

**AN ECONOMIC ANALYSIS OF THE
BARCELONA '92 OLYMPIC GAMES:
RESOURCES, FINANCING, AND IMPACT**

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Barcelona is a Mediterranean city, the heart of the industrialization and the social, political, and cultural movements of contemporary Spain. Like other European and American cities, Barcelona must face up to the costs of being a large metropolis while lacking the income deriving from being a political capital. The expansion of the city of Barcelona is tied to its *Ensanche* and to the driving forces of the Universal Expositions of 1888 and 1929. In 1959 a new stage of economic growth and urban speculation began. The Spanish political transition to democracy initiated in 1975 came to coincide with the general economic crisis. Barcelona entered into a stage of difficulties, aggravated by the transfer of industry outside of the city, the stagnation of the population, and decreased political activity. In this context, the best way to revive the city, which brought together efforts in urban renovation and external projection, was its nomination in October of 1986 for the organization of the Games of the XXV Olympiad in the summer of 1992. Between these two dates, Barcelona would go from depression to economic boom.

1. The organization of the Barcelona Olympic Games

1.1. The model of the 1992 Barcelona Olympic Games

The objectives and forms of any Olympic Games are set by their model of organization. The goals of Barcelona in organizing the 1992 Olympic Games were to become a better forum for the meeting of athletes from around the world, offer excellent competitions in accord with the Olympic spirit, and promote a great urban transformation that would improve the quality of life and attraction of the city. In all probability, due to its nature and its size, between 1986 and 1993 Barcelona carried out the most important urban change in Europe. (See for example HOLSA, 1992b.)

The organization of the Olympic Games was sustained in three ways:

- a) By the inter-institutional agreement between the City of Barcelona (promotor of the initiative), the Spanish government, the Generalitat (the autonomous government of Catalonia), the Spanish Olympic Committee, and the International Olympic Committee.

- b) By a joint venture, with agreement and shared administration of the public sector and private initiative.
- c) By the creation of special administrative bodies, not associated with the ordinary public administration, with a separation between investment functions and organizational functions.

Without a doubt, the key to the good work and success of the 1992 Olympic Games lay in the strength of the goal (projection and transformation of the city) and in its form of organization (institutional agreement, special bodies and joint ventures), all brought together in the great capacity shown by the Barcelona economy to respond to Olympic stimuli and to attract investment (see Table 1).

TABLE 1. OVERALL ECONOMIC INDICATORS OF BARCELONA

	1985	1986	1987	1988	1989	1990	1991	1992	<i>Variation 1985/1992</i>
Electrical consumption Index 1985=100	100.0	97.2	102.9	101.2	105.8	108.1	124.8	129.7	29.7%
Gas consumption. Index 1985=100	100.0	97.2	102.9	101.1	105.8	108.1	124.8	129.7	29.7%
Collection of urban refuse. Index 1985=100	100	108.2	117.2	125.8	130.8	135.2	141.1	145.9	45.9%
Kilograms per resident	262.9	286.2	313.2	340.3	358.5	376.3	399.4	410.2	56.0%
Passengers Barcelona Airport (in thousands)									
National	3,676	3,876	4,335	4,752	5,144	5,654	5,710	6,123	66.6%
International	1,783	2,221	2,345	2,482	3,002	3,388	3,266	3,913	119.5%
International as % of total	32.7%	36.4%	35.1%	34.3%	36.9%	37.5%	36.4%	39.0%	19.4%
Telephone calls (in thousands)									
Interurban	166,905	177,386	193,867	210,798	241,070	248,055	229,393	240,736	44.2%
International	7,080	8,037	9,731	12,524	16,475	19,062	23,593	28,760	306.2%
International as % of total	4.1%	4.3%	4.8%	5.6%	6.4%	7.1%	9.3%	10.7%	162.2%

Source: The Author, from data with the City of Barcelona and the Statistical Institute of Catalonia.

1.2. The budget of the COOB '92 in revenue and expenditure

The organizational tasks were entrusted to the Comitè Organitzador Olímpic Barcelona 1992, S.A. (COOB '92) (Barcelona Olympic Organizing Committee '92, Ltd.). Upon liquidating the budget of the COOB '92 in July of 1993 revenue was set at 195,594 million pesetas, or US \$1,638,000,000. Against this there were expenditures of 195,236 million pesetas (or US \$1,635,000,000) 42,448 million of which were carried by

sponsors. The difference between revenue and expenditures liquidated leaves a positive account of 358 million pesetas (COOB'92, 1992).

In relation to other Olympic Games, it could be noted that in the 1992 Barcelona Games revenue rose sharply, especially that generated by the entity, which rose to 75.2% of the total. This is the most notorious characteristic of the organizational budget of the Barcelona Games: the high proportion of its own income, made up of contributions of the sponsors (58,152 million, with 42,448 million worth in goods) and television rights (54,164 million pesetas). In the 1992 Games sponsorship reached 30.5% of revenue. Expressed in dollars, and in comparison with the figures obtained in Los Angeles '84, income for sponsorship was 3.7 times higher and television income 1.9 times higher (see Table 2). Sponsorship was organized according to Collaborating Partners, World Sponsors and Sponsors, Suppliers, Licensers, Suppliers of Sporting Material, and Collaborators of the Cultural Olympics (COOB'92, 1991).

<i>Zone</i>	<i>Entity</i>	<i>Network</i>	<i>Rome</i>	<i>Tokyo</i>	<i>Mexico City</i>	<i>Munich</i>	<i>Montreal</i>	<i>Moscow</i>	<i>Los Angeles</i>	<i>Seoul</i>	<i>Barcelona '92</i>
United States		ABC			4,500,000	6,500,000	12,500,000		225,000,000		
		NBC		1,500,000		+ts 6,500,000	+ts 12,500,000	22,333,333		300,000,000	401,000,000
		CBS	394940					+ts 50,000,000			
Canada (CTV)		CBC			250,000	257,000	300,000	1,044,000	3,000,000	3,600,000	16,500,000
Europe	UER		667,967		1,000,000	1,745,000	2,250,000	4,702,500	19,800,000	28,000,000	90,000,000
							25				
	OIRT		66,320			300,000	+ts 2,275,000	+ts 950,000			
						+ts 1,000,000		1,500,000	2,500,000		
										3,000,000	4,000,000
Latin America	OTI			2,500,000		300,000	1,060,000	2,150,000	2,920,000	3,550,000	
							+ts 300,000				
Asia	ABU						1,050,000	150,000			
							+ts 1,050,000				
		NHK	48,400		1,000,000	1,000,000			18,500,000	52,000,000	62,500,000
		ANB						4,500,000			
Africa	URTNA						25,000	64,000			
							+ts 25,000				
		SABC					25,000				
							+ts 25,000				
Oceania											
Australia		CHANNEL						1,360,284	10,600,000	7,000,000	33,750,000
Australia and New Zealand					500,000						
Arab States	ASBU						75,000	300,000			
							+ts 75,000				
Various			630	77,778		990,000	31,100	20,000	6,793,000	10,613,000	24,260,000
							+ts 31,000				
Total rights			1,178,257	1,577,778	9,750,000	11,792,000	17,581,100	37,034,117			
Technical services (ts)						6,000,000	17,281,100	50,950,000			
General total			1,178,257	1,577,778	9,750,000	17,792,000	34,862,200	87,984,117	288,343,000	407,133,000	635,560,000

Source: the author, with data from the IOC and the COOB'92.

