

# Do sports mega-events boost public funding in sports programs? The case of Brazil (2004–2015)

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## Abstract

This article explores public expenditure in Brazilian sport from 2004 to 2015 and aims to understand if hosting sport mega-events has influenced investments in different types of sport (elite sport and educational/participation sport). Data were collected through governmental records and examined through descriptive statistics. Positive and negative variations of spending were reported, regarding both the overall budget allocated to sport and among the different types of sport. This study concluded that sport mega-events have influenced the funding of sports programs to some extent, but other aspects of public funding are likely to be more significant influencers on the observed variations. The study also argues that further research on different host countries is necessary to understand the impact of sport mega-events on public sport funding.

## Keywords

Brazil, budget, mega-events, public funding, sport

The acknowledgment that sport mega-events ‘have highly significant social, political, economic and ideological consequences for the host city, region or nation’ (Horne, 2015: 467) is probably the main cause for the increased attention and interest by the local population, governments and the media in those given areas (Horne, 2015; Muller, 2015; Roche, 2000). Among these consequences, there are concerns as to whether and how hosting sport mega-events, particularly the Olympic Games, can promote participation in sport and physical

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activity (e.g. Bauman et al., 2015; Derom and Lee, 2014; Reis et al., 2014; Weed et al., 2015).

Brazil has been central to contemporary mega-events dialogue as the host country of the 2014 FIFA Men's World Cup and the 2016 Olympic and Paralympic Games. The country also hosted the 2007 Pan-American Games, a 'third order event' of continental scope (Black, 2008: 468) that initiated substantial investments in international sporting events that lasted more than a decade. During the bid for the 2016 Olympic Games, the federal government promised to increase investment into sport programs in schools and sport for all initiatives (Brasil, 2009; Comitê de Candidatura Rio 2016, 2009) (hereafter educational/participation sport), although detailed planning was only evident for elite sport facilities (Souza et al., 2014). After the bid confirmation, other policies showed the aims to be among the top 10 medal winning countries for the Olympics and the top five for the Paralympics (Brasil, 2016b). As these commitments were published in official documents, one would expect higher funding for sport policies in the years prior to the Games, both in educational/participation sport and elite sport, increasing the importance of sport as a policy area for public investments.

These intentions and promises show the potential of larger public investments in sport, but risk focusing on elite sport to reach the set aims. The debate over the policy priorities within sport is present in previous research for different countries (Green, 2006, 2007; Green and Collins, 2008; Law and Chan, 2012), but they were not informed by analyzing the distribution of funding. Sport funding has been presented for research on Canada 1985–2013 (Thibault and Harvey, 2013) and Australia 1979–1998 (Hogan and Norton, 2000); yet, the authors did not intend to use the data to relate sport investments to hosting mega-events. Therefore, this article examines the dynamics of Brazilian sport funding in the years leading up to and the hosting of sport mega-events. To do this, the article begins by outlining public budget processes to contextualize how budget allocation manifests some of the political dynamics, but also how these dynamics can be influenced by specific events, linking specifically to recent mega-events in Brazil.

## **Public budgeting and sport in Brazil**

The process of public budgeting involves legal, economical, technical and political aspects: legally, each country has laws to regulate the sequence for budget planning and execution; economical conjuncture and fiscal policies are discussed to understand the sources for funding; technically, the rules are applied to follow the legal and the economic aspects, as well as defining the concepts of revenues and costs; and politically, different actors influence the choices of how much should be invested in each possible program and area (Assis, 2009). This section focuses upon how political choices for the budget are made and how they are theoretically assessed, followed by a description of the technical and legal processes in Brazil.

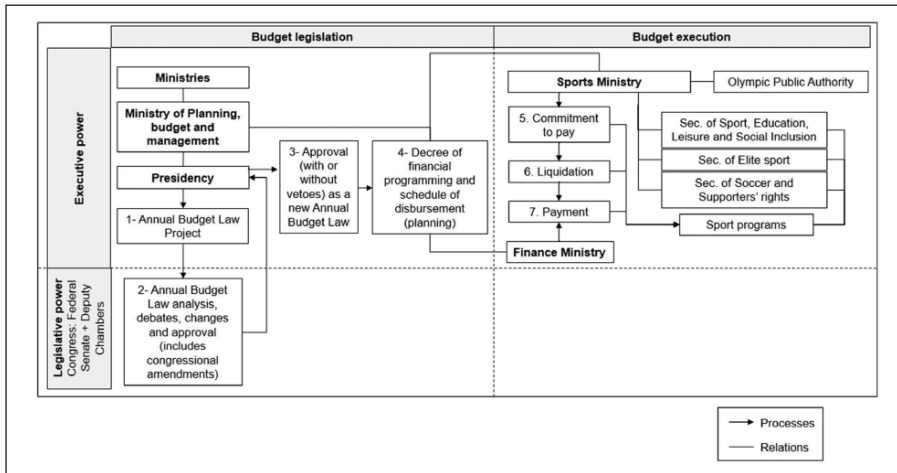
Public budgets demonstrate the commitments and the priorities for a government in numbers (Jones et al., 2009). This is also recognized in the Brazilian literature: 'The planning of public expenses reflects the priorities of the political agenda and constitutes the government's action plan through the allocation of revenues in the various government functions' (Alves, 2015: 132). Limited resources force different areas and

programs to compete to show why they should be prioritized and funded. While lobby groups and public opinion may engage to demonstrate their priorities, elected officials make the final decisions on public budgets (Peters, 2010; Rubin, 2010). Elected officials can impose minor or major changes on the budget allocation each year. The magnitude of changes (either positive or negative) is characterized by small or high percentages between two consecutive years, representing stability or change for an area or program (Jones et al., 2009). Assessing and explaining public budgets may differ by focusing only on stability or on both stability and change. Two of the common models for discussing these are the incremental model and the punctuated equilibrium theory.

