

The entrepreneurship of host cities of the Olympic Games - Between success and social destruction

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A Study Design
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abstract

Many publications focus on the deficit nature of the Olympic Games organisation, when considered from the point of view of host cities - organisers of such events. However, does such an event actually affect the region and the host country in a positive way? The presented article aims at the assessment of the organisation of mass sports events, such as the Olympic Games, taking into consideration entrepreneurial activities which can be defined in terms of a productive, destructive or socially destructive category. In order to determine the relevant types of entrepreneurship, the authors refer to well-established definitions (in the case of productive and socially destructive types) and to their own, original definition of destructive entrepreneurship.

Key words: Olympic Games, productive, destructive, socially destructive.

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INTRODUCTION

After the end of each Olympic Games, the counting of profits and losses takes place. Usually, the costs defined in the budget in order to organise such a sports event are notoriously exceeded. More and more publications focus on the deficit nature of organising the Olympic Games, when considered from the point of view of host cities – organisers of such events. The budget plan of an event (despite the fact that the actual expenditures are higher than planned) lists a number of advantages which come with the organisation of the Olympic Games. The main advantage is the development of the host city, the region and even an increase in the GDP of the host country. However, does such an event actually affect the region and the host country in a positive way?

THE ESSENCE OF PRODUCTIVE AND DESTRUCTIVE ENTREPRENEURIAL ACTIVITIES

Baumol [1] was the first author to define the destructive character of entrepreneurial activities. In his opinion, the difference between productive, unproductive and destructive entrepreneurship lies in the influence it may exert on the growth of economy. As an example of the destructive character of such activities he provides so-called rent seeking, a process characterised by legal limitation of competition. While providing their definition of destructive entrepreneurship, Desai and Acs [2] make three assumptions, namely:

- maximal utility;
- constant accessibility of supplies, however with the changeable allocation of entrepreneurial behaviour in economy;
- necessary analysis at the level of economic development.

In their model, the authors assume that destructive entrepreneurship negatively affects rents, considering the application of that phenomenon in productive processes. Furthermore, the authors indicate a significant feature of the phenomenon, i.e. generation of profits at one place and their reduction at another location [2]. Indicated by Baumol, the phenomenon of rent seeking is defined by them as redistribution of wealth and a decrease in growth. The authors do not state precisely whether the discussed growth should refer to the micro-scale, i.e. to an enterprise, or to the macro-scale, i.e. to the measure of the economic growth rate, in accordance with Baumol's assumptions. We can only presume that the authors' approach refers to an enterprise, thus to the field of micro-economy. Such presumptions are based on a feature which is applied to distinguish the destructive type of entrepreneurship from its unproductive and productive types: it is a negative net impact on the GDP of a particular country. Considering that point of view, any destructive activities performed by an entity do not necessarily mean stagnation or a decline in the GDP, as suggested by Covne and Leeson [3], who use the notion of evasive entrepreneurship instead of destructive entrepreneurship. Destructive activities should be characterised by a negative balance of the positive and negative impact exerted on the GDP of a particular country. In fact, it means a negative impact on the total GDP; however, if the scale of the phenomenon turns out to be insignificant, it may remain unnoticed. Similarly, productive activities would affect the positive balance of the positive and negative impact exerted on the GDP.

Next, Henrekson [4] presents a notion of predatory entrepreneurship which can be identified with its both destructive and unproductive types. As an example of predatory entrepreneurship, he indicates the establishment of an enterprise which aims at exploitation of subventions and tax concessions instead of generation of values resulting from entrepreneurial operations which could be beneficial for customers.

Referring Henrekson's approach to the approaches presented by the above-mentioned authors, it is possible to draw some absurd conclusions. The establishment of an enterprise which solely aims at the exploitation of subventions and does not generate any values for customers, in accordance with the income-based and aggregate expenditure methods, affects the GDP growth in a positive way. It would mean that such operations should be considered as productive because of the positive balance of net impact on the GDP. Such an approach is contradictory to Henrekson's proposition. It seems that one reason for such discrepancies in the discussed approach is the lack of a time framework that should be defined for the analysed phenomenon. An increase in the expenditures from the state budget and the income generated by business entities in a short time may have some positive impact on the GDP. However, in a long-term perspective, it may be necessary to limit other, more important expenditures incurred by the state and the income generated by enterprises. It will then be translated into a decline in the GDP.

