

Water tariffs in Spain

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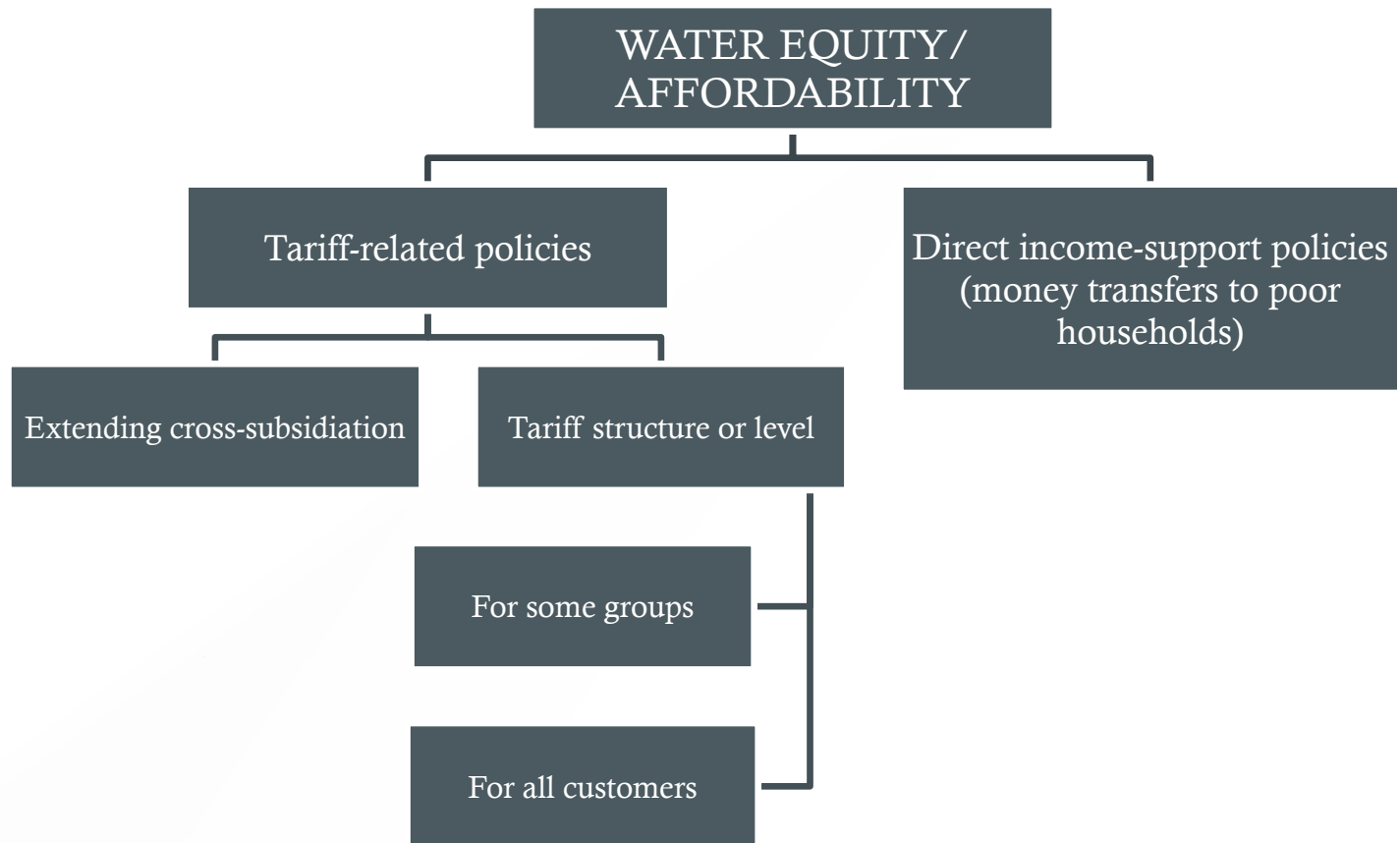
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Introduction