Initial analysis in the United States found the process of public budgeting to be linear and stable over periods of time. Because budgets are complex and each investment has many potential alternatives, they are rarely reviewed as a whole, so previous decisions tend to be repeated with attention to very few areas for small (incremental) adjustments (Davies et al., 1966). The incremental model dominated the public budget analysis and alternative explanations were non-existent for almost four decades (Jones and Baumgartner, 2005; LeLoup, 2002).

Although the incremental model recognizes ‘deviant cases’ presenting higher positive or negative variations in some programs between years (Davies et al., 1966: 540), other theories were needed to explain both the majority period of stability and the erratic bigger variations. This is the main purpose of the punctuated equilibrium theory (True et al., 2007). Similar to the incremental model, this theory recognizes the limited capacity to process the information of decision makers. However, the punctuated equilibrium theory allows for an understanding that political systems tend to maintain the status quo. From these foundations, the theory states that significant changes only happen through a powerful force to generate a reaction beyond the inertia (Jordan, 2002; True et al., 2007). This force may be exogenous or endogenous to the decision makers. Exogenous forces are shifts in public attention, unusual and persuasive new information that demands a response, or changes in the composition of decision makers in relevant public institutions. These exogenous factors do not necessarily influence the budget decisions, as the commissions tend to keep the same decisions. However, the exogenous factors can cause endogenous conflicts among the budget group members, particularly toward how to respond to such external factors. The result can create a sporadic change with regard to the budget allocation for a given area or program (True et al., 2007).

If sport mega-events generate a ‘shock’ of agenda (Horne and Whannel, 2012; La Barre, 2016) in various areas, on the budgeting process they could be considered a political disruption that caused punctuations on the Brazilian sport budget. In other words, Brazil’s selection to host two sport mega-events in a short period may represent an exogenous force that demanded a reaction by elected officials responsible for public budgeting, as those events bring a significant public attention to sports. Although the punctuated equilibrium theory has not been applied to sport funding before, it has been tested and confirmed in different government levels and countries (Baumgartner et al., 2006, 2009, 2012; Jones and Baumgartner, 2005). Baumgartner et al. (2015) assessed the variations in four national budgets (Russia, Turkey, Malta and Brazil) during different political regimes and showed that both authoritarian and democratic periods in Brazil had more equilibrium than punctuations compared to other countries. One Brazilian study



**Figure 1.** Sequence of the Brazilian budget legislation and execution related to the Sports Ministry.

Source: The authors with data from Brasil (1964, 2011a).

confirmed the punctuated equilibrium theory when investigating all the expenses of municipalities in one state (Silvestre and Araujo, 2015). Nevertheless, more studies on the federal level are yet to be published. Due to the insufficient available data points on the Brazilian ‘sport and leisure’ budget, it was not possible to assess if it follows the statistical patterns of the punctuated equilibrium theory. However, this theory can be useful to address this research problem and may help to explain some of the data in conjunction with domestic factors.

The domestic factors refer to the technical aspect of public budgeting. In Brazil, the public budget is a document of authorization, in which the legislative power (senate and deputy’s chamber) allows the executive power (presidency and ministries) to manage the federal revenue and expenditures for a limited period through a law approved annually (Baleeiro, 2012). This process is shown in Figure 1.

Within the executive power, the Ministry of Planning, Budget and Management appoints a maximum budget to each ministry whose members work together to propose guidelines for the programs/actions and their respective funding amount. After the proposal is formalized and confirmed to be within the limits of expenditure, a law project is written and sent to the legislative power by the presidency. Both Congress houses (Senate and Deputy Chambers) discuss the proposal and may propose changes. The law includes an amount for parliamentary discretion to be invested in the government’s programs/actions. When the law is approved by the legislative power, it is returned to the presidency for the final approval, which may or may not have vetoes. Finally, a decree of financial programming and a planned disbursement schedule is elaborated by the Finance Ministry, the Ministry of Planning, Budget and Management and the presidency. The decree establishes quotas for the ministries to execute their budgets quarterly, but may be updated according to the budget execution. The ministries have certain autonomy as to

what they execute among their planned proposals, but not on the amounts they receive, which are established by the Finance Ministry. Then, at the execution phase, the Sports Ministry opts to invest within the allowed amount in its different programs/actions. First, it commits to pay an expense related to a program/action, which means that an amount will be reserved when ordering a product or service. Second, the liquidation occurs when the service is made or the product is received. Finally, the government pays the company or people responsible for the service or product (Brasil, 1964).

During the timeframe in analysis, sport secretaries were created, clustered and dissolved. Figure 1 includes the sport-related agencies on the 2011–2015 Sports Ministry organizational chart (Brasil, 2011a). It includes three secretaries: the secretary of soccer and supporters' rights (responsible for the 2014 FIFA World Cup in the Sports Ministry), the secretary of sport, education, leisure and social inclusion and the secretary of elite sport. With the participation of the Sports Ministry, two agencies were created to coordinate the governmental actions related to the mega-events: the Management Committee for the 2014 FIFA World Cup and the Olympic Public Authority.

The Management Committee for the 2014 FIFA World Cup was composed of 20 federal agencies, including 16 ministries and controlling agencies. The aim of the committee was to define, approve and supervise all the federal actions related to the 2014 FIFA World Cup. This committee did not receive public funds, as its members were already part of the 20 federal agencies (Brasil, 2010), so it is not represented in Figure 1. The second agency was the Olympic Public Authority, which was a public consortium created to coordinate the public actions related to the Rio 2016 Olympic and Paralympic Games. It was composed and funded by the federal government, the Rio de Janeiro state government and the Rio de Janeiro municipal government (Brasil, 2011b). The federal subsidies for its operation came from the Sports Ministry (Autoridade Pública Olímpica, 2012).