Sautet suggests some modifications to the discussed phenomenon. He seeks for evasive entrepreneurship in formal institutions, the operation of which may result in the negligence of generally accepted principles. The author understands socially destructive entrepreneurship as involvement in operations connected with a so-called zero-sum or a negative-sum game, rent seeking and theft [5]. It should be noted that, similarly to other authors (e.g. Desai and Acs [2], Sauka [6], Starnawska [7], Covne and Leeson [3], Sautet [5] and Henrekson [4]), Sautet assumes that the undertaken operations may, but do not have to, be compliant with legal regulations. Assuming the zero-sum or negative-sum game as an indicator results in a conflict among the players (business entities) because one player's gain is earned at the expense of other players [8, 9]. In this theory, the winners gain as much as the losers lose. Considering the negative-sum game, all its participants incur some loss.

Sautet's indication of the case where at least one of the above-mentioned games appears, through the use of the or conjunction in the definition, should be understood in the following way: one of two cases may occur to generate the phenomenon of socially destructive entrepreneurship. Furthermore, any activities which are aimed at rent seeking and theft also meet the criteria assumed by the author.

The presented article refers to three definitions: a definition of productive entrepreneurship, which (as opposed to Baumol's [1], and Desai and Acs's [2] approach) exerts a positive net impact on the GDP of the state and contributes to social welfare [3, 10]; a definition of destructive entrepreneurship, which comes in line with Baumol [1], and Desai and Acs's [2] considerations and exerts a negative net impact on the GDP of the state, as for instance rent seeking; a definition of socially destructive entrepreneurship which is assumed in accordance with the presumptions suggested by Sautet [5], namely: involvement in a zero-sum or negative-sum game, rent seeking or theft.



ECONOMIC RESULTS OF THE OLYMPIC GAMES

Numerous authors have already made their attempts to assess economic and social results of such mass events as the Olympic Games [10-18]. Considering the scale of those events, it has been so far impossible to provide precise information on the gain and loss they generate. Nevertheless, the economic aspect of sports events seems to become more and more important. It results from the fact that the actual costs related to the organisation of such events and the questions referring to their unprofitability have been more and more frequently discussed. Therefore, a new phenomenon has already appeared – a social movement which aims at protesting against the organisation of such sports events¹ [19]. It is, however, not surprising when we analyse the costs that have been actually incurred in relation to the costs that have been planned. The exceeded costs that were related to the organisation of the Olympic Games in the years 1960-2012 are presented in Table 1.

Table 1. The exceeded costs that were related to the organisation of the Olympic Games in the years 1968-2012 [%]

City and year	Country	Type of the Olympic Games	The exceeded costs [%]
London 2012	Great Britain	Summer	101
Vancouver 2010	Canada	Winter	17
Beijing 2008	China	Summer	4
Torino 2006	Italy	Winter	82
Athens 2004	Greece	Summer	60
Salt Lake City 2002	USA	Winter	29
Sydney 2000	Australia	Summer	90
Nagano 1998	Japan	Winter	56
Atlanta 1996	USA	Summer	147
Lillehammer 1994	Norway	Winter	277
Barcelona 1992	Spain	Summer	417
Albertville 1992	France	Winter	135
Calgary 1988	Canada	Winter	59
Sarajevo 1984	Yugoslavia	Winter	173
Lake Placid 1980	USA	Winter	321
Montreal 1976	Canada	Summer	796
Grenoble 1968	France	Winter	201

Source: [18, p. 10].