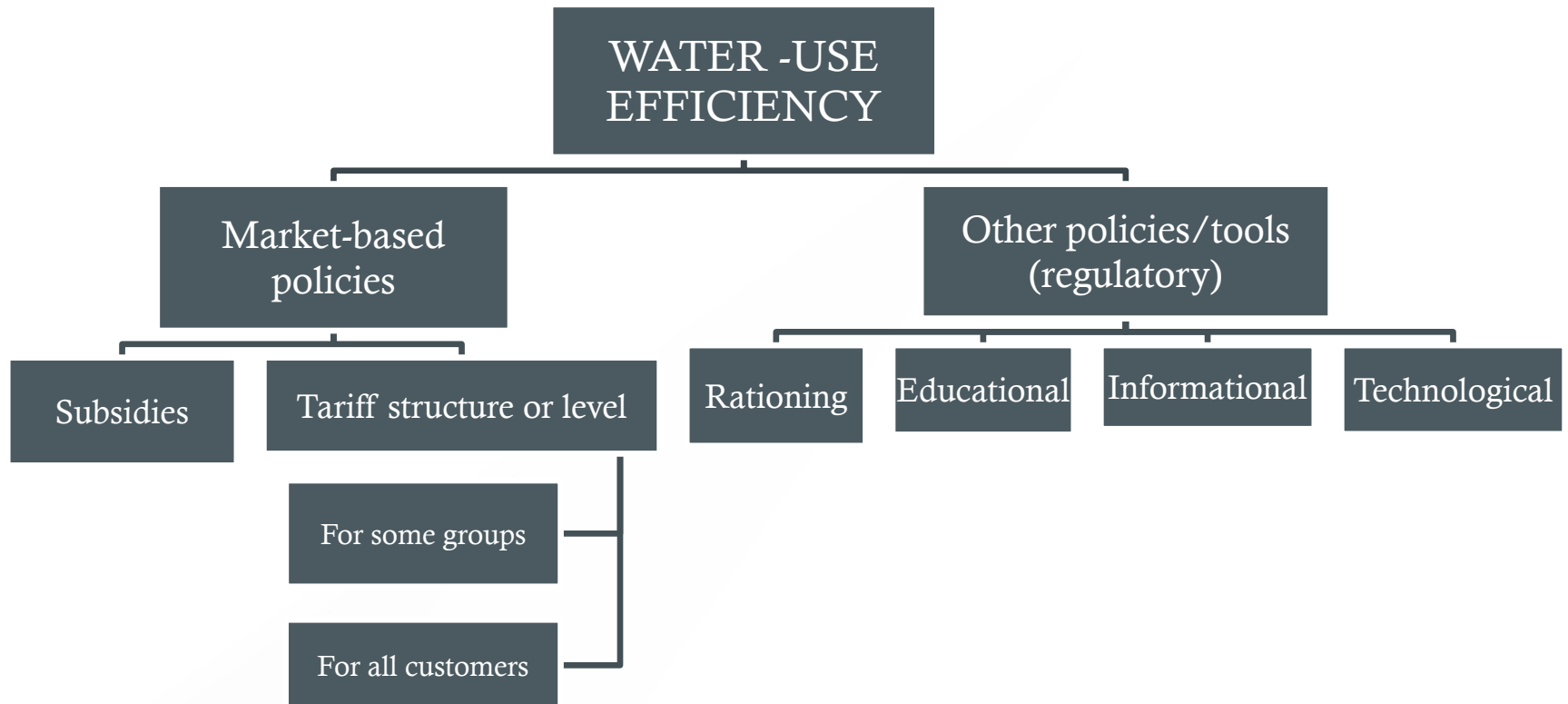
- Several pricing aims in a climate change and water scarcity context (Spain not an exception):
 - United Nations explicitly recognized the human right to water (United Nations, 2010). In this respect, pricing policies are also playing a significant role in the attempt to accomplish these objectives.
 - WFD -->“(...) *water-pricing policies provide adequate incentives for users to use water resources efficiently*” (EC, 2000, Art. 9).
- Main contribution: residential supply water tariffs analysis

Equity and efficiency aims in water sector



Source: Adapted from OECD (2003)

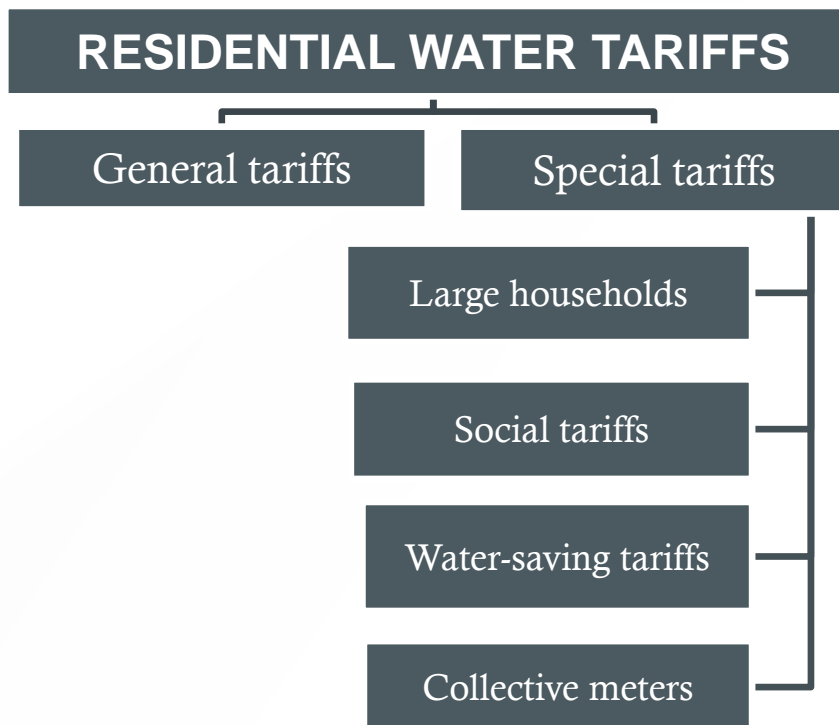
Equity and efficiency aims in water sector