Except for the mandatory expenditures, the authorization to invest in a planned program does not guarantee its execution by the Brazilian executive power. The process of execution depends on economic aspects – such as reaching annual targeted revenues and expenses, and the payment of the public debt – but also on political aspects, mainly according to the political intentions associated with each investment.. The executive power has discretion with regard to the planned expenses, meaning that some program funding may be planned but not completely implemented in the execution phase (Azevedo, 2006; Piscitelli, 2006). As discussed later, this possibility can be damaging for funding non-mandatory programs, such as those in sport and leisure.

## Methods

This article aims to answer the following questions: have public investments through the Brazilian federal budget for sport (beyond the mega-events expenditures) increased from 2004 to 2015, in comparison to the overall trends of the federal budget? How did the public investments in mega-events, in elite sport and in educational/participation sport vary in this timeframe?

Data were collected on the online platform *SIGA Brasil* (Brasil, 2016c). This platform was developed and hosted by the Brazilian Senate, in response to its attribution of

supervising and promoting publicity and transparency of federal public spending. Available for public viewing since 2004, any citizen can access the different phases of Brazilian federal public planning, budgeting and spending. Compared to other federal sources, this platform is preferred for gathering the information of various federal systems (Azevedo et al., 2012).

For the purposes of this article, the focus was on the expenditure stage of the federal budget, particularly the phase in which the federal government commits to an expense. This stage is more accurate than others (e.g. intended and planned), because it shows what investments were actually made by the Brazilian government. Data were collected in April 2016. The timeframe of the research was from 2004 (when the sports ministry started to implement activities in Brazil) to 2015 (one year prior to the Olympic and Paralympic Games, with complete available data). Considering these criteria, the committed amounts of the federal total budget and of the function 'sport and leisure'<sup>1</sup> were selected. The raw data from *SIGA Brasil* included total expenditures as well as specific budgets from 2004 to 2015, and were downloaded into Microsoft Excel spreadsheets. These choices are more complete than those made in previous studies. Almeida et al. (2012) used data from a less complete database of Brazilian public expenses and analyzed the period from 2004 to 2009. Castro et al. (2016) used the *SIGA Brasil* database, yet opted for the authorized and payment phases of expenditure in the period 2004 to 2011. In addition, neither study included any budget theory for their analysis. For these reasons, in this study a wider panorama on public budgeting in Brazilian sport is presented, opening the debate to understand the impact of mega-events in the sport funding of a host country.

During the timeframe, the official presentation of sport programs and actions has changed; many programs were discontinued while others changed their titles. As this modification does not interfere in the financial data analysis, this article describes the programs/actions altogether, treating them as equivalents. By analyzing the aims of each program/action, they were categorized according to their purposes: mega-events, elite sport and educational/participation sport. A Brazilian law recognizes the existence of educational sport, participation sport and elite sport (Brasil, 1998).<sup>2</sup> As some programs/actions encompass both educational and participation purposes, they are categorized together. Although 'mega-events' are ultimate competitions of 'elite sport', they are separated to specify if and how much the former influenced the latter. The category 'others' was also included, referring to investment in human resources and the ministry's management. Despite the above attempts to organize the data, this categorization of the funding through programs/actions may hide overlaps. For instance, funding to build mega-events' facilities is restricted to this category, but elite sports training or educational/participation events may occur afterwards. Another possibility is that a facility may be conceived for an educational/participation purpose, but elite athletes also use it. As this limitation is intrinsic to the data collection, the amount categorized refers to its approved purpose.

Allowing a comparison within this timeframe, all numbers were adjusted for inflation to 2015-value according to the Consumer Price Index for Domestic Availability (IGP-DI), the same index used by the Brazilian government to calculate national and state debts (Fundação Getúlio Vargas, 2016). All data were then converted to US dollars, according to the Brazilian Central Bank rate exchange for the year 2015, when US\$1 was 3.33 Brazilian Reais (Banco Central do Brasil, 2016). Using descriptive statistics, the amounts

of the national and the sport budget were summarized, subdividing the latter into the four presented categories. Finally, the information is presented numerically and graphically by year, describing and discussing the results.

## Results

### *Sport and leisure in comparison to the total Brazilian budget*

The Brazilian federal executed budget has not increased continuously since 2004 when considering the values adjusted to inflation. In 12 years, the overall budget decreased on five occasions (2007, 2008, 2010, 2013 and 2015), compared to each previous year. The average of the total budget in the timeframe was US\$641.8bn, presenting the lowest variation in 2004 (US\$511.7bn) and the highest in 2014 (US\$769.7bn).<sup>3</sup> Considering the estimated Brazilian population of 205 million people in 2016 (CIA, 2016), the average value invested per person per year was \$3130.73.

By comparison to the pattern of the total budget, the executed budget for sport and leisure decreased on only three occasions compared to the previous year: 2008, 2010 and 2015. The average of the 'sport and leisure' budget in the timeframe was US\$495.4m, with the lowest amount in 2004 (US\$152.9m) and the highest in 2014 (US\$806m) – both years coincide with the total budget. The amount represents an average of US\$2.41 invested in sport and leisure per person per year.