While analysing the above-presented data, it should be stated that during the years 1968-2012 organisation of all 17 events generated costs which exceeded the underestimated budgets. The Olympic Games organised in Beijing reached the lowest level of the exceeded costs – 4%, whereas the Olympic Games organised in Montreal reached the highest level of such costs – 796%. Considering the costs related to the organisation of such events, which range from dozens of millions of US dollars to dozens of billions of US dollars, and the analysis of the exceeded costs related to the particular Olympic Games, at least a few questions may arise:

- why did the budget units, which were experienced in financial planning, allow such considerable excess of costs to take place?

¹ <http://tvn24bis.pl/wiadomosci-gospodarcze,71/igrzyska-czy-to-sie-oplaca,430163.html> [Are the Olympic Games worth-while?] [accessed on 1st Feb. 2017]

- what was the reason for the lack of a possibility to correct such underestimations during the subsequent events, despite the fact that the previous organisers' experience could have been taken into consideration?
- did the exceeded costs overtop the expected benefits?
- would the authorities have still organised the discussed events if they had been aware of the necessity to incur much higher costs?

The lack of answers to the above-mentioned questions results in some well-grounded concerns about the profitability of such events for the host cities and the institutions which provide funds for such mass events. In view of publications on the profitability of sports events, it is possible to state that they are hardly ever profitable [20]. The Director of the International Centre of Olympic Studies, Professor R. Barney, believes that so far there have not been any Olympic Games which ended with profit² [21]. His opinion seems to be even more plausible if we consider the fact that the budget of the Olympic Games has been so far calculated with a method in which the costs equal the income - and the costs have been constantly exceeded. Moreover, after the organisation of the sports events, the host cities were left with the infrastructure which is not fully exploited, yet it still generates considerable costs which have not been previously calculated into the budgets. Thus, there is a problem related to the maintenance of unexploited buildings and facilities. An attitude that is often assumed by the city authorities towards the problem is the limitation of expenses related to the maintenance of such infrastructure and an intended consent to its devastation. The Internet provides numerous photographs of the places where the sports events were once organised³ [22, 23, 24]. In the discussed cases, the devastation is so extensive that it is practically impossible to use that infrastructure (once constructed and funded) again to organise a similar event. The actual costs related to the organisation of a mass sports event refer not only to its preparation and realisation (as stated in the budget) but also to the maintenance or transformation of the infrastructure which, after the end of the sports event, might turn out to be only a financial burden.

The discussed theoretical benefits for the host city are usually of economic, social and environmental nature. The expected economic benefits refer to the development of the city and the region, the investment and development of the infrastructure, an increase in the number of tourists and (at least, it is stated in the analysed documents provided by the event organisers [18, 20, 25, 26, 27]), and the macroeconomic effect, i.e. the growth of the GDP. Social benefits mainly involve the prestige of the inhabitants who live in the host city, (at least) a temporary increase in employment (vacancies related to the organisation of the sports event), construction of sports facilities that can be used (at least as stated in theory) by the host city inhabitants. Environmental benefits mainly refer to the development of transport links.

However, we should remember that the above-stated benefits involve the necessity to incur some specific and - as it turns out - underestimated

² <http://www.npr.org/templates/story/story.php?storyId=113351145> [accessed on 13th Feb. 2017]

³ For example: <https://www.theguardian.com/sport/video/2017/feb/10/rio-2016-olympic-venues-abandoned-derelict-video>; <http://www.cbsnews.com/pictures/olympic-venues-that-were-abandoned> <https://www.theguardian.com/sport/gallery/2017/feb/10/rios-olympic-venues-six-months-on-in-pictures>

costs. We should also bear in mind the negative effects related to such events. They may involve the risk of corruption as regards the organisation of the Olympic Games, procedures and investment processes, and that can be a reason for irrational expenditures.

Considering the current attitude towards the organisation of the Olympic Games, the efficiency of all the required preparations is more important than the effectiveness. Thus, a question may be posed about the productive or socially destructive character of the discussed phenomenon.

DISCUSSION

The Olympic Games are a commercial event focused on gaining, despite the awareness of numerous risky issues, and thus they come as an operation characterised by entrepreneurial features [28]. The article assumes three categories of entrepreneurship: productive, destructive and socially destructive.

