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## **The infrastructural investments in the Polish Euro 2012 host cities**

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## **THE INFRASTRUCTURAL INVESTMENTS IN THE POLISH EURO 2012 HOST CITIES**

### **Introduction**

The most significant value added by Euro 2012 is undoubtedly the infrastructural changes. The event became a catalyst for the execution of more than two hundred projects for an amount of ca. PLN 100 billion. This paper focuses on the key projects, including above all the road construction projects, as well as those connected to road and rail infrastructure.

Considering such significant outlays, the funding the preparation, particularly in a division into private and public sources, becomes an especially important issue. It is the predominant commitment of public funds that creates the need to justify their allocation, chiefly in the case of the sports venues, usually utilised by private sports clubs after the end of the event. Euro 2012 has been compared in this respect with other events of this rank, staged in Europe since the beginning of the 21st century.

### **The model of financing of Euro 2012 in Poland and in other UEFA European Championships hosts – comparative analysis**

Poland's participation in the organisation of UEFA European Championships in 2012 is a pretext to attempt to determine whether the commitment of public funds in such major events is justified. The issue of financing mega sports events has been the subject of comprehensive analyses presented in foreign literature. For obvious reasons, this subject has not yet been taken up in Poland, although both Euro 2012 and any potential mega sports events that may be organised in future, given the present infrastructure, have contributed to a change in this trend.

Table 3.1 contains an overall comparison of the expenses incurred in the framework of preparations for UEFA European Championships organised in 2000–2012. In terms of the structure of financing, two models can be identified: public and private. In nearly all countries private funds have been committed, with the exception of Poland, where the outlays were financed exclusively from public sources. It was in spite of huge hopes placed in public-private partnership [Zawadzki, 2010, pp. 606–616].

The fact of financing from a single source compounds the massive size of the outlays. In this respect the event in Poland was among the most expensive ones. Its total cost was in excess of 22.5 billion EUR<sub>2012</sub>.<sup>1</sup> This is at odds with the assumption presented in the subchapter 2.3 that the most expensive events necessitate funding from a variety of both public and private sources. For comparison, the co-organiser of UEFA Euro 2012 – Ukraine spent less than a sixth of that amount on preparations for the event. Among the cheapest were the tournaments organised at the turn of the century in Belgium and the Netherlands. The overall amount allocated to the preparations in both countries was less than half a billion EUR<sub>2012</sub>. The tournament organised in Austria and Switzerland should also be considered cheap. It cost each of the countries around half a billion EUR<sub>2012</sub>. This confirms the hypothesis of lower infrastructure expenditures in countries with more developed economies. During UEFA Euro in 2000 and 2008 the event hosts, being some of the most developed European countries, focused on preparing the stadiums and their immediate surroundings. In Poland, Portugal and Ukraine organisation of such a major sporting event became an excuse for execution of a series of infrastructural projects related to sports venues only to a small extent.

**Table 1.**

Size and structure of financing of UEFA European Championships, broken down into public and private sources

Place and time	Financing [EUR <sub>2012</sub> bn]			Participation In funding [%]	
	public	private	total	public	private
Belgium 2000	0.09	0.103	0.193	47	53
The Netherlands 2000	0.078	0.202	0.280	28	72
Portugal 2004	3.4	0.6	4.0	85	15

<sup>1</sup> The EUR<sub>2012</sub> unit was used to reflect as accurately as possible the expenditures incurred by the individual countries [Zawadzki, 2013, pp. 613–615].

Austria 2008	0.4045	0.023	0.4275	95	5
Switzerland 2008	0.303	0.230	0.533	57	43
Poland 2012	22.503	0	22.503	100	0
Ukraine 2012	2.97	0.72	3.69	80	20

Source: [Zawadzki, 2013a, p. 615].

Although the stadiums were among the most important projects completed in Poland as part of Euro 2012, they accounted for a relatively small part of the total expenditure on key investments – under 6% (Table 3.2). Non-sports infrastructure was of a far greater significance here, above all, road infrastructure, which accounted for more than 80% of the outlays.

Since the execution of a great proportion of infrastructure projects in countries with less developed economies is accelerated due to the event but the projects would be completed in the future regardless, it is difficult to compare the cases of the individual host countries in terms of overall expenditures made in connection of UEFA Euro tournaments. As shown in Table 3.1, the scale of variance is enormous. The “most expensive” UEFA European Championships in Poland ate up more than 116 times funds than the “cheapest” ones in Belgium. But to determine the actual scale of financing of an event it would be necessary to isolate only the projects executed exclusively for UEFA Euro and disregard the ones for which the event was only a catalyst.

