5 Number Games

The economic impact of Tokyo 2020

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It all depends

Olympic Games are mega-events. They are known to afford “mega” budgets. Still, organizers expect the overall benefits to surmount the costs. However, neither costs nor benefits can be unambiguously measured. It is not just a forecasting problem. Even after the Games, the numbers will be disputed. There is a simple reason for this. In order to correctly assess the costs and benefits, a fundamental question needs to be answered: How would the economy of the host city and country have performed, if they had not hosted the Olympic and Paralympic Games? The economic impact of the Games is then given by comparing the development with and without the Games. The problem is that the all-decisive reference point is purely hypothetical. It cannot be observed. We can only assume what the development without the Games might have been. The numbers change as we vary our assumptions about the “what if.” This can also be seen in the case of the Tokyo 2020 Games (see Figure 5.1). Cost estimates vary from \$5.2 to \$28.1 billion and benefit estimates from \$64 to \$155 billion. Assessments of the overall economic impact range from \$36 to \$220 billion.

Costs – allocating public infrastructure investments and budgets

Tokyo’s application files submitted to the IOC in January 2013 distinguish three cost categories. (1) The budget of the Tokyo Organising Committee of the Olympic and Paralympic Games (TOCOG), (2) Non-TOCOG capital investments for sports venues, the Olympic Village, and other infrastructure built for the Games, (3) Non-TOCOG operational costs related to services and activities in such areas as security, transportation, medical support or cultural and educational events. The TOCOG budget estimate amounts to \$3.4 billion, which is equivalent to 41% of the total

a) Cost estimates in billion US dollar

b) Benefit estimates in billion US dollar

c) Estimates of overall economic impact in billion US dollar

Illustration by the author. Refer to main text for more information and sources.

Figure 5.1 Estimates of costs, benefits, and overall economic impact of the 2020 Games.

budget. Expenditures relate to the promotion, preparation, and operation of the sports events and include rent, wages, and other running costs as well as expenses for all kinds of services like telecommunication or transportation. They are balanced by contributions from the IOC (\$0.8 billion), sponsors and official suppliers (\$1.3 billion) and by income generated by the Games including mainly ticket sales (\$0.8 billion) and licensing (\$0.1 billion). The non-TOCOG capital investments are estimated to amount to \$4.4 billion, almost 60% of which are to be spent on the new Olympic Stadium (\$1.5 billion) and the Olympic Village (\$1.1 billion).

One tricky part in the cost assessment is the allocation of infrastructure investments. The Tokyo 2020 Games are part of Tokyo's urban development plan, which means that even without the Games many investments would have been undertaken. Should they be allocated to the Games? If one only includes investments exclusively tied to the hosting of the Games, the related non-TOCOG capital investment estimates come down to \$1.8 billion. The total budget would correspondingly be reduced to \$5.2 billion, and the share of the TOCOG budget would then be roughly two-thirds.

Olympic Games are known for notoriously exceeding original budgets. Half of the Summer Games organized since 1976 cost 80% more than originally forecast.¹ Since 2016, TOCOG has been annually updating its estimates for its own budget and the two non-TOCOG budgets. Looking at the three updates the total budget figures jumped to \$15 billion in December 2016, fell back to \$13.5 billion in December 2017 and then remained unchanged in December 2018. Accordingly, Tokyo 2020 would be as expensive as London 2012. The cost overrun of 52% would be in line with Rio 2016 (51%), but still lower than London 2012 (76%).

How can the dramatic revisions in the official Tokyo 2020 budgets be explained? The Board of Audit of Japan, which in October 2018 evaluated the preparations for the Olympics, attributes the jump in the first budget revision to the fact that the figures presented in the application files were calculated according to IOC standards. The statement implies that IOC accounting standards only captured about 55% of the actual costs. The Board of Audit further notes that the reduction of the estimate from \$15 billion to \$13.5 billion in the second revision is not explained in public documents. According to the information provided by the Tokyo Metropolitan Government (TMG), the revision was based on a re-assessment of public expenditures that had incorrectly been attributed to the Games, although they would have been incurred irrespective of the hosting of the Games. Again, this reveals the uncertainties and in a way the arbitrariness of how public expenditures are allocated. Such revisions, while reducing the estimated public burden, also reduce the credibility of the numbers presented.

To add to the confusion, in January 2018 Koike Yuriko, Governor of Tokyo, announced that the city would put an additional \$8.1 billion aside for the Games. Adding this to the \$6 billion stated in the TOCOG report, one arrives at costs of \$14.1 billion to be borne by the TMG alone, about 20% of the city's general annual budget. In January 2019, Sakurada Yoshitaka, at the time the minister in charge of the Tokyo Olympics, provided new estimates of the central government's total budget for the Games amounting to \$2.9 billion, \$1.4 billion higher than the budget figures given by the TOCOG report. Even more frightening however are the numbers presented by the Board of Audit of Japan's October 2018 report. The report revealed that various ministries and agencies of the central government had over the four years from April 2013 to March 2018 budgeted expenditures of \$8 billion under 286 projects declared to be related to the Games. Updating the cost estimates on the basis of these numbers one arrives at a total amount of \$28.1 billion, 3.4 times the original estimate of \$8.3 billion.

The extreme range in the numbers related to the public financial burden can be seen to be the outcome of two opposing interests. The IOC and TOCOG want the public budget to appear as small as possible not only to guard against public criticism, but also to not discourage future candidate cities. On the other hand, for the TMG and the ministries of the central government the Games are a window of opportunity to obtain additional budgets. The argument "necessary expenses for the smooth operation of the Games" is likely to sell well in budget negotiations. Also, as disaster relief policy measures show, it is not uncommon to secure higher budgets than eventually needed, as the "unused money" may later be used for other purposes.