The first category refers to the definition of productive entrepreneurship which exerts a positive net impact on the GDP of the country, contributing to social welfare. The Olympic Games meet the first condition of that definition. In the short-term perspective, and considering the aggregate expenditure method [29], this kind of entrepreneurship should be classified as an event which positively affects the GDP growth. The multi-million costs which must be incurred in relation to the organisation of sports events mean the growth of the GDP during the time of the expenditures and during the subsequent years (however, considerably lower) after the year of the sports event, because of the costs related to the necessity to maintain or adapt the sports facilities constructed for the Olympic Games.

The second part of the definition, however, refers to social welfare. Considering the opinion expressed by the Director of the International Centre for Olympic Studies, Mr R. Barney, on the unprofitability of such events, the exceeded costs incurred during the years 1968–2012 which are presented in Table 1, the debts which are to be paid back during dozens of years by the host city authorities [20] (in the case of the Olympic Games organised in Athens, the event has contributed to the general financial crisis in the country⁴ [30]) and corruption which is associated with such events⁵ [31], there are no explicit grounds to define this kind of sports events as events which contribute to social welfare. Therefore, it should be stated that the Olympic Games do not meet the requirements of the definition of productive entrepreneurship.

The next definition discussed here refers to destructive entrepreneurship. In order to define an event as belonging to that category, it must have a negative net impact on the state GDP. As it has been already proved for productive entrepreneurship, the Olympic Games positively affect the GDP growth. Therefore, the event cannot be placed into that category. However, the Olympic Games can come as an example of a situation in which competition is limited, because they are of monopolistic nature – it means that the event is organised only at one place in the world. It is impossible to organise two Olympic Games at the same time, in two different countries, as two simultaneous competitive events. Such sports events cannot be copied or replaced by some substitute

⁴ <http://www.cnbc.com/2012/01/19/Olympic-Cities--Booms-and-Busts.html?slide=5> [accessed on 1st Feb. 2017]

⁵ <http://www.reuters.com/article/us-olympics-sochi-corruption-idUSBRE94TORU20130530> [accessed on 1st Feb. 2017]

events of a similar character. It is, however, not enough to refer to them as destructive.

The last assumed entrepreneurial category is socially destructive entrepreneurship which should be understood as involvement into a zero-sum or negative-sum game, rent seeking or theft. The Olympic Games can be viewed as a zero-sum game because the gain for all the beneficiaries of the Olympic Games is earned at the expense of the city, the country and social budget. Considering the economic point of view, it seems that the beneficiaries who are not connected with the budget of the host city and the host country find themselves in the best situation. In such a case, they become actual beneficiaries: without a necessity to bear the consequences of the debts that have been generated.

The necessity to repay the debt generated by the organisation of the sports event may also involve a necessary decrease in current expenses from taxpayers' money, an increase in taxes or a financial crisis in the host country which will directly affect business enterprises operating there. However, the Olympic Games cannot be defined as a negative-sum game. Considering a logical point of view, it seems that if all the participants of the sports event incurred loss, then they would not be prone to repeat that in the subsequent years. Moreover, companies which construct and fit out sports facilities and offer hotel and catering services do not incur any loss because of the organisation of such an event. The assumed definition, however, requires the appearance of one of two phenomena: a zero-sum game or a negative-sum game. Considering the specificity of the Olympic Games which refers to the zero-sum game, the requirement referring to the negative-sum game does not have to be met to qualify the event as socially destructive entrepreneurship. Therefore, the Olympic Games can be defined as the socially destructive type of entrepreneurship.

The definition of socially destructive entrepreneurship also includes rent seeking and theft. Rent seeking, as it is, may refer to the question of selecting a host city where the Olympic Games could be held. The selection of one city which will be announced as the host of the event is preceded by a lot of endeavour which may generate more expenses, and the selection criteria are not transparent. Despite benefits that have been declared, analysis of the particular cases allows stating that this kind of activity is rather unprofitable for the host city. Thus, the selection of a host city is also related to the selection of a source from which the wealth distribution could take place, in accordance with the rules of a zero-sum game. It is, however, impossible to state that each event involves theft. Nevertheless, in this case, the author of the definition also states that one requirement to be met is enough to define the Olympic Games as the socially destructive type of entrepreneurship. Moreover, such sports events display some features of evasive entrepreneurship because of notorious ignorance towards the approved cost budgets.

