Eliminado: *Countries*

Development in Public Private Partnerships for construction-based projects in the developing countries

A. Akintoye[1] and T. Kyaw[1], A. Ngowi[2], P. A. Bowen[3]
[1]School of the Built and Natural Environment Glasgow Caledonian University, Glasgow G4 0BA, UK akin@gcal.ac.uk.
[2]Department of Civil Engineering, University of Botswana, Gaborone, Botswana
[3]Department of Construction Economics and Management, University of Cape Town, South Africa

Abstract
Public-private partnerships (PPPs) provide an avenue for funding major public sector capital projects. This paper documents the extent to which PPP for infrastructure development has emerged in developing countries compared with developed countries. It produces an analysis on the use of PPP in the developing countries based on the database of private sector participation in infrastructure produced by the World Bank. From the analysis it emerged that the private sector participation in infrastructure development in developing countries has mainly been in telecommunication, energy, transport and water sewage schemes. Private sector participation in transport and water is comparatively low, particularly, in the low income developing economies. In addition, PPP investment in low income developing economies is generally very low, representing 9% of the total private sector participation compared with 36% in lower middle income and 55% in the upper middle income. The paper identifies the enabling environment for the developing economies, particularly the low income, to attract private sector investment. The enabling environment includes creation of contractual and legal framework to expedite PPP projects; development of guidelines or framework that promotes PPP contracts; partnering role in procurement process; and PPP strategy that focuses investment in optimum areas.

Keywords
Public-Private partnership, developing countries, service delivery, infrastructure, private finance, public sector

INTRODUCTION

The numbers and types of public private partnerships (PPPs) are overwhelming, making a definition of a PPP difficult. In some cases, city officials might describe a tax concession for which business promises to create jobs in the future as a partnership. In other instances, hiring a private contractor to manage a parking garage or to collect garbage might be labelled a PPP. A partnership might be as extensive as privatising facilities or services, or it might simply involve applying financing or management techniques from the private sector. This idea of bringing in private finance to finance public sector infrastructure originated with the early occurrences of PPP. At the time, the terms

"privatisation", Public Private Partnerships, Alternative Service Delivery and Municipal Service Partnerships were used to mean the same thing.

Public-private partnerships (PPPs) provide an avenue for funding major public sector capital projects. PPPs are joint ventures in which business and government co-operate, each applying its strengths to develop a project more quickly and more efficiently than government could accomplish on its own. The private sector may be responsible for the designing, financing, constructing, owning and/or operating the entire project. The private sector may want to be assured that the public-private partnership structure is designed to provide competitive rates of return commensurate with a financial rate of return that they could earn on alternative projects of comparable risk.

The private-public partnership is now a worldwide significant means of delivering public infrastructure development. This paper documents the extent to which PPP for infrastructure development has emerged in developing countries compared with developed countries. It produces an analysis on the use of PPP in the developing countries based on the database of private sector participation in infrastructure development produced by the World Bank.

RESEARCH METHODS

This paper is based on (i) literature review of PPP, (ii) previous research undertaken by Akintoye et al (2002, 2005) and (iii) an analysis of secondary data from by World Bank: Private Participation in Infrastructure Database (http://ppi.worldbank.org/reports/customQueryAggregate.asp). The World Bank database of PPP infrastructure projects covers PPP projects in developing economies by income from 1983 to 2003. Only three countries from Sub Saharan Africa (Botswana, Gabon and South Africa) are among the upper middle income economies that include Malaysia, Brazil, Poland and Libya. Thirty four (34) of the low income developing economies are located in Sub-Saharan Africa and two (2) in the lower middle income. The database covers four infrastructure sectors: (i) energy (electricity generation, transmission, and distribution and natural gas transmission and distribution; (ii) telecommunications (fixed or mobile local telephony, domestic long-distance telephony and international long-distance telephony); (iii) transport (airports runways and terminals; railways fixed assets, freight, intercity passenger, and local passenger; toll roads, bridges, highways, and tunnels and seaports channel dredging and terminals); and (iv) water (potable water generation and distribution and sewerage collection and treatment). The database considers projects to have private participation if a private company or investor bears a share of the project's operating risk. The database classifies private infrastructure projects into four categories: management and lease contracts; concessions (or management and operation contracts with major private capital expenditure); greenfield projects; and divestitures. This paper is restricted to an analysis of private participation from 1990 to 2003.

