The economic impact of the Barcelona Olympic Games, 1986-2004

Barcelona: the legacy of the Games 1992-2002

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4

Introduction

Barcelona's dream of hosting an Olympic Games which would achieve the highest levels of human and sporting quality was fulfilled. In the process, the city itself underwent an impressive urban transformation. Overall, we can say:

- A. The Barcelona Games were a total success in organisational and sporting terms.
- B. The urban transformation generated by the Games had far-reaching economic and social impacts.
- C. Barcelona has been highly successfully in harnessing the impetus and legacy of the Games: by 2001, the city was ranked as the Europe's sixth most attractive.

Consequently, the Barcelona Games, their organisation and impact, have become a model from the sporting, organisational, economic, social and urban planning perspectives. In this article sets out to study the following:

- I. The organis ation of the 2002 Games in terms of the model adopted, methods and resources used over the 1986-1992 period.
- II. The impact of the investments made on economic activity, employment, income, construction, tourism and transport, with special emphasis on the 1992-2002 period.
- III. The city's harnessing of the Olympic impetus to improve its strategic position with a view to the future (2002-2010).

I. 1986-1992: Resources

Preparing for the Games: an opportunity to foster investment, organisational excellence and urban transformation of the city

In organising the Olympic Games, Barcelona aimed to ensure sporting excellence in keeping with the Olympic spirit, and also to bring about a major urban transformation leading to improved quality of life and greater attractiveness for the city as a whole.

The Barcelona'92 Organisational Model

The key to the success of the Barcelona Games (Samaranch, 1992) lies in the strength of the objectives (organisational excellence and urban impact), the inter-institutional consensus, the use of special management bodies, mixed private-public funding models, and also the successful harnessing of the Olympic impetus and attracting of investments.

These features and the excellent results achieved (Barcelona City Hall, various years)¹ constitute a "Barcelona model" for urban transformation linked to major events. Figure 1 sets out the main features of this model.

Economic resources of Barcelona'92: the cost of the Games and source of funding

A distinction must be drawn between organisational costs (items not usable after the Games) and investment in building work and facilities which would continue to serve the city in the future. The organisational costs are in effect the genuine "net cost", since their functions end with termination of the Games. Therefore, the aim was to minimise these organisational costs. In contrast, facilities and infrastructure constitute part of the Olympic Legacy, the benefits of which continue after the Games, and were therefore to be maximised.

The resources allocated to organisational costs and investments in facilities and infrastructure, and their impact, are set out in Table 1. There is a major difference between total organisational costs (1,364 million dollars – hereafter, M \$, mainly funded by the Organising Committee) and the investments in infrastructure and facilities (8,012 M \$). The latter accounted for 85.5% of total Olympic spending (Figure 4).

COOB'92 closed their accounts in July 1993: spending had totalled 195,594 million pesetas, that is, 1,638 M \$ (equivalent to 1,678 M \$ at 2000 rates), with a surplus of 3 M \$ (COOB'92, 1993).²

Income accruing directly to COOB'92 itself accounted for 75.2% of the total. The main sources of this income were sponsorship and television rights. In organisational costs, the main outgoings were for television and press facilities (International Communications Centre and technology), the competitions themselves and Olympic family services (Table 1 and Figure 2 for exact distribution). The main COOB'92 costs lay in services (49.9% of the total), followed by investments in infrastructure (33.8%).

Olympic Organising Committee income, 1964-2008

In comparison with other Olympic Games, the Barcelona Games were outstanding for the increased Organising Committee income, investment in facilities and infrastructure, and impact (Figures 3, 7 and 9) (International Olympic Committee, 2001, 2002a and 2002b). The Games continue to have an impact.

- a) In general terms, as an organisational model the memory of the excellent organisational and sporting results lives on (Rogge, 2002); and as a model of urban transformation;
- b) Locally, in the present effects of the Olympic investments, in the scale of the Olympic Legacy and the far-reaching impacts of the city's improved strategic positioning.
- c) Herein lies our interest in studying the investment in infrastructure and facilities generated by the Barcelona Games, the city's harnessing of the Olympic legacy, and the ongoing investment and urban renewal process (Brunet, 1995a and 1996).

Construction work for the Barcelona Games

The central Spanish government and Barcelona City Hall set up a joint venture, Barcelona Holding Olímpic, S.A. (HOLSA), to facilitate the investment process. In an excellent example of mixed publicprivate funding, HOLSA built the main Olympic facilities, the bulk of the 78 km of new road infrastructure and the Olympic Village.

Given the Barcelona'92 objectives, a vast amount of construction work was required, and much more was also indirectly generated, most of the latter not being directly necessary for the holding of the Games. This is one of the aims of candidate host cities: to generate construction of as much infrastructure and facilities

as possible which will serve the city in the aftermath of the event itself. Total such spending linked to the Games over the 1986-1993 period amounted to 8,012 M \$ (for details see Tables 1 and 3).

The main construction work was as follows :

- I. Road and transport infrastructure;
- II. Housing, offices and business premises;
- III. Telecommunications and services;
- IV. Hotels;
- V. Sports facilities;
- VI. Environmental infrastructure.

A total of 61.5% of Olympic funding was allocated for building work. This illustrates a key feature of Barcelona'92: its structuring effect on the city.³ The deepest impacts of the Olympic investments are in the long-term.