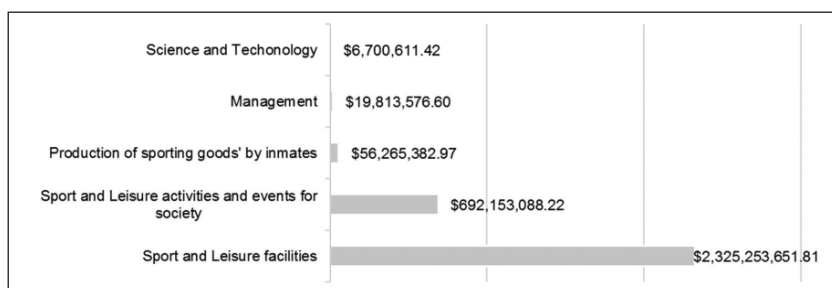
The information on the total and sport and leisure budgets is detailed in Table 1.

**Table 1.** Brazilian executed total and sport and leisure budget (in million US dollars), 2004–2015.

Year	Executed total budget	Variation from the previous year	Sport and leisure budget	Variation from the previous year	Sport and leisure investments in relation to the total budget	Sport and leisure position in the total budget (out of 28 functions)
2004	511,736.9	—	152.9	—	0.03%	27
2005	613,300.5	+19.8%	234.4	+53.4%	0.04%	27
2006	633,127.5	+3.2%	394.6	+68.3%	0.06%	24
2007	613,975.0	−3.0%	709.8	+79.9%	0.11%	23
2008	567,948.0	−7.5%	434.8	−38.7%	0.08%	25
2009	650,476.1	+14.5%	451.1	+3.7%	0.07%	25
2010	623,999.2	−4.1%	429.6	−4.7%	0.07%	25
2011	658,517.4	+5.5%	452.7	+5.3%	0.07%	25
2012	673,791.6	+2.3%	460.5	+1.7%	0.07%	25
2013	670,141.8	−0.5%	804.4	+74.7%	0.12%	22
2014	769,776.9	+14.9%	806.0	+0.2%	0.10%	21
2015	714,997.6	−7.1%	613.9	−23.8%	0.08%	22

Source: The authors with data from Brasil (2016c).





**Figure 2.** Investments in the five programs/actions of educational/participation sport, 2004–2015. Source: The authors with data from Brasil (2016c).

Since the sport and leisure budget is not directly linked to percentages of the total budget in Brazil, the variations are not equivalent. While positive variations happened in both budgets in 2005, 2006, 2009, 2011, 2012 and 2014, they did not necessarily follow the same proportion. Punctuations happened in 2007 and 2013, when the sport and leisure budget grew more than 70% while the total Brazilian budget decreased.

Comparing the position of sport and leisure to the total budget and other areas of investments, other variations can be seen. Table 1 demonstrates that the dynamics of the sport and leisure budget are not explained by the total budget, particularly in some years (e.g. 2007, 2013, 2014 and 2015) when positive and negative differences are accentuated. It also shows that there were three years that sport and leisure were particularly the focus of investments: 2007, 2013 and 2014. In these cases, the investments reached 0.1% of the total budget, placing ‘sport and leisure’ in a better position among other areas of federal expenditures.

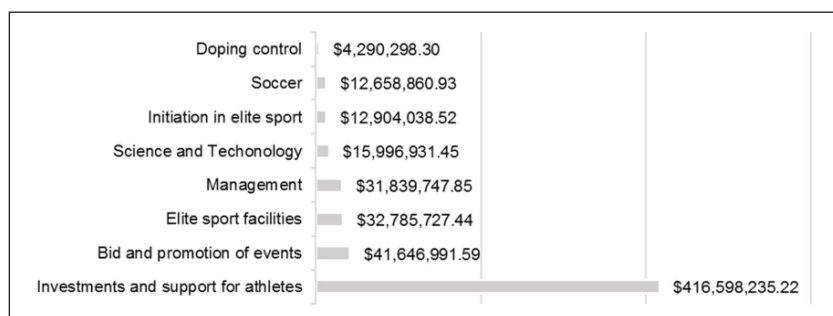
Considering the data presented above, there is an inconsistency in the amounts invested in sport and leisure over the years, demonstrating that the selection and preparations to host sport mega-events did not sustain annual growth on sport public funding in Brazil. The next section details the investments for the different sport categories to understand their budget variations over time.

### *The investments in sport and leisure categories*

Sports programs/actions are divided according to their aims in four categories: educational/participation sport, elite sport, mega-events and others. ‘Educational/participation sport’ includes programs/actions that aim to promote sports for children and teenagers associated with schools, as well as facilities and activities for adults, none of them being related to high performance. Within the programs/actions for educational/participation sport, investments are allocated in: (1) Sport and leisure facilities’ building; (2) Sport and leisure activities and events for society (children, youth, adults, elderly, indigenous); (3) Production of sporting goods by inmates; (4) Management; and (5) Science and technology. The absolute investments in each program/action for the period are plotted in Figure 2.

Figure 2 shows that many of the investments were in sport and leisure facilities, with significant expenditure in educational/participation programs. However, other programs/





**Figure 3.** Brazilian budget investments in the eight programs/actions of elite sport, 2004–2015. Source: The authors with data from Brasil (2016c).

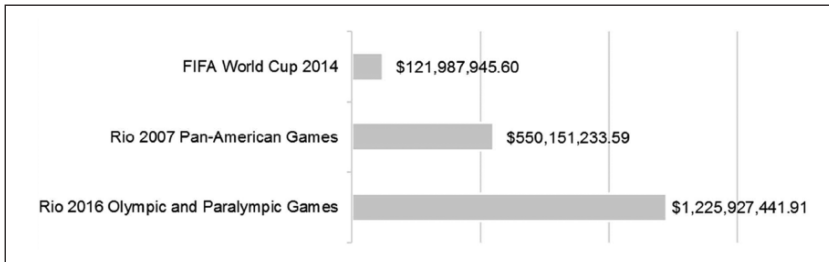
actions received smaller investments. This situation demonstrates that the government's priorities were on building new facilities and other construction: a strategy used by federal deputies to gain visibility and political prestige with their local electorate (Bezerra, 2001).

