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PUBLIC-PRIVATE PARTNERSHIPS FOR REAL ESTATE PROJECTS: CURRENT FRAMEWORK AND NEW TRENDS

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Abstract

Purpose - In the current economic context, caused by the financial crisis which began in 2007 and by the economic downturn that it triggered, the interest in developing projects through public-private partnerships is growing. There is no question that for the world's real estate market the events of recent years represented the greatest crisis since the 1930s and had a devastating impact on the availability of public resources. In this scenario, there is a clear need for the establishment of advanced, innovative approaches in order to avoid delays in execution of real estate projects, which are highly capital-intensive, and in order to ensure quality and cost-effective service delivery. In view of the above, this paper analyses the framework and the new trends in public-private partnerships, such as the constitution of public-private real estate funds that allow risk allocation on an agreed basis, primarily for the development of projects with positive externalities.

D**esign/methodology/approach -** Through data collection, the study analyses the current situation of public-private partnerships in the global real estate industry. It identifies the main forms of collaboration, the legal structure of the partnerships, types of public and private organizations involved, allocation of risks among project stakeholders, the project leadership team, financial contributions, kinds of projects developed, and the key factors for success.

Findings – The present framework of advanced and innovative public-private partnerships for real estate projects and the new trends being introduced aim to combine a better allocation of public resources with the competitive approach provided by private participation.

Originality/value The limited availability of public resources and the high financial investment required to carry out real estate projects make it imperative to find complex, innovative ways of developing projects of this kind with positive externalities for society.

Keywords Public-Private Partnerships, Real Estate Project, Project Finance
JEL Codes:

1. Introduction

Given the fiscal deficit and the high levels of debt in many European countries, there is a clear need to review strategies of public resource allocation. This is particularly the case in the budget headings with the greatest impact on resources, such as the health sector, infrastructures, and the real estate industry.

Real estate is a clearly capital-intensive activity and displays particularly high levels of tangible investment. In 2010 it employed 2.0% of the non-financial business economy

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workforce in Europe and generated 3.9% of the total non-financial business economy (NACE, 2013). What is more, in recent years the industry has faced the worst crisis since the 1930s. In this situation, governments should encourage property investment and development, particularly in projects that have positive externalities for society (Kroszner & Shiller, 2011).

Real estate projects have a positive effect on societies as they attract economic activity and commercial development, and provide decent and affordable housing. Therefore, it is important to design appropriate methods for developing real estate projects which cannot prosper with private initiative alone and which require public participation.

This study analyses the current framework and recent trends in public-private partnerships for real estate projects. These partnerships involve contracts or arrangements between government and private entities that provide for projects with substantial levels of risk transfer and which are designed to meet government or social needs and to reward and remunerate the private sector depending on outputs. (Sharma & Bindal, 2014).

Public-private partnerships can provide a wide variety of benefits for society and become a win-win collaboration by improving innovation, reducing the time of project implementation, transferring risk to the private sector, improving the allocation of public resources, and reducing costs. These collaborations have a high chance of being successful and can enable governments to focus on their core mission of freeing up resources for other public needs (Nijkamp, et al, 2002).

2. Methodology, data and hypothesis.

The methodology applied in the study is outlined below.

Firstly, we analyse public-private partnerships, taking account of the following key success factors identified by previous research: government guarantee (Li et al, 2005, Quio et al, 2001), favourable economic conditions (Li et al, 2005), effective procurement (Li et al, 2005, Arthur Andersen and Enterprise LSE, 2000), available financial market (Li et al, 2005, McCarthy & Tiong, 1991 and Akintoye et al, 2001), effective risk allocation (Grant, 1996, and Arthur Andersen and Enterprise LSE, 2000), project implementability (Li et al, 2005), sound economic policy (European Investment Bank, 2000), attractive financial package (Quio et al, 2001), feasibility study and cost-benefit analysis (Brodie, 1995, Hambros, 1999), and good governance (Frilet, 1997).

Secondly, we perform a market study of public-private partnership models to identify the ones that are the most advanced, innovative and complex, in order to develop a joint venture framework. Several European regions are analysed through data collection.

Thirdly, we consider public-private partnerships not only in formal collaborative agreements but also in collaborations in the value chain between institutions and business sectors. These partnerships focus on joint planning, coordination, and process integration in order to obtain competitive benefits such as cost reductions and improved returns on assets, reliability, and responsiveness to market needs. Figure 01 displays a condensed real estate value chain in which the supply activities are

commonly implemented by the public sector, while construction and asset management is usually carried out by private companies.