**Table 2.**

Expenditure on key investments as part of preparations for Euro 2012 in Poland

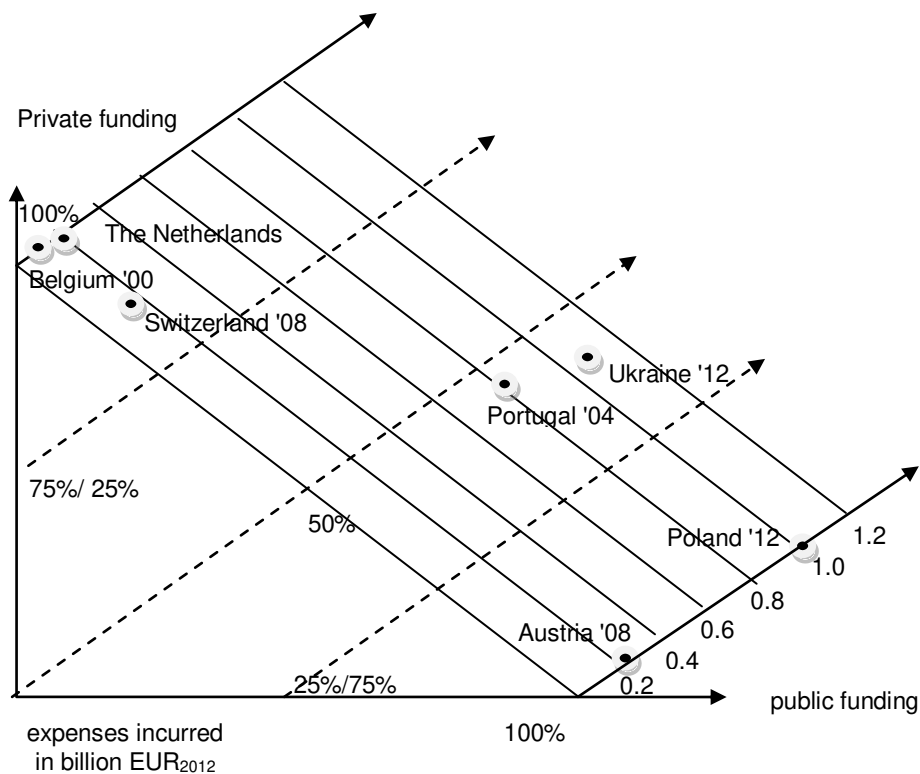
place	stadium infrastructure	road transport	rail transport	air transport	public transport	other infrastructure	
Gdańsk	921.21	1 569.15	0	306.60	0	19	
Poznań	638.58	151.83	0	222.50	0	0	
Warsaw	1 914.63	0	0	0	0	84	
Wrocław	857.42	890.24	0	503.25	760	0	
entire state	0	60 003.80	8 042.70	206.69	0	0	
Total	million PLN	4 331.84	62 615.03	8 042.70	1 239.04	760	103
	%	5.62	81.22	10.43	1.61	0.99	0.13

Source: Author's own compilation based on: Sprawozdanie z realizacji przedsięwzięć Euro 2012 oraz z wykonanych działań dotyczących realizacji przygotowań Polski do finałowego

turnieju Mistrzostw Europy w Piłce Nożnej UEFA Euro 2012 (styczeń 2012 – czerwiec 2012), Ministry of Sport and Tourism, Warsaw 2012 pp.24-42.

Therefore, western specialist literature usually refers to the expenses incurred solely with the purpose of preparing the sports venues [Feddersen et al., 2008]. Opponents of this approach invariably point to the fact that highly developed countries usually already have the necessary stadiums and are not forced to build them from scratch. Moreover, the construction of an arena generally increases the competitiveness of a particular region after the event, so the expenses incurred during its creation will be offset by potential income from its operation. Despite the aforementioned reservations, such an approach seems far more reliable than a comprehensive approach, taking into consideration multiple road, rail or air infrastructure projects. As shown in Figure 3.1, focusing exclusively on the financing of sports venues greatly reduces the scale of financing. The most substantial expenditures, incurred by Ukraine, amount to 1,093 billion EUR<sub>2012</sub>. It also reduces the difference between the “most expensive” and “cheapest” event. A comparison of the expenses incurred by the individual countries as part of the same (co-organisers) and different events gives rise to some interesting conclusions.

