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"HOW (WELL) DID THE FAIR GO?" ESTIMATION OF THE ECONOMIC IMPACT OF TOURIST EVENTS: THREE CASE STUDIES

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1. INTRODUCTION

Towards the end of 2005, the Town Council of Vic commissioned us to measure the "profitability" of the city's three main annual events: the Palm Sunday Market ("Mercat del Ram": MR), the Live Music Market ("Mercat de Música Viva de Vic": MMVV), and the Medieval Market ("Mercat Medieval": MM). The results of the research were to be used to justify, in fiscal terms, the investment necessary to organize these fairs, to provide arguments to support requests for sponsorship, and to determine the number of visitors and their profiles. The more general aim was to come to an understanding of how the specific characteristics of the events affect their economic impact, and thus to contribute to the establishment of useful criteria for decision-making related to the design and management of the markets.

Our approach consisted of applying the proposals, methods and concepts of studies of economic impact in tourism, in general, and of events, in particular. Our formal objective was to estimate and compare the direct and indirect economic impact of the MR, MMVV, and MM in 2006. This required answers to questions such as: How many visitors from outside Vic did each fair attract? How much did these visitors spend? What revenues did each fair generate for the homes and businesses of the city? And how many jobs?

This research makes the special contribution to the literature of the case of a comparative estimate of the economic impact of three events with very different characteristics but all promoted by the same entity and held in the same city during the same year. We treated the MR as an enclosed fair; the MMVV, on the other hand, was open, with concerts all over the city and concentrated within a few hours, while the MM was also open but was treated as a circuit. In addition, an important contribution of this study is the use of evaluation indicators from public administration to evaluate the economic impacts of events.

2. VIC AND THE THREE MARKETS

The city of Vic is situated 70 kms. to the north of Barcelona. Known as the "City of the Saints", it is a bishopric and the demographic, administrative and service centre for an

area of some 150,000 inhabitants. The historic centre and especially the main square, the Cathedral and the Roman Temple are of great architectonic and cultural value, as is the Episcopal Museum of Vic, which houses one of the world´s most important collections of Romanesque art. Outstanding figures such as the philosopher Jaume Balmes and the poet Jacint Verdaguer received their education at the Seminary of Vic. Apart from historical considerations, Vic is also famous for the production of pork sausage meats, particularly that known as "llonganissa". Finally, apart from the traditional Saturday market in the main square, every year the Town Council promotes twenty sectorial events such as fairs, markets and congresses and amongst these are the MR, MMVV and MM.

The MR is an agricultural and live-stock fair which takes place for two days in the area of the Sucre and on the streets of Vic and in which live-stock farmers, manufacturers of animal feed, horticultural and gardening firms, amongst others, show their products. At the same time, cultural, sports and religious entities organize activities such as competitions, exhibitions and processions. The visitors are thousands of families and groups of friends from Osona and other areas. The vast majority come to the MR as a tradition, to wander around and see animals, while only a very small number come for professional reasons.

The MMVV has taken place for the last 19 years. Every September professionals of the music industry come from Spain, Latin America and southern Europe to gather for four days in Vic. On the one hand, this 'market' offers musical groups and their managers, who pursue the promotion of discs, contracts and live performances, and on the other, the demand is from the organizers of festivals and live-music programmes, who discover and contract groups, make contacts and gather up-to-date information on the sector. Besides being a professional fair, the MMVV is also a popular music festival attracting thousands of young people from Osona and other parts of Catalonia, who come to have fun and enjoy the more than 100 concerts taking place in the city.

In no more than 11 years, the MM has become one of the main events in Vic. It consists of a "journey in time" to the Middle Ages: over a long weekend in December, the city is filled with the aroma of herbs, decorated with heraldic flags and shields and comes to life with the performances of jugglars, fakirs and jesters. In addition, masons, potters, weavers and falconers teach their traditional skills, while street-vendors dressed as medieval merchants make and sell craftwork, herbal remedies and homemade foodstuffs. The visitors to this event are thousands of families, couples and groups of friends, the majority from outside Osona, who stroll, purchase, eat and look on at the workshops.