Figure 1: Real Estate Value Chain[1)]

+ Higher Project Activities - Lower Project Activities

Land Provision	Land Planning	Urbanization	Construction	Asset Management

+ Public sector leadership *+ Private Sector Leadership*

1) Public entities usually play an active role at the initial stages of projects where the risk is more acute and private companies are not adequately incentivized Source: Prepared by the authors.

3. Evidence-Based Analysis of Real Estate Public-Private Partnerships.

A case study analysis of advanced and innovative public-private joint venture models is presented. The partnerships are listed according to the degree of complexity.

3.1 Public-Private Partnerships through the value chain.

3.1.1. Zurich, Switzerland.

The city of Zurich owns a considerable amount of real estate equity: 9,000 residential properties, 1,000 offices, and urban land which it develops and leases to individuals.

The public entity Liegenschaftenverwaltung reports directly to the Ministry of Finance. One of its objectives is to provide a suitable environment to attract and maintain the activities of companies, for example, by offering industrial land.

In this way, the city of Zurich deals with spatial planning and land development to allow the private entity to subsequently focus on building and marketing to end users. Via this formula, public and private entities collaborate in the value chain; the city authorities concentrate on the most high-risk activities (land planning and/or development) and leave construction, commercialization and asset management responsibilities to private companies.

This model allows the public entity to focus on its core activity: that is, by ensuring that the land is an attractive proposition to companies, it can reduce its financial commitment to the project and can allocate resources to other ends

3.1.2. Hamburg, Germany

The Real Estate Management Department and the HaGG institution (a Hamburg firm which promotes construction) are public organizations that depend on the Ministry of Finance and are legally mandated to encourage sustainable enterprise activity in the long term.

Their core tasks include regional planning, boosting strategic clusters, and focusing on the initial activities of the value chain. As in the city of Zurich, they leave the final activities to private companies (Monitor Wachsende Stadt, 2007).

3.1.3. Salzburg, Austria

The public company Landinvest works together with the Zentrum für Innovation und Standortpolitik (henceforth, ZIS) in Salzburg (Austria). The ZIS serves as one-stop-window for companies.

Landinvest also helps the ZIS in the development of real estate projects in regions with lower levels of economic activity in which the private sector is less likely to invest. So Landinvest acts as a facilitator for companies seeking land and optimal locations to end users.

In this case, Landinvest creates partnerships for collaboration in the real estate value chain and fosters economic activity through real estate projects (Gesamtüberarbeitung, 2003, Sachprogramm, 1995, ZIS, 2007).

3.1.4. Flanders, Belgium

The main mission of the Flanders Institute for Logistics (henceforth, FIL) is to support the national bid to become a reference point in the field. Its work so far has resulted in the development of 200 million square meters of economic activity, with the port region as a main driver.

As a public entity, the FIL focuses its attention on land-use planning and development planning and imposes rules with a view to the long term, such as limiting the rental prices of industrial buildings so as not to discourage economic activity.

The FIL works side by side with the Antwerp Development Authority, a regional development entity. If necessary, it has the capability to develop industrial or logistic real estate projects if these projects have positive externalities for the community.

The private sector usually collaborates through the value chain, carrying out the activities with lower risk such as construction and commercialization.

3.2. Public-Private Partnerships through agreements.

3.2.1. Welsh Industrial Strategic

The United Kingdom has been identified as one of the most advanced regions in public-private joint ventures (Li et al, 2005). Among its most important representatives are the public entities denominated *Regional Development Agencies* (henceforth, RDA). The mission of these agencies is to develop the economic prosperity of particular regions of Britain and to collaborate with the private sector via a selection process through a public tender.

The public organization Welsh Industrial Strategic (henceforth, WISP) specializes in projects with a poor risk-return trade-off due to the lack of demand, but with a sufficient level of positive externalities to justify supporting the development.

In order to implement these projects, and taking account of the resource shortages, WISP develops joint ventures with private partners such as Barcock & Brown, which allows it to concentrate on its core business. In addition, through these partnerships WISP has been able to transfer a part of the risk to the private sector, mostly marketing and building activities.

Due to a below average risk-return trade-off, WISP is able to guarantee a minimum performance by ensuring an income.

3.3. Public-Private Partnerships through the foundation of companies.

3.3.1. Harwell Science & Innovation Campus (Oxfordshire, UK)

The Harwell Science & Innovation Campus is a successful public-private joint venture between UKAEA, the public entity, and Goodman, the private partner.

In this case, the joint venture involved only one project: a science, innovation, technology and business campus, located just south of Oxford. Just as private initiative would never have developed a science-oriented campus, due to the lower than average risk-return ratio, the help of Goodman allowed the public body to reduce its resource allocation in Harwell and develop a project with high positive externalities and high added value.