The principal programs developed by the COOB '92 and its resources were: installations and preparation of facilities (45,866 million pesetas); services to the Olympic Family (37,023 million pesetas); telecommunications and electronics (24,791 million pesetas); competitions (14,045 million pesetas); commercial management (10,681 million pesetas); ceremonies and cultural acts (9,053 million pesetas); image (7,937 million pesetas); and security (4,671 million pesetas).

In classifying the expenditures of the COOB '92 one will see that the principal item was the acquirement of services (49.9% of the total). The COOB '92 was the axis of the organization of the Games, though it was careful to not assume directly the initiative in all areas. Here then, personnel represented only 11.2 % of expenditure (21,919 million pesetas) and purchase of material 5.1%. On the other hand, COOB '92 investments reached 65,931 million pesetas (33.8% of the total) (Brunet, 1993b: 42 ff).

The personnel required for the organization of the Olympic Games varied radically from 57 employees in 1987 to 5,965 on August 9, 1992. Including indirect personnel, on the closing day of the Olympic Games the human resources of Barcelona '92 included 89,723 people, with 34,548 volunteers, 23,467 employees of service enterprises, and 21,116 people employed in security (COOB'92, 1992c).

2. The resources and financing of the Barcelona Olympic Games

2.1. Construction projects

Barcelona Holding Olímpic, S.A. (HOLSA) integrated the activity of the Spanish State and the City of Barcelona. HOLSA was the matrix company of the constructions in the Olympic ring, the majority of the 78 new kilometers of roads and the Olympic Village. The work developed represented 275,000 million pesetas (figure from July 1993) (HOLSA, 1992a).

Given the model of the Barcelona Games, many projects had to be completed and many more would end up being generated, the majority of which were not directly necessary for the Games themselves. This was precisely one of the intended impacts: leave behind the greatest number of fully useful investments for after the Games.

In this way, beginning with the final results of HOLSA, COOB '92, the City of Barcelona, the Generalitat de Catalunya, the Ministry of Economy and Treasury, and the rest of the agents involved in the Games, we estimate that the direct investments related to the Games of Barcelona from 1986 to 1993 reached a figure of 956,630 million pesetas (US \$8,012,000,000) (See Table 3).

588,625 million pesetas were designated for civil projects, or 61.5% of the Olympic investments, while construction projects received the remaining 368,364 million pesetas. This confirms another key aspect of Olympic investments: the structural effect on the city. Thus we can deduce that the most important effects of the Olympic projects will be long term.

The principal classes of Olympic projects were as follows, in order of importance:

1. Road and transportation infrastructures.
2. Housing, offices and commercial venues.
3. Telecommunications and services.
4. Hotel facilities.
5. Sports facilities.
6. Environmental infrastructures.

The construction of the ring roads of Barcelona -key roads to move around the circumference of Barcelona- the opening of Barcelona to the sea with the construction of the Olympic Village, the creation of various new centres and the Olympic zones of Montjuïc, Diagonal and Vall d'Hebron are the main projects in the City of Barcelona.

However, the Barcelona Games were characterized by geographical decentralization into a number of towns that were Olympic sub-sites in the regions of Catalonia, Valencia and Aragon. Only 38.5% of the Olympic investments were made in Barcelona. 61.5% of the Olympic projects were carried out in the metropolitan area (29%), the rest of Catalonia (16%), or were not limited to a specific location (20%), such as investment in telecommunications.

TABLE 3. CONSTRUCTION FOR THE 1992 BARCELONA OLYMPIC GAMES

<i>Investment projected and initiated between 1986 and 1993</i>	<i>Accumulated values in current pesetas</i>	<i>Distribution</i>
Road construction projects	343,804,115,303	35.9%
Ronda Litoral and Nus Trinitat (includes land, services and facilities)	77,501,540,000	8.1%
Ronda de Dalt and Nus Llobregat (includes land, services and facilities)	68,839,310,000	7.2%
Ronda del Mig (first ring road)	2,536,397,316	0.3%
Other projects of internal connections in Barcelona	15,848,662,684	1.7%
Computerized traffic control system	5,250,000,000	0.5%
Metropolitan connections	88,533,355,303	9.3%
Regional connections (including Girona airport)	51,791,600,000	5.4%
Barcelona airport	27,756,250,000	2.9%
Parking (outside of Olympic areas)	5,747,000,000	0.6%
Construction at the Poble Nou Olympic Area	212,681,960,000	22.2%
Olympic Village Private development	100,980,000,000	10.6%
Public development in Poble Nou area	75,203,560,627	7.8%
Other projects in Poble Nou	36,498,399,373	3.8%
Construction in other Olympic areas of Barcelona	117,973,650,000	12.3%
Montjuic Area	58,138,020,000	6.1%
Vall d'Hebron Area	29,425,740,000	3.1%
Diagonal Area	30,409,980,000	3.2%
Other projects in Barcelona	182,449,775,658	19.1%
New western urban axis (Numancia-Tarragona Area)	7,979,130,000	0.8%
New eastern urban axis (North-Glories Area)	16,395,880,000	1.7%
Remodelation of Old Port (Phase I)	6,890,000,000	0.7%
Service Galleries	10,071,325,658	1.1%
Other facilities (cultural, sanitary and other)	21,229,090,000	2.2%
Improvement of hotel facilities	119,884,350,000	12.5%
Projects in Olympic sub-sites	69,916,420,000	7.3%
Other sports infrastructure projects	29,804,169,039	3.1%
Other COOB'92 infrastructures	13,643,000,000	1.4%
Other Barcelona sports centres	1,107,169,039	0.1%
Other sports infrastructures	15,054,000,000	1.6%
Total	956,630,090,000	100.0%

Source: The author, from data with COOB'92, HOLSA, City of Barcelona, and the Generalitat de Catalunya.

The importance of the urban transformation of Barcelona due to the Games is seen in these proportions: in relation to the dimension in 1989, the new road projects meant an increase of 15%, the new sewerage systems an increase of 17%, new green zones and

beaches an increase of 78%, and ponds and fountains, an increase of 268%. As for the annual cost of maintenance of these roads, sewerage systems, green spaces and additional accessible coastline, it can be estimated in 2,900 million pesetas (excluding the cost of the security, cleaning and illumination of the ring roads).