AN OVERVIEW OF PUBLIC PRIVATE PARTNERSHIPS

PPP can be described as a contractual agreement of shared ownership between a public agency and a private company, whereby they pool resources together and share risks and rewards, to create efficiency in the production and provision of public or private goods. It can be argued that it is difficult to have a unified definition of PPP, although all definitions have common features or

characteristics. This has led Peters (1998) to identify five general defining features of Partnerships which are very common to public private partnership, namely:

1. A partnership involves two or more actors, at least one of which is public and another from the private business sector. Tarantello and Seymour (1998) suggest that partnerships between non-profit organisation and local governments should also be counted as PPPs.
2. In a PPP, each participant is a principal, i.e., each of the participants are capable of bargaining on its own behalf, rather than having to refer back to other sources of authority. Grimsey and Graham (1997) noted that, in some instances, the public sector has to set up a special agency capable of entering into partnership before collaboration becomes possible.
3. Another feature of partnerships is that they establish an enduring and stable relationship among actors. In a PPP there is a need for continuing relationship and the parameters which are negotiated among the members from the outset and a process in which such a partnership is created (Moore and Pierre, 1988).
4. In a PPP, each of the participants brings something to the partnership. Therefore, for the partnership to be a genuine relationship, each will have to transfer some resources – material or immaterial – to the partnership.
5. A partnership implies that there is some shared responsibility for outcomes or activities (Collin, 1998). This differs from other relationships between the public and the private sectors in which the public sector retains control over policy decisions after receiving the advice of organisations in the private sector. Partnerships often are separate organisational structures, rather than bargaining relationships which have been established among otherwise autonomous organisations. Grant (1996) argues that shared authority and responsibility, joint investment, sharing liability/risk-taking and mutual benefit stand at the core of a partnership.

PPP can take different forms, as in the case of UK government that has identified about seven PPP models (HM, 2000). The level of private sector involvement might range from a purely service provision, without recourse to public facilities, through service provision based on public facilities usage, up to "public facilities" ownership. Gentry and Fernandez (1998) noted the form adopted depends on such issues as: the degree of control desired by the government; the government's capacity to provide the desired services; the capacity of private parties to provide the services; the legal framework for monitoring and regulation; and the availability of financial resources from public and private sources. For example, South African PPP excludes an agreement between an institution and a private party, where the latter perform an institutional function without accepting the significant risks (South Africa Government Gazette, 2000).

Li and Akintoye (2003) have identified the benefits of PPPs to include: enhancing government's capacity to develop integrated solutions; facilitating creative and innovative approaches thus reducing the cost to implement the project; reducing the time to implement the project; transferring certain risks to the private project partner; attracting larger, potentially more sophisticated, bidders to the project; and providing avenue to access skills, experience and technology.

PPP IN THE DEVELOPED ECONOMIES

The use of PPP in developed economies has being the subject of rigorous research investigation. For example, based on case studies of transport PPP projects in Europe, Jones (1998) documented INFRAFIN project (Contract No: ST-97-SC.121) which was funded by the European Commission under RTD programme of the 4th Framework programme to examine issues in the planning, financing and operation of major transport infrastructure projects, whether undertaken as public-

private partnerships (PPPs) or as traditional publicly financed schemes. Poole, Jr. (1995) reported the need for PPP in America to empower cities and states to tap private capital and rebuild America. In addition Poole, Jr. (1995) noted the case for PPP including new source of capital, time saving, capital saving, risk reduction and new tax revenues. In addition, he noted that 'an added benefit of encouraging investor-owned infrastructure in America would be the development of world-class U.S. infrastructure firms'. Li and Akintoye (2003) report the pattern in the use of PPP across continents. What is noticeable in their study is that, while PPP is used predominantly in public sector infrastructure developments in the developing economies, it is used in the developed economies to deliver various government public services, goods and facilities.