'Elite sport' is targeted at athletes performing at a higher level of performance and includes activities to find and develop talents, as well as maintaining and supporting athletes' careers by promoting their participation in competitions. This also includes sports ministry programs/actions regarding professional soccer. In addition, investments also occur on: (1) Support for athletes; (2) Bid and promotion of events; (3) Elite sports facilities; (4) Management; (5) Scientific and technological centers and events; (6) Initiation in elite sport; and (7) Doping control.

Figure 3 demonstrates that a major priority of the Brazilian federal government was to invest in and to offer support to athletes. This happened particularly in 2007 and from 2012 on. This growth is related to the government intention to improve results for the Rio 2016 Olympic and Paralympic Games. During the latter years, there was an increase in the quantity and amount of individual support given to potential medal-winning athletes (Brasil, 2016b). Doping control received investments after 2014, as the federal government accepted the responsibility for building and maintaining a national anti-doping agency (Brasil, 2013).

'Mega-events' as a category of analysis for the present study contains every activity targeting the construction of facilities as well as actions that are needed to host the three international events of this period – (a) the Rio 2007 Pan-American Games; (b) the 2014 FIFA World Cup; and (c) the Rio 2016 Olympic and Paralympic Games.

Figure 4 shows that there was a higher investment in the Rio 2016 Olympic and Paralympic Games, followed by the Rio 2007 Pan-American Games and the 2014 FIFA World Cup. The first two events received more attention from the federal government in comparison to the FIFA World Cup, as the latter had its investments spread within the 12 host states and cities for building the football arenas and related infrastructure for the event (Brasil, 2016a). Similarly, Rio 2007 and Rio 2016 had also received investments from the state and city budget, but the federal funds were more significant than the local ones compared to the FIFA World Cup (Autoridade Pública Olímpica, 2016). As this



**Figure 4.** Brazilian budget investments in the three mega-events, 2004–2015.

Source: The authors with data from Brasil (2016c).

article covers only the investments from the federal budget, other federal incentives and regional/local funding would need to be included to have a complete assessment of the public expenses for these three events.

Table 2 shows an overview of the absolute investments, their variations throughout the years and comparisons among different sport and leisure categories.

As can be seen in Table 2, the budget for educational/participation sport had variations when compared to previous years. The budget had continuous increases from 2004 to 2009, followed by decreases, except for 2013. In an opposite direction, investments in mega-events increased in most years when they occurred, except for 2005 and 2015. The demands for the Rio 2007 Pan-American Games, the 2014 FIFA World Cup and the Rio 2016 Olympic and Paralympic Games are related to timing and amount of investments. In these three cases, budget resources were substantially applied around two to three years before each event. By comparison to the categories of mega-events and educational/participation sport, investments in elite sport were considerably smaller and unpredictable. The investment grew significantly, but the increase was not consistent during the timeframe. Yet, it is noticeable that elite sport grew in importance compared to the first years of analysis, particularly after 2013.

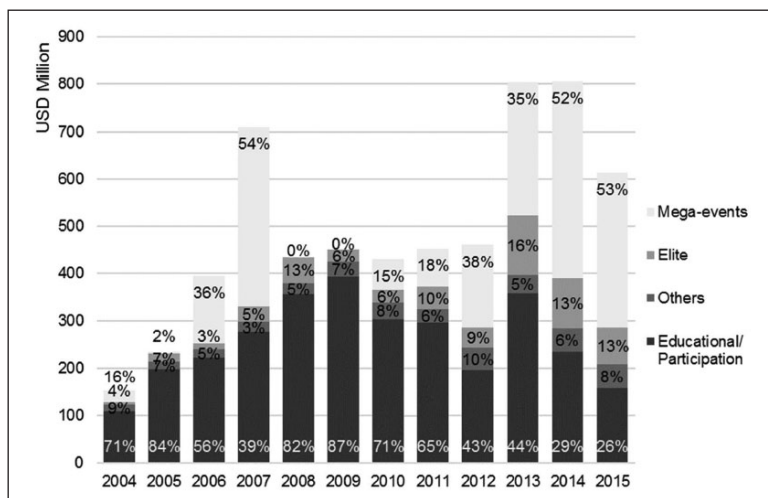
The majority of budget variations were not just incremental. The three sporting categories varied in their investments significantly from year to year. Positive and negative peak variations happened for mega-events in 2005 (–85.5%) and in 2006 (+3904.7%). While 60% of the data points varied  $\pm 30\%$ , showing an equilibrium, the presence of higher variations represents significant punctuations. It is also worth noting that educational/participation sport had incremental changes, with a few exceptions, while mega-events and elite sport had significant punctuations during the timeframe.

The ‘sport and leisure’ function received a total of US\$5.9bn in investments during the 12 years of analysis. Considering the total investments for all these years, more than half of the total was invested in educational/participation sport, almost a third in mega-events, around 10% in elite sport, and the remaining in the category ‘others’. During times of sport mega-events, there is an expectation that there is more investment in these events and elite sport, but this was not the case. However, it is important to highlight that the majority of investments in educational/participation sport focused on the building of facilities that are not necessarily linked to the promotion of programs for sport development. Moreover, in

**Table 2.** Brazilian sport ministry absolute investments and variations from the previous year, grouped by year and sport category (in million US dollars), 2004–2015.