Another revealing aspect is how the projects in sports infrastructure, conditioning and facilities only represented 9.1% of the total of Olympic investments. This proportion is explained by the great level of overall investment, the principal effect that the Olympic Games had on Barcelona. (On the urban transformation, see: IMPU, Ajuntament de Barcelona, 1988; La Vanguardia, 1992.)

2.2. Private and public investment

32.7% of the Olympic projects were promoted by private initiative. Private Olympic investments from 1986 to 1993 reached 313,017 million pesetas. Of this total, more than a third came from foreign capital. Basically, the private projects have been oriented towards the following areas:

1. Housing
2. Hotels
3. Entrepreneurial centres
4. Toll motorways

The high degree of private investment in the projects related to the 1992 Barcelona Olympic Games corresponds to the great expectation created by the attractiveness of the city of Barcelona. In spite of this, the immediate context in which these private investments have come of age is not the most ideal. In effect, after the Olympic Games, in 1993, the economic crisis which had been visible in many countries in 1990 began to show itself clearly in Barcelona.

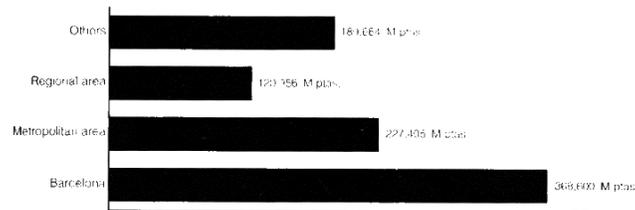
Public investment came to 643,613 million pesetas. It represented 67.3% of the total of Olympic activities. Classifying it by governmental levels, the Spanish State contributed 193,572 million pesetas, 77,948 million of which were channelled through HOLSA. Enterprises under the auspices of the central administration carried out 20.3% of the

total of "public" investment. In this way, a good part of the "public" investment in Barcelona '92 was made by enterprises which in spite of being state-owned, operated according to market criteria. In these cases, Olympic investment helped the business strategy of these enterprises, even though they were public, and was thus benefitted from in the same way as other investments.

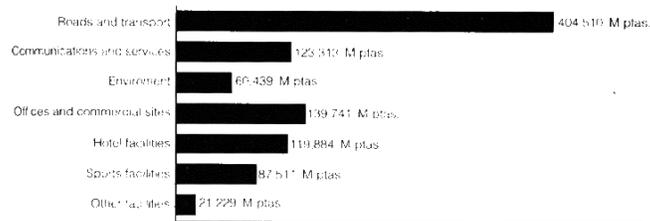
The municipal administration contributed 100,237 million pesetas. The concentration in HOLSA of the Olympic projects of the city of Barcelona and the Spanish state in an original joint venture made the investment process more agile. HOLSA is an extraordinary example of a joint venture. Of the 275,000 million pesetas administered by HOLSA, 125,000 were designated to projects delegated by other institutions, and 149,546 million pesetas were for projects made by its own enterprises, 11,722 of these on Montjuïc, 67,692 million in the Olympic Village and the coast, and 70,132 million on roads (see Chart 1).

CHART 1. CONSTRUCTION PROJECTS FOR THE 1992 BARCELONA OLYMPIC GAMES

Geographical distribution of construction projects



Types of projects



The growth of HOLSA projects in 29,000 million pesetas was compensated by 14,000 million pesetas in increase income. The recourse of credit represented 131,000 million pesetas on July 31, 1993. Until the year 2009 the annual payments will be about 16,000 million pesetas, to be covered equally by the Spanish state and the City of Barcelona. For the city the annual payment of 8,000 millions that must be passed onto to HOLSA until that date represents less than 5% of the budget of 1993 (City of Barcelona, 1991: 578-590; 1992b; 1993).

The Generalitat de Catalunya, the regional autonomous government, contributed to the effort in public investment for the Olympic Games with the significant amount of 22% of the public investment or 142,726 million pesetas which went basically to the Barcelona ring roads, transportation infrastructures for towns that were Olympic sub-sites, and sports and cultural facilities.

2.3. The dynamic of the Olympic projects

The excess of activity could well have sharpened the imbalances inevitably produced in some markets of prime materials, and in labour. The Olympic program also could have been hurt by its own success. There was the risk that the Olympic whirlpool would devour the Olympics themselves.

The main risks were as follows:

- Internal prices and costs. The accumulative index, from its starting point in 1983, shows that in Barcelona there was an increase in the cost of living 20% above that in the rest of Catalonia. (Brunet 1993b: 20-24, 110 ff.) The effect was clear: from 1986 on the difference in the price index grew, with 1990 and 1991 being the crucial years.
- Exchange rates. It was clear that television rights and the rest of commercial contracts established in foreign currency, with the added instability of the exchange rate and the devaluation of the dollar, were a serious risk. To counteract this risk, the COOB '92 insured the exchange rate established for these operations.
- Project Calendar. The calendar was kept without technical or social difficulties.

- Participation and audience. The participation of national committees and athletes evolved in the best way possible, so that the 1992 Games brought together the greatest number of committees and athletes . The Gulf War, which had broken out in August of 1990, augured badly for the Olympics, but once it was over the rest of the international factors evolved favourably for the development of the Barcelona Olympics. As a result, the Barcelona Games appeared as the first of a new world, without conflict between different political blocs.

2.4. Cost of the Olympic Games and the financing of investments

There was considerable sensitivity to questions of "cost", the necessary resources, and the "financing" of a social event of the importance of the Olympic Games. Thus a distinction was made between organizational expenditures (those for aspects not usable after the event) and project expenditures (those usable after the event). The expenditures in projects were made up of direct investments (or those necessary for the development of the event), indirect investments, and investments induced by the event. The organizational expenditures were the true "cost", the net cost, of which nothing would remain afterwards. For this reason effort was made to minimize them. On the other hand, the investment expenditures are the legacy, what remains. For this reason the effort was made to maximize them.

In the consideration of these questions a double tendency appears:

- A. If one wishes to establish the cost of the Olympic Games, the tendency will be to minimize the "Olympic" works, reducing them to their strict nucleus and concerning oneself with the upward fluctuations for expansion of projects or higher costs.
- B. If the goal is to evaluate the impact of the Olympic Games, the tendency will be to maximize the "Olympic" works, widening this category and making note of the upward variations for growth of projects or the amplification of their scale.

Also noteworthy was the difference between organizational expenditures (162,880 million pesetas) and direct investment (956,630 million pesetas) (see Table 4). Investments represented 85.5% of all Olympic expenditures! A distinction has also been made according to whether revenue had a commercial origin (investments of private and

public enterprises, revenue of the COOB '92 itself in television rights, sponsorship and licences, and lotteries) or a tax origin (from public budgets).