In UK for example, it has been used on different types of projects including schools, education facilities, car parks, airports, leisure, hospitals, rail, tram, roads, bridges, prisons, equipment, waste management and water. Despite this, private sector investments have mostly been in four sectors: transport, health, defence and school. Combined projects in these four sectors represent 51.12% of the total number of the signed PFI projects and 78.16% of the total capital value. The transport sector has the highest share of the PFI schemes undertaken in the UK in terms of value of schemes. Although transport PPP projects are responsible for less than 6% of the signed projects, they account for about 50% of the capital value. The average capital value of projects in this sector is £368m, with 74% of the schemes over £50m capital value. Locke (1998) argues that the interest in transport schemes is attributable to a large backlog of road and bridge projects held 'on-the-shelf' plus interest in light rail or guided bus schemes. Most road and bridge PFI schemes in England are sponsored centrally by the Highways Agency under the Department of Transport. The total PFI investment in transport PFI schemes between 1989 and 2003 was £15b. Since then many new transport PFI schemes have been signed. It is expected that the investment in road PFI schemes will increase now that the local authorities are venturing into road maintenance PFI. The first local authority road PFI is the £500m Portsmouth City Council highways maintenance PFI contract that was awarded in early 2004 (see Akintoye et al (2005) for a comprehensive analysis of the PPP trends in the UK).

ANALYSIS OF THE PPP IN INFRASTRUCTURE DEVELOPMENT IN THE DEVELOPING ECONOMIES

PPP in the developing countries has not developed to the extent where they are used to deliver different types of public sector services, goods and facilities compared to the way it is being used in developed countries (Li and Akintoye, 2003). For example, Jütting (1999) has shown using case studies how the implementation of PPP in the health sector, although theoretically appealing, is still not very common in developing countries. This emanates from the level at which many developing economies, particularly low income countries, are operating primarily to provide basis essentials of life: food, shelter and water. In addition, many developing countries depend on extraction and exportation of agricultural and raw natural resources to support the economy. The implication is that the basic infrastructures that are needed are those essential to support these basis essentials of life and to extract and export agricultural and raw natural resources.

The infrastructures mainly needed by the developing countries to support their economic activities are those related to transportation, energy and portable water, and most recently, telecommunication. Although these are needed, many developing countries cannot afford them without affecting other economic activities because of cost considerations (initial capital outlay and

cost of operation and maintenance) and lack of appropriate technology to support them. Level and efficiency of productivity have also been identified as factors militating against infrastructure performance in developed economies. All these have opened avenues for consideration of PPPs in developing economies to design, construct, operate, maintain and finance infrastructure development in form of management and lease contracts, concessions and divestitures.

The Institute of International Project Financing (IIPF) produced a list of how PPP project finance has been used internationally (IIPF, 2005). According to IIPF, whether termed "international project finance," "global project finance" or "transitional project finance," the financing technique of bringing together development, construction, operation, financing and investment capabilities from throughout the world to develop a project in a particular country is very successful. The technique is being used throughout the world, in emerging and industrialised societies. Examples of facilities developed through public-private partnership project financing include (IIPF, 2005):

- Energy Generation: This is for construction of new energy infrastructure and presents an alternative to the traditional, non-market-based development of electricity resources and allows private generation of electricity through various models: privatisation of existing assets, encouragement of private development of new electrical production, and establishing the government-owned utility as a purchaser of power for transmission and distribution over existing facilities, or a combination of these.
- Pipelines Developments: This allows large natural gas pipelines and oil refineries to be developed through this model rather than being financed either by the internal cash generation of oil companies or by governments.
- Mining Development: Projects financed through PPPs are commonly used for mining operations in many developed and developing countries.
- Toll Roads: The capital-intensive nature of these projects, in a time of intense competition for limited governmental resources, makes PPP project finance based on toll revenues particularly attractive. This is used in many Asian countries including Thailand, India and Malaysia.
- Waste Disposal: PPP has become an attractive financing vehicle for household, industrial and hazardous waste disposal facilities.
- Telecommunications: According to IIPF, the information revolution has created enormous demand for telecommunications infrastructure in developed and developing countries. Telecommunication projects are a growing area in Sub-Sahara Africa in countries like Nigeria, Cameron, Angola and Burkina Faso. Nigeria alone has seen private investment of about US$2636 million in its telecommunication sector between 2000 and 2003 compared with Cameron US$234million, Angola US$158.9 and Burkina Faso US$158.6million over the same period.

