UNIVERSAL WATER AND SANITATION: HOW DID THE RICH COUNTRIES DO IT?

In rich countries like the US and the UK, efforts to provide universal water and sanitation began in the 19th century, and have resulted in near-100% coverage. Today, low and low-middle-income countries face a challenge in many respects similar to that faced by these wealthier countries 150 years ago. So how exactly did the rich countries finance water and sanitation coverage? Was private enterprise the main driver, or was investment led by governments? This Finance Brief briefly summarises the history of water and sanitation services provision in the US, the UK, and South Korea, and considers whether this historical experience is relevant to low and middle-income countries today.

THE UNITED STATES

We might expect water and sanitation provision in the US to have been strongly market-led: but in fact, national and local governments were the driving force, and much of the investment was public.[1,2] In the 19th century, water companies were typically municipally owned, and from around 1840 municipal bonds were the major source of finance for investment. In big cities, property taxes and water levies also played an important role, as well as service tariffs and connection charges.[3] In Philadelphia, a pioneer city for water and sanitation provision in the US, users had to pay to connect to the water network, and were charged tariffs based on the number of facilities (bath, toilet, etc.) in their home. However, this was insufficient to support investment costs, and the city emitted municipal bonds to finance construction.[4] Rural water supply in the US remains heavily dependent on government subsidy: in Wisconsin, for instance, there is a complex system of grants and soft loans to support the capital and recurrent costs of rural water supply; small enterprises provide travelling maintenance services over a wide area, and this is financed about 80% from federal grants and about 20% by state government.[5]

THE UNITED KINGDOM

In Britain, provision of water in cities prior to 19th century was dominated by small private providers. By the end of the century, most major municipalities had created public utilities, despite Parliament's strong support for private enterprise.[6]

A New York street in the early 1900s. Library of Congress image.

The development of sewerage systems was extensively funded by public finance: investments in most major cities were financed by commercial loans, or soft loans from central government, subsequently repaid largely through local taxation based on property value. Access to loan capital was facilitated by various pieces of national legislation (including the 1848 Public Health Act and city-specific Improvement Acts) which authorised municipal government to raise local taxes to pay for infrastructure and other improvements. Cross-subsidy using tariffs in one publicly owned sector (e.g. gas) to repay loans in another (e.g. sewerage) was also common.[7,8] Today (as in France) most water systems are privately owned: but they were originally developed under public ownership with massive injection of public finance.[9]

SOUTH KOREA

The fascinating history of WASH investment in South Korea is much more recent. High-level political leadership was key to achieving total coverage, as part of a wider push towards nation-building, common well-being and modernity.[10] The initial injection of funds came from foreign aid (mainly from the US) in the 1960s, which allowed for rapid industrialisation and economic take-off, and more specifically for major WASH infrastructure investment. But the aid flow was strictly time-limited, so South Korea rapidly had to find other sources of revenue for on-going capital investment.[11] Taxes were initially very important, but gradually tariffs became more important: the national water company achieved full cost recovery by 2004. Currently, central government continues to provide substantial subsidies for water supply and sanitation to local government and other service providers. Tariffs alone are insufficient to cover the full operational costs of sewerage systems, and government has used proceeds from a national liquor tax to meet the shortfall.[12] By 2012, South Korea had achieved 100% access to improved sanitation and 98% access to improved water (versus 17% in 1961).[13]

IS THIS HISTORY RELEVANT TO LOW-INCOME COUNTRIES TODAY?

The development of water and sanitation services in the US, the UK and South Korea was massively supported by public finance. But is this relevant to low and low-middle-income countries today? In some respects, 19th century Europe was quite different to current-day Africa and Asia: for example, medicine is now more advanced, so that the wealthy classes are less scared of epidemics associated with poor sanitation.[14] Furthermore, many low-income countries today are poorer in real terms than the US and the UK in the 19th century; equally, however, many low-middle-income countries today are in a comparable economic situation to that of South Korea in the 1960s.

The precise strategies followed by different countries will clearly vary: in modern China, for example, urban infrastructure is financed by a variable mix of central government grants, local taxation and other revenues.[15] But the history of rich countries, very briefly summarised here, clearly indicates 1) that domestic public finance was and is critically important even in strongly market-led economies like the US, and 2) that government leadership and high-level political commitment has been a key driver. In no country to date has the private sector alone achieved universal water and sanitation coverage.[16]

> *"Where access to utilities is already high, privatisation may yield dynamic efficiencies. Where access is low and the focus is on increasing coverage of the poor in low-income countries, public provision makes sense."*
>
> *– Duncan Green, 2009*
> *Oxfamblogs.org*

1 Cutler D M & Miller G (2006) Water, Water Everywhere. Municipal Finance and Water Supply in American Cities.
2 OECD (2011) Meeting the Challenge of Financing Water and Sanitation: Tools and Approaches.
3 See our Finance Brief 7 The history of water and sanitation in New York City, including references therein Goldman (1997) and Solomon (2011).
4 Kramek N & Loh L (2007) The History of Philadelphia's Water Supply and Sanitation System. For the story of Baltimore, see Boone C G (2003) Obstacles to Infrastructure Provision: The Struggle to Build Comprehensive Sewer Works in Baltimore.
5 Lockwood H & Smits S (2011) Supporting Rural Water Supply: Moving towards a service delivery approach.
6 Hassan J (1985) The Growth and Impact of the British Water Industry in the Nineteenth Century.
7 Szreter S (2002) A central role for local government? The example of late Victorian Britain.
8 Fisher J et al. (2005) Learning from the past. Delivery of water and sanitation services to the poor in 19th century Britain.
9 Hall D & E Lobina (2012) Financing water and sanitation: public realities.
10 WaterAid (2014) Total sanitation coverage in East Asia.
11 Oxfam (2006) In the Public Interest. Health, Education and Water and Sanitation for All.
12 UN (2009) World Water Development Report.
13 JMP (2012) Progress on drinking water and sanitation.
14 Crow B (2007) Bare knuckle and better technics: trajectories of access to safe water in history and in the global south.
15 Wu W (2007) Urban Infrastructure Financing and Economic Performance in China.
16 Budds J & McGranahan G (2003) Are the debates on water privatization missing the point? Experiences from Africa, Asia and Latin America.

PUBLIC FINANCE for WASH

The Public Finance for WASH initiative is grounded on two principles: i) that sustainable universal provision of high-quality water and sanitation services is fundamentally dependent on progressive domestic taxation systems, and that consequently ii) WASH-sector donors, donor-funded NGOs and in-country actors need to pay greater attention to ensuring that ODA is delivered in ways which support the development of effective and equitable domestic public finance systems.

WSUP Water & Sanitation for the Urban Poor
IRC Supporting water sanitation and hygiene services for life
trémolet consulting infrastructure | economics | policy