By matching up the origin with the destination various conclusions can be reached concerning the use of Olympic resources. The "cost" of the Olympic Games was only 162,880 million pesetas. This true cost is only 14.5% of the resources of Barcelona '92, in its majority self-financed with the income of the COOB'92 itself. This entity only received 12,947 million pesetas from public budgets, which were the direct cost for the Spanish State of the Olympic Games.

However, the central administration and the remaining public institutions contributed up to 338,533 million pesetas from their budgets, and until the year 2009 will contribute 112,590 million more. As a consequence, if from the 451,000 million pesetas supplied by taxes we take off the 13,000 million transferred to the COOB '92 for its organizational expenditures, we arrive at a total of 438,000 million pesetas supplied by the budgets of all public administrations and applied to Olympic investment

TABLE 4. ORIGIN AND DESTINATION OF REVENUE FROM THE 1992 BARCELONA OLYMPIC GAMES

<i>Period 1986-1993</i>	<i>In current pesetas</i>	<i>Distribution</i>
A. ORIGIN OR FINANCING OF REVENUE		
1. Commercial Revenue	668,386,640,000	59.7%
Private national investment	204,697,131,130	18.3%
Private foreign investment	108,320,328,870	9.7%
Investment of state enterprises	130,416,240,000	11.6%
HOLSA: self-generated revenue of the enterprises of the group	42,448,000,000	3.8%
COOB'92: self-generated revenue	120,055,700,000	10.7%
COOB'92: contribution of sponsors of materials	42,448,000,000	3.8%
COOB'92: lotteries	20,143,400,000	1.8%
2. Revenue from taxation	451,123,080,000	40.3%
Investments in public budgets	325,586,180,000	29.1%
HOLSA: credit (contributions of the Ministry of Economy and Taxation, and the City of Barcelona)	112,590,000,000	10.1%
Transfer payments from the Central State to the COOB'92	12,946,900,000	1.2%

A=B ORIGIN=APPLICATION	1,119,509,720,000	100.0%
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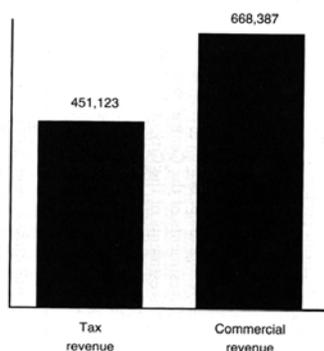
B. APPLICATION OR USE OF RESOURCES

1. Resources applied to the organization	162,879,720,000	14.5%
Programs of the COOB'92	162,879,720,000	14.5%
2. Resources applied to construction projects	956,630,000,000	85.5%
Investment of private enterprises	313,017,460,000	28.0%
Investments of State enterprises	130,416,240,000	11.6%
Investments of the City of Barcelona	22,788,580,000	2.0%
Investments fo HOLSA	154,895,840,000	13.8%
Investments of the Generalitat de Catalunya	142,726,000,000	12.7%
Investments of the COOB'92	32,714,280,000	2.9%
Investments of other public administrations	43,947,840,000	3.9%

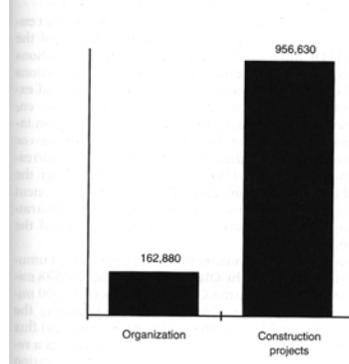
Source: the author, from data from the Ministry of Economy and Taxation, the COOB'92, the City of Barcelona, and the Generalitat de Catalunya.

The previous investments from public coffers were complemented by 130,000 million pesetas invested by public enterprises (Telefónica, RENFE, and others). Besides, we know that the Olympic Games contributed 313,000 million more in private investments. Thus the overall direct investments (956,630 million pesetas worth) and organizational expenditures (162,880 million) give us a total of 1,119,510 million pesetas, equivalent to US \$9,376,000,000 (see Chart 2).

CHART 2
Origin of the economic resources of Barcelona '92



Destination of economic resources of Barcelona '92



In the development of the Olympic project the forecasts went from 237,000 million pesetas in April 1985, to an estimated 768,368 million in March 1991, to the final figure of 1,119,510 million pesetas in July of 1993 (real definitive figures, accumulated to July, 1993) presented here.

This series of figures indicates a sharp rise, but they do not indicate the "budget" of the Olympic Games, nor their cost (which would be legitimate to try to minimize). We are speaking of "Olympic" investments (precisely what one should try to maximize). For this reason, the growth of Olympic projects should be considered in positive terms. If we consider the previous figures of the resources of the 1992 Barcelona Games as definitive, reflecting "costs" exactly, organizational expenditures, and direct public and private "Olympic" investments, the impact of all Olympic resources on the economy and the capacity to generate additional demand could be considered.

3. The impacts of the 1992 Barcelona Olympic Games

3.1. The overall economic impact

Direct and indirect Olympic investments (1,119,510 million pesetas) were really exceptional, as seen by comparing them to other Olympic Games (see Table 5). In effect, direct investment is exceptional not only in absolute terms (Brunet, 1993: 63 ff.). The induced impact is as well, along with investment demand and the consumption generated by direct investments of the Olympic Games. Barcelona '92 was unusual. As seen in this report, only the Tokyo Olympic Games generated more direct investment than those of Barcelona.

The induced impact in the period from 1987 to 1992 was calculated to be 1,942,000,000 million pesetas (16.6 billion dollars). Adding the direct impact to this (1,166,000,000 million) the total impact of the 1992 Barcelona Olympic Games could be calculated to be 3,108,000,000 million pesetas (or 26.048 million dollars) (see Table 6 and Chart 3).

In order to round off this perspective, we should briefly consider the estimate of the tax and commercial balances of the 1992 Barcelona Olympic Games. Although there are limitations in the availability of data, certain generally valid conclusions clearly stand

out. Thus a consideration of all revenue and expenditures of the public administrations - excluding public enterprises- whether explicit -with the budgetary designation independent from other State expenditures and revenue- or implicit -without a separate designation-, whether past- corresponding to the period from 1986 to 1993- or future - after the event- as well as direct, indirect and induced -as the permanent increase of income and capital are deductible- will be illustrative concerning the tax balance for the public treasury of the Olympic Games. In the area of "Olympic" tax income, there was an accumulated total (before and after the Olympic Games) of 889,848 million and an annual flux after the Olympic Games of 27,500 million. As for the expenditures for the public treasury, the accumulated total was 522,569,000 million and the annual flux after the Olympic Games some 51,000 million pesetas. As a result, the "Olympic" tax balance for the public administration resulted in a surplus of accumulated values for the period from 1986 to 1993 of about 371,279 million pesetas (+- 100,000 million) and an annual deficit (from 1993) of 23,500 million (+-15,000 million) (see Table 7).