Table 1 and Figure 1 show the World Bank figures on the private sector investment in infrastructure in these sectors between 1990 and 2003, with the main investment being in telecommunication sector followed by the Energy sector. The figures show that the Sub-Sahara Africa has not benefited much from PPP compared with Latin America, the Caribbean, East Asia and the Pacific regions that have continuously used PPP to deliver public sector infrastructure.

Figures 2 show the private sector investment in infrastructure in developing economies based on the sector segments. These figure shows that telecommunications (fixed access, mobile access, and long distance) and electricity (generation, transmission, and distribution) followed by toll-roads (bridge, highway, and tunnel) are the major segments for private sector investment in developing economies. Portable water is not popular with the private sector although this is an infrastructural

area that many developing countries, particularly the low income countries, need help with investment and knowledge transfer.

Table 1. Sectorial private sector investment in infrastructure 1990 -2003 (US$ millions)

Primary Sector	EAS	ECA	LAC	MENA	SA	SSA	Total
Energy	71,522.90	31,631.60	118,841.60	11,794.70	20,258.50	6,175.00	260,224.30
Telecom	53,243.10	78,900.50	171,390.10	15,500.20	21,436.10	21,723.60	362,193.60
Transport	46,649.80	4,719.60	63,894.00	2,425.50	3,115.20	2,748.90	123,553.00
Water and sewerage	15,311.90	3,327.40	19,465.30	1,236.50	216	229.8	39,786.90
Grand Total	186,727.70	118,579.00	373,590.90	30,956.90	45,025.70	30,877.30	785,757.50
	23.76%	15.09%	47.55%	3.94%	5.73%	3.93%	100%

Source: Based on an analysis of the World Bank database (2005)
Note: (i) EAP - East Asia and Pacific; ECA - Europe and Central Asia; LAC - Latin America and Caribbean; MENR - Middle East and North Africa; SA - South Asia; and SSA - Sub-Saharan Africa

Figure 1. Percentage analysis of sectorial private sector investment in infrastructure (1990-2003)

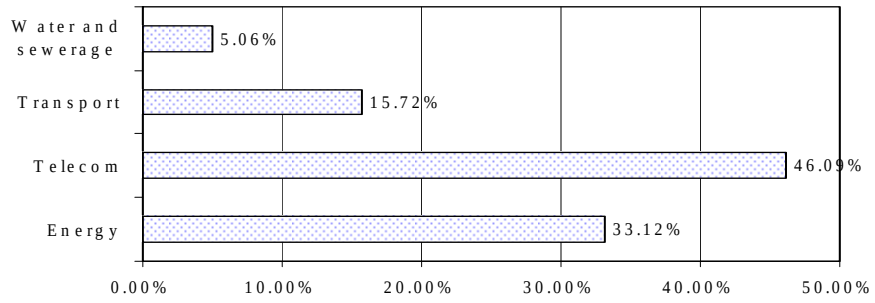
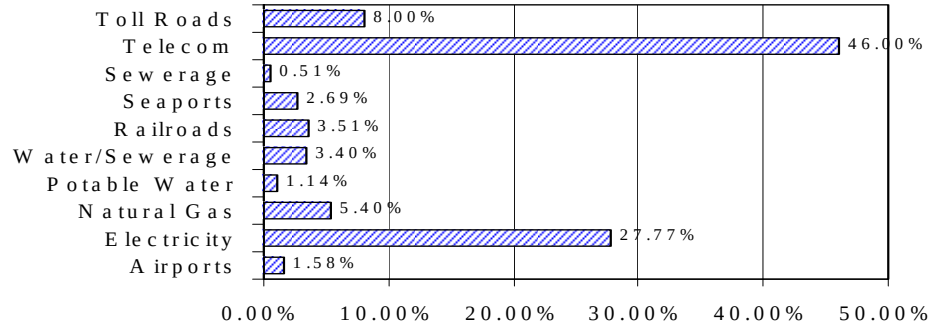