The Barcelona rondes or ring-roads, the re-opening of the city to its seafront via construction of the Olympic Village, the creation of a range of new urban sub-centres and the Olympic facilities at Montjuïc, the Diagonal and Vall d'Hebron, were the main Barcelona building projects (HOLSA, 1990).

The scale of the urban transformation arising from the Games was immense: new roads represented an increase of 15% over those existing in 1986; new sewage systems, 17%, and new green areas and beaches, 78%. Another outstanding feature of the Games was regional decentralisation: Olympic investment also went to numerous sub-host cities. Of the total investment, only 38.5% was located in Barcelona city. The immediate impact was, therefore, felt throughout the region.

Another important aspect was that construction of sports facilities accounted for only 9.1% of the total investment. This small percentage reflects the great volume of additional indirect investment attracted by the impetus of the Games.

A total of 36.8% of the Olympic building work was promoted by the private sector, and one-third of this was funded with foreign capital. Private investment focused on:

- I. Housing
- II. Hotels
- III. Business Centres

The high level of private investment was sparked by expectations of improvement in the city's attractiveness (Roldán, 1992).

The financial balance Barcelona 1992

The Games require public resources which, in turn, generate further public resources. The thesis is that if the Games are fostered by the public sector, the public administration will itself benefit far in excess of the cost of the investment. The aim was then to minimise public funding for organisational costs, and to direct it towards construction of infrastructure and facilities.

Public funding may rise to levels above those originally foreseen or promised. However, the greater the public investment, the greater the private investment which will follow, and the greater the legacy, the additional activity and employment generated. Public return will also rise in line with increased investment and activity.

The financial balance sets out all the Olympic-related public administration costs and the income generated by the Games, both directly and indirectly.

Table 2 sets out the financial balance of the Barcelona Games. Two periods are considered: the preparatory period (1986-1992), and the aftermath of the Games. Up to 1992, we see that public infrastructure costs were high, but so was public administration income due to taxable Olympic activities. After 1992, public Olympic-related spending was limited to maintenance of the Legacy, yet income deriving from greater private capital and economic activity generated by the Games had risen sharply. Therefore, in both periods, the financial balance is clearly a positive one.

Even by 2004 then, public investment in the Games had received ample returns, as shown in Figure 7. The financial balance presented here has been estimated with an error margin or +/- 15%. However, it does not include income deriving from company social security contributions. Including this figure, the surplus would be as follows: + 6,835 M \$ for 1986-1992; + 2,608 M \$ for 1993-2001; + 3,873 M \$ for 2002-2010.

II. 1992-2004: Impact

Successful harnessing of the Olympic impetus and generation of further investment and activity

The impact of the city's nomination as Olympic host city was immediate: unemployment underwent a dramatic fall, the housing market came back to life and, of course, the construction industry underwent a boom (Brunet, 1995b).

However, one decade later, it is surprising to find that this expansive trend continues: 1993 was worse than 1992 – as it was in the entire region, and indeed in all of western Europe; however, every year since has seen new growth records on all indicators: employment, investment, income, attractiveness, etc. Not only did Barcelona react well to the Games, it succeeded in maintaining the growth generated, on a scale never seen before.

The economic impact of the Games

The labour market of Barcelona and its hinterland benefited substantially in the run-up period to the Games. The numbers unemployed fell from an all-time high of 127,774, in November 1986, to as low as 60,885, by July 1992, during the Games themselves (Figure 6). Between October 1986 and August 1992, Barcelona's general unemployment rate fell from 18.4% to 9.6%, while the Spanish figures were 20.9% and 15.5%, respectively. In the preparatory phase, Olympic-based activity generated annual occupation rates of an additional 35,309 persons, on average.

In addition, Olympic-linked investment in infrastructure and facilities led to additional permanent employment for an estimated 20,019 people. Therefore, the average annual effect over the 1987-1993 period of Barcelona'92 was employment for some 59,328 persons. From this we can conclude that at least 88.7% of the reduction in unemployment registered in Barcelona between November 1986 and July 1992 (66,889 fewer unemployed) was due to the Games.

After the Games, unemployment in Barcelona rose by 21,000 persons, a figure approximately equivalent to the annual employment provided by COOB'92. Over the following years, unemployment fell significantly (Figure 6). The investment generated by the Games provided a soft mattress, breaking the fall in a context of general depression. Barcelona's economy proved resistant to the widespread repression and, after 1994, once again began to create employment (1993, 41,450 new jobs had been created, representing a halving of the unemployment figures. In 1993 and 1994, the numbers in unemployment increased by 18,000 persons; however, after 1995 unemployment was to fall, thanks, in part, to some 20,230 permanent jobs deriving from Olympic investment (a legacy of 956,000 million pesetas in company capital).

The remaining economic indicators confirm Barcelona's progress over the years after the Games. Let us take the construction sector, for example. Graph B in Figure 6 sets out the increased consumption of cement – multiplied by 2.5 – between 1986 and 1992, and this figure was to grow to a total of 3.5 times the 1986 figure by 2001. House building also expanded, despite the fact that as a city Barcelona's building potential had already been relatively well exploited.

