

Column C Economic Impact of Hanshin-Orix Championships by Region in 2023

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Introduction

In 2023, the Central League championship was won by the Hanshin Tigers (Hanshin) and that of the Pacific League by the Orix Buffaloes (Orix), with both of these professional baseball teams based in the Kansai region. In the Climax Series, the league champions of both the Central and Pacific League won the series, making it the first time in 59 years that two teams from the Kansai region faced off in the so-called “Kansai Derby.” Finally, Hanshin won the Japan Series for the second time in 38 years.

In Column C, in addition to the analysis of the Hanshin and Orix championships, the economic ripple effects of the Climax Series, Japan Series, subsequent victory-related sales, and victory parades are measured using the APIR-Kansai interregional input-output tables.¹⁾ The procedure for measuring economic ripple effects is shown in Figure 2-CC-1.

First, we estimate the new demand generated by winning the championship. New demand is estimated by dividing it into three categories:

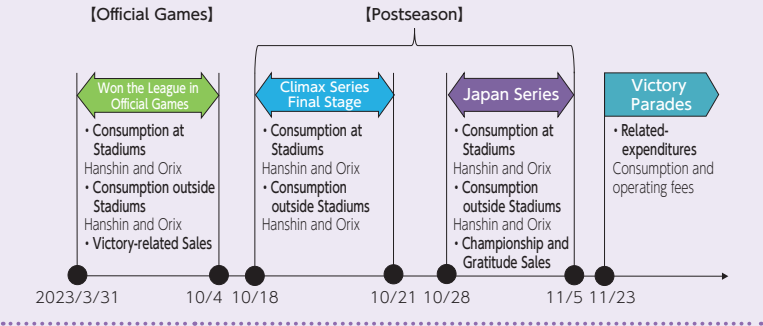


Figure 2-CC-1 Procedure for estimating economic ripple effects

Source: Prepared by the author

1) For a detailed analysis, see APIR-Kansai Interregional Input-Output Tables Project Team (2023).

1) consumption by spectators at the stadium; 2) consumption outside the stadium during official games and the postseason; and 3) the league championship, the Japan championship, and the “Gratitude Sale” (hereinafter referred to as “victory-related sale”), and victory parades. New demand is assumed by region and industry, and is refined to reflect the actual situation as much as possible. The 2015 Interregional Input-Output Table for the Kansai Region were used to calculate the economic ripple effects of the estimated new demand on the entire nation and the Greater Kansai region.

1. Consumption at stadiums

Consumption by stadium-visitors is calculated by multiplying the number of stadium visitors by per capita consumption price. By assuming the case where a team does not win the championship (hereafter referred to as “a normal situation”) and the case where a team did so this year, the difference between the two is considered as the new demand generated by the championship.

(1) Number of spectators at stadiums

Hanshin’s average number of spectators per game in normal conditions is 2,901,110, calculated by multiplying the average attendance of 40,861 per game during the 15 years from 2006, the subsequent year of its last championship to 2019 before the COVID-19 pandemic, by 71, the number of games hosted in 2023. The total attendance in 2023 was 2,915,528.

Orix’s average number of spectators per game in normal conditions is calculated in the same way, using the average number of spectators from 2006 to 2019 before the COVID-19 pandemic as in the case of Hanshin, i.e., 20,939. Multiplying this by 72, the number of games conducted in 2023, Orix’s average attendance is estimated to be 1,507,583. The total number of spectators in 2023 was 1,947,453.

Therefore, the increased attendance due to the 2023 championship would be 14,418 for Hanshin and 439,870 for Orix.

Next, let’s look at postseason attendance. Since post-season games are a net increase compared to normal conditions, the number of spectators thus motivated is directly attributable to the incremental increase

due to the holding of post-season games. In the Climax Series, Hanshin held three games and Orix four games at their home stadiums, with respectively attendance totaling 127,913 and 141,311. In the Japan Series, three games were held at Hanshin Koshien Stadium and four games at Kyocera Dome Osaka. The attendance for the three games at Koshien Stadium totaled 123,075, while that for the four games at Kyocera Dome Osaka totaled 134,323. In addition, public viewing of the 6th and 7th games in the Japan Series was held at Hanshin Koshien Stadium, totaling 25,887 people over the two days.

(2) Assumed unit consumption price at stadiums

We then identified the following four items of consumption for stadiums games: tickets, transportation, food and beverages, and merchandise purchases, and assumed unit consumption of these items in normal conditions and in 2023 for each team.