CONCLUSIONS

The presented article aims at the assessment of the organisation of mass sports events, such as the Olympic Games, in terms of their classification into the productive, destructive or socially destructive categories of entrepreneurship. Based on the available research and analyses provided

by various authors, it should be stated that the Olympic Games meet all the criteria to be classified into the socially destructive category of entrepreneurship. It results from the fact that the organisation of the Olympic Games comes as an enterprise with the characteristics of a zero-sum game, and the selection of the host city resembles the process of rent seeking.

The Olympic Games, however, cannot be defined as productive or destructive. Admittedly, the organisation of the Olympic Games is related to the GDP growth (and this fact itself excludes the event from the destructive category), but at the same time, it does not contribute to social well-fare (and if it does, such contribution is of a very little scope, provided in a very short time). The experience taken from 17 analysed cases of the Olympic Games allows the authors to state that the cost assumptions have been unfeasible, and therefore, the declared benefits were been questionable. The necessity to repay debts, which turned out to be higher than previously assumed, the lack of the intended benefits, additional expenses which were generated after the organisation of the event - all these elements allow the authors to define such events as unprofitable, especially when they are considered from the point of view of the local society. A direct connection of the Olympic Games organised in Greece with the financial crisis after the event comes as a very illustrative example to prove the statement.

On the basis of the analysis presented in the article, it is only possible to state that the organisation of the Olympic Games is of socially destructive nature, in accordance with Sautet's definition.

REFERENCES

- [1] Baumol WJ. Entrepreneurship: productive, unproductive, and destructive. *J Politic Economy*. 1990;98(5):894.
- [2] Desai S, Acs Z. A theory of destructive entrepreneurship. Copenhagen; 2008.
- [3] Coyne CJ, Leeson PT. The plight of underdeveloped countries. *Cato J*. 2004;24(3):235-249.
- [4] Henrekson M. Entrepreneurship and institutions. Research Institute of Industrial Economics. IFN Working Paper No.707; 2007.
- [5] Sautet F. The role of institutions in entrepreneurship: Implications for development policy. (February 2005). *Mercatus Policy Primer No. 1*. Available at SSRN: <https://ssrn.com/abstract=1264033>.
- [6] Sauka A. Productive, unproductive and destructive entrepreneurship: A theoretical and empirical exploration. *Wiliam Davidson Institute Working Paper Number 917*; 2008.
- [7] Starnawska M. Przedsiębiorczość w kontekście otoczenia instytucjonalnego - refleksje. [Entrepreneurship in the context of the institutional environment - reflections]. *Master of Business Administration*. 2011;116(1):21-29. Polish.
- [8] Kostecki RP. Wprowadzenie do teorii gier [Introduction to game theory]. http://www.fuw.edu.pl/~kostecki/teoria_gier.pdf [accessed on 1st Nov. 2016]. Polish.
- [9] Sułek M. Trzy działy prakseologii [Three divisions of praxeology]. Warszawa: Instytut Stosunków Międzynarodowych UW; 2008. Polish.
- [10] Henrekson M, Sanandaji T. The interaction of entrepreneurship and institutions. IFN Working Paper. Stockholm: Research Institute of Industrial Economics; 2010.
- [11] Kurscheidt M. Stand und Perspektiven ökonomischer Forschung zum Fussball - eine dogmenhistorische Annäherung [State and perspectives of economic research on football - an approach of dogm-historical]. In: Hammann P, Schmidt L, Welling M, editors. *Ökonomie des Fussballs*. Wiesbaden: Gabler; 2004. German.
- [12] Analiza - Piłka to biznes w kraju nad Wisłą [Football is business in the country upon Vistula]. *Przełom Sport*. 2005;5. Polish.
- [13] Bieling M, Eschweiler M, Hardenacke J, editors. *Business-to-Business Marketing im Profifussball*. [Business-to-business marketing in professional football]. Wiesbaden: Gabler; 2004. German.
- [14] Dietrich J, Rosenblum S. The impact of the Summer Olympics on its host city: The costs outweigh the tangible benefits; 2009.
- [15] Barclay J. *Misjudgement of Olympic proportions?* Oxford: Institute of Economic Affairs; 2009.

