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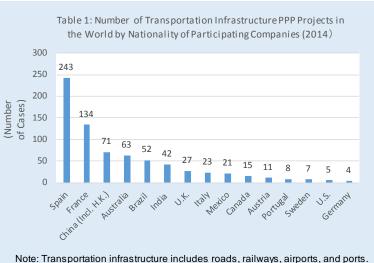
When it comes to infrastructure projects such as roads, airports and water supply, major construction companies in European countries (e.g., France, Germany and Spain) have successfully diversified their businesses by not only undertaking public sector-driven construction work but also providing, under public private partnerships ("PPP"), a series of services varying from fundraising to post-construction maintenance, management and operation. Among such companies, Spanish construction companies have shown a particularly remarkable presence in the global PPP market. This paper will provide an analysis of the backdrop to and factors supporting the growth of Spanish construction companies in the global PPP market.

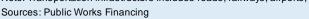
OUTSTANDING PRESENCE IN THE PPP MARKET

The global PPP infrastructure market can be divided into certain categories by field, such as water supply, transportation, energy, and telecommunication. In emerging countries, contract prices of PPP projects (i.e., construction costs of newly launched projects and considerations for rights to operate in existing projects) in the fields of transportation, energy, and telecommunication account for a large portion, with each such contract price being more or less the same amount as the others. In developed countries, however, the contract price of PPP projects in the field of transportation accounts for a major part. In other words, the field of transportation takes up a large portion even when examined globally, and it is in this field that Spanish construction companies have demonstrated their strength.

According to "Public Works Financing," a professional journal in the U.S., the global aggregate contract price of PPP infrastructure projects in the fields of water supply and transportation (i.e., roads, railway, airports, and ports) from 1985 to 2013 totals \$1 trillion. When this amount is examined by region, Europe has the biggest

share of approximately 40% by accruing \$429.2 billion, followed by Asia with a share of 20%, then by North America and Latin America, each with a share of approximately 14%. When this amount is analyzed by field, road infrastructure accounts for approximately 50% with \$523 billion, rendering the aggregate amount accrued in the field of transportation infrastructure \$896 billion. There are a large number of multi-national companies operating in the global PPP market. Although the data sorted out by company is available only in the field of transportation infrastructure, when this data is examined in terms of nationality, it becomes clear that as of 2014, Spanish





companies (the majority of which were construction companies) were participating in 234 projects in 27 countries, thereby exceeding, by a great margin in terms of the number of projects participated, French

companies participating in 134 projects, Chinese companies (including those in Hong Kong) participating in 74 projects, and Australian companies participating in 63 projects (Table 1). Also, when we examine the data of aggregate prices of PPP contracts from 1985 to 2014 by company, we can see 5 Spanish construction companies ranked among the top 10 companies (ACS ranking 1st, Ferrovial, 2nd, Sacyr, 8th, FCC, 9th, and OHL, 10th), causing the share of 49% of the total contract price of the top 10 companies to be held by Spanish construction companies (Table 2).

Table 2: Contract Price and Number of Transportation Infrastructure PPP Projects in the World by Participating Company				
Ranking	Company Name	Nationality	Contract Price (Million Dolloar)	Number of Cases of Paticipation
1	ACS	Spain	75,200	56
2	Ferrovial	Spain	74,300	33
3	Vinci	France	70,800	36
4	Macquarie	Australia	48,200	43
5	Bouygues	France	44,700	27
6	John Laing	U.K.	32,900	16
7	Egis Projects	France	24,100	25
8	Sacyr	Spain	22,900	22
9	FCC	Spain	21,200	43
10	OHL	Spain	19,900	21

Note: Transportation infrastructure includes roads, railways, airports, and ports.

Contract price is the aggregate amount in the period from 1985 to 2014. Number of cases is as of 2014, except for John Laing whose data is as of 2013. Source: Public Works Financing

INTERNATIONAL COMPETITIVE STRENGTH NURTURED IN THE DOMESTIC MARKET

What lies behind today's large presence of Spanish construction companies in the global PPP market with a focus on the field of transportation infrastructure is a history of development of road infrastructure in Spain.

In European countries, until the early 19th century, the main transportation means was horse-drawn carriage. Then railways appeared in the mid-19th century, and once into the 20th century, motor vehicles became the main means of land transportation. It was in 1924 that the first toll expressway in the world was opened in Italy. Then in France, where state roads had been well developed, construction of toll expressways was commenced in the 1950's in parallel to the rapid motorization following the end of World War II. In Spain, however, development of roads was delayed due to political turmoil and civil strife. Under the authoritarian regime led by Franco, the Spanish government formulated a national plan on the state expressway in 1967 to address a deteriorating situation of congestion in state road networks. As to the methods adopted, while Italy and France, which were leading countries, commenced construction and operation by retaining public organizations such as state companies, Spain, in contrast, adopted a concession approach in which private companies were granted the right to construct and operate expressways by raising funds by themselves and obtain toll income for a certain period of time. Today, this is considered to be one type of PPP. Although this approach was adopted in an act of desperation by the Spanish government under Franco's authoritarian regime as it could not receive reconstruction aid under the Martial Plan, and, thus, had only scanty public funds, it became a pioneering approach to introduce PPPs in the field of road infrastructure. Many construction companies in Spain participated in such projects. As a result, a network of expressways approximately 2,000 km-long was successfully built by the mid-1970s. When a construction company participates in a concession project to build a toll road, it can expect both to invest in a company to be established as a special purpose company ("SPC") in order to operate the toll road, and to undertake the initial construction work from such SPC. Although the investment in an SPC is of a long-term nature that requires a few decades to collect the capital, Spanish construction companies could make such investments because they could obtain profits at an early stage by undertaking the resulting construction work.