(3) Result: Consumption Expenditures by Spectators at stadiums

Multiplying the number of stadium spectators in 1.(1) by the assumed unit consumption price in 1.(2), the respective amounts of consumption expenditures by stadium spectators in normal conditions and during this year, can be calculated. The calculation results are summarized in Table 2-CC-1.

2. Consumption outside stadiums

Next, we consider consumption outside stadiums. The estimation here is the multiplication of the number of fans and additional unit consumption prices outside stadiums, which is the amount of additional consumption that occurs in the league championship and postseason.

(1) Assumption of fan population

Population estimates are made for the number of people who will additionally spend money outside stadiums as a result of the Hanshin-Orix victories, i.e., the fan populations of the two teams. Using the results of the annual “Popular Sports Survey” conducted by Central Research

Table 2-CC-1

Spectator Attendance, Consumption Prices, and Spending by Spectators at Ballparks

	Number of People					
	Hanshin			Orix		
	Normal Year	2023	Difference	Normal Year	2023	Difference
Average Number of Visitors to a Official Game	40,861	41,064	203	20,939	27,048	6,109
Total Number of Visitors to Official Games	2,901,110	2,915,528	14,418	1,507,583	1,947,453	439,870
Climax Series	0	127,913	127,913	0	141,311	141,311
Japan Series	0	123,075	123,075	0	134,323	134,323
Public Viewing	0	25,887	25,887	0	0	0

	Hanshin					Orix				
	Average Unit Price per Game in Yen		Annual Expenditure in a Million Yen			Average Unit Price per Game in Yen		Annual Expenditure in a Million Yen		
	Normal Year	2023	Normal Year	2023	Difference	Normal Year	2023	Normal Year	2023	Difference
Ticket	3,653	3,653	10,597	10,650	53	3,441	3,441	5,188	6,701	1,514
Transportation	2,825	2,927	8,196	8,533	337	2,825	2,927	4,259	5,700	1,441
Food and beverage	2,064	2,171	5,988	6,331	343	2,064	2,171	3,112	4,229	1,117
Goods	1,429	2,245	4,147	6,545	2,398	1,918	3,012	2,892	5,866	2,975
Total	9,971	10,996	28,927	32,058	3,131	10,248	11,551	15,450	22,496	7,046

	Hanshin		Orix	
	Average Unit Price per Game in Yen	Total Expenditure in a Million Yen	Average Unit Price per Game in Yen	Total Expenditure in a Million Yen
Ticket	4,373	559	3,666	518
Transportation	2,927	810	2,927	807
Food and beverage	2,171	601	2,171	598
Goods	748	207	753	208
Total	10,220	2,178	9,517	2,131

Source: Prepared by the author

Services, Inc and the Mitsubishi UFJ Research and Consulting (2022), we estimated the Hanshin fan total to be 4.04 million and the Orix fan total to be 673,333 in Japan.

(2) Assumed unit consumption price: Official games and post-season

Next, for consumption outside stadiums, we assumed the unit price for food and beverages and other consumption such as team merchandise. We assumed that an additional JPY 10,000 per person a year would be spent on food and beverages when a favorite team wins the league championship. In addition, we assume that each fan spends JPY 1,000 a year

for the purchase of merchandise and other items. There is no difference between teams in this assumption.

As for Hanshin, additional expenditures will be incurred due to their achievement of the first Japanese championship in 38 years. The unit price of the additional expenditures is assumed to be JPY 2,000 for food and beverages and JPY 200 for the purchase of team merchandise. The predicted expenditures for the purchase of merchandise, etc. is assumed to be the same as for the league championship. For Orix, additional expenditures are not calculated.

(3) Result: Consumption Expenditures outside stadiums

Multiplying fan population by region and the assumed unit consumption price, we calculated the amount of consumption expenditures by fans in each region outside stadiums associated with the league championship and the Japan championship. The calculation results are summarized in Table 2-CC-2.

3. Victory-related Sales and Victory Parades

This subsection illustrates the new demand generated by victory-related sales at department stores to commemorate the Hanshin and Orix championships and by the victory parades held in Kobe and Osaka on November 23 to celebrate the two teams' victories.

(1) Victory-related Sales

Regarding victory-related sales, we limited our estimates to the Hanshin Department Store Umeda main store and the Kintetsu Department Store Abeno Harukas Kintetsu main store, and compared sales from May to August 2023, as well as sales in September and November 2023 for both stores.