- [16] Zarnowski CF. A look at Olympic costs. Maryland: Mount St. Mary's College Emmitsburg. <http://library.la84.org/SportsLibrary/JOH/JOHv1n1/JOHv1n1f.pdf> [accessed on 1st Feb. 2017]
- [17] Flyvbjerg B, Stewart A. Olympic proportions: Cost and cost overrun at the Olympics 1960-2012. Oxford: University of Oxford; 2012.
- [18] Jedel J. Euro 2012 jako czynnik rozwoju ekonomicznego województwa pomorskiego. [Euro 2012 as a factor of economic development of the Pomeranian Region]. Warszawa; 2012. Polish.
- [19] Billings SB, Holladay J. Should cities go for the gold? The long-term impacts of hosting the Olympics? *Economic Inquiry*. 2012;50(3):754-772. https://econpapers.repec.org/article/blaecinqu/v_3a50_3ay_3a2012_3ai_3a3_3ap_3a754-772.htm [accessed on 1st Feb. 2017].
- [20] Zimbalist A. Circus Maximus: The Economic gamble behind hosting the Olympics and the World Cup; 2015.
- [21] Matheson VA. Economic multipliers and mega-event analysis. *Int J Sport Finan*. 2009;4(1):63-70.
- [22] Andersson Tommy D, Armbrecht J, Lundberg E, Impact of mega-events on the economy. *Asian Business & Management*. 2008;7(2):173-179.
- [23] von Rekowski R. Are the Olympics a golden opportunity for investors? *Leadership series Investment Insights*; 2013. https://www.fidelity.com/bin-pub-lic/060_www_fidelity_com/documents/Are%20the%20Olympics%20a%20Golden%20Opportunity%20for%20Investors_Fidelity.pdf [accessed on 1st May 2017].
- [24] Whitson D, Horne J. The global politics of sports mega-events: underestimated costs and overestimated benefits? Comparing the outcomes of sports mega-events in Canada and Japan. *Soc Rev*. 2006 Dec;54(2suppl):73-89.
- [25] Don C. Far from gold: Why hosting the Olympics is detrimental to the host country. Claremont McKenna College; 2010.
- [26] Mizuho Research Institute, Economic Research Department, The economic impact of the 2020 Tokyo Olympic Games. 2014 <http://www.mizuho-ri.co.jp/publication/research/pdf/eo/MEA141017.pdf> [accessed on 12nd Sept. 2016]
- [27] Osada M, Ojima M, Kurachi Y, Miura K, Kawamoto T. Economic impact of the Tokyo 2020 Olympic Games. *BOJ Reports & Research Papers*. January 2016. https://www.boj.or.jp/en/research/brp/ron_2016/data/ron160121b.pdf
- [28] Encyklopedia PWN, hasło "przedsiębiorczość" <http://encyklopedia.pwn.pl/haslo/przedsiębiorczosc;3963281.html> [Electronic encyclopaedia PWN, the term „entrepreneurship”] [accessed on 21st March 2017]. Polish.
- [29] Hall RE, Taylor JB. *Makroekonomia [Macroeconomics]*. 3rd edition revised. Warszawa; 2000. Polish
- [30] Kasimati E, Dawson P. Assessing the impact of the 2004 Olympic Games on the Greek economy: A small macroeconomic model. *Economic Modelling*. 2009;26(1):139-46. <http://www.sciencedirect.com/science/article/pii/S0264999308000709> [accessed on 21st March 2017]
- [31] Li SN, Blake A, Thomas R. Modelling the economic impact of sports events: The case of the Beijing Olympics. *Economic Modelling*. 2013;30(1):235-244. <http://www.sciencedirect.com/science/article/pii/S026499931200288X> [accessed on 21st March 2017]

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