As seen above, Spain introduced the concession approach in its expressway business in the late 1960s, and thus has a long history of PPPs in the field of infrastructure. The Spanish construction companies that joined such projects could obtain and accumulate know-how regarding not only construction work but also provision of a series of services in infrastructure projects, such as fundraising, maintenance, management and operation. Through participation in concession projects, they have especially nurtured the ability to appropriately manage lifecycle costs throughout a long in-service period of a subject infrastructure facility, including those of maintenance and repair, based on their construction technology, which was their core competence. Then in the 1990's, when PPPs started to gain popularity throughout the world, they quickly entered foreign markets based on their experience and past results in their home country.

Meanwhile, in 1986, Spain joined the EC (now the EU). This added momentum to the trend of managementscale expansion of domestic corporations through mergers and acquisitions among them in view of the intensified competition in the single European market in the 1990's. In this circumstance, conditions that allowed Spanish construction companies to actively increase their investment abroad were prepared. For example, ACS, which was established through a merger of several mid-sized construction companies, became the biggest construction company in the country in 2000 by absorbing Dragados, which was a major construction company. Construction companies that were predecessors of ACS as well as Dragados started participating in concession projects for domestic expressways in Spain in the late 1960's. Also, in 1994, Ferrovial absorbed and merged with Agroman, which was another construction company. Other examples include OHL, which was established through repeated absorptions and mergers of 11 construction companies. Likewise, other construction companies have followed similar paths of reorganization to become what they are today.

LEAP IN LATIN AMERICA AND BUSINESS EXPANSION IN THE U.S

The major foreign markets in which Spanish construction companies have expanded their PPP business are those in Latin American countries, such as Mexico, Colombia, Chile, Argentina and Brazil. Spain, as a former colonial power in Latin America, has an advantage of having retained close ties with many countries in the region in terms of their language and culture, which enabled Spain to introduce systems concerning PPPs that were similar to those employed back home. These facts facilitated Spanish construction companies' expansion in the region. In addition, the existence of Spanish financial institutions that were cooperative in funding was of great help. Major Spanish commercial banks substantially increased investments and loans in Latin America, where they had a competitive edge against mega-banks from other EU countries, in expanding their business abroad against the backdrop of maturing European markets. As of the end of 1999, the assets of Banco Santander and BBVA held in Latin America accounted for 35% and 29%, respectively, of the total assets of each of these banks. Spanish financial institutions such as these also actively provided assistance to Spanish construction companies that were expanding their business in the region.

Furthermore, Spanish construction companies have also expanded their business in European countries (e.g., Portugal, Greece, France, and the U.K.) as well as in North America (i.e., Canada and the U.S.), with a particular focus on the U.S. in recent years. In the U.S, the use of PPPs is gaining popularity chiefly in the field of road infrastructure due to the financial difficulties experienced by the Obama government. In addition, construction companies in the U.S. do not have much experience in PPPs and thus do not possess much know-how thereof. For these reasons, Spanish construction companies have succeeded in leading the market in the U.S. without regard to American construction companies. According to Public Works Financing mentioned above, the aggregate contract price of the toll road PPP projects implemented from 2009 to 2013 in the U.S. is approximately \$15 billion, of which the aggregate contract price of the projects that Spanish construction companies, such as Ferrovial and ACS, participated in accounts for \$9.2 billion, which constitutes over 60% of the aggregate contract price.

TO THE DEVELOPMENT OF NEW MARKETS

Spanish construction companies have built their position as major players in the global PPP market through accumulation of experience and past results in domestic expressway concession projects, the expansion of management scale through corporate reorganizations, and overseas business expansions with a focus on Latin America based thereon. The infrastructure field in which they are engaged has expanded from that of toll roads, which is their core field, to the fields of airports and water supply infrastructure. In addition, they are exhibiting willingness to grow even further in the global PPP market that is likely to continue to expand due to financial difficulties of the governments in developed countries as well as revenue shortages of those in emerging countries. According to a survey by a World Bank group, the annual PPP contract price in the field of transportation in emerging countries hovered at around \$10 billion from the 1990's to the first half of the 2000's. Thereafter, this amount rapidly increased to \$55.3 billion in 2014. In 2011, ACS affiliated Hochtief, a large German construction company, and has rapidly formed one of the major construction company groups in the world. As a result, ACS now has a control over the business of Hochtief, which is an international PPP operator.

To grow further, Spanish construction companies will probably develop new markets in regions including Asia in addition to their current focus in the operation on Latin America, Europe and America. In such case, fierce competition involving existing competitors, such as French construction companies, and Chinese construction companies as well as local companies in emerging countries that are growing rapidly will likely occur. Nevertheless, Spanish construction companies, which excel in experience and past results, are expected to continue to have a substantial presence, utilizing their know-how accumulated so far.