The event in Ukraine, although generating the largest expenditures, is not regarded as the most expensive in view of the high share (over 40%) of funds from private sources for the construction of the Donetsk and Kharkov. These venues were prepared efficiently and without any serious disruptions and were put in operation as early as in 2009. However, the execution of the stadiums for public funds was far from trouble-free. As a result of the increasing costs and repeated postponement of completion dates, the Olympic Stadium in Kiev was completed in mid-2011, and the venue in Lvov was not ready until November 2011, following a decisive intervention of the Ukrainian government and public prosecutor's office.



**Figure 1.** Scale and structure of financing of sports venues in the framework of UEFA Euro in 2000–2012

*Source:* Author's own compilation.

The venues in Poland, wholly financed from public sources, have given rise to much controversy and social discontent. Opponents of such a model of funding often argue that the venues are now being used by sports clubs owned by private investors. This applies to the stadiums in Gdańsk, Poznań and Wrocław.

It is noteworthy that the outlays made by Poland and Ukraine are far higher than those incurred by Portugal despite the relatively similar level of economic development and the fact that the Iberian country prepared ten stadiums, including six funded from public sources, for an amount of 0,441 billion EUR<sub>2012</sub> (all ten for 0,8 billion EUR<sub>2012</sub>). This might indicate a steady increase in the cost of sports venue construction, whose dynamics exceeds the HICP index level assumed in the calculations of the EUR<sub>2012</sub> unit.

To sum up the aspect of financing the stadium infrastructure outlays, there is a striking contrast between the wealthier countries, allocating relatively modest funds to this purpose, usually upgrading existing venues, and the poorer countries, not having the required infrastructure base and forced to build sports

venues from scratch. The issue of the structure of financing is more ambiguous, although, with the exception of Austria, it may be ventured that better developed countries are more willing to use private sources, whereas public and mixed sources dominate in less economically developed countries.

It would be difficult to judge at this stage whether such a high share of public funding was justified in the case of Poland. A matter of great importance will be the utilisation of existing infrastructure, including the stadiums which, if managed inefficiently, will continue to be a burden to the cities' budgets in the future. This issue is described in more detail in chapter four.

### **Degree of completion of the projects undertaken as part of preparations for Euro 2012**

The fact of entrusting organisation of one of the world's largest sport events to Poland gave rise to the natural questions as to whether our country would be ready to take up such a multifront challenge. Particular anxiety accompanied the condition of the infrastructure and the scale of the necessary actions to improve it. The only elements which appeared to be of decent quality were: the hotel infrastructure, the quantitative coverage of the Polish railway network, and the urban transport. All other areas required immense investments almost revolutionary in nature. Some economists formulated a risky, though not unsubstantiated thesis, that given its actual infrastructure of the year 2007 Poland would not have stood any chance organise the Euro efficiently even as early as in 1980 [Zawadzki, 2013b, p. 53].

Hence, the paramount challenge the organisers faced was to carry out the necessary infrastructural projects. As mentioned in the subchapter 1.3, the number of the investments planned totalled 219. The immense scale of the investment-related works was evident to the legislator as early as at the stage of creating the legal framework, and the scenario of a possible failure to carry through the daring plans was realised. Therefore, the projects were arranged in three groups depending on their perceived weight. The key investments grouped the initiatives considered paramount in importance and indispensable for efficient organisation of the Euro 2012. This group includes projects connected with:

- stadiums,

- road infrastructure,
- air transport,
- rail transport,
- public transport.

Among the important projects were also those connected with medical care, while other projects also included hotel infrastructure and the preparation of team base camps.

Table 3.3 gives an overview of the projects grouped by their designations. Apart from the four host cities, the projects embraced the entire country. This means, they were investments carried out over large areas, basically improving the transport infrastructure all over Poland. The largest group named “other cities” refers primarily to the accommodation centres dispersed all over the country, prepared to receive the national teams. Table 3.3 reveals that out of the four host cities Wrocław was the location of most key and important projects planned. However, with all other investments taken into account Gdańsk takes the lead with its 34 projects in total.