Source: Own elaboration from García-Valiñas et al. (2015)

Residential water supply tariffs in Spain

Water tariffs' complexity is illustrated with a description of the tariffs applied in the 15 largest Spanish cities → 23% of the total Spanish population in 2018 (INE, 2018a)



Residential water supply tariffs in Spain

City	Type of tariff	Number of blocks	First block size (m ³ /month)	Last block Kink point (m ³ /month)	First block price (€/m ³)	Last block price (€/m ³)	Ratio (p _{last} /p _{first})
Alicante	IBT	4	4.00	21.00	0.0100	2.5600	256.00
Barcelona	IBT	5	7.00	18.00	0.6087	3.0436	5.00
Bilbao	IBT	3	8.33	25.00	0.5653	1.2463	2.20
Córdoba	IBT	3	9.00	18.00	0.7930	1.2292	1.55
Gijón	IBT	3	15.00	25.00	0.3776	0.7112	1.88
Palmas de Gran Canaria	IBT	3	5.00	14.00	1.21045	3.1686	2.62
Madrid	IBT	3	12.50	25.00	0.1335	0.5016	3.76
Málaga	IBT	4	2.00	5.00	0.2080	1.4060	6.76
Murcia	IBT	5	3.00	45.00	0.9884	2.6424	2.67
Palma de Mallorca	IBT	5	5.00	40.00	0.6000	5.7600	9.60
Sevilla	IBT	3	4.00	5.00	0.5000	1.6110	3.22
Valencia	IBT	2	6.00	6.00	0.4693	0.5490	1.17
Valladolid	IBT	5	5.33	15.00	0.2707	0.6637	2.45
Vigo	IBT+FA	5+1	15.00	100.00	0.0000	1.1687	∞
Zaragoza	IBT	3	6.00	18.48	0.2640	1.5820	5.99

Legend: IBT: Increasing block tariff; FA: Free allowance

¹ Where there is a free allowance for basic consumption levels, this is shown separately (e.g. 2+1)

² The size of the blocks varies according to the diameter of the meter. In this table a 13mm diameter water meter is considered.

Residential water supply tariffs in Spain

City	Average family size	Eligibility conditions	Changes relative to the general tariff				Is the special tariff the same for all family sizes?
			Discounts on the fixed charge	Block extension	Change in prices	Change in prices and blocks	
Alicante	2.57	Accredited large and extra-large families		X			No
Barcelona	2.43	Households with 4 or more people ^a		X			No
Bilbao	2.41	Accredited large and extra-large families				UVT	Yes
Córdoba	2.71	Accredited large and extra-large families			X		Yes
Gijón	2.29	-	-	-	-	-	-
Las Palmas de Gran Canaria	2.75	Households with 4 or more people		X			Yes
Madrid	2.52	Accredited large and extra-large families and households with 5 or more people.				X	No
Málaga	2.72	All households ^b				X	No
Murcia	2.88	Households with 4 or more people		X			No
Palma de Mallorca	2.82	Accredited large and extra-large families	X			X	Yes
Sevilla	2.65	All households ^b		X			No
Valencia	2.52	Accredited large and extra-large families				X	No
Valladolid	2.41	Accredited large and extra-large families	X		X		Yes
Vigo	2.69	-	-	-	-	-	-
Zaragoza	2.57	Households with 5 or more people		X			No

^a Legend: UVT: Uniform Volumetric Tariff

^a According to Catalanian Social Services, a person with a disability level greater than or equal to 75% or with a high level of dependence (he/she needs assistance with most daily activities, several times a day) counts as two people.

^b Per-head IBT. Applicable if household's members are officially registered as residents in the dwelling.

Source: Own elaboration

Residential water supply tariffs in Spain

- Large households' special tariffs:
 - Eligibility criteria vary substantially across the cities, and the definition of “large household” may be different depending on the household's place of residence
 - The number of members required for a household to be categorized as eligible ranges from any size (i.e. Sevilla or Málaga) to 6 members (Zaragoza)
 - In cities where the special tariff is exclusively applied to accredited large households, these households benefit much more than non-accredited households of the same size.