The partnership model used was the constitution of a society with the same equity capital between the two partners. UKAEA provided the land and Goodman the economic resources. Goodman carried out the management, with the condition that only scientifically-oriented companies be accepted.

The creation of the partnership doubled the absorption rate of new companies due to the incentives for private stakeholders to attract companies in order to make the investment profitable.

3.3.2. Advantage West Midlands

The public body Advantage West Midlands (henceforth, AWM) developed real estate projects with positive externalities by sharing the risk with a private partner. In particular, AWM founded companies for developing specific projects with private partners which provided economic resources; AWM provided land to an equivalent value.

The management was led by the private company (for example, Langtree) but the board of directors was usually distributed equally between the two stakeholders. Profits were partly reinvested, and partly distributed to shareholders.

Private partners were selected by a public tender in which experience in development and commercialization and financial resources were valued.

3.3.3. Welsh Investment Partnership

Like AWM, the Welsh Investment Partnership (henceforth, WIP) carried out public-private partnerships, but in this case they were more complex and advanced. A company was established not only to develop a single project but was given a permanent role, allocating part of the risk to the private partner.

Risk-return trade-off, risk allocation between public and private entities and commercial know-how were the primary determinants in the selection of the partner. The public entity transferred the right to develop the project to the private sector but only under certain conditions.

In contrast to AWM's joint ventures, WIP sought financial private partners rather than developers. WIP considered that its weak points were the cash requirements. As an example of a partnership, WIP joined Royal Bank of Scotland through the constitution of a company in which it has a 49% stake comprising land as a capital contribution (10 million pounds in land and 0.98 million pounds in cash), and the Royal Bank of Scotland a 51% stake with economic resources as capital (10.2 million pound in cash). WIP was responsible for company management.

3.3.4. Northwest Regional Development Agency and the Norwepp public-private fund

The most advanced public-private partnership was between the Northwest Regional Development Agency (henceforth, NWDA) and the private company Ashtenne Industrial Fund, through the constitution of a real estate fund called Norwepp.

NWDA provided 140 million pounds in property assets mainly comprising residential and industrial buildings and lands and Ashtenne contributed the equivalent in economic resources and was responsible for company management for 10 years.

Thus, after imposing certain rules on Ashtenne to guarantee the NWDA's mission of stimulating economic activity, the public entity obtained economic resources which it could allocate to other projects (Employment Land Reviews, 2004, Planning and Compulsory Purchase Act 2004, Regional Economic Forecasting Panel, 2007).

3.4 Summary of the public-private partnership case studies

The research reflects that the predominant interest of governments in developing public-private partnerships is to improve resource allocation. Partnerships of this kind allow them to reduce their capital contribution to a single project but also diversify risks and resources in projects with positive externalities. However, public institutions must be prepared to deliver part of the project's profits to the private entities and to assume the greater part of the risk, commonly during the early stages of the project since land is an illiquid asset.

The paper also shows that project management is commonly led by private partners, mainly in construction and commercialization, who are usually more efficient. In addition, public entities can maintain their project objectives by imposing specific requirements on the development of the project. Some exceptions are recognized, mainly when public institutions want to lead the project and look for a financial partner – for example, WIP and Royal Bank of Scotland.

Moreover, the range of positive externalities reflects the risk undertaken by public institutions; the greater a project's contribution to society, the greater the risk the public bodies are prepared to assume. Table 01 shows the distribution of responsibilities in the value chain.

Table 1. Distribution of responsibilities between for public-private partnerships by region.

	+ Public sector leadership				*+ Private sector leadership*	
	+ Risk				*- Risk*	
Region	**Land Supplier**	**Land Planning**	**Urbanization**	**Construction**	**Asset Management**	**Leadership in economic attraction**
United Kingdom	Public	Public	Public / Private	Public / Private	Private	Private
Switzerland	Public / Private	Public / Private	Public / Private	Private	Private	Private
Austria	Public	Public / Private	Public / Private	Private	Private	Public
Germany (Hamburg)	Public	Public	Public / Private	Public / Private	Private	Public
Flanders	Public	Public / Private	Public / Private	Public / Private	Public / Private	Public

Source: Prepared by the authors.

4. Public-Private Partnership Framework and Trends

4.1. Public-Private Partnerships Framework

Based on the analysis made, the table below illustrates the public-private partnership framework (Table 2).