**Table 3.**

Number of projects implemented in preparation for the Euro 2012 in Poland,  
grouped by area

Area	Project type			Total
	Key	Important	Other	
Gdańsk	7	5	22	<b>34</b>
Poznań	5	11	13	<b>29</b>
Warsaw	4	7	8	<b>19</b>
Wrocław	11	6	11	<b>28</b>
Other cities	0	0	69	<b>69</b>
Poland	19	8	13	<b>40</b>
<b>Total</b>	<b>46</b>	<b>37</b>	<b>136</b>	<b>219</b>

*Source:* the author’s own study.

As of day one, it was assumed that the percent of unrealised projects would be inversely proportional to the weight ascribed to them. In practice, it turned out that not only some of the ‘other’ projects, but also not all of the undertaken investments of the ‘key’ and ‘important’ status had been completed by the opening of the European Championship. Table 3.4 shows the degree of project’s attainment expressed in figures and percentages. The category of investments



unfinished on time includes projects ultimately completed by the end of the year 2012. There were 13 projects brought to completion after their original deadline, including 2 of the key status, and 6 classified as important. In table 3.4, the number of those investments is shown in brackets.

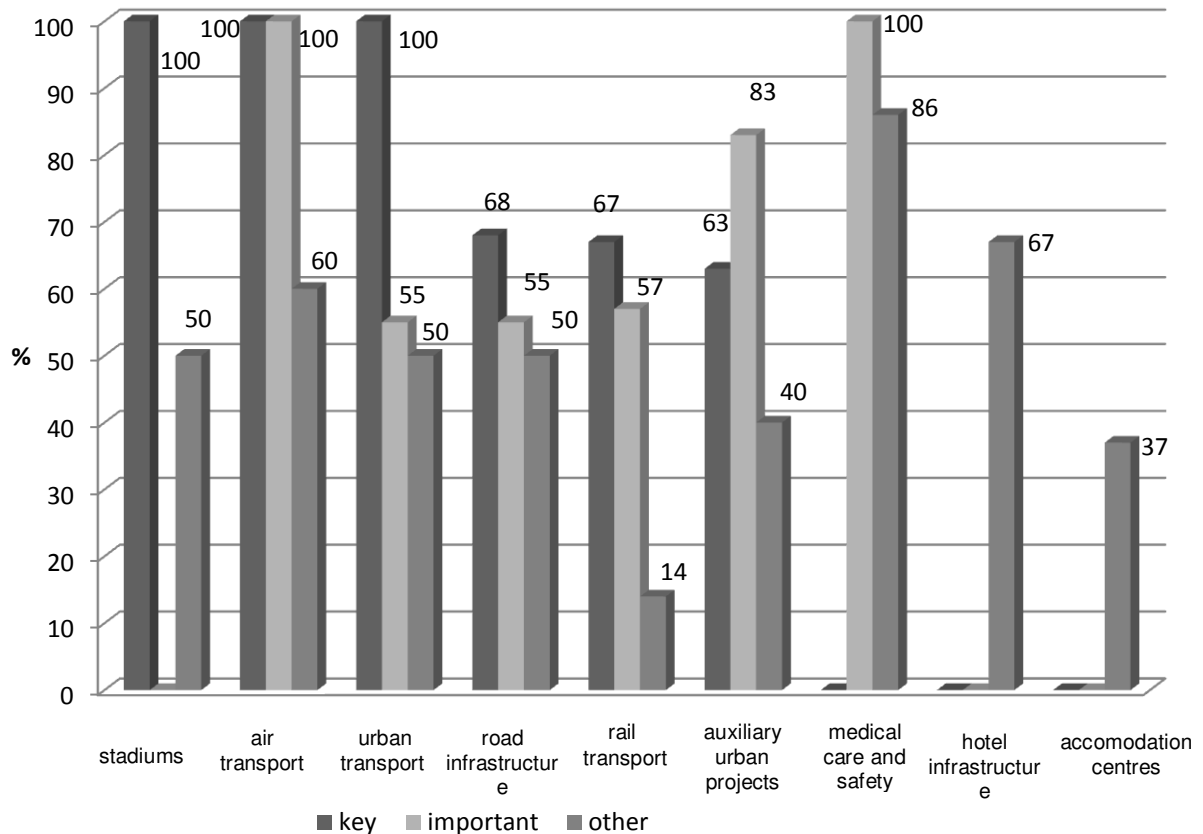
**Table 4.**

Degree of project attainment by day one of the Euro 2012

Area	Project type									Total
	Key			Important			Other			