3. METHODOLOGY

3.1. General approach

In order to estimate the economic impact of the three markets, we adopted a traditional approach of studies of the economic impact in tourism, synthesized in the following general formula (Stynes, 1997):

$$\text{Economic impact} = \text{Number of visitors (N)} * \text{Average spending per visitor (S)} * \text{Multiplier (M)}$$

We obtained the direct impact on output (DIO) by multiplying the number of visitors/day that the three events attracted to the city (N) by the average daily spending of the visitor/day (S). In order to estimate the DIO, we considered the spending of three types of visitor: general public, professionals and suppliers. Firstly, we estimated the effective number of general visitors/day (N1) –general public, spectators, tourists– by means of the tallying systems, secondly, the Town Council provided us with the effective number of professional visitors/day (N2) –exhibitors, accredited visitors, vendors–.

In parallel, we investigated the average daily spending per visitor/day of the general public (S1) and of the professionals (S2) by means of a personal survey. We were thus able to obtain the total spending of the general visitors (TS1) and of the professionals (TS2) by multiplying N1 and N2 by S1 and S2 respectively. We then made an approximate calculation of the spending of the suppliers, or effective organizational expenditure (TS3), basing ourselves on the official estimates for the events. Finally we obtained the DIO by adding the TS1, theTS2 and the TS3.

We then obtained the total impact on output (TIO), income (TII) and employment (TIE). In this way, we were able to calculate the indirect impact on output (IIO), subtracting the DIO from the TIO, as well as the multipliers of output (OM), income (IM) and employment (EM). To sum up, we specified the general formula for economic impact as follows:

TIO = DIO * OM = [TS1 + TS2 + TS3] * OM = [N1 * S1 + N2 * S2 + TS3] * OM = DIO+IIO; and as regards the total impacts on income and employment: TII = TIO * IM; and TIE = TIO * EM

3.2. Tally of the public

In general, in the process of obtaining the N1, we worked according to two principles. We excluded the visitors who resided in Vic, since their spending did not represent an entry of "new money" for the city, except in the case of those who did not leave Vic because of the events. We also excluded those who were present by chance and who, though they had not been attracted to the city by the fairs, decided to stay and visit once they were there. Even though, in principle, what these visitors spent cannot be attributed to the events, we have included that part of their expenditure that corresponded to the extra time they stayed in Vic because of the markets.

3.3. Estimate of spending

To estimate spending, we investigated S1 and S2 by means of two personal surveys: survey staff working freely around the fairs asked visitors about their spending in Vic on the day of the survey. More detailed information was obtained by asking visitors about the type of spending. Thus, in the three markets the categories were hotels, restaurants and bars, commerce, transport and other expenses; in the MR and the MM we also asked about purchases at the market stalls and in the MM about spending in the taverns.

Those individuals questioned in the survey were visitors to the three markets, residents and non-residents of Vic, over 18 years of age. We determined the selection and size of the cross-section by means of simple random sampling. We carried out 488 interviews at the MR, 797 at the MMVV and 1,196 at the MM. Of these, 23%, 33% and 26%, respectively, were with residents of Vic and the rest with non-residents. In the calculation of the cross-section we obtained sampling errors of between 3% and 4.5%, with a reliability level of 95.5% and establishing an equality of p=q=50%.

Through lack of resources, we were only able to question professional visitors to the MMVV. We interviewed a sample of 200 exhibitors from among 7,960 professionals. The error was 6.9%, with a reliability level of 95.5% and considering p=q=50%. We estimated the S2 of the MR and MM on the basis of the opinions of experts in the events and taking as a reference the S2 of the MMVV. Specifically, we considered that the S2 of the MR and MM represented 40% and 15%, respectively, of the S2 of the MMVV.

In addition, we estimated the revenues for the city derived from the organization of the three markets on the basis of the budgets prepared by the Town Council.

3.4. Calculation of indirect and total impacts

With regard to the methodology for calculating the impacts of the three markets on the economy, we considered the sum of the total spending of the visitors to the three events, general public (TS1), professionals (TS2) and suppliers (TS3), to be the direct impact of the three events on the output of Vic (DIO). On the basis of this DIO we estimated the total impact on output (TIO), income (TII) and employment (TIE), using the Input-Output Tables for Catalonia of 2001. The following formulas express the calculations we carried out:

$TIO = [I - A]^{-1} * DIO$ on $[I - A]^{-1}$ is the Leontief inverse matrix of the TIOC-2001; I, the identity matrix, and A, the technical coefficient matrix.

TII = I * TIO on I is the vector column of income coefficients

TIE = E * TIO on E is the vector column of employment coefficients

Finally, we calculated the multipliers of the output (OM), income (IM), and employment (EM) of the three events, as well as the indirect impacts, relating the total impacts with the direct impacts. This facilitated a comparison between the multipliers of this study and those of other investigations.

