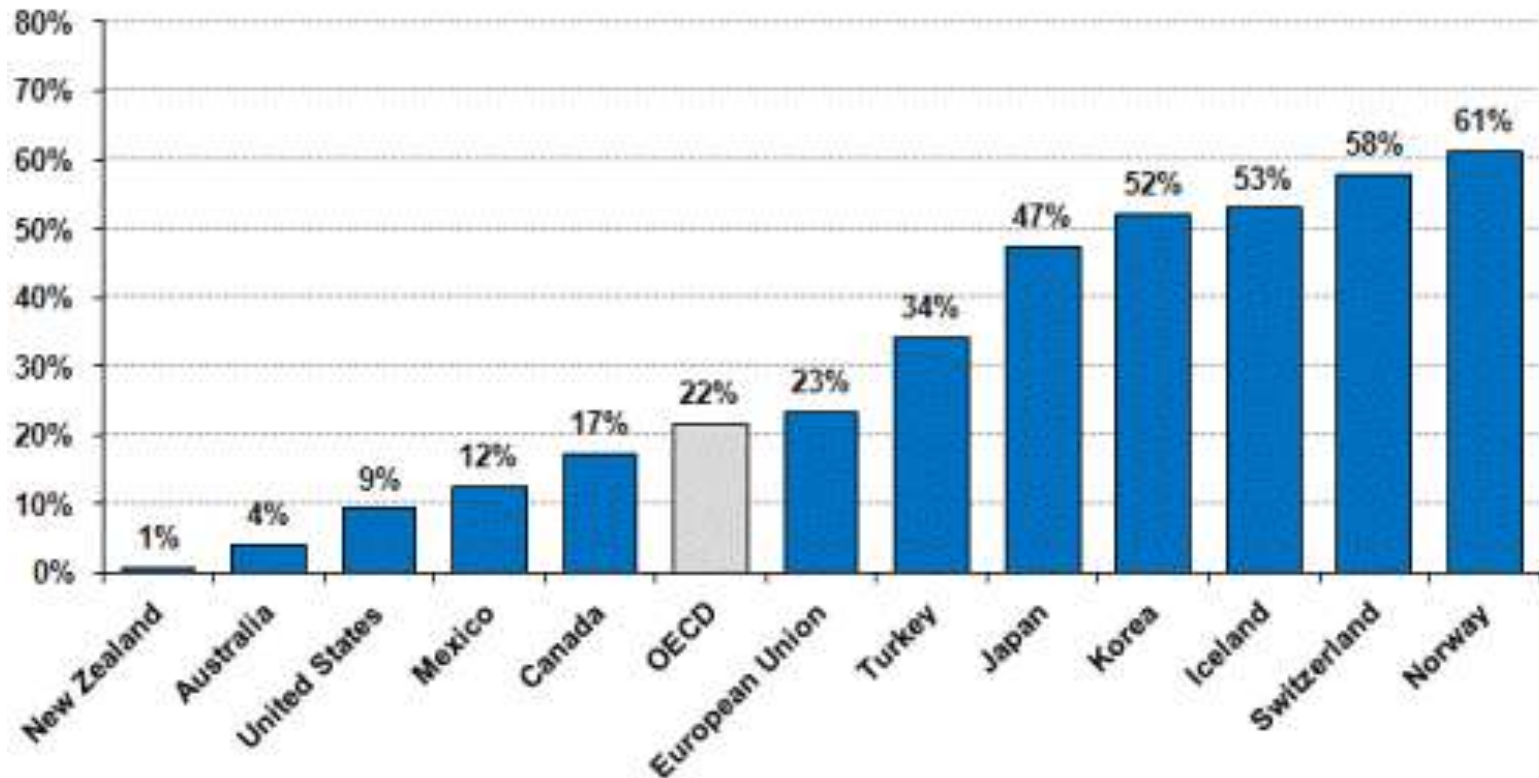
Conclusions

	Valor de producción regadío Mill € corrientes	% de Subv sobre Valor Prod
1996	11100	9.91%
1997	11800	9.32%
1998	12100	9.09%
1999	12300	8.94%
2000	12500	8.80%
2001	11800	9.32%
2002	13700	8.03%
2003	16400	6.71%
2004	14800	7.43%
2005	15000	7.33%

Fuente: *Anuario MARM, diversos years*

Conclusions

Producer Support Estimates as % of gross farm receipts, 2007-09 average



Fuente: *OECD, PSE/CSE database, 2010.*