	completed	uncompleted	attainment (%)	completed	uncompleted	attainment (%)	completed	uncompleted	attainment (%)	
Gdańsk	6	1	86%	4	1	80%	15	7 (1)	68%	74%
Poznań	4	1	80%	6	5 (1)	55%	9	4 (2)	69%	66%
Warsaw	3	1	75%	6	1 (1)	86%	3	5	38%	63%
Wrocław	10	1	91%	5	1	83%	4		36%	68%
Other cities	-	-	-	-	-	-	32	37 (1)	46%	46%
Poland	12	7 (2)	63%	3	5 (4)	38%	7	6 (1)	54%	55%
<b>Total</b>	<b>35</b>	<b>11 (2)</b>	<b>76%</b>	<b>24</b>	<b>13 (6)</b>	<b>65%</b>	<b>70</b>	<b>66 (5)</b>	<b>51%</b>	<b>59%</b>

*Source:* the author's own study.

On the whole, however, the anticipation that the degree of project attainment would be proportional to the status ascribed to the specific projects has proven true. We have managed to complete more than  $\frac{3}{4}$  of the planned key projects, but not much more than half of all other initiatives. Ultimately, 59 per cent of the planned projects were completed on time. Looking at the host cities alone, Gdańsk performed best with 74 per cent of its planned initiatives completed before day one of the Euro event. On the other hand, from the perspective of the key and important projects alone, Wrocław proved more effective with its respective 91 and 83 per cent plan attainment.



**Figure 2.** The degree of attainment of individual projects related to the Euro 2012 by the type of the infrastructural investment

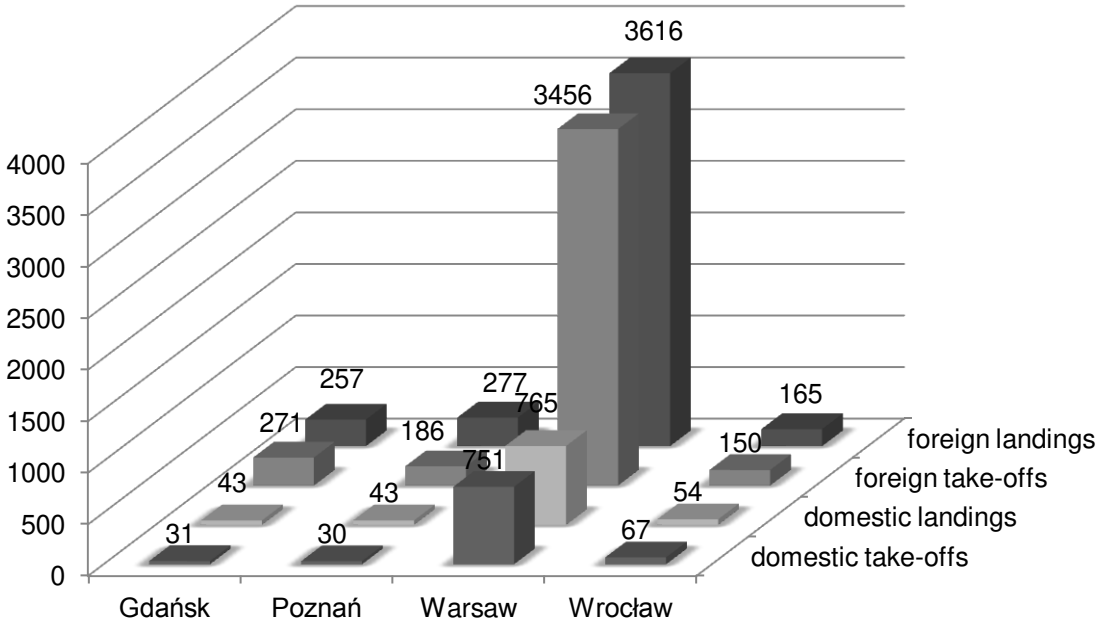
*Source:* the author's own study.