In spite of the limitations of the sources and estimates, two conclusions are unquestionable: a) the tax balance of the Olympic Games up to 1992 is very positive; and b) the tax balance of the Olympic Games after 1992 is slightly negative.

On the other hand, in the estimate of the external balance of payments or external commercial trade balance and capital of the Olympic Games, there appeared a negative commercial balance of 358,210 million pesetas, due to the fact that the elevated imported component of direct and induced investments was greater than income from television rights and sponsorship. The capital balance or exterior investment balance was positive, however, indicating the great attraction of Barcelona.

TABLE 5. INVESTMENT RELATED TO THE OLYMPIC GAMES

<i>In millions of \$US</i>	<i>Tokyo '64</i>		<i>Montreal '76</i>		<i>Los Angeles '84</i>		<i>Seoul '88</i>		<i>Barcelona '92</i>	
	<i>M of \$</i>	<i>%</i>	<i>M of \$</i>	<i>%</i>	<i>M of \$</i>	<i>%</i>	<i>M of \$</i>	<i>%</i>	<i>M of \$</i>	<i>%</i>
Direct expenditures	452,116	2.7%	2,824,863	89.0%	522,436	100.0%	1,467,853	46.5%	2,460,855	26.2%
Operational expenditures	169,510	1.0%	411,857	13.0%	450,394	86.2%	478,204	15.2%	1,361,156	14.5%
Direct investments	282,605	1.7%	2,413,006	76.0%	72,042	13.8%	989,649	31.4%	1,099,699	11.7%
Indirect expenditures										
Indirect investments	6,373,372	97.3%	350,012	11.1%			1,687,423	53.5%	6,915,274	73.8%
Total Olympic investments	6,825,488	100.0%	3,174,875	100.0%	522,486	100.0%	3,155,276	100.0%	9,376,129	100.0%

Source: the author, with data from the IOC, the SOOC, and the COOB'92.

TABLE 6. ECONOMIC IMPACT OF THE 1992 BARCELONA OLYMPIC GAMES

<i>Period 1986-1993</i>	<i>In millions of current pesetas</i>	<i>Distribution</i>
Direct accumulated impact	1,165,600	37,5%
Investment	956,630	30.8%
Public Investment	643,613	20.7%
City of Barcelona	22,789	0.7%
Central Administration	246,540	7.9%
HOLSA: investment	154,896	5.0%
Generalitat de Catalunya	142,726	4.6%
COOB'92: investment	32,714	1.1%
Other public administrations	43,948	1.4%
Private investment	313,017	10,1%
Consumption	208,970	6.7%
COOB'92: current expenditures	162,880	5.2%
Consumption of visitors	46,090	1.5%
Induced accumulated impact	1,942,188	62.5%
Total accumulated impact	3,107,788	100.0%

Source: the author, with data from the Ministry of Economy and Taxation, the COOB'92, the City of Barcelona, and the Generalitat de Catalunya.

CHART 3. CALENDAR OF THE ECONOMIC IMPACT OF BARCELONA '92

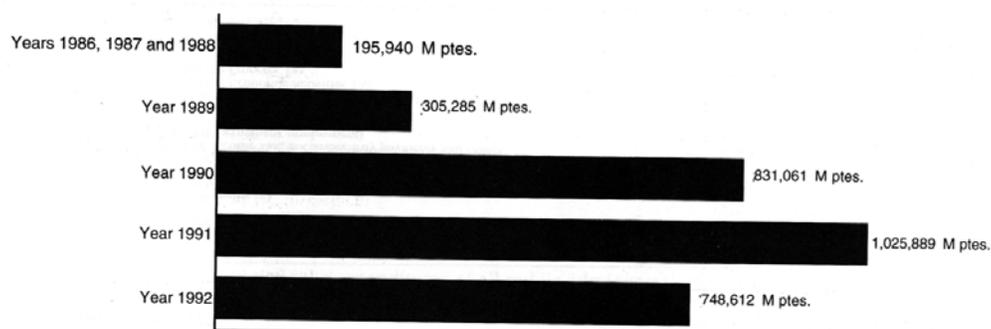


TABLE 7. TAX BALANCE OF THE 1992 OLYMPIC GAMES

A. Revenue from the public administrations (in millions of pesetas)	
Synthesis	
Accumulated total before and during the Olympic Games	893,848
Annual total after the Olympic Games	27,500
Details of revenue	
Central administration	
Accumulated before the Olympic Games	
Value Added Tax (a)	152,750
Savings of unemployment benefits (a)	212,098
Personal Income Tax and Social Security payments of supplementary employed (a)	525,000
Annual, after the Olympic Games	
Value Added Tax, Personal Income Tax, Social Security payments and others (capital and those related to permanent unemployment)	25,000
City of Barcelona. Accumulated before the Olympic Games	
Increase in the benefits of the Economic Activities Tax	2,000
Increase in the benefits of the Property Tax	3,000
Annual, after the Olympic Games	
Increase in the benefits of the Economic Activities Tax	1,000
Increase in the benefits of the Property Tax	1,500
B. Expenditure of the public administrations (in millions of pesetas)	
Synthesis	
Accumulated total before and during the Olympic Games	522,569
Annual total after the Olympic Games	51,000
Details of expenditures	
All public administrations (a)	
Contributions from public budgets	338,533
Central Administration	
Before the Olympic Games, without independent accounting	
Security forces (a)	80,000
Olympic tasks of the administration without independent accounting (diplomatic service, Superior Sports Council, and others)	20,000
Annual, after the Olympic Games	
HOLSA annual payment	8,000
City of Barcelona	
Accumulated before the Olympic Games, without independent accounting	
Various Areas	20,000
During the Olympic Games, without independent accounting	
Exceptional municipal services	4,036
Annual, after the Olympic Games, without independent accounting	
Maintenance of civil work and new municipal buildings (cleaning and profitability of the ring roads, parks, urban mobility, buildings and facilities)	20,000
HOLSA annual payment	8,000
Other public administrations	
Accumulated, before and during the Olympic Games	60,000
Annual, after the Olympic Games, without independent accounting	15,000

A-B: TAX BALANCE = INCOME MINUS THE EXPENDITURES OF ALL PUBLIC ADMINISTRATIONS

Estimate of accumulated values in the 1986-1993 period	Tax surplus of 371,279 million (+/- 100 thousand million)
Annual estimate after the Olympic Games	Tax deficit of 23,500 million (+/- 15 thousand million)

Note (a): see the technical details in Brunet (1994: 184-186).

Source: the author, with data from the ministry of Economy and Taxation, the COOB'92, the City of Barcelona, the Generalitat de Catalunya, and the European Community.