Regarding the league championship sales, the figures for the Hanshin Umeda main store and the Kintetsu Abeno Harukas store were estimated at JPY 1.799 billion and JPY 506 million, respectively, for a total of JPY 2.305 billion.

The combined sales figures in the Hanshin Umeda main store and the Kintetsu Abeno Harukas store were estimated at JPY 1.496 billion,

comprising JPY 1.43 billion and JPY 66 million for the Kintetsu Abeno Harukas store for the Japan Championship sale and the gratitude sales, respectively.

Table 2-CC-2 Fan population and consumption expenditures outside stadiums

Hanshin in League Championship								Hanshin in Postseason							
Prefecture	Fan Population	Food and Beverage	Other Consumption					Food and Beverage	Other Consumption						
	Number of People	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen		
Fukui	8,843	88	9	1	4	4	1	18	2	0	1	1	0		
Mie	14,243	142	14	1	6	6	1	28	3	0	1	1	0		
Shiga	186,242	1,862	186	19	74	74	19	372	37	4	15	15	4		
Kyoto	338,743	3,387	339	34	135	135	34	677	68	7	27	27	7		
Osaka	1,189,686	11,897	1,190	119	476	476	119	2,379	238	24	95	95	24		
Hyogo	734,280	7,343	734	73	294	294	73	1,469	147	15	59	59	15		
Nara	179,500	1,795	180	18	72	72	18	359	36	4	14	14	4		
Wakayama	126,140	1,261	126	13	50	50	13	252	25	3	10	10	3		
Tottori	14,008	140	14	1	6	6	1	28	3	0	1	1	0		
Tokushima	29,499	295	29	3	12	12	3	59	6	1	2	2	1		
Other Areas	1,218,815	12,188	1,219	122	488	488	122	2,438	244	24	98	98	24		
Total	4,040,000	40,400	4,040	404	1,616	1,616	404	8,080	808	81	323	323	81		

Orix in League Championship

Prefectures	Fan Population	Food and Beverage	Other Consumption	Food	Cloth and Textile	Industrial Goods	Books and DVDs
	Number of People	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen	In a Million Yen
Fukui	2,279	23	2	0	1	1	0
Mie	5,352	54	5	1	2	2	1
Shiga	24,031	240	24	2	10	10	2
Kyoto	43,709	437	44	4	17	17	4
Osaka	153,508	1,535	154	15	61	61	15
Hyogo	94,746	947	95	9	38	38	9
Nara	23,161	232	23	2	9	9	2
Wakayama	16,276	163	16	2	7	7	2
Tottori	1,641	16	2	0	1	1	0
Tokushima	2,199	22	2	0	1	1	0
Other Areas	306,431	3,064	306	31	123	123	31
Total	673,333	6,733	673	67	269	269	67

Source: Prepared by the author

(2) Victory Parade

On November 23, victory parades were held simultaneously in Sannomiya, Kobe, and Midosuji, Osaka, to celebrate the league championships of Hanshin and Orix, with the teams switching places in the

morning and afternoon. Blessed with fine weather, the parades attracted a total of 1 million spectators, comprising 300,000 in Kobe and 200,000 in Osaka in the morning, and 150,000 in Kobe and 350,000 in Osaka in the afternoon, according to an organizer's estimate. Consumption expenditures by parade spectators, such as food, drink, and transportation costs, as well as operating expenses spent on the parades, also had economic ripple effects.

Total consumption expenditures associated with the victory parade are estimated at JPY 1.06 billion for Osaka and Hyogo prefectures, comprising JPY 150 million for transportation and JPY 410 million for food and beverages in Osaka Prefecture, and JPY 150 million for transportation and JPY 340 million for food and beverages in Hyogo Prefecture. In addition to the consumption expenditures, the parade also generated new demand of JPY 500 million in operating expenses such as security at associated parade sites and parade operation expenses.

4. Economic Ripple Effects of Hanshin-Orix Victory

Based on the assumptions in subsections 1, 2 and 3, the economic ripple effects of the Hanshin-Orix league championship, postseason, and victory parades were calculated using the 2015 Interregional Input-Output Table for the Kansai Region.

(1) New demand

We estimated the new demand generated by the Hanshin and Orix championships by dividing it into consumption by spectators in and outside of stadiums during the league championships and postseason, as well as by victory-related sales and victory parades. New demand generated by the league championships was JPY 62.02 billion, 13.20 billion for postseason, JPY 3.80 billion for the victory-related sales, and JPY 1.56 billion for victory parades, for a total of JPY 80.58 billion. Table 2-CC-3 shows these figures broken down by expenditure item and region.