The response capacity of Olympic host cities: Barcelona as an exception

Between 1986 and 2000, Barcelona's hotel capacity increased threefold. Parallel to this, the number of visitors from abroad visiting the city doubled, reaching a total of 3.5 million visitors per year. In comparison with the other host cities over the last 12 years, Seoul, Atlanta and Sydney, Barcelona's results are outstanding. In some areas, they are truly exceptional, as for example, in the figures on hotel capacity and the number of foreign visitors.

Barcelona's response to the Olympic stimulus has been more intense and sustained than that of the other host cities. This has made Barcelona'92 a model in so far as impact is concerned. This is where Barcelona's performance was exceptional: in its extraordinary and sustained capacity to ride the Olympic wave.

The "Barcelona Olympic Impact Model"

The immediate impact of the Olympic Games was highly notable. However, what was truly surprising was the impact and scale of the permanent Olympic Legacy, and the continuation of this impact over the 1992-2002 period. The "Barcelona Olympic Impact Model" and its main results are summarised in Figure 8.

The key element of this model is investment in infrastructure, both in terms of quantity and quality. However, this impact model presupposes a certain organisational model for the Games and also involves urban transformation of the city. The model is based on maximisation of investment, attraction of further investment and temporal concentration. Given the scope of urban transformation sought, continued investment is essential. This has occurred in the case of Barcelona (Table 3).

Barcelona has been highly successful in harnessing the Olympic impetus and benefiting from the investment made, and this had facilitated change. The resources allocated to urban infrastructure led to temporary employment in the necessary construction work, followed by permanent employment in operation of this infrastructure. Both led to increased economic activity, although not all of it was concentrated in the city itself. The capital invested and the increased economic activity led to increased wealth, wellbeing, and social cohesion and made the city more attractive.

Comparison of Olympic impacts, 1964-2008: Barcelona as an exception

A database has been prepared to compare the Olympic impact of various host cities in terms of organisation, investment and resulting economic impact (Figure 9).⁴

Barcelona's performance again stands out. The Olympic investments and their economic impact are without parallel in the other host cities. Only Tokyo reached half the volume of the investment generated in Barcelona. Investment was also significant in Seoul; however, Olympic investments in Atlanta and Sydney were very limited. The projections for Athens and Beijing include major investment and impact, more along the lines of Barcelona.

III. 2004-2010: Strategy and perspectives

The Olympic Legacy and continued investment as driving forces for Barcelona's new strategic position

Now in 2004 we can see that the investment made between 1986 and 1992 were the key to the city's urban transformation and its improved strategic positioning.

Investment in infrastructure and urban transformation, 1986-2010

The investments are the key element within the economic resources mobilised by Barcelona'92, and were crucial in the economic impact of the Games, the city's transformation and the subsequent increase in economic activity, income and wellbeing.

The investments explain a great part of Barcelona'92's exemplary success and were notable both in terms of the quality of the infrastructure and scale of funding (10,660 million Euro). They constitute the Olympic Legacy which underpinned much of Barcelona's economic and social boom in the 1990s.

Not only were the investments central to the original Olympic impetus, they were also important in completing the impact and enabling continuation of the urban transformation and strategic strengthening process. For this reason, the investments made post-1992 are also set out in Table 5. Two central axes served to focus urban transformation in the post-Olympic period:

- $\sqrt{}$ The Barcelona Universal Forum of Cultures 2004.
- $\sqrt{}$ The Poblenou 22@BCN Plan.

The first involves renewal of Barcelona's eastern section, thus completing the Olympic Village seafront (Brunet, 2000). Just as occurred with the Games, the Forum will serve as a framework for large-scale urban planning projects, several of which would be difficult to undertake and complete under normal conditions. Funding is largely public.

The second comprises far-reaching renovation of the Poblenou district (Brunet, 1995a and Trullén, 2000), adjacent to the Forum 2004 site. In this case, the investment is largely private.

These two pillars served to mobilise the investments set out in Table 4 in three phases :

- $\sqrt{1986-1992}$, included for comparative purposes .
- √ 1992-2004, in which other large-scale projects such as the AVE (high-speed train), work on the Besòs and Llobregat rivers, and the extensions to the port and airport were added to the direct investment in the Forum 2004.
- √ 2004-2010, in which investment still pending from earlier projects, and a major public transport initiative covering Barcelona and its hinterland, will be added to direct investment in the Poblenou area.

To complete our view of Barcelona's urban transformation process up to and beyond 2004, we must include the inner-city renovation projects (PERI) taking place in various parts of the city: Ciutat Vella, Eixample, Gràcia, Nou Barris, etc.

The Olympic Legacy and Barcelona's strategic perspectives

The new public and private capital and the permanent employment generated by the Olympic investments constitute the city's Olympic Legacy; a legacy which included the city's urban transformation, changed economic structure, increased capitalisation, increased service sector activity, heightened international role, attractiveness, centrality, productivity and competitiveness. Barcelona has been outstandingly successful in strengthening and maintaining the Olympic impetus, thus increasing its own level of economic activity and income, improving its quality of life and social cohesion, and advancing strategically.

Business confidence in Barcelona, as reflected by the willingness of foreign companies to establish there (a combination of attractiveness, availability of services, workers, market, and competitiveness) improved notably in the aftermath of the Games (Healey and Baker, 2001). In 1990, Barcelona occupied 11th position; by 1993, it had risen to 10th, and by 2001 it was in 6th position (Table 4).