The principal spectator of any Olympic Games is in front of the television. For this reason: a) economic success depended on the income in this area; and b) the success of the image and the international impact depended upon the television audience and the message that was sent out to it.

It is for this reason that the number of visitors to Barcelona was not the principal effect of the Olympic Games, although the greater attention they received was primordial. There had been great expectations as to the number of visitors, but was realite limited by hotel space. As a result of significant private investment, from 1990 to 1992 hotel space grew 38% in Barcelona. On July 25, 1992 there were 25,641 hotel spaces in the city. If to these another 15,000 are added from the area of Olympic influence, the supply of hotel space was 40,641 spaces, allowing for a maximum of 422,666 Olympic tourist visits. Together with the expenditures of the Olympic family, local consumption by non-resident visitors can be estimated at 46,090 million pesetas (Brunet, 1993b: 105 ff.).

3.2. The urban transformation of Barcelona

In the analysis of the impact the effects generated by the change of an element on the components of a system are estimated, and the transformation for a specific modification are recounted. Impact analysis can be preventative, like that in the dossiers of the candidature for the organization of the Olympic Games, or the final dossiers, after the Games. This report hopes to contribute to the final impact analysis of the 1992 Barcelona Olympic Games.

The impact of the nomination of a city as organizer and the necessary decisions and investments for its organization, range from the most physical (construction projects) to the most intangible (local self-esteem or international impact, one of the most valued effects).

Among the physical impacts - which per se can have important economic effects - is the impact on urbanism. Change in the urban configuration and potential of Barcelona due to the 1992 Olympic Games has been enormous. The Olympic nomination was the spark that lead to the application of a previously elaborated urban plan concerning the project of Barcelona. (See for example: Bohigas, 1995; Busquets, 1992.) Beyond the

Olympic Games there has been a leap forward in the perception of the city of itself, in terms of urban planning in Barcelona. Thus, from the perception of Barcelona as relatively uniform, where the differences were residual and where there was no significant differentiation between different districts and streets, the situation changed so as to promote actions that would make urban spaces specialized.

In this point we would like to point out to the reader an aspect where the extraordinarily synthetic mode of Barcelona's urban transformation was reflected, as generated by "Olympic" investments: the circulation of motor vehicles. The change in the urban model can be seen immediately by comparing the density of traffic in 1990 before the ring roads were built, with the density of 1993, after the opening of the Dalt and Litoral ring roads. The changes in traffic due to the effect of these roads was one of the most synthetic expressions of the impact of the Olympic Games on the city.

3.3. Construction and housing

The construction sector best reflects the economic boom in Barcelona between 1986 and 1993 (Brunet, 1993b: 85 ff.). From this we might conclude the following:

- The population employed in the construction sector grew 72% from 1985 to 1992.
- The peak of construction employment was in 1991.
- The consumption of cement rose 74% between 1985 and 1993.
- The consumption of electricity in the production of construction materials rose 55% from 1985 to 1993.
- The consumption of electricity in construction rose 142% from 1985 to 1993.

Presented by function and specific projects, the construction that stands out during the years 1988 to 1991 was surface area of parking lots (34% of the total), housing (23%), commercial venues (13%), offices (12%) and hotels (5%). In this period in Barcelona, 605,688 square metres of office space were constructed, an increase of 21%, which to a large degree compensated previous unavailability and expense. The dynamic of offices construction in Barcelona is important, surpassing the construction of offices in

Brussels and Madrid although not reaching the feverish pitch of London and Paris. As a consequence, the expectation of investment in this sector is still high.

One of the most notable impacts of the 1992 Barcelona Olympic Games was the growth in housing, due to the increasing attraction of Barcelona, the lack of buildable land, increased construction costs, the rise in available family income, and the difference in prices between the Spanish market and the rest of Europe.

The revival of the real estate market was rapid and voracious, from the Olympic nomination in October 1986 to the middle of 1990. From that point on, the economic crisis, and perhaps the availability of housing in the Olympic Village, depressed the market, especially in relation to housing that was not of new construction: the market price of new and previously-built housing between 1986 and 1992 grew, respectively, 240% and 287% (see Chart 4).

3.4. Employment

The nomination of Barcelona as the organizing city for the 1992 Olympic Games produced a sharp effect: in December 1986 unemployment, which until then had been on the rise, began to fall. The curve of the temporary shifts in unemployment changed drastically and began to fall until August of 1992. The labour market in Barcelona, all its metropolitan area, and in all of Catalonia improved substantially during the period of preparation for the Olympic Games (Brunet, 1993a).

Synthetically, the number of registered unemployed fell from a historical maximum of 127,774 people in November of 1986 (the month following the Olympic nomination) to a minimum of 60,885 unemployed in July 1992, in the middle of the Olympic Games (see Table 8).

From October 1986 to July 1992, the general rate of unemployment in Barcelona fell from 18.4% to 9.6%. In 1986 in Barcelona, its province, Catalonia, and all of Spain, the unemployment rates ranged from 18.4% and 23.7%. In 1992, the rates varied from 9.6% in Barcelona to 15.5% in the rest of Spain. The reduction in half of the number of registered unemployed in Barcelona was even more significant if one considers that the number of active employable people in Barcelona in this period grew by 1.1%.

As a complement to this, while unemployment was reduced by half between 1986 and 1992, the number of work contracts rose 2.5 times. Registered unemployment and labour hiring formed an "X": while the fall in unemployment was sharp, so was the rise in hiring.

In comparing these figures with the levels of unemployment in July 1993 (78,251), one sees that a year after the Olympic Games there were still 49,523 unemployed less than in November of 1986 (127,774). After the Olympic Games, the economy of Barcelona showed a greater capacity to resist the economic crisis which had also appeared in the city, even though it has only appeared since 1993.

Moving from bust to boom, the economic situation in Barcelona improved notably between October 1986 and August 1992. The crisis died down and gave way to a general revival of activity, and even euphoria in some sectors. In sum, the crisis appeared in Barcelona much later than in other places, and the situation the local economy finds itself in is better.