Residential water supply tariffs in Spain

City	Eligibility criteria	Changes relative to the general tariff			
		Fixed charge	Blocks	Prices	Prices and blocks
Alicante		-	-	-	-
Barcelona	People over 60 years old; People who receive a basic pension (retirement, widow/widower or disability); Families where all members are unemployed	x		x	
Bilbao	People over 60 years old; People who receive a basic pension (widow/widower or disability); Families where all members are unemployed				x
Córdoba	Retired people and people who receive a pension with a monthly income lower than 1.5*IPREM			X	
	Families where all members are unemployed or some are participating in the "Plan Prepara" with an income lower than 1.5*IPREM			X	
	Families at risk of social exclusion: income lower than (IPREM+0.1*IPREM*(Adults-1)+0.2*IPREM*Children)				X
Gijón		-	-	-	-
Las Palmas de Gran Canaria		-	-	-	-
Madrid	Families at risk of social exclusion (evaluated by local social services on a case-by-case basis)	X		X	
	People who receive a widow's/widower's pension with a gross income lower than €14,000/year	X			

Legend: IPREM (*Indicador Público de Efectos Múltiples*): Official index used in Spain as a reference for granting financial assistance, allowances or unemployment benefits, among others. In 2019, IPREM was set at €537.84/month; The "Plan Prepara" is a public programme for unemployed people who do not receive any unemployment benefits. The beneficiaries of this programme receive financial assistance of €400/month; SMI (*Salario Mínimo Interprofesional*): Minimum wage. In 2019, the SMI was set at €900/month.

Source: Own elaboration.

Residential water supply tariffs in Spain

City	Eligibility criteria	Changes relative to the general tariff			
		Fixed charge	Blocks	Prices	Prices and blocks
Málaga		-	-	-	-
Murcia	Retired people who receive a pension lower than the SMI	x			x
	Families at risk of social exclusion (evaluated by the local social services on a case-by-case basis) with reduced water consumption (lower than 10 l/p/d)				Flat rate
Palma de Mallorca	Households with income lower than €15,750/year	x			x
Sevilla		-	-	-	-
Valencia		-	-	-	-
Valladolid	People over 65 and people who receive a pension	x		x	
Vigo		-	-	-	-
Zaragoza	Households with income lower than (SMI*1.123) if N≤4 or lower than (SMI*1.23*1.25) if N>4	x		x	
	Households with income between (SMI*1.5) and (SMI*1.66) if N≤5 or between (SMI*1.5*1.25) and (SMI*1.66*1.25) if N>5			x	
	Households with income between (1.123*SMI) and (1.5*SMI) if N≤5 and between (SMI*1.123*1.25) and (1.5*1.25*SMI) if N>5	x		x	

² Legend: IPREM (*Indicador Público de Efectos Múltiples*): Official index used in Spain as a reference for granting financial assistance, allowances or unemployment benefits, among others. In 2019, IPREM was set at €537.84/month; The “*Plan Prepara*” is a public programme for unemployed people who do not receive any unemployment benefits. The beneficiaries of this programme receive financial assistance of €400/month; SMI (*Salario Mínimo Interprofesional*): Minimum wage. In 2019, the SMI was set at €900/month.

Source: Own elaboration.

Residential water supply tariffs in Spain

City ¹	Groups (if more than one) ²	Income level ³ (€/month) ³	General ² tariff ²	Social ² tariffs ²
Barcelona ²		835.80 ²	2.62% ²	2.14% ²
Bilbao ²		835.80 ²	0.91% ²	0.89% ²
Córdoba ²	- Retired people and low-income households ²	806.76 ²	1.74% ²	1.11% ²
	- Unemployed households ²	806.76 ²	1.74% ²	1.11% ²
	- Families at risk of social exclusion ²	699.00 ²	2.01% ²	0.89% ²
Madrid ²	- Families at risk of social exclusion ²	430.27 ²	0.74% ²	0.19% ²
	- People who receive a widow(er)'s pension ²	1,166.67 ²	0.27% ²	0.20% ²
Murcia ²	- Retired people ²	900.00 ²	2.43% ²	1.16% ²
	- Families at risk of social exclusion ²	430.27 ²	5.09% ²	1.77% ²
Palma de Mallorca ²		1,312.50 ²	1.12% ²	0.22% ²
Valladolid ²		1,581.84 ²	0.39% ²	0.34% ²

¹The income level is defined on the basis of the legal regulations of each social tariff

Source: Own elaboration

Conclusions

- High heterogeneity in structure and price levels
- High complexity
- Not clear the equity and redistributive effects
- A simplification of the tariff system is required in most cities in order to accomplish the principle of “consumer acceptability” and reduce the administrative costs of water utilities.