4. RESULTS

4.1. Number of visitors/day

The Appendix shows the N1 and N2 of the three markets. The MM showed the largest N1, with 74,437 visitors in the category of general public/day, more than the other

two events put together. However, per day, it was the MR which attracted more general public/day: 19,138. As regards the N2, it was the MMVV which attracted the largest total of professionals/day: 7,960.

4.2. Average and total spending

Firstly, there are outstanding differences between the S1 of the three markets: on average, a visitor to the MMVV spent double the amount spent by one to the MR and 66% more than one to the MM. These differences were mainly due to the differences in spending in restaurants and bars, but also, though to a lesser degree, to the differences between all the other types of expenditure.

On the other hand, the proportions of the various types of expenditure within the visitors' average daily spending, that is to say, the profiles of their spending, were similar in the three events. Indeed, in all three markets, eating was the main item of expenditure: at the MM and the MMVV this represented approximately 70%, while at the MR it was almost 50%. The visitors to the three markets also coincided in the second reason for spending: shopping, although at the MR this was relatively more important. At the same time, the expenditure for lodging was very low at the three fairs, which indicates that few visitors stayed to sleep in the city.

With regard to the S2, this was outstanding amongst the professionals at the MMVV, who spent, on average, 73.59 euros per day – more than double that of the exhibitors at the MR (30.95 euros) and six times more than that of the vendors at the MM (11.61).

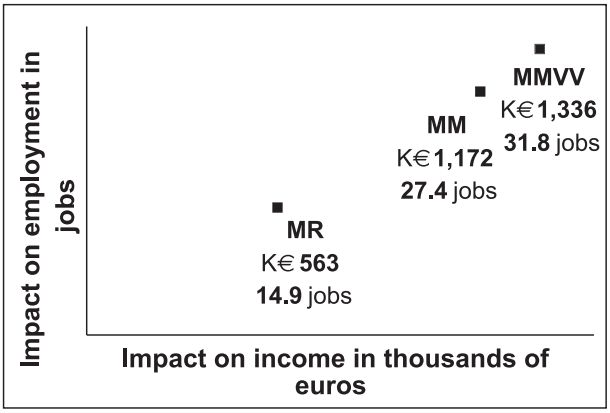
Regarding the organizational expenditure of the markets, the MMVV is outstanding with an impact on output of 321,037 euros, largely due to the considerable amount of aid received from institutions outside Vic. The organization of the MR also caused a significant impact (99,576 euros). And, with regard to total spending, the sum of TS1, TS2 and TS3, both the MMVV and the MM caused double the DIO than that caused by the MR

4.3. Indirect and total economic impacts

Basing ourselves on the direct impact of the three events on output in Vic (DIO), we estimated the indirect and total impacts on output (TIO), income (TII) and employment (TIE) (see the Appendix).

It should be pointed out that the analysis of the TII and the TIE is more interesting than that of the TIO, because the wealth that was generated and the jobs that were created are a better demonstration of the benefit derived from the events than are the sales that were registered. Graph 1 compares the three events: the MMVV caused the greatest TII and TIE.

Graph 1
IMPACT ON EMPLOYMENT AND INCOME OF EACH MARKET
Units: thousands of euros, and jobs.



Source: Our own.

We also analysed the distribution of impacts among sectors of the economy in order to discover which sectors most benefited from the events. Restaurants and bars were the sector that most benefited from the three markets and in second place, the commercial and industrial sectors. The "primary" and "company services" sectors were benefited more in terms of total impact than of direct impact. On the other hand, the "other services" were more to the forefront in effective spending than in other impacts. Transport and hotels show constant low participations in all the variables analysed. Finally, the construction sector had the least relative importance.

5. CONCLUSIONS

To sum up, as regards the direct impact on output, the MMVV, though it attracted less public, was the event that caused the greatest impact because the lower level of attendance was compensated by the high average spending per visitor - both amongst the general public and professionals – a greater number of professional visitors and a higher level of effective organizational expenditure. On the other hand, the lesser relative impact of the MR was due mainly to the low average spending of the general public and also to the low number of professionals who attended. Finally, in comparison, the calculations for the MM showed the professionals with less average spending and the lowest effective organizational expenditure, but, even so, this event caused a high level of direct impact thanks to the greater number of visitors.