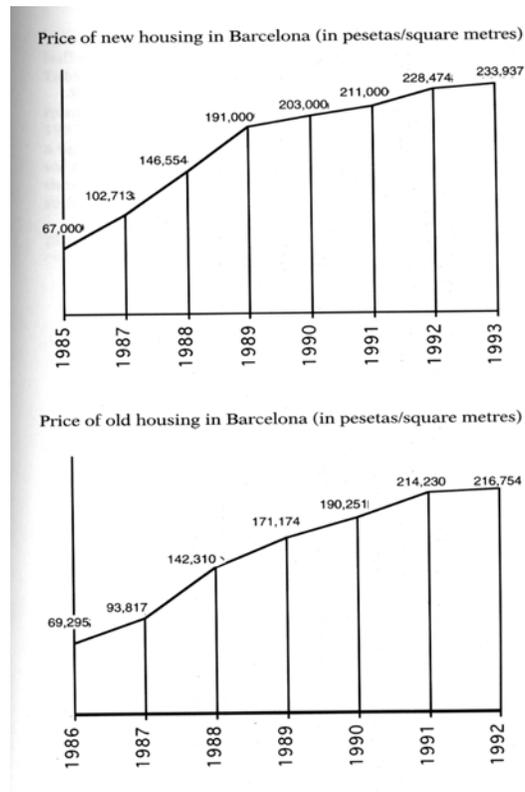


CHART 4
Preu de les vivendes

TABLE 8. ACTIVITY AND EMPLOYMENT IN BARCELONA

Situation on 31.12.	1986	1987	1988	1989	1990	1991	1992	Variation	
								1986-1992	1991-1992
Active	707,772	743,348	728,704	734,746	741,662	722,870	715,774	1.1%	-1.0%
Employed	582,078	624,946	631,697	664,104	675,424	656,575	645,833	11.0%	-1.6%
Unemployed	125,694	118,402	97,007	70,642	66,238	66,295	69,941	-44.4%	5.5%

Source: the author, with data from the City of Barcelona and the INEM (National Employment Institute).

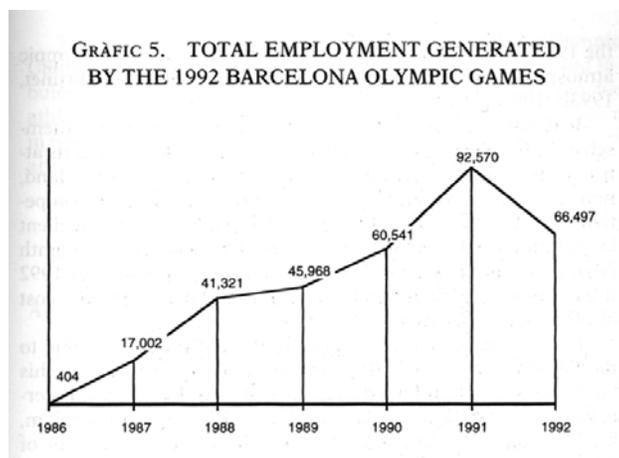
Thus the 1992 Barcelona Olympic Games were a protective buffer against the economic crisis that affected Europe (see Table 9).

TABLE 9. UNEMPLOYMENT RATE IN BARCELONA, CATALONIA AND SPAIN

Situation on 31/12	Unemployed as a % of the active population							Variation	
	1986	1987	1988	1989	1990	1991	1992	1986-1992	1991-1992
Barcelona	18.4	17.4	14.3	10.4	9.7	9.2	9.6	-47.8%	4.2%
Province of Barcelona	23.7	19.3	16.0	12.0	11.3	11.0	11.7	-50.6%	6.0%
Catalonia	21.0	18.3	15.2	11.6	10.9	10.7	11.2	-46.7%	4.5%
Spain	20.9	20.9	18.8	16.2	15.6	15.4	15.5	-25.8%	0.6%

Source: the author, with data from the City of Barcelona and the INEM (National Employment Institute).

Relevant conclusions can be made concerning employment from the data obtained. Thus in comparing July 1992 with July 1993 one can observe the "Olympic" effect of 17,366 fewer jobs, a figure close to the annual employment of the COOB '92. Here we might conclude that the jobs lost corresponded directly to the organization of the Olympic Games. Other jobs appeared to resist this change (see Chart 5).



On the basis of various analytic procedures (analysis of employment, production, investment and income), the following can be concluded:

- There was annual average employment (1987-1992) related to direct expenditures (organization by the COOB '92 plus direct public and private Olympic investments) of 35,309 people.
- There was annual average employment (1987-1992) related to the induced impact (generation of the induced demand) of 24,019 people.
- There was a permanent effect of the Olympic Games (additional employment arising from capitalization and changes in economic structures) that could be calculated to be 20,000 people (Brunet, 1993b: 74 ff.).

In sum, the annual average effect of employment for the period 1987-1992 from the economic impact of the Games was 59,328 people. The result was that the drop in unemployment in Barcelona between November 1986 and July 1992 in 66,889 people was due (at least 88.7% of it) to the impact of the organization of the Olympic Games of 1992.

3.5. The confidence of citizens, the opinion of visitors, and the attraction for investors

The confidence of Barcelonans in the 1992 Games was almost unanimous, and many visitors were surprised by the unanimity and passion the city showed for the Olympic Games. The projects in the streets were so numerous that it was thought that the situation had to lead to improvements. Surveys showed this tendency both before the Olympic Games and afterwards.

In 1987, 61.4% put the urban changes in first place among the perceived benefits the Games would bring the city. 81.7% believed that there was enough time to develop the Olympic project, while 38.0% expected that it would result in benefits. A half a year before the Olympic Games, this optimism not only remained intact but had even increased. 87% of all Catalans believed that Barcelona would come across well during

the Olympic Games. 55% felt that the construction projects would be finished on time, although 48% were afraid that the city would become apathetic in 1993.

Immediately after the Olympic Games the average mark given of those questioned was 8.78 out of 10. 23% had attended some Olympic event. The King of Spain, the Mayor of Barcelona, and the President of the International Olympic Committee received the highest evaluations of all leaders. The aspect of the Olympic Games that received the highest qualification was security (8.9), followed by street atmosphere (8.7), access to facilities (8.2), public transportation (7.9), and traffic (7.6%). 39% felt that Barcelona would become apathetic after the Olympic Games had ended, 9% less than half a year earlier.

A year after the Olympic Games, the positive evaluation of the Olympic Games shown by the citizens before and immediately after the event held up, in spite of the fact that the economic crisis of the 90's had arisen in Barcelona as well. The degree of satisfaction of living in Barcelona was 7.9 out of 10. Only 47.7% believed that after the Olympic Games Barcelona had become apathetic. Thus the positive evaluation of the citizenry towards the 1992 Olympic Games not only held up, but in fact grew.

Another aspect to keep in mind is the impression from the outside. Visitors to the Olympics gave a very high evaluation to the 1992 Games, especially for the Olympic events, the Olympic atmosphere, Olympic facilities, and Olympic signage (Brunet, 1993b: 109-110).

It is felt that the preference of enterprises to locate themselves in Barcelona is an excellent synthetic indication of its attractiveness, the availability of services (offices, industrial land, housing, and so on) and labour, its market, and overall competitiveness. In 1991, in midst of the pre-Olympic boom, the excellent expectation for Barcelona was already felt, reaching the eighth position in the ranking of European cities. In contrast, by 1992 it had fallen to 13th due to the rise in rental prices and the cost of office space (Maragall, 1993-1994).