The city 's capacity to prolong the Olympic impact has enabled it to offset impediments such as disputes between different public administration bodies, and the delay in providing certain infrastructure, such as the high-speed train (AVE). It has also enabled it to avoid drowning in a sea of uncertainty with regard to the seafront and urban renewal programme (Mackay, 2000) associated with the Forum 2004. And, although it does have certain disadvantages (it is neither a state capital nor headquarters for many

multinationals, and suffers from shortcomings in public transport, language training, worker mobility and available development land, etc.), Barcelona continues to attract investment and enterprise.

Barcelona, model and reality

We can talk of a "Barcelona model" in three respects:

- $\sqrt{}$ A model for organisation of the Olympic Games (Figure 1).
- ✓ A model for economic impact of the Olympic Games, especially in terms of investments not directly linked to the Games (Figure 5).
- $\sqrt{}$ A model for urban transformation, improved attractiveness and strategic positioning (Figure 8).

The use of the term "model" has become widespread and seems to have been accepted. In analytical terms, a model is an organised set of forms and procedures, shorn of accessories. However, in everyday usage, "model" includes the extra content, in this case the objectives and results.

The objectives of Barcelona'92 were very clear (sporting and organisational excellence and the urban transformation of the city) and so were the procedures (institutional unity, mixed public-private funding, etc.). And since the results of this "Barcelona model" were positive, then the term "model" is often used in the sense of being exemplary for other cities organising similar events. It seems that it did serve as a model in this sense for Sydney, and that it will also do so for Athens and, possibly Beijing as well. Barcelona has then become a model for other Olympic Games and cities.

Conclusions

Thanks to the Olympic Games, Barcelona is now a different city. The organisation was optimum, fostering massive investment in infrastructure. Thanks to correct use of the Olympic Legacy, increased capital and improved attractiveness, the urban development process has continued long after 1992.

The organisation (Figures 1, 3 and 4), the investment (Tables 1 and 3), the economic and social impact (Table 1, Figures 5 and 8), the urban transformation (Figure 5), the efficient use of the Olympic Legacy (Figure 8) were all highly positive. This is why we refer to the "Barcelona model" for organisation of megaevents, economic impact and urban transformation.

The objective was quality, the implementation excellent, both in the preparatory and follow-up phase. Of equal importance however, was the city's capacity to harness the Olympic impetus. Comparison with other Games and cities over the 1964-2008 period, shows that Barcelona was most successful in harnessing the Olympic impetus and its impact (Figures 3, 7 and 9, Table 4).

The continued investment in infrastructure and development driven by such events as the Forum, and development of the Poblenou district into a high-added value information and technology area, is the key to the city's maintaining its 6th position among European cities.

The city's achievements from 1986 to 1992 and again after 1992, have been enormous. Yet the challenges facing it now and in the future are similarly daunting. The investment in urban transformation must go on. European integration and globalis ation are factors which favour Barcelona, as long as the city maintains the Olympic spirit, and continues to implement the "Barcelona model".

Tables

Table 1. Economic resources of the Barcelona Olympic Games 1992: source, application and impact