Figure 2: Percentage analysis of segmental project investment in Infrastructure 1990 -2003



ANALYSIS OF PPP IN THE TRANSPORT SECTOR

Table 2 and Figure 3 present the World Bank data analysis of capital investment by the private sector in transport sector (i.e. road, railway, seaport and airport). Transport has been chosen as a major sector that investment is needed in the developing economies (apart from water sector) but in which PPP has not been particularly tapped. Table 2 shows that private sector investment in transport in Sub-Sahara Africa is 2.53% of the total transport investment compared with 50.44% in Latin America and the Caribbean and 38.18% in East Asia and the Pacific. In addition, the number of transport schemes in Sub-Sahara Africa is less than fifty (50) and the schemes are typically small (about US$77milion per scheme) compared with many (283 and 220) and larger (US$184million and US$179 million per scheme) schemes in Latin America and the Caribbean and East Asia and the Pacific respectively. The transport sector investment is 8.9% of the total private investment in infrastructure in Sub-Sahara Africa compared with 70.4% in telecommunication and 0.74% in water.

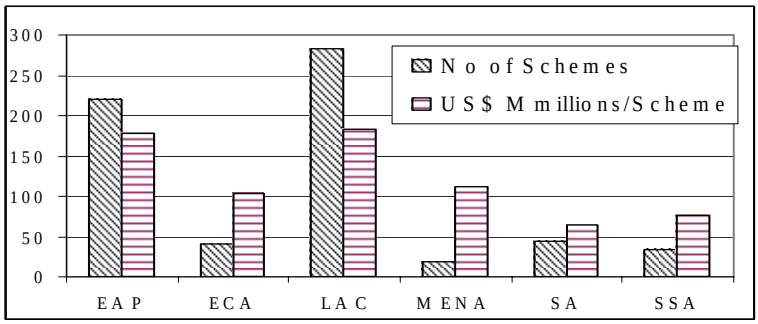
The main countries in the East Pacific and Asia where there is huge private sector investment in transport, apart from China, are Malaysia, Indonesia, Thailand and the Philippines. In these four countries, about 40% of the private sector investment in transport is in highways compared with terminal (22%), urban passenger (18%) and freight (15%). Private sector investment in transport in Latin America and the Caribbean comprises of 53% in highway, 21% in terminals and runways, 17.3% in freight and 8% in urban transport. Although transport investment in the Sub-Sahara Africa is low, the majority of this is in highway transport (61%) which supports the fact that many countries in Sub-Sahara Africa have low income compared with East Asia and the Pacific and Latin America and the Caribbean countries that have achieved diversified private sector transport investment.

Table 2: Private sector participation in transport sector projects (1990 – 2003)

	EAP	ECA	LAC	MENA	SA	SSA
1990	289		1,435.60		1.9	
1991	1,956.20		257.4			
1992	879.9	0	1,406.10			
1993	1,334.50	3.1	1,891.60			30.8
1994	4,001.80	634	2,273.00		125	18
1995	3,711.40	263.7	2,786.40		299.6	
1996	8,188.70	106.2	6,557.30		107.2	28
1997	6,424.50	305	8,377.70	297.5	549.3	468.6
1998	1,939.90	1,224.30	13,212.90	123.9	294.4	320.6
1999	2,163.70	356.5	3,739.50	207	661.9	1,045.70
2000	3,016.10	882.2	4,426.30	466.9	100.3	43.2
2001	3,364.80	333.6	3,850.20	905	100	504.3
2002	165.2		988.1	20	495.9	
2003	1,840.20	121	681.4	5.2	114.5	142.5
Total	39,275.90	4,229.60	51,883.50	2,025.50	2,850.00	2,601.70
%	38.18%	4.11%	50.44%	1.97%	2.77%	2.53%

Source: Based on an analysis of the World Bank database (2005)

Figure 3: Project investment in Infrastructure 1990 -2003 in terms of project count and size



AN ENABLING ENVIRONMENT FOR PRIVATE SECTOR INVESTMENT IN PUBLIC SECTOR PROJECTS IN DEVELOPING COUNTRIES

The analysis of the World Bank data has shown that there is low private sector investment in transport and water schemes compared with telecommunication, particularly in the low income developing economies. However, it would appear that these two sectors (transport and water) are in dire need of this investment. Overall the low income developing economies have insignificant private sector involvement in public sector facilities (in terms of project investment and project count) compared with lower middle income and upper middle income developing economies (see Table 3).