In 1993 Barcelona rose again to the tenth position, due to the Olympic effect and the lower price of office space. In this year, the other 9 preferred cities in terms of location of enterprises were London, Paris, Frankfurt, Brussels, Amsterdam, Zurich, Glasgow,

and Manchester. The strongest aspects of Barcelona were quality of life of employees (5th in Europe), office prices (6th), availability of directors and their cost (8th), proximity and accessibility to the market (10th), transportation infrastructures (15th) and telecommunications (19th).

3.6. The legacy of the Olympic Games and the strategic perspectives of Barcelona

The direct and indirect investments of the Olympic Games were seen in civil construction projects and infrastructures, as well as building and installations. Significant public and private capital that had come together during the preparatory effort of the Olympic Games, together with permanent employment created, constitute the legacy of the 1992 Barcelona Olympic Games.

This legacy is synthesized in the urban transformation of Barcelona and in the economic structure (greater capitalization, growth of the service sector, internationalization, attractiveness, centrality, productivity, competitiveness).

European integration strengthens the Western Mediterranean region, as a bridge between the centre and the south of Europe. In this context, Barcelona also has another powerful attraction: its metropolitan area, found in a central axis of European communications. Barcelona is thus an excellent location for head offices and its metropolitan area excellent for the introduction of their plants. The possibilities of capitalizing on the Olympic impulse, consolidating its new role as a service centre specialized in activities with high surplus value, seems clear.

The organization and development of the 1992 Olympic Games could be considered to have been an exceptional and fabulous experience. During the Games an excellent forum for athletes from all over the world was provided, a great spectacle in tune with the Olympic spirit, strengthening both new and old attractions of the city of Barcelona.

Bibliography

Ajuntament de Barcelona

- 1986, Sol.licitud de candidatura al COI per a la celebració dels Jocs de la XXVa Olimpíada, Barcelona: Ajuntament de Barcelona (6 vols + 1 cassette + 1 disk + 1 video, in container ['la Caixa Màgica']
- 1988, Urbanisme a Barcelona. Plans cap al 92, Barcelona: Ajuntament de Barcelona-&AGRAVE;rea d'Urbanisme i Obres Públiques.
- 1991, Barcelona. Espacios urbanos, 1981-1991, Barcelona: Ajuntament de Barcelona.
- 1992a, Anuari estadístic de la Ciutat de Barcelona, 1991, ("Capítol 21. Barcelona Olímpica"), Barcelona: Ajuntament de Barcelona-Servei d'Estadística.
- 1992b, Barcelona Economy (núm. únic), Barcelona: Ajuntament de Barcelona. &AGRAVE;mbit d'Organització i Economia. &AGRAVE;rea d'Economia i Empreses.
- 1993, Memòria Econòmica 1992, Barcelona: Ajuntament de Barcelona-&AGRAVE;mbit d'Organització i Economia.

Bohigas, Oriol

- 1985, Reconstrucció de Barcelona, Barcelona: Edicions 62 (Illustrated Spanish version: Idem (1986), Reconstrucción de Barcelona, Ministerio de Obras Públicas y Urbanismo-Dirección General de Arquitectura y Edificación).

Brunet, Ferran

- 1993a, Ocupació i activitat econòmica, 1963-1992, Barcelona: Ajuntament de Barcelona-Barcelona Activa, S.A.
- 1993b, Economy of the 1992 Barcelona Olympic Games, Lausanne: International Olympic Committee.
- 1995, Dinàmica econòmica i posició estratègica del Poblenou, Barcelona: Ajuntament de Barcelona-Districte de Sant Martí.

Busquets, Joan

- 1992, Barcelona. Evolución urbanística de una ciudad compacta, Madrid: Fundación Mapfre-América.

Comitè Olímpic Internacional

1992, Carta Olímpica, Lausanne: International Olympic Committee (IOC).
COOB'92

1991, Criterios de patrocinio y colaboración empresarial en los Juegos de la XXV Olimpiada Barcelona'92, Barcelona: Comitè Organitzador Olímpic Barcelona 1992 - Divisió Comercial.

1992a, Memòria Oficial dels Jocs de la XXVa Olimpíada Barcelona 1992. Volum I. El repte. De la idea a la nominació, Barcelona: Comitè Organitzador Olímpic Barcelona 1992 - Enciclopèdia Catalana.

1992b, Memòria Oficial dels Jocs de la XXVa Olimpíada Barcelona 1992. Volum II. Els mitjans. Escenaris, objectius i recursos, Barcelona: Comitè Organitzador Olímpic Barcelona 1992 - Enciclopèdia Catalana.

1992c, Memòria Oficial dels Jocs de la XXVa Olimpíada Barcelona 1992. Volum III. L'organització. La preparació dels Jocs, Barcelona: Comitè Organitzador Olímpic Barcelona 1992 - Enciclopèdia Catalana.

1992d, Memòria Oficial dels Jocs de la XXVa Olimpíada Barcelona 1992. Volum IV. Els Jocs. Setze dies d'estiu, Barcelona: Comitè Organitzador Olímpic Barcelona 1992 - Enciclopèdia Catalana.

HOLSA

1992a, Los Juegos Olímpicos como generadores de inversión (1986-1992) ,
Barcelona: Barcelona Holding Olímpic, S.A.

1992b, Barcelona Olímpica. La ciutat renovada. Barcelona: Barcelona Holding Olímpic, S.A.-&AGRAVE;mbit Serveis Editorials.

IMPU

1990, Barcelona, la ciutat i el 92 [Catàleg de la exposició del mateix nom, 21.XI.1990-13.I.1991], Barcelona: Institut Municipal de Promoció Urbanística-Olimpíada Cultural, S.A.

La Vanguardia

1992, La Barcelona del 92. Imágenes de un cambio, Barcelona: La Vanguardia, TISA.

Maragall, Pasqual

1993, Balanç de l'any 1992. L'Estat de la ciutat, Barcelona: Ajuntament de Barcelona-Col·legi de Periodistes de Catalunya.

1994, Balanç de l'any 1993. L'Estat de la ciutat, Barcelona: Ajuntament de Barcelona-Col·legi de Periodistes de Catalunya.

Mariscal, Javier

1992, El libro del Cobi, Barcelona: Edicions de l'Eixample.

Martorell, J.; Bohigas, O.; Mackay, D.; Puigdomènech, A.

1991, La Villa Olímpica. Arquitectura. Parques. Puerto deportivo, Barcelona: Editorial Gustavo Gili, S.A.

Samaranch, Juan Antonio

1992, "Jeux de la XXVe Olympiade: Discours d'ouverture par Juan Antonio Samaranch, president du CIO et Pasqual Maragall, Maire de Barcelone, president de COOB'92", a Revue olympique, n. 300, octobre: 473.

1992, "Jeux de la XXVe Olympiade: Discours de clTMture de S.E.M. Juan Antonio Samaranch", a Revue olympique, No. 300, October: 574-575.