| Accumu | Accumulated value 1986-1993 | | US \$ (000,000) Current | | Euros (000,000) At 2000 rates | | ion (%) |
|----------------------|---|----------------|-------------------------------|------------|-------------------------------------|-------------|-------------|
| A. SOURCE OF FUNDING | | 1119510 | 9376 | 11532 | 12474 | 100.0 | |
| 1. Comme | ercial income | 668387 | 5598 | 6886 | 7448 | 59.7 | 100.0 |
| 1.1. | Domestic private company investments | 204697 | 1714 | 2108 | 2280 | 18.3 | 30.6 |
| 1.2. | International private company investments | 108320 | 907 | 1116 | 1207 | 9.7 | 16.2 |
| 1.3. | Spanish state company investments | 130416 | 1092 | 1343 | 1453 | 11.6 | 19.5 |
| 1.4. | HOLSA income | 42306 | 354 | 435 | 471 | 3.8 | 6.3 |
| 1.5. | COOB'92 | 182648 | 1530 454 | 1882 | 2036 604 | 16.3 4.8 | 27.3 |
| | Television rights Sponsors: monetary payment | 54164 58152 | 454 487 | 558 599 | 604 648 | 4.8 5.2 | 8.1 8.7 |
| | Sponsors: nonetary payment Sponsors: payment in kind | 42448 | 356 | 438 | 474 | 3.8 | 6.4 |
| | Lotteries | 20143 | 169 | 208 | 225 | 1.8 | 3.0 |
| | Others | 7741 | 65 | 80 | 87 | 0.7 | 1.2 |
| 2. Govern | nment funding | 451123 | 3778 | 4647 | 5026 | 40.3 | 100.0 |
| 2.1. | State funding for COOB'92 | 12947 | 108 | 133 | 144 | 1.2 | 2.9 |
| 2.2. | HOLSA: MEH and AB credit | 112590 | 943 | 1160 | 1255 | 10.1 | 25.0 |
| 2.3. | State budget investments | 325586 | 2727 | 3354 | 3628 | 29.1 | 72.2 |
| | Barcelona City Hall (municipality) | 22789 | 191 | 235 | 254 | 2.0 | 5.1 |
| | Generalitat de Catalunya (regional government) | 142726 | 1195 | 1470 | 1590 | 12.7 | 25.7 |
| | Spanish state (central government) | 116124 | 973 | 1197 | 1295 | 10.4 | 31.6 |
| | European Union | 8100 | 68 | 84 | 91 | 0.7 | 1.8 |
| | Other public administration bodies | 35848 | 300 | 369 | 399 | 3.2 | 7.9 |
| B. APPLICA | TION AND USE OF RESOURCES | 1119510 | 9376 | 11532 | 12474 | 100.0 | |
| - | sation (COOB'92 programmes) | 162880 | 1364 | 1678 | 1815 | 14.5 | 100.0 |
| 1.1. | Competitions | 14045 | 118 | 145 | 157 | 1.3 | 8.6 |
| 1.2. | Ceremonies and cultural events | 9053 | 76 | 93 | 101 | 0.8 | 5.6 |
| 1.3. 1.4. | Press, radio and television | 18254 | 153 113 | 188 139 | 203 150 | 1.6 1.2 | 11.2 8.3 |
| 1.4. | Preparation of facilities (not including building work) Technology | 13510 24791 | 208 | 256 | 277 | 2.2 | 0.3 15.2 |
| 1.5. | Olympic family services | 37023 | 310 | 381 | 412 | 3.3 | 22.7 |
| 1.7. | Security | 4671 | 39 | 48 | 52 | 0.4 | 2.9 |
| 1.8. | Management and corporate image | 18618 | 155 | 191 | 207 | 1.7 | 11.5 |
| 1.9. | Support structures | 22915 | 192 | 236 | 255 | 2.0 | 14.1 |
| | irces applied to building work (public and private ments linked to the Games) = Olympic Legacy | 956630 | 8012 | 9855 | 10660 | 85.5 | 100.0 |
| 2.1. | Roads and transport | 404514 | 3388 | 4167 | 4507 | 36.1 | 42.3 |
| 2.2. | Telecommunications and services | 123313 | 1033 | 1271 | 1375 | 11.1 | 2.9 |
| 2.3. | Coasts, recovery work and parks | 60438 | 506 | 622 | 673 | 5.4 | 6.3 |
| 2.4. | Housing, offices and premises | 139741 | 1170 | 1439 | 1556 | 12.5 | 14.6 |
| 2.5. | Hotels | 119884 | 1004 | 1235 | 1336 | 10.7 | 12.5 |
| 2.6. | Sports equipment and facilities | 87511 | 733 | 902 | 976 | 7.8 | 9.1 |
| 2.7. | Cultural and health facilities, and others | 21229 | 178 | 219 | 237 | 1.9 | 2.2 |
| C. TOTAL E | CONOMIC IMPACT | 3107788 | 26028 | 32014 | 34628 | 100.0 | |
| 1. Direct i | impact | 1165600 | 9762 | 12007 | 12987 | 37.5 | |
| 1.1. | Resources applied to organisation and building work | 1119510 | 9376 | 11532 | 12474 | 36.0 | |
| 1.2. | (A = B) Spending by non-resident visitors | 46090 | 386 | 475 | 514 | 1.5 | |
| 2. Indirec | | 1942188 | 16266 | 20007 | 21641 | 62.5 | |
| | • | | | | | | |