By item, the final demand of the league championship was JPY 47.57 billion for Hanshin and JPY 14.45 billion for Orix, for a total of JPY 62.02 billion. Final postseason demand was JPY 11.07 billion for Hanshin and JPY 2.13 billion for Orix, for a total of JPY 13.20 billion. Final total demand

from victory-related sales was JPY 3.80 billion, comprising JPY 2.31 billion from the league championship and JPY 1.50 billion from the Japan championships and gratitude sales. The final demand for the victory parades totaled JPY 1.56 billion.

By region, both Hanshin and Orix were highest in Osaka Prefecture, with JPY 17.04 billion and JPY 8.29 billion, respectively. Although Hanshin had the larger amount, the ratio of Osaka Prefecture in total final demand (excluding victory parades) was 29% for the Hanshin region and 51% for the ORIX region. The rates for other regions were 28% for Hanshin and 26% for Orix, indicating that the final total demand generated by championships by Kansai teams is not limited to the Kansai region.

Table 2-CC-3 Assumed Final Demand

By Item

In a Million Yen	League Championship			Postseason			Sales		Pa- rades	Total
	Han- shin	Orix	Total	Han- shin	Orix	Total	Victo- ry-re- lated Sales	Japan Champion- ship and Gratitude Sales	Total	
Consumption at Stadiums	3,131	7,046	10,177	2,178	2,131	4,309	-	-	-	14,486
Tickets	53	1,514	1,566	559	518	1,077	-	-	-	2,644
Transportation	337	1,441	1,778	810	807	1,617	-	-	-	3,395
Food and Beverage	343	1,117	1,460	601	598	1,200	-	-	-	2,659
Goods	2,398	2,975	5,373	207	208	415	-	-	-	5,788
Additional Consumption outside Stadiums	44,440	7,407	51,847	8,888	0	8,888	-	-	-	60,735
Food and Beverage	40,400	6,733	47,133	8,080	0	8,080	-	-	-	55,213
Goods and Other Consumption	4,040	673	4,713	808	0	808	-	-	-	5,521
League Championship, Japan Championship, and Victory Sales	-	-	-	-	-	-	2,305	1,496	-	3,801
Victory Parades	-	-	-	-	-	-	-	-	1,564	1,564
Total	47,571	14,452	62,023	11,066	2,131	13,197	2,305	1,496	1,564	80,584

By Region

	Final Demand in a Million Yen					Share in Prefectures				
	Hanshin	Orix	Sales	Parades	Total	Hanshin	Orix	Sales	Parades	Total
Fukui	152	71	40	0	264	0.3	0.4	1.1	0.0	0.3
Mie	192	71	19	0	283	0.3	0.4	0.5	0.0	0.4
Shiga	2,496	325	23	0	2,844	4.3	2.0	0.6	0.0	3.5
Kyoto	4,534	584	158	0	5,277	7.7	3.5	4.2	0.0	6.5
Osaka	17,043	8,286	2,827	844	29,000	29.1	50.0	74.4	54.0	36.0
Hyogo	13,000	2,397	139	719	16,255	22.2	14.5	3.7	46.0	20.2
Nara	2,415	324	39	0	2,778	4.1	2.0	1.0	0.0	3.4
Wakayama	1,694	224	29	0	1,948	2.9	1.4	0.8	0.0	2.4
Tottori	201	39	23	0	263	0.3	0.2	0.6	0.0	0.3
Tokushima	402	39	16	0	458	0.7	0.2	0.4	0.0	0.6
Other Areas	16,506	4,223	487	0	21,215	28.1	25.5	12.8	0.0	26.3
Total	58,637	16,583	3,801	1,564	80,584	100.0	100.0	100.0	100.0	100.0

Source: Prepared by the author

(2) Economic ripple effects of the Hanshin-Orix Japan Series: Impact on the Kansai economy

The economic ripple effects were measured based on the new demand shown in Table 2-CC-3. Here, we looked at the effect of the new demand generated (direct effects) and the additional indirect effect generated to meet this demand (indirect effects). Indirect effects include first-order spillovers from induced production of intermediate goods as well as second-order spillovers from increased incomes. The sum of the direct and indirect effects is the total economic ripple effect.

The total economic impact of the league championship, postseason, victory-related sales, and the victory parades is JPY 160,733 million, comprising JPY 71,999 million for direct impacts and JPY 88,733 million for indirect impacts.