With regard to the total impact on income and on employment, we calculated efficiency ratios which relate, by quotient, the total impacts on income and employment with the Town Council transfers. It is an indicator of the profitability for the citizens of Vic, in

terms of revenues and jobs, of their investment in the financing of the events. Here, the MM was the most profitable and the MR the least profitable.

And also, we calculated the ratios that compare the total impacts on income and employment of the three events with the number of effective visitors that they attracted. It is a measurement of the profitability contributed by each visitor. According to this indicator, the MMVV was the most profitable and the MR and MM had similar profitabilities, but much lower than the MMVV.

Finally, we recommended certain measures to be taken to increase the economic impact of the events. As examples: increase the number of professionals at the MMVV given their high daily spending, promote overnight stays in the city during the MR and the MM to increase spending on lodging, increase opportunities for spending at the three markets, create more activities at the MMVV during the day in order to raise the number of spectators and their spending, continue encouraging local firms to participate as stall-holders in the MM, enlarge the proportion of organizational expenditure undertaken by local firms and reward suppliers who obtain their resources locally.

However, the limitations of this study prevented us from evaluating the events globally, for two reasons. On the one hand, we only studied part of the economic impacts: the impact of visitors' spending on output, input, and employment. On the other hand, we did not take into account other types of possible economic impacts, positive or negative, such as the influence on the creation and improvement of infrastructures or the effect on inflation. Neither did we investigate sociocultural nor environmental impacts, beneficial or otherwise, such as an eventual enlivening of local community interest in their own culture or the generation of waste.

This research could be continued in the future in various ways. To begin with, it could be repeated in future editions of the events in order to: firstly, perfect and systematize the methodology; and secondly, analyse the impact of the markets over time. In addition, apart from measuring and describing the impact, research could be carried out into the factors that cause the impact, with the aim of establishing criteria of use for the decision-taking related to the design and management of the events.

Appendix: Main results

SPENDING	MR	MMVV	MM	TOTAL
Number of general visitors/day N1	38,276	27,021	74,437	139,734
Average daily spending per visitor/day of the general public S1	16.44	33.85	20.39	21.91
Total spending of the general visitors N1 * S1 = TS1	629,180	914,690	1,517,469	3,061,339
Number of professional visitors/day N2	1,875	7,960	3,120	12,955
Average daily spending per visitor/day of the professionals S2	30.95	73.59	11.61	52.49
Total spending of the professionals N2 * S2 = TS2	58,035	585,801	36,214	680,050
Total organizational expenditure	360,000	893,520	120,000	1,373,520
Town Council transfers	120,000	119,750	60,000	299,750
Effective organizational expenditure TS3	99,576	321,037	24,894	445,507
DIRECT IMPACTS	**MR**	**MMVV**	**MM**	**TOTAL**
Direct impact on output TS1 + TS2 + TS3 = DIO	786,791	1,821,528	1,578,577	4,186,896
Direct impact on income DII	394,109	951,523	834,324	2,179,956
Direct impact on employment DIE	11.31	23.73	20.04	55.08
INDIRECT IMPACTS	**MR**	**MMVV**	**MM**	**TOTAL**
Indirect impact on output IIO	366,866	826,783	752,187	1,945,836
Indirect impact on income III	169,721	384,991	337,855	892,567
Indirect impact on employment IIE	3.58	8.09	7.35	19.02
TOTAL IMPACTS	**MR**	**MMVV**	**MM**	**TOTAL**
Total impact on output TIO	1,153,657	2,648,311	2,330,764	6,132,732
Total impact on income TII	563,830	1,336,514	1,172,179	3,072,523
Total impact on employment TIE	14.89	31.82	27.39	74.10
MULTIPLIERS	**MR**	**MMVV**	**MM**	**TOTAL**
Multiplier of output OM	1.47	1.45	1.48	1.46
Multiplier income IM	0.72	0.73	0.74	0.73
Multiplier of employment per million euros EM	18.92	17.47	17.35	17.70
RATIOS	**MR**	**MMVV**	**MM**	**TOTAL**
Income generated per euro spent by the Town Council	4.70	11.16	19.54	10.25
Income generated per visitor	14.04	38.21	15.11	20.12
Jobs created per €10,000 spent by the Town Council	1.24	2.66	4.57	2.47
Jobs created per 1,000 visitors	0.37	0.91	0.35	0.49