Table 2 | Financial balance of the Barcelona Olympic Games 1992

| | Before the | | 1002 (| | the Games | | |
|--|----------------------------|------------------------------|-----------------------------------|-----------|----------------------|--------------------|-----------|
| Current accumulated monetary values in Millions | 1986- | US \$ | 1993-2 | US \$ | | 2002-2010 | US \$ |
| | Pesetas (000,000) | (000,000) | Pesetas (000,000) | (000,000) | Pesetas (000 000) | Euros (000,000) | |
| A. Fiscal income for Public Administration from organisation of Barcelona Olympic Games 1992 a | | | | (000,000) | (000,000) | (000,000) | (000,000) |
| 1. Central Spanish Government | 7593 | 80 6359 | 445024 | 2781 | 636191 | 3824 | 3534 |
| . VAT | 1864 | 67 1562 | 120314 | 752 | 178580 | 1073 | 992 |
| Company tax | 776 | 94 651 | 37598 | 235 | 55806 | 335 | 310 |
| Income tax | 3107 | 79 2603 | 150392 | 940 | 223225 | 1342 | 1240 |
| Savings on unemployment payment | 1844 | 40 1545 | 136720 | 855 | 178580 | 1073 | 992 |
| 2. Generalitat de Catalunya (regional government) Inheritance and legal deed tax | 23 | | 7500 | 47 | | | 63 |
| innentance and legal deed tax | 23 | | 7500 | 47 | 11250 | | 63 |
| 3. Barcelona City Hall (municipal government) | 21 | | | 297 | 57059 | | 317 |
| Tax on economic activities (IAE) | | | 18776 | 117 | | 135 | 125 |
| Property and capital gains tax | | 00 4 | 27490 | 172 | | | 183 |
| Planning and waste disposal fees, and other sources of income | | 00 3 | 1260 | 8 | | | 9 |
| 4. Other Public Administration bodies | 2 | 00 2 | 600 | 4 | 700 | 4 | 4 |
| Total public administration income deriving from Olympic | | | | | | | |
| Activities B. Public Administration investment and expenses in organisation of the Barcelona Olympic Game | 7640 es 1992 and in rel | 27 6398 ated public and p | 500650 rivate sector activitie | s 3129 | 705200 | 4238 | 3918 |
| 1. Central Spanish Government | 1990 | 71 166 | 7 68692 | 429 | 70192 | 422 | 390 |
| MOPU and other Ministries | 1161: | 24 972 | 2500 | 16 | 4000 | 24 | 22 |
| State payments to COOB'92 | 1294 | 47 108 | - | - | - | - | - |
| 1/2 HOLSA annual funding 1993-2009 (MEH) | | | 66192 | 414 | 66192 | 398 | 368 |
| Tax reductions for Olympic activities | 500 | 00 419 | - | - | - | - | - |
| Other services not listed | 200 | 00 167 | - | - | - | - | - |
| 2. Generalitat de Catalunya (regional government) | | | | | | | |
| Infrastructure: building / maintenance | | | | 375 | | | 417 |
| 3. Barcelona City Hall (municipality) | 283 | | | 1039 | 191192 | | 1062 |
| Barcelona City Hall and municipal areas | 2278 | | | 63 | | | |
| ¹ / ₂ HOLSA annual funding 1993-2009 (AB) | | | 00102 | 414 | | | 368 |
| Extraordinary municipal services in relation to the Games | 403 | | | - 563 | - 110000 | - 661 | - |
| Maintenance and amortisation of Olympic facilities 4. Other Public Administration bodies | 150 3584 | | | 503 88 | | | 611 36 |
| 5. European Union | 3584 | | | 88 | 6500 | 39 | 30 |
| | | | | | 242004 | - | 1005 |
| Total public investment and spending on Olympic activities A-B. Financial balance of the Barcelona Olympic Games 1992 | 4140 | 70 346 | 8 308884 | 1931 | 342884 | 2061 | 1905 |
| Income-expenses = Financial balanc | 3499 | 57 2930 | 191766 | 1198 | 362316 | 2177 | 2013 |
| | | DC 400 | 00074 | 450 | 45000 | 070 | 050 |
| Yearly average financial balanc Yearly average in millions of euros at 2000 rates | | 26 488 50 | 3 23971 26 | 150 7 | 45290 | 272 505 | 252 |

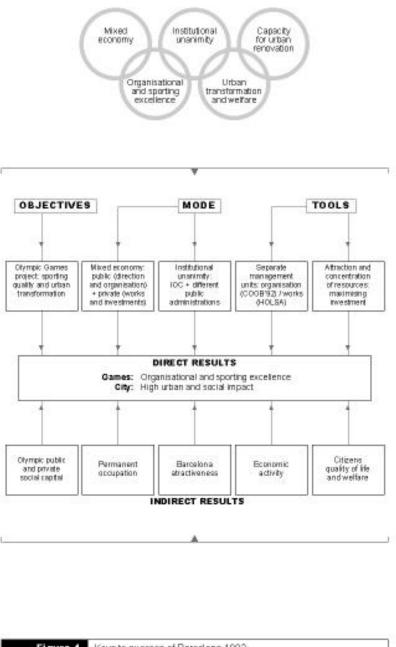
Source: This research and Brunet (1994 and 2000).

| Accumulate d values in | 1986-1992 | | 1992-2004 | | 2004-2010 | |
|------------------------------|---|---------|--|--------|--|----------|
| millions of | Public and private inv related to the Olympic Olympic Legac | Games = | Investments in metropolitan ec infrastructure | onomic | Investments related to Barcelona Poblenou 22@BCN | 2004 and |
| Coasts, recovery | y work and parks | 673 | Environmental infrastructure | 930 | Environmental infrastructure | 180 |
| Telecommunicat | ions and services | 1375 | Telecommunications (telephones and cables) | 2036 | Seafront | 75 |
| Housing, offices | and premises | 1556 | AVE and non-regional trains | 1658 | AVE | 2100 |
| Hotels | | 1336 | Extension of airport | 925 | Extension of port | 80 |
| Sports equipmer | nt and facilities | 976 | Extension of port | 841 | Port, diversion of Llobregat river & Logistics Zone | 150 |
| Cultural, health f others | acilities and | 237 | Electric network | 589 | Diagonal Mar, Forum 2004 and Sant Andreu | 72 |
| | | | Road network | 1502 | Metropolitan public transport | 729 |
| Roads and trans | sport | 4507 | Metro, urban trains, trams and buses | 1394 | Poblenou 22@BCN | 267 |
| | Total | 10660 | Total | 9875 | Total | 1764 |
| | | | + Urban renewal | | | |
| Ciutat Vella | | 1603 | Ciutat Vella, Eixample | 1921 | Ciutat Vella, Eixample, Gràcia, Nou Barris | 240 |
| | General total | 12263 | General total | 11796 | General total | 2004 |