Table 2: Real Estate Public-Private Partnership Models

PPP Category	Public Role	Private Role	Risk Allocation
Value Chain Collaboration	Planning of positive externalities projects not of interest to the Private Sector.	Development and asset management of projects with an acceptable binomial profitability-risk.	Private sector assumes the last activities of the value chain which are less risky, that is, the cost of construction and commercialization, while public entities assume the most risky activities (land planning and development).
Public-Private Agreement	Public entities contribute the definition of the project and sometimes develop the land.	Private companies usually acquire the land and inject economic resources to develop the construction and, subsequently, sell or rent	Risk is shared by private and public entities; public entities usually take on the most risky activities.
Real Estate Company	Public entities contribute land as share capital for the company founded.	The private partner injects economic resources as share capital and, commonly, leads the land development, the construction and the commercialization.	Risk is shared between private and public entities through the contributions to the company founded.
Real Estate Fund	Public entities contribute with properties as share capital for the fund founded.	The private partner injects economic resources as share capital and, commonly, leads the management of the properties incorporated in the fund.	Risk is shared between private and public entities through the contributions to the company founded.

Source: Prepared by the authors.

Table 3: Types of Real Estate Public-Private Partnership Projects

Category	Project characteristics		Risk Allocation	Description
	Positive Externalities	Profit-Risk		
Necessary Projects	Medium / High	Low / Medium	Public sector	Projects that are required by society, but are unlikely to be profitable.
Market Projects	Low / Medium	Medium / High	Private sector	Public entities allocate few resources to market projects, as private entities develop them on their own.
Dispensable Projects	Low / Medium	Low / Medium	Public sector	The first projects that should be discarded by public and private companies.

Source: Prepared by the authors.

These four schemes may be applied to develop any type of real estate project. We stress that projects with positive externalities are unlikely to be carried out without public participation, primarily due to the lack of a competitive return-risk ratio.

Three main categories of real estate projects have been identified according to the risk of the development (Table 03). Commonly, private companies are responsible for the management of the project, company, or fund, while the public body generally imposes requirements to guarantee positive externalities.

The problem occurs when governments allocate resources and assume risks in dispensable projects due to decision-making mistakes; in these cases, the underlying causes are usually inaccurate forecasts and feasibility studies, forthcoming elections, or pressure from interest groups.

It is common to find dispensable projects during periods of economic growth; in the present context, it is important to allocate resources to necessary projects and let the markets dictate the resources available for both market projects and dispensable projects.

4.2. Public-Private Partnership Trends

The research identifies similarities between the joint ventures analysed. The distribution of tasks and responsibilities distribution is represented in Table 04; it is emphasized that public institutions commonly contribute an illiquid asset, which is land, while private companies provide economic resources. In addition, while private partners require a competitive return-risk ratio in order to collaborate in real estate projects with positive externalities, governments must seek a way to offer a competitive investment through risk transfer and/or income guarantees in order to attract private investment.

Table 4: Distribution of Tasks and Responsibilities

Concept	Leadership	Description
Project strategy, planning and design	Public Entity	The administration ensures that the project is designated to the common good and not to private interest.
Construction	Private Sector	Construction is usually developed by the private sector.
Economic Resources	Public and/or Private Sector	Economic contributions to market projects are usually led by the private sector, while necessary projects are led by public entities.
Commercialization	Private Sector	Project marketing and sale or rent properties is usually led by the private sector.

Source: Prepared by the authors.

By way of example, a science and technology park is being developed in the city of Barcelona with the mission of attracting added value activities: in this project public entities invested in a synchrotron and provided university research facilities and land planning, while private companies invested in economic and residential real estate projects in which access was restricted to technology firms. Without this value chain collaboration and the investment of the public entities in anchor facilities, private developers would never allocate resources to a project with commercial limitations.

Another common feature of the case studies is the use of public tendering for the selection of partners, designating the development and commercialization strengths, bidders' assessments of the economic value of the project , and previous experience.

Exit scenarios and exit clauses that may only be exercised at certain times over the term of the partnership are also important for the interested parties.

5. Conclusions

Governments must distinguish properly between real estate projects that bring an added value to society and those that are dispensable. When the project target is identified, governments must set up a strategy to deal with scarce resources and the greatest real estate crisis since the 1930s.

Among the alternatives are public-private partnerships which enable governments to reduce the allocation of public resources and diversify risks while keeping the project afloat.

Four types of collaboration have been identified: from least innovative to most complex: Value Chain Collaboration, Public-Private Agreement, Real Estate Company, and Real Estate Fund.

The choice of the type of collaboration will depend on the return-risk ratio, the contribution of positive externalities, the know-how of the public entities and the project's complexity.