While the aforementioned economic ripple effects are on a national basis, they are important to the impacts on regional economies. Since our analysis used the 2015 Interregional Input-Output Table for the Kansai Region, it is possible to determine in which regions economic ripple effects occur.

As Figure 2-CC-2 shows, by region, the economic ripple effect in the Greater Kansai region was JPY 93,557 million (58.2%), and JPY 67,176 million (41.8%) in other regions excluding Greater Kansai. Looking at the economic ripple effects for the Kansai prefectures (Figure 2-CC-3),

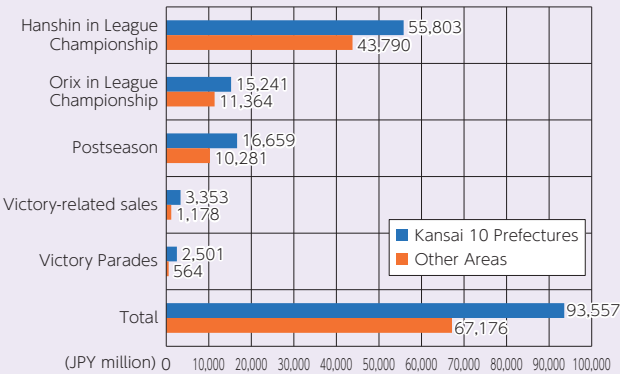


Figure 2-CC-2 Economic ripple effects by region: 10 prefectures in Greater Kansai and other regions

Source: Prepared by the author

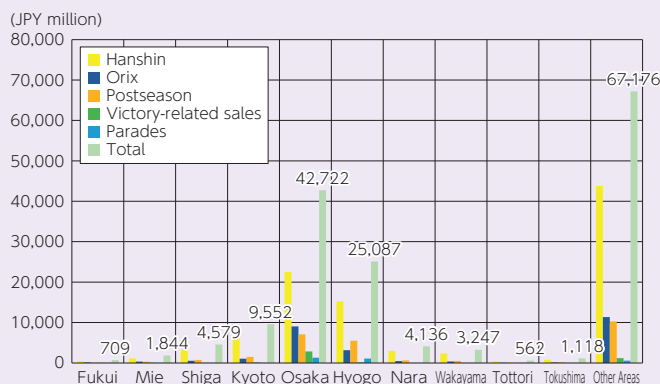


Figure 2-CC-3 Economic ripple effects by region

Source: Prepared by the author

Osaka and Hyogo prefectures accounted for JPY 42.722 billion (26.6%) and JPY 25.087 billion (15.6%), respectively.

Regarding the economic ripple effects of victory-related sales, Osaka Prefecture accounted for the overwhelming majority with 62.8%, while Osaka Prefecture (42.1%) and Hyogo Prefecture (35.4%) comprised 77.5% of the ripple effects of the victory parades.

Although we have examined economic ripple effects based on induced production prices, the economic ripple effects of the league championships, postseason, victory-related sales, and victory parades in the six prefectures in terms of added value were estimated to be JPY 44.076 billion. According to APIR's latest prediction, in 2023, the nominal GRP of the six prefectures of the Kansai region was JPY 9,337,600 billion, with these effects expected to boost the nominal GRP of the Kansai region by about 0.05%. On a national scale, the economic ripple effects on a value-added inducement basis would be JPY 79.3 billion, which would boost the national nominal GDP (JPY 588.5 trillion) by about 0.01%.

References

APIR Kansai Interregional Input-Output Tables Project Team (2023), "Final Report: Economic Effects of the 2023 Hanshin-Orix Championship by Region - Comprehensive Analysis of the League Cham-

pionship, Postseason, Victory-related Sales, and victory Parades,” APIR Trend Watch No. 91, (Japanese title: *Ketteiban: 2023nen Hanshin Orix yusyo no chiikibetsu keizai kouka -ri-gu yusyo, posutoshizun, yusyo kanrense-ru oyobi yusyopare-do no sougoubunseki-*), (<https://www.apir.or.jp/research/13218/>; last viewed on December 4, 2023).

Central Research Services, Inc, “Popular Sports Survey,” (Japanese title: *Ninki supo-tsu chosa*), (<https://www.crs.or.jp/data/>; last viewed on September 14, 2023).

Mitsubishi UFJ Research and Consulting Co., Ltd. (2022), “[Preliminary Report] 2022 Basic Sports Marketing Survey,” (Japanese title: *[Sokuhou] 2022nen Supo-tuma-kethingu kiso chosa*), (https://www.murc.jp/news/news_release/news_release_221027/; last viewed on September 14, 2023).