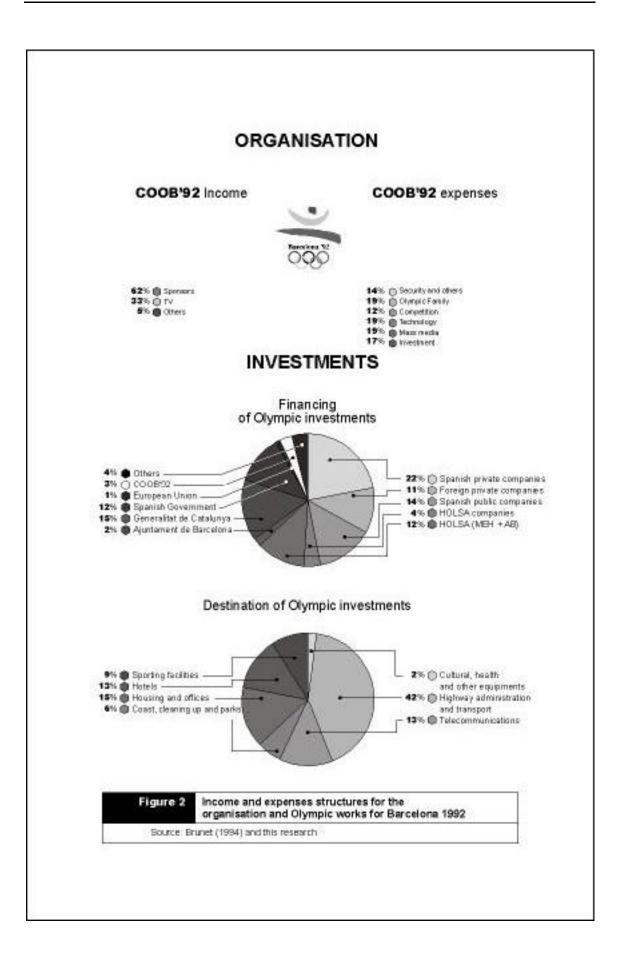
| Table 4 Ranking of European cities | | | | | |
|--------------------------------------|------------|------|--|--|--|
| 1990 | City | 2001 | | | |
| 1 | London | 1 | | | |
| 2 | Paris | 2 | | | |
| 3 | Frankfurt | 3 | | | |
| 4 | Brussels | 4 | | | |
| 5 | Amsterdam | 5 | | | |
| 11 | Barcelona | 6 | | | |
| 7 | Zurich | 7 | | | |
| 17 | Madrid | 8 | | | |
| 15 | Berlin | 9 | | | |
| 12 | Munich | 10 | | | |
| 9 | Milan | 11 | | | |
| 8 | Geneva | 12 | | | |
| - | Dublin | 13 | | | |
| 13 | Manchester | 14 | | | |
| 19 | Stockholm | 15 | | | |
| 16 | Lisbon | 16 | | | |
| 6 | Düsseldorf | 17 | | | |
| 14 | Hamburg | 18 | | | |
| 10 | Glasgow | 19 | | | |
| 18 | Lyon | 20 | | | |
| 23 | Prague | 21 | | | |
| 21 | Budapest | 22 | | | |
| 20 | Vienna | 23 | | | |
| - | Copenhagen | 24 | | | |
| - | Rome | 25 | | | |
| - | Helsinki | 26 | | | |
| 25 | Warsaw | 27 | | | |
| - | Oslo | 28 | | | |
| 22 | Athens | 29 | | | |
| 24 | Moscow | 30 | | | |

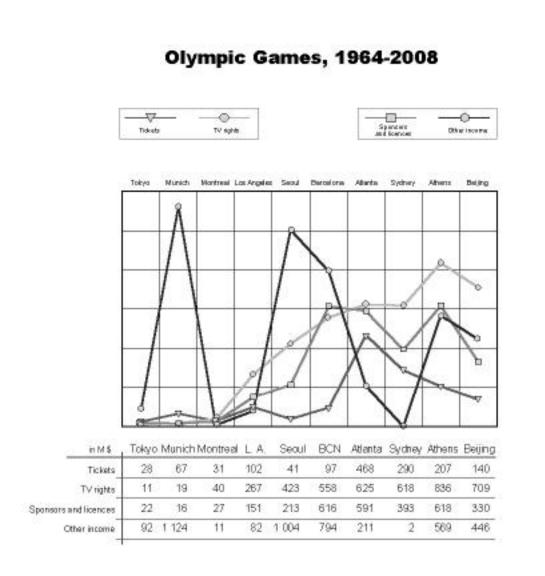
Source: Healey & Baker (2001).

Figures

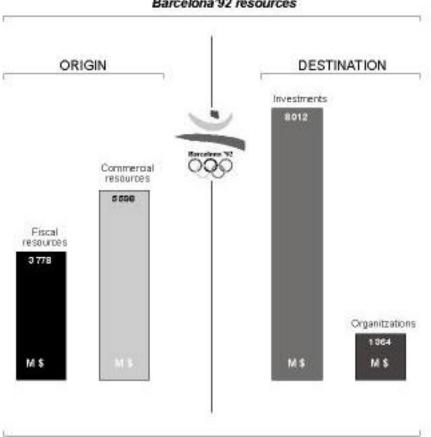


| Figure 1 | Keys to success of Barcelona 1992 |
|--------------|-----------------------------------|
| Source: Brun | et (1994) and this research |