	Educ./ partic.	Variation from the previous year	Mega- events	Variation from the previous year	Elite	Variation from the previous year	Others	Variation from the previous year	Total	Variation from the previous year
2004	108.4	—	24.4	—	5.6	—	14.3	—	152.7	—
2005	197.8	+82.4%	3.5	−85.5%	17.3	+204.6%	15.7	+9.7%	234.3	+53.4%
2006	222.0	+12.2%	142.0	+3904.7%	11.8	−31.8%	18.6	+18.8%	394.4	+68.3%
2007	276.3	+24.2%	380.1	+167.6%	32.5	+175.4%	20.8	+11.7%	709.7	+79.9%
2008	355.5	+28.7%	0	—	56.3	+73.4%	22.9	+10.1%	434.7	−38.7%
2009	393.1	+10.6%	0	—	26.8	−52.3%	31.0	+35.1%	450.9	+3.7%
2010	303.7	−22.8%	65.2	—	26.5	−1.4%	34.2	+10.2%	429.6	−4.7%
2011	296.4	−2.4%	80.8	+23.9%	47.4	+79.2%	27.9	−18.3%	452.5	+5.3%
2012	196.6	−33.7%	174.3	+115.7%	42.7	−9.9%	46.8	+67.3%	460.4	+1.7%
2013	357.7	+81.9%	282.8	+62.3%	124.8	+191.9%	38.9	−16.7%	804.2	+74.7%
2014	234.7	−34.4%	416.9	+47.4%	104.9	−15.9%	49.4	+26.9%	805.9	+0.2%
2015	157.5	−32.9%	327.7	−21.4%	77.9	−25.7%	50.6	+2.5%	613.7	−23.8%
<b>Total</b>	<b>3100.1</b>	<b>52.1%</b>	<b>1898.0</b>	<b>31.9%</b>	<b>574.9</b>	<b>9.7%</b>	<b>371.8</b>	<b>6.3%</b>	<b>5945.4</b>	<b>100%</b>

Source: The authors with data from Brasil (2016c).



**Figure 5.** Brazilian budget investments according to sporting purposes and percentages on the overall budget for the 'sport and leisure' function, 2004–2015.

Source: The authors with data from Brasil (2016c).

their everyday use, some of these facilities may be used for elite sport, although their main purpose was supposedly for educational/participation uses. Similarly, facilities built for the Rio 2007 Pan-American Games have been used by subsequent mega-events, by elite sport training and by educational/participation activities. The facilities in Rio de Janeiro for the 2014 FIFA World Cup were also used by the Rio 2016 Olympic and Paralympic Games, although in most cases improvements were made (Rio 2016, 2016).

The variation of investment through the years is noticeable, both in relative and absolute terms. Figure 5 provides the amount of investment in each category per year, as well as the annual relative impact on the sport and leisure budget.

Figure 5 reinforces the significance of educational/participation sport, with a growing investment from 2004 to 2009 and maintaining its dominance in the sport and leisure budget for most of the years, except for 2007, 2014 and 2015. These exceptions were dominated by investments in sport mega-events. Including this information with data in Table 2, sport mega-events were not directly linked to the variations in educational/participation and elite sport, particularly in 2007 (when investments in all categories grew) and 2015 (when investments in all categories decreased). Including 2013, these are ones that had the highest budget, when sport and leisure represented around 0.1% of the Brazilian total budget. In 2013, for instance, the absolute investment in educational/participation sport was amongst the highest in the 12 years analyzed, even though its relative amount represented 44% of the budget of sport and leisure. Nonetheless, the investments in educational/participation decreased in 2014 and 2015, years prior to the 2016 Olympic and Paralympic Games.

The unique dynamics of elite sport is seen in the absolute and relative investments. While elite sport had higher investments in the last three years than ever before, the

growth was not constant. Reaching percentages higher than 10%, its relative importance appeared on four occasions: 2008, 2013, 2014 and 2015. The percentage was probably bigger in 2008 due to the lack of investments in sport mega-events, as well as the participation of the Brazilian delegation in the 2008 Beijing Olympic and Paralympic Games. However, for the Olympic and Paralympic Games in London 2012, investments in elite sport were not high, which could be explained by the smaller 'sport and leisure' budget and the increase of investments in mega-events. While many would expect that elite sport would be the priority for investment due to its potential to generate international visibility through Olympic and Paralympic success, this was not the case for the Brazilian federal budget in any year.

## Discussion

As previously mentioned, the 'sport and leisure' budget variations over the period analyzed cannot be explained by Brazil's total budget, particularly in the years 2007 and 2013, when the sport and leisure budget grew considerably and the federal total budget decreased. In 2007, the Rio 2007 Pan-American Games had a significant impact on the 'sport and leisure' budget, and the investments in elite and educational/participation had also increased. As True et al. (2007) acknowledge, the politics of punctuation is originated on the macro-political level – and the Rio 2007 Pan-American Games had this national relevance, producing a significant change in the 'sport and leisure' budget compared to previous years. Even ignoring the investments in sport mega-events, a similar pattern is seen in 2013, when the investments in all sport categories grew considerably in comparison to the previous year. In contrast, decreases occurred in 2008, 2010 and 2015 in both the 'sport and leisure' and the total budgets, but these decreases were not equivalent in volume. In 2008, the total budget for 'sport and leisure' was smaller than the previous year, mostly due to the end of investments in the Rio 2007 Pan-American Games; yet, elite and educational/participation sport had received increased investment.

The years 2010 to 2012 represent what may be expected as the trend for public investment in a country hosting sport mega-events. As the budget for 'sport and leisure' did not increase accordingly, the investments in sport mega-events reduced the investments of educational/participation sport. However, the investment in elite sport has not followed any expectation, as positive and negative variations occurred in the timeframe analyzed. Considering the growth of every aspect in 2013, the year 2014 led to stagnation in the 'sport and leisure' budget, but again the priority for sport mega-events resulted in reduced investments for elite and educational/participation sport. In 2015, given the overall budget decrease, the three categories were similarly impacted.