Table 3: Private sector participation in infrastructure: low, low middle and upper middle incomes

	Low income	Lower middle income	Upper middle income
Total Number of Countries	59	49	30
Project Investment (US$ Million)			
Energy	29,569.90	107,174.40	127,809.40
Telecom	33,350.80	118,658.90	210,183.80
Transport	5,330.90	42,526.60	76,571.50
Water and sewerage	621.1	16,112.50	23,053.30
Grand Total	68,872.60	284,472.40	437,618.00
Percent	8.71%	35.97%	55.33%
Project Count			
Energy	159	555	407
Telecom	189	253	158
Transport	97	299	341
Water and sewerage	13	108	140
Grand Total	458	1215	1046
Percent	16.84%	44.69%	38.47%
Investment/Scheme (US$ million)	150.38	234.13	418.37

Source: Based on an analysis of the World Bank database

Table 3 shows that the low income developing economies associated with 59 countries in this category have 8.91% of private sector infrastructure project investment and 16.84% project count compared with 49 lower middle income countries with 35.97% project investment and 46.69% project count and 30 upper middle income countries with 55.33% project investment and 38.47% project count. About one-third of the projects count in the low income developing countries are in India (130 projects out of 458). This might suggest that the middle income (lower and middle) developing economies must do something unique or have some special features that is not the case in low income countries which encourage private sector project investment in infrastructure in these countries.

There are some enabling factors noticeable in the developed and upper middle developing economies that are essential for private investment in infrastructure development in developing countries. These include: creation of contractual and legal frameworks to expedite PPP projects; development of guidelines that promote PPP contracts; partnering role in procurement process; and PPP strategy that focuses investment in optimum areas

The need for this enabling environment is recognised by the Botswanan government that has seen PPP as one of the main methods chosen for the delivery of public sector services and facilities. This is informed by an increase in the government commitment to services and the health of the national economy and the need to gain efficiency in the delivery of public service. The government has entrusted PPP programme in Botswana to its Public Enterprises Evaluation and Privatisation Agency (PEEPA). To this effect, PEEPA has recently advertised to procure the services of reputable and experienced consultants to develop the strategic implementation framework for Public Private Partnership (PPP) in Botswana. The strategic implementation framework is intended to create a favourable environment that will facilitate PPP project implementation, provide comfort to potential investors in PPP projects, and guidance and direction to implementing Government agencies. The key elements of the framework will be, amongst others, a clear guiding policy, appropriate legislation, an institutional set up capable of efficient implementation and facilitation of PPP projects, as well as standard procedures and guidelines for setting out the process to be followed in implementing PPP projects.

Li and Akintoye (2005) have also identified some critical success factors based on the UK PPP/PFI study that shows that effective procurement, project implementability, government guarantee, favourable economic conditions, and available financial market are essential for PPP to thrive. Jütting (1999) identified macro level conditions in favour of setting up of a PPP: these include a political environment supporting the involvement of the private sector, an economic and financial crisis leading to pressure for the public sector to think of new ways of service provision, and a legal framework which guarantees a transparent and credible relationship between the different actors. At the micro level, the capacities of the actors, e.g. their personal interest, skills and organisational and management structure are identified as being important (Jütting , 1999).

CONCLUSIONS

From the results of the analysis of the World Bank data it is evident that private sector investment in infrastructure in developing economies is a major source of investment for delivery of public sector services in the developing economies. Private sector investment has been mainly in telecommunication and energy sectors rather than transport, water and sewerage. The energy sector private investment is mainly in the electricity generation, transmission, and distribution. Although

the low income countries constitute the bulk of developing economies, private sector investment in infrastructure in this category of countries is very insignificant compared with middle income countries. The amount of private sector participation in infrastructure in Sub-Sahara Africa is comparatively low.