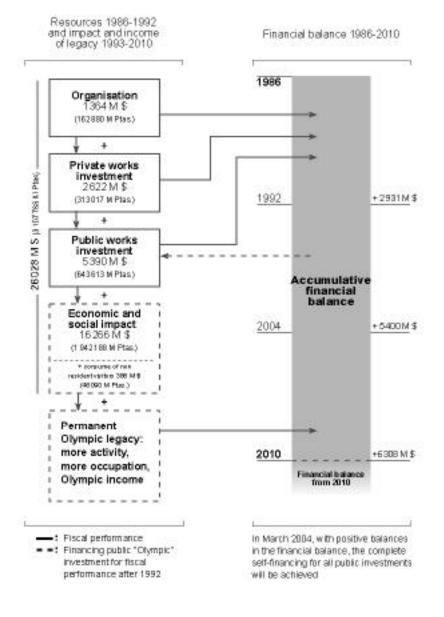


| Figure 3 | Organising Committees of the Olympic Games income 1964-2008: dynamic and structure |
|------------|---|
| Source: Br | unet (1994 and 1997) and IOC (2001 and 2002b) |

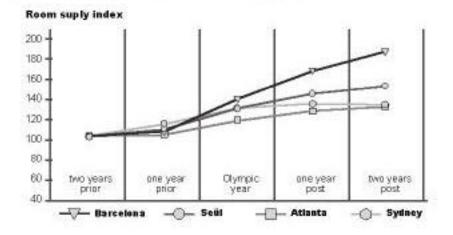


Barcelona'92 resources

| Figure 4 | Barcelona 1992 resources commercial and budget origin and destination in investments and works |
|------------|---|
| Source: Ta | die 1 in this research |

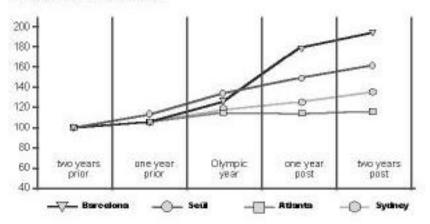






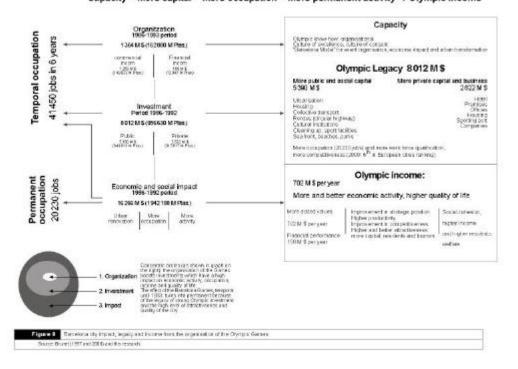
A. Hotel offer, increase before, during and after the Olympic Games

B. Foreign visitors: increase before, during and after the Olympic Games



International arrivals index

| Figure 7 | Olympic cities response | |
|------------|---------------------------------|--|
| Source: Jo | nes Lang LaSalle IP Inc. (2002) | |



 $Organitzation + Investments + Impact \rightarrow Olympic Legacy = Capacity + More capital + More occupation + More permanent activity \rightarrow Olympic income$

Olympic Games, 1964-2008

| | Tokyo | Munidh | Montreal 1 | .os Angeles | Seoul | Bevoelona | Atlenta | Sydney | Attens | Beijing |
|-------------------------------------|-------|-------------------------|--|-------------|-------|-----------|---------|--------|---------|---------|
| | - 0 | Overwarked (| e ette Game Dismple invest mentini mpact | trant | | | | | | |
| | | | | | | | | | | |
| in million of constant 5 in 2000 | Tokyo | Munich | Montreal | L. A. | Seoul | BCN | Atlanta | Sydney | Athens | Beijing |
| Organisation of the Games | 169 | 617 | 451 | 628 | 698 | 1678 | 543 | 1099 | 2 2 3 0 | 1435 |
| | | the second data and the | | | | 10,000 | 1301 | 1.500 | 4 70.0 | 0017 |
| Generated Olympic Investment | 5 106 | 1652 | 3123 | 88 | 3908 | 10 330 | 1301 | 1500 | 4736 | 8817 |

| Figure 9 | Economic resources used by the Olympic Games, 1964-2008: organisation, investment and impact |
|------------|---|
| Source: Br | net (1994) and IOC (2001 and 2002b) |

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¹ I wish to thank Ramon Maria Canals, of the Statistics Department of Barcelona City Hall.

² As the project advanced, public and private investment far exceeded initial projections: 1,984 M \$, April 1985; 6,435 M \$, March 1991, and 9,376 M \$, finally in July 1993. The real cost, the organisational expenses, remained fixed in current peseta rates, but the volume of investment generated by the Games rose extraordinarily.

³ According to an urban planning perspective represented by Bohigas (1986), Busquets (1992) and Esteban (1999), among many others.

⁴ On the impact of the Games, in addition to the International Olympic Committee (2001, 2002a and 2002b), see, for Seoul, Jong-Gie et al. (1989) and Do-Young (1999); for Atlanta, Humphreys and Plummer (2002), and for Sydney, Centre For Regional Economic Analysis – Arthur Andersen (1999) and Preuss (2000). *Cf.* also Organising Committee For The Olympic Games Athens 2004 S.A. (2002) and Organising Committee For The Olympic Games Beijing 2008 (2002).