The analysis of the 'sport and leisure' budget dynamics in Brazil between 2004 and 2015 shows that mega-events increased the amount of resources for this function, but alone they do not fully explain the equilibrium and punctuations of funding. Factors that may have intervened to create these variations include some unusual characteristics of Brazilian public funding and the composition of the 'sport and leisure' budget.

The 'sport and leisure' budget is composed mainly of non-mandatory investments. Therefore, the investments may be impacted by contingencies and the discretion of the executive power in the budget execution. The amount of investment relies on

good financial planning and a political will from the executive power to execute such planning. These factors' discrepancies are a possible explanation for the variations observed in this research. According to punctuation equilibrium theory, this type of spending tends to have more punctuations than mandatory spending<sup>4</sup> (Baumgartner and Epp, 2013).

The difference between expected and real tax revenues usually affects the budgeting process (Peters, 2010), including in Brazil (Azevedo, 2006; Batistella, 2009; Pereira and Mueller, 2002). In this case, the discretionary expenses that were supposed to be temporary become permanent, generating uncertainty on the planned budget (Azevedo, 2006). The executive power's control over budget execution may apparently gain on efficiency, although it generates losses on transparency. Because the real tax revenues are usually different from the expected ones, the executive power uses additional credits and contingencies that give a high level of discretion and flexibility to execute the budget (Pereira and Mueller, 2002). As such, some authors argue that the Brazilian public budget is a 'piece of fiction' (Lacher, 1995; Piscitelli, 2006).

The contingencies and discretion by the executive power have impact on the Brazilian 'sport and leisure' function (Athayde, 2014; Castro, 2016; Veronez, 2005). According to Castro (2016), the 'sport and leisure' function has the lowest execution of authorized and planned resources among all the government's budget functions, although it is not the smallest budget, as shown in Table 1. While management inefficiency can be a part of this issue, this reality shows that 'sport and leisure' was the least prioritized on the concurrence for non-mandatory expenditures over eight years (2004–2011) (Castro, 2016).

Another institutional variable may be the political changes which occurred in the federal government and in the sports ministry that interfered with the secretaries' organization (Starepravo et al., 2015), sport programs/actions and resources' distribution during the years considered for this study (Athayde, 2014). As these institutional changes affected educational/participation sport more significantly, one hypothesis is that the forces in the subsystem were not favorable to changes (True et al., 2007) in this category, which may help to explain its equilibrium for most years.

The analysis showed that sport mega-events changed the investment priorities only in 2007, 2014 and 2015. Apart from these three years, educational/participation sport received most investments, even though this category did not have many punctuations. These data differ from previous studies that concluded that mega-events and elite sport were prioritized in terms of funding in Brazil (Almeida et al., 2012; Athayde, 2014; Bueno, 2008; Castro et al., 2016), except for Castro (2016) whose work found similar results with regard to her analysis of sport funding from 2004 to 2011. This discrepancy can happen when considering different time frames and different sources of public investments, as well as the consideration of sport mega-events as elite sport altogether. Here, other public funding sources that elite sport receives were not included, such as lottery percentages, sponsoring of sports and athletes through state-owned companies and fundraising via tax exemption. These sources mostly benefit the Brazilian Olympic and Paralympic Committees, national sport federations and clubs where elite athletes train (Almeida, 2010; Almeida and Marchi Júnior, 2011; Matias et al., 2015; Reis, 2014). These organizations are private and recognized as legitimate promoters of elite sport, even though the federal government supports a significant part of their activities

financially. Possibly, if the federal government promotes other actions for elite sport, they would concur with those promoted by private organizations. Therefore, while the existence of other public sources for elite sport may reduce the need for public programs/actions, it increases the overall federal participation in sports funding beyond those assessed by this article.

The budget was larger for educational/participation sport due to the influence of legislative power on the budget proposal for sport and leisure. This power significantly influenced the budget volume and the approval for expenditures. As noted by Castro (2016) for the 2004–2011 period, legislators were responsible for the allocation of 62.2% of the sport and leisure budget, whereas 91% of this amount was investment in sport and leisure facilities. Because these politicians have access to part of the federal budget to individually suggest investments in local projects, they tend to prioritize the building of new facilities, as new construction potentially attracts more attention – and potential public recognition – than investments in refurbishment or services. This strategy was identified previously in sport funding (Castelan, 2011; Castro, 2016; Castro et al., 2016; Veronez, 2005) and as a characteristic of the budget definition in Brazil (Assis, 2009; Bezerra, 2001). Although there were investments for the construction and refurbishment of sport and leisure facilities, there were no public policy-derived comparable investments in programs and activities to facilitate their use. The funding for facilities and programs/actions is not directly dependable, so the volume of investments is disproportionate between them (Castelan, 2011; Castro, 2016).

Except for three years, sport mega-events did not reframe priorities among the categories of the ‘sport and leisure’ budget. Sport mega-events also had a limited influence on decreasing and/or increasing investments in the different sport categories. Nevertheless, two dynamics are highlighted.

First, the Rio 2007 Pan-American Games and the 2014 FIFA World Cup did not significantly change the amounts invested in elite sport, whereas the Rio 2016 Olympic and Paralympic Games did motivate higher investments in the ‘sport and leisure’ function after 2013. While the legislators focused on local projects via educational/participation sport, the executive power increased direct support for athletes with possibilities to win Olympic and Paralympic medals as a known strategy to boost international prestige (Grix and Carmichael, 2012). The investments did not have consistent growth, yet the function had a bigger budget recently in comparison to previous years.