Moreover, the research identifies a trend regarding the distribution of tasks and responsibilities between public and private organizations. The private sector assumes the final activities of the value chain which involve less risk, that is, the cost of construction and commercialization, while public entities assume the more risky activities such as land planning and development. In this way, public institutions commonly take charge of land planning and development, an illiquid asset, while private companies are responsible for economic resources and asset management.

However, public-private partnership strategies depend on government decisions. Our case studies highlight the presence of two different models. On the one hand, regions as Zurich, Hamburg and Salzburg focus on attracting economic activity through territorial land planning, but do not tend to be involved in the urban development or construction; they let the market operate and impose only a few restrictions. On the other hand, regions such as Wales, West Midlands or the Northwest UK are involved in most of the project's value chain. This is due to the greater range of positive externalities and the greater risk undertaken by the public institutions; the more a project contributes to society, the greater the risk that the public entities are prepared to assume.

Finally public tendering appears to be a key success factor for identifying the best private partner by emphasizing the development and commercialization strengths, bidders' appraisals of the project's economic value, and previous experience.

References*

Akintoye, A., Beck, M, Hardcastle, C., Chinyio, E, Asenova, D., 2001. The financial Structure of Private Finance Initiative Projects". Procedings: 17th ARCOM Annual Conference. Salford. Volume 1, pp 361-369.

Arthur Andersen and Enterprise LSE, 2000. Value for Money Drivers in the Private Financial Initiative, the Treasury Task Force.

Brodie,M.J. 1995. Public-Private Joint Ventures: The Government as Partner – Bane or Benefit?. Real Estate Issues. Chicago 20 (2), pp. 25-29.

Employment Land Reviews, 2004. Planning. Available at: http://goo.gl/KsFCtH

European Investment Bank, 2000. The European Investment Bank and Public Private Partnerships. The Newsletter of the International Project Finance Association, 1, pp.3-4.

Frilet, M., 1997. Some Universal Issues in BOT Projects for Public Infraestructure. The International Construction Law Review, 14 (4), pp. 499-512.

Gesamtüberarbeitung, 2003. Salzburger Landesentwicklungsprogramm. Available at: http://goo.gl/sIl60F

Grant, T., 1996. Keys to Successful Public-Private Partnerships. Canadian Business Review. Ottawa, 23 (2), pp. 27-28.

Hambros, SG., 1999. Public-Private Partnerships for Highways: Experience, Structure, Financing, Applicability and Comparative Assessment. Canada.

Krozner, R.; Shiller, R.J., 2011. Reforming U.S. Financial Markets: Reflections before and beyond Dodd-Frank. The MIT Press.

Li, B., Akintoye, A., Edwards, P. J., & Hardcastle, C., 2005. Critical success factors for PPP/PFI projects in the UK construction industry. Construction management and economics, 23(5), pp. 459-471.

McCarthy, S.C., Tiong, R.L.K.,1991. Financial and Contractual Aspects of Build-Operate-Transfer Projects. International Journal of Project Management, 9 (4), pp. 222-227.

Monitor Wachsende Stadt, Bericht, 2007. Statistisches Amt für Hamburg und Schleswig-Holstein Available at: http://goo.gl/MK23Rk

NACE - Statistical classification of economic activities in the European Community, 2013. Real estate activity statistics - NACE Rev. 2. Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Real_estate_activity_statistics_-_NACE_Rev._2

Nijkamp, P., Van Der Burch, M., & Vindigni, G., 2002. A comparative institutional evaluation of public-private partnerships in Dutch urban land-use and revitalisation projects. Urban studies, 39(10), 1865-1880.

Planning and Compulsory Purchase Act, 2004. Available at: http://goo.gl/fnA8Bx

Regional Economic Forecasting Panel, 2007. State of the Northwest Economy. Available at: http://goo.gl/J5A7Hv

Sachprogramm, 1995. Siedlungsentwicklung und Betriebsstandorte im Salzburger Zentralraum, Materialien zur Entwicklungsplanung, Amt der Salzburger Landesregierung; 1. Aufl edition.

Sharma, MR.; Bindal, A., 2014. Public-Private Partnership. International Journal of Research, 1-7, pp. 1270-1274.

Zhang, W.R., Wang, S.Q., Tiong, R.L.K., Ting, S.K., Ashley, D., 1998, Risk Management of Shanghai's Privately Financed Yan'an Donglu Tunnels. Engineering, Construction and Architectural Management, 5 (4), pp. 399-409.

ZIS, 2007. Bericht des Landesrechnungshofes. Available at: http://goo.gl/2xuFBd