"The Oxford Olympic Study 2016," which assesses the costs and cost overruns of Summer and Winter Games from 1960 to 2016 based on official IOC data, finds that Olympic Games have the highest cost overruns compared to any other mega-projects. In their 2014 paper on mega-projects they list many reasons why cost overruns occur: (a) the inherent riskiness and complexity of such projects; (b) the lack of experience of local planners as mega-projects tend to travel across locations; (c) conflicting interests among stakeholders; (d) too high ambitions by organizers; and (e) incentive and misrepresentation problems.² The various Tokyo 2020 cost estimates suggest that conflicts of interest between the IOC and the local organizing committee on the one hand and government officials on the other hand regarding how to account for Games-related expenditures represent the most important source for apparent increases in and divergences among estimates.

Benefits – possibly huge, but hard to measure and not evenly spread

Cities apply for the Games because of the benefits they expect from being a host. There are first the infrastructure investments in the run up to the Games. They go beyond the capital expenditures for venues, as they also include construction in anticipation of a rising number of tourists. The Bank of Japan estimates construction investments related to the Games to amount to \$100 billion, boosting annual GDP by \$220 billion between 2014 and 2020.³ But to what extent do these investments actually generate additional demand and not just crowd out otherwise undertaken investment? The stimulus can be expected to be largest in the context of high unemployment and unused production capacities. Given Japan's very low rate of unemployment and the strong demand created by the reconstruction of the disaster-hit areas in the Tohoku region, crowding out effects cannot be neglected. The overall economic impact is likely to be smaller than Bank of Japan calculations suggest and more in line with the estimate of \$36 billion given by the Mizuho Research Institute.⁴ The additional demand will again be lost once the investments are completed. There is then likely to be a downturn.

Of course, the modernized transportation, communication, and tourist infrastructures including barrier-free access to public buildings and transportation and the greening of the cityscape will contribute to the city's economic performance and well-being of citizens and visitors beyond 2020. These effects are not as easy to measure. In 2017, the TMG estimated these legacy effects to amount to \$131 billion, more than five times the estimated direct effects (\$24 billion).⁵ This sounds rather optimistic. Given the high level of sophistication of Tokyo's existing infrastructure, upgrading effects should be marginal. In the end, these benefits will also depend on whether Tokyo will be able to continue to attract international events and foreign visitors to keep the occupancy rates at a level high enough to generate economic surplus. This is even more pressing because population decline, which already began nationwide since 2010, is predicted to reach Tokyo after 2020.

Tourism is not only a factor feeding into infrastructure investments. It is also an important benefit channel by itself. Visitors bring money. During the Games, 920,000 spectators are expected to stay in Tokyo. Like with investments, the question is to what extent they crowd out tourists who would otherwise have come. Given the additional accommodation capacities newly built or provided through for example Airbnb, crowding out might not be expected. But Japan has over the last seven years experienced an almost fourfold increase in the number of visitors from abroad, from

8.4 million in 2012 to 31.2 million in 2018, mainly from China and other countries in East and Southeast Asia. The main reasons for Japan's tourist boom are rising income levels in the region, a cheap yen, the growth of low-cost carriers, and improved diplomatic relations combined with policies to promote tourism both in Japan and in the countries of origin.

Although the Tokyo 2020 Games have been receiving the full backing from the Japanese government, it would be wrong to equate Tokyo with Japan. The Games are likely to increase the disparities in economic and cultural activities between the capital and Japan's regions and this constitutes probably the largest downside. Official documents avoid mentioning this aspect, but it cannot be neglected in an overall assessment of the economic impact of the Games.

Changing perceptions and mindsets

After all, the most important value of the Games for Tokyo and Japan might not be the new infrastructures or the additional tourists. The overarching theme postulated by the city's application was "Discover Tomorrow." The TOCOG slogan emphasizes the power of sport to promote diversity and positive change. Like in 1964, when Japan proudly presented itself to the world as a rapidly advancing nation, 2020 will be used to showcase new technology and environmental initiatives, to demonstrate Japanese culture and hospitality, and to position Japan's capital as a safe and secure place where people from all over the world can meet and engage in mutually beneficial exchange. The motto reaches out to the world, but it also addresses the Japanese population, especially the younger generation, by creating awareness about not only the necessity, but also the benefits of international exchange and diversity. The Games are seen as a window of opportunity to change perceptions and mindsets both at home and abroad and to rejuvenate an aging society and economy by inviting the world to Tokyo and Japan. If such change can be set in motion, the benefits will indeed be huge, though not easily expressed in numbers.

Notes

- 1 Flyvbjerg, Bent, Allison Stewart, Alexander Budzier. 2016. "The Oxford Olympics Study 2016: Cost and cost overrun at the Games." *Saïd Business School Research Paper* 2016(20).
- 2 Flyvbjerg, Bent. 2014. "What you should know about megaprojects and why: An overview." *Project Management Journal* 45(2): 6–19.
- 3 Osada, Mitsuhiro, et al. 2016. "Economic impact of the Tokyo 2020 Olympic Games." *BoJ Reports & Research Papers*, January. www.boj.or.jp/en/research/brp/ron_2016/ron160121b.html.

- 4 Mizuho Research Institute. 2014. "The economic impact of the 2020 Tokyo Olympic Games." *Mizuho Economic Outlook & Analysis*, October 17.
- 5 Bureau of Olympic and Paralympic Games Tokyo 2020 Preparation. 2017. "Tōkyō 2020 taikai kaizai ni tomonau keizai hakyū kōka" [Economic impact of the Tokyo 2020 Games] www.2020games.metro.tokyo.lg.jp/9e1525ac4c454d171c82338c5a9b4c8a_1.pdf.