Second, the budget for sport mega-events was higher in the years closer to the events. For the Rio 2007 Pan-American Games, 69.1% of the resources were invested only in 2007. For the 2014 FIFA World Cup, 55% of the total investments happened only in 2013. And for the Rio 2016 Olympic and Paralympic Games, 59.7% of the total investments happened in 2014 and 2015. This pattern helps to explain some of the punctuations observed, as well as their influence on the sport and leisure budget in some years and not in others. According to Castro (2016), 45% of investment for the Rio 2007 Pan-American Games in the function ‘sport and leisure’ occurred through extraordinary credits, which means that they were not previewed in the annual budgets. The Brazilian legislation states that these credits should be used in urgent and unplanned circumstances, such as wars and public calamity (Brasil, 1964). Baumgartner and Epp (2013) point out that some policy domains are more prone to a logic of response to emergencies, such as



disaster relief and military spending, provoking under- and over-reactions not only by the events themselves, but due to institutional inefficiencies. The Brazilian executive power has also used these credits in other budget functions to correct planning failures (Assis, 2009). This is likely to be the consequence of reacting to an 'emergency' – the sport mega-events – without the proper institutional efficiency of planned investments, as pointed out by the media throughout the events' preparations in Brazil (e.g. Barbara, 2016; Watts, 2014).

Reflection on the condition of public budgeting for sport in Brazil creates two main implications. First, the instability and unpredictability of the volume of expenditure may generate a discontinuity in sport programs/actions. The absence of guarantee of continuous investments may compromise the planning and the implementation of public policies, damaging the management with regard to reaching the programs/actions goals. Second, the investments in facilities without clear planning and budget to promote the activities generate doubts as to whether the facilities will be available for public use, and about capabilities for their long-term maintenance. In a sense, both executive and legislative powers at the federal level do not commit to the consequent use of these facilities, usually leaving the managerial responsibility to local governments that do not necessarily have the resources to promote activities in these spaces. These implications challenge the sustainability of investments beyond the period of visibility given to sport due to the hosting of sport mega-events in Brazil.

## **Conclusion**

Considering the two questions proposed, this article demonstrated that hosting sport mega-events has helped to increase the amount of resources for sport and leisure within the Brazilian total budget in some years. However, the equilibrium and punctuations presented cannot be fully explained by the sport mega-events. Additionally, the curves of investment for the different sport categories varied unpredictably in most of the years. The curves did not present continuous growth, nor did they demonstrate significant decreases due to investments in mega-events, showing that national dynamics of federal funding have significant influence.

The use of an official national database to map the funding variations among different sport programs/actions for 12 years allows for a greater understanding of the national priorities and how executive and legislative powers influence sports funding. While it may be expected that higher investments in elite sport versus educational/participation sport would occur, particularly in the years close to hosting sport mega-events, this was not the case in Brazil. When considering sport investments from the federal budget, the resources for sport mega-events were concentrated over a shorter period, so a larger timeframe allows a better assessment of the balance of sport public funding. This is the main contribution of this paper for the literature on Brazilian sport funding.

Although sport mega-events influence sport public funding, there are other factors to explain equilibrium and punctuations during the analyzed timeframe. Local political priorities from both the executive power and the legislative power had more influence on the destination of resources than investing in athletes for medal winning, for instance. In this case, particularly the Rio 2016 Olympic Games influenced elite sport funding, but

not enough to turn it into a priority within the 'sport and leisure' budget. These elements show the need for qualitative studies to understand the reason behind the punctuations to inform the analysis of data series (John and Bevan, 2012), a limitation of this study. For Brazil, future research should address the rationale of politicians during the preparations for sport mega-events and an understanding of what factors influence the funding priorities of the technical and political executive power members.

A second limitation of this study is that it selected only one source of public investments in sport among many. As cited, other sources of public investments in sport happen beyond the federal budget, including from states and cities. This study significantly sheds light on the political priorities of the largest source of investment in sport funding in Brazil – the Brazilian federal government.

This research has focused upon one country hosting sport mega-events. Similar studies are necessary to compare how significant such events are when it comes to changing (or not) the profile of public investments in sport in different countries.

The lack of data points due to the limited data available for the sport and leisure budget in Brazil did not allow a complete confirmation of the punctuated equilibrium theory for this case. This research showed that mega-events are a limited disruption for the 'sport and leisure' budget. Future studies amplifying the sources of public investments, the timeframe (i.e. comparison pre- and post-event) and different hosting countries are recommended for a broader understanding of the influence of mega-events on the dynamics of sport public funding.

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## Notes

1. The function reflects 28 different areas of governmental investments, in most cases being directly related to the respective ministries. By analyzing the function 'sport and leisure', all federal investments for this area were considered, which is linked to the Sports Ministry. Other areas of federal investment are Justice, Management, Defense, Security, Social Assistance, Pensions, Health, Education, Culture, Citizenship rights, Agriculture, Industry, Communications, Energy, Transportation, among others.
2. This law was altered in 2015, when 'sport formation' was included as a fourth type of sport (Brasil, 2015). As it was not present during the time frame of this research, it was not added among the categories.
3. The US Central Intelligence Agency (CIA) estimated that the Brazilian federal expenditures would reach US\$641.2bn in 2015, whereas in the United States it would reach US\$3.6tr, in China US\$2.7tr, in the UK US\$1.2tr, in Canada US\$614.1bn, in Australia US\$451.4bn, in

India US\$236bn and in South Africa US\$98.2bn (CIA, 2016). Although the CIA estimate for Brazil was smaller than the final outcome for the year 2015 (US\$714.9bn), these figures help to put the amount of investments into an international perspective.

4. For the 2015 budget law, the mandatory investments represented 75.5% of the Brazilian federal budget, meaning that the government had the possibility of managing only 24.5% of the budget (Brasil, 2014). As a comparison, the mandatory investments in the United States surpassed 80% in 2005 (Peters, 2010).

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