However, the private sector investment in public sector infrastructure development has some benefits that the developing countries need to tap. This will enable the governments in developing countries to develop capacity for integrated solutions for infrastructural development, reduce time and cost to deliver projects; reduce risk associated with infrastructure projects, attract larger and potentially more sophisticated project sponsors and achieve technology and knowledge transfer. To achieve this, an enabling environment needs to be created in the form of appropriate guidelines, contractual and legal frameworks to promote PPP, government guarantees and stable economic, social and political environment, and a PPP strategy that focuses investment in optimum areas.

REFERENCE

Akintoye, A., Hardcastle, C., Beck, M., Chinyio, C. and Asenova, A. (2002) *Framework for Risk Assessment and Management of PFI Projects*. Glasgow Caledonian University, ISBN 1 903661 28 5.

Akintoye, A., Bowen, P.A., and Evans, A. (2005) Analysis of development in the UK Public Private Partnership. *Proceedings of the CIB W92/T23/W107, International Symposium on Procurement Systems - The Impact of Cultural Differences and Systems on Construction Performance*, University of Nevada, Las Vegas 8-10 February, Vol. 1. pp 113-124

Collin, S. (1998) In the Twilight Zone: A Survey of Public-Private Partnerships in Sweden. *Public Productivity & Management Review*, Vol. 21, No. 3, pp. 272-283.

IIPJ (2005) International project finance. http://members.aol.com/projectfin/project_finance_links.htm [accessed August 2005]

Gentry, B. and Fernandez, L. (1998) Evolving Public Private Partnerships: General themes and examples from the urban water sector. *OECD Proceedings: Globalisation and the Environment, Perspectives from OECD and Dynamic Non-Members Economies*. Pp. 99-125.

Grant, T. (1996) Keys to Successful Public-Private Partnerships. *Canadian Business Review*, Vol. 23, No. 3, pp. 27-28.

Grimsey, D. and Graham, R. (1997) PFI in NHS. *Engineering, Construction and Architectural Management*, Vol. 4, No. 3, pp. 215-231.

HM Treasury (2000) *Public Private Partnerships – The Government's Approach.* The Stationery Office, London. http://www.hm-treasury.gov.uk/docs/2000/ppp.html. [Accessed July, 2000]

Jones, I. (1998) INFRAFIN. Final Report for Publication *Contract No: ST-97-SC.1218* Project funded by the European Commission under the transport RTD programme of the 4th Framework Programme.

Jütting, J. (1999) Public Private Partnerships and social protection in developing countries: the case of the health sector. *Paper presented at the ILO workshop on 'The extension of social protection'* Geneva, 13-14 December, Centre for Development Research, University of Bon, Germany.

Li, B. and Akintoye, A. (2003) An overview of public private partnership. *Public Private Partnership: Managing Risks and Opportunities*. Edited by Akintola Akintoye, Matthias Beck and Cliff Hardcastle) ISBN 0-632-06465-X), pp 1-30

Locke, D. (1998). On the move. *Private Finance Initiative Journal*, Vol. 3, Issue 4, pp. 82-85.

Moore, C. and Pierre, J. (1988) Partnership or Privatisation? The Political Economy of Local Economic Restructuring. *Policy and Politics*, Vol. 16, No. 3, pp. 169-178.

Peters, B. (1998). 'With a Little Help from Our Friends Public-Private Partnerships as Institutions and Instruments,' *Partnerships in Urban Governance: European and American Experience*, Ed. Jon Pierre, MacMillan, London, 11-33.

Poole, Jr. R. W. (1995) Revitalizing state and local infrastructure: Empowering cities and states to tap private capital and rebuild America, Policy Study No. 190, May, http://www.rppi.org/privatization/ps190.html#11 [accessed August, 2005]

South Africa Government Gazette (2000) Pubic Finance Management Act, 1999. Regulation Gazette No. 6780. http://www.gov.za/gazette/regulation/2000/21082.pdf. [Accessed August 2005] pp.54.

Tarantello, R. and Seymour, J. (1998). Affordable Housing through Non-Profit/Private-Public Partnerships. *Real Estate Issues*, Vol.23, No.3, pp.15-17.

World Bank (2005) Private participation in infrastructure database. http://ppi.worldbank.org/reports/customQueryAggregate.asp [accessed August, 2005]