When analysing the degree of project attainment against the criterion of the type of the infrastructural one should note cases of 100 per cent plan execution in the categories of key and important projects. These are found in such areas as stadium infrastructure, air transport, urban transport, and projects connected with medical care and safety. Moreover, the degree of advancement into key and important projects, if only undertaken, never fell below 55 per cent. The top position in this ranking belongs to the air transport-related infrastructure, where the key and important projects were fully completed. The outcomes were worst, as could be expected, in the case of other projects. In none of the analysed areas was the plan fully executed, and the worst situation was noted for the railway infrastructure, where the attainment stopped at the mere 14 per cent (Figure 3.2).

# Major infrastructure changes occurring in Polish host cities in connection with the staging of Euro 2012

## Air transport

Predictably, air transport played a crucial role in the tourist traffic to and from Poland. According to representatives of the airports in the four host cities, more than 10 000 take-offs and landings took place during the group phase and quarterfinals (Figure 3.3). An overwhelming proportion of these were foreign flights, accounting for more than 82 per cent of all air traffic.



**Figure 3.** Use of the airports in the four host cities during Euro 2012

*Source:* own compilation based on the data received from the administrators of Warsaw Chopin Airport, Gdansk Lech Walesa Airport, Wrocław Airport, Poznan Airport.

Such performance could not have been achieved without the extension of all the aforementioned airports, aimed at increasing their capacity and streamlining the handling of arriving and departing passengers (Table 3.5).

In addition to the efforts aimed at adjusting the capacity of the Polish airports to temporarily increased air traffic during the event, another objective of equal importance was to meet top safety standards and ensure minimum delays for traffic other than connected with Euro 2012. Achievement of these aims was also facilitated by the introduction of new procedures – IAP, STAR and SID – for the individual airports.

**Table 5.**

Effects of the expansion of airports in host cities

City	Before/after upgrading	Capacity		Operations
		Number of passengers arriving/hour	Number of passengers departing/hour	Number of operations/hour
Gdańsk	Before upgrading	760	760	23
	After upgrading	2240	2240	23
Poznań	Before upgrading	900	500	10
	After upgrading	1900	1100	20
Warsaw	Before upgrading	3750	2340	36
	After upgrading	5860	3660	38
Wrocław	Before upgrading	1260	840	10
	After upgrading	2240	2240	22

Source: own compilation based on the data received from the administrators of Warsaw Chopin Airport, Gdansk Lech Walesa Airport, Wrocław Airport, Poznan Airport.

### Rail transport

During the preparations for Euro 2012, a number of projects were carried out on the rail network, with the aim of reducing the time of journey between the host cities and from border crossings to the host cities (Table 3.6). In the latter case the modernisation related to the links on two routes: Terespol – Warsaw and Zgorzelec – Wrocław The longest journey is that between Gdańsk and Wrocław. It is noteworthy that before the upgrading the journey time on the same route was around 8 hours.

**Table 6.**

Time of train journey between host cities and from border crossings to host cities  
[in hours]

	Gdańsk	Poznań	Terespol	Warsaw	Wrocław	Zgorzelec
Gdańsk	X	06:20	-	04:40		
Poznań	03:30	X	-	02:40	02:30	-
Terespol	-	-	X	02:37	-	-
Warsaw	04:40	02:40	02:37	X	04:45	-
Wrocław	06:20	02:30	-	04:45	X	01:59
Zgorzelec	-	-	-	-	01:59	X

Source: Author's compilation.

Beside the track upgrading, the goal was also achieved thanks to the new rolling stock. It consisted of 29 Elf electric multiple units and 10 Newag electric multiple units. In addition, 21 new train engines were added to the resources of Polish State Railways.

An important element of improvement of Poland's image were investments involving certain elements of rail infrastructure. These included, in particular:

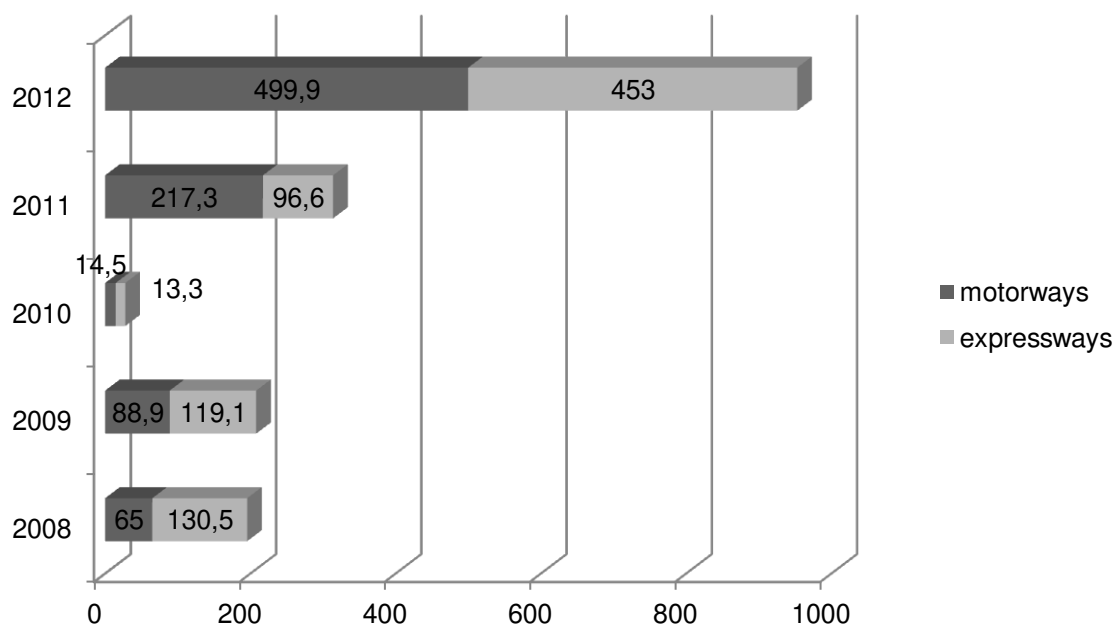
- railway stations:
  - Warszawa Centralna,
  - Warszawa Wschodnia,
  - Wrocław Główny,
  - Poznań Główny;
- railway stops:
  - Warszawa Stadion,
  - Gdańsk Stadion Expo,
  - Wrocław Stadion.

## **Road infrastructure**

The amounts spent on this element of infrastructure were by far the most substantial. The data quoted at the beginning of this chapter show that the outlays on roads are greater than the total of all other infrastructure projects. Among the most important road infrastructure undertakings carried out as part of the preparations for Euro 2012 are the expressways, including motorways and ring roads. They contributed to reduced journey times, sometimes by as much as several hours; for example, A2 motorway with S8 expressway reduced the time of journey from Berlin to Warsaw from seven hours to four and a half hours. Furthermore, the investments improved the safety on Polish roads.

Since 2007, the number of kilometres of completed roads has increased radically (Figure 3.4). Particular acceleration of this process was observed in 2012, when nearly 1000 kilometres of expressways were put in operation in Poland. This is an unprecedented case in our country. It may be worth comparing this number with the total length of all expressways in Poland put in operation until and including 2011. There were 1738 kilometres of such roads, which is only 82% more than in 2012 alone. Meanwhile, from 2008 to the end

of 2012 the motorway network was extended by 885 kilometres, and other expressway network – by 812 kilometres. Compared with the situation as of the end of 2007, there was a 171% increase in length. It was largely due to the organisation of UEFA European Championships. In this context, the Euro effect will continue to be discernible for a few more years. This is because of the roads whose construction began before the tournament, but was not completed before the end of 2012. General Directorate for National Roads and Motorways (GDDKiA) plans to put in operation an additional 64 kilometres of motorways and 300 kilometres of other expressways in 2013-2014 in the aftermath of Euro 2012 in Poland.



**Figure 4.** Development of the road network in Poland in 2008-2012 [km]  
*Source:* own compilation based on GDDKiA data.

## Final remarks

In this study, an attempt was made to estimate the impact of the organisation of UEFA European Championships on the host cities: Gdańsk, Poznań, Warsaw and Wrocław. The adopted list of infrastructural undertakings executed as part of Euro 2012 preparations included 219 projects divided according to the urgency criterion into key, important and other projects. Analysis of project

completion revealed that not all tasks had been executed as planned before the beginning of the event. Predictably, the key projects were found to have been completed in the greatest percentage of the cases (76%), while other projects were characterised by the lowest percentage of completion (51%). The degree of completion also varied between the individual cities. Gdańsk turned out to be the most efficient city with 74% of all projects completed, while Warsaw was at the bottom of the ranking with 63% of completed projects.

Even considering the high percentage of incomplete infrastructural projects, it is worth emphasising that Euro 2012 became a catalyst of important changes, especially with respect to broadly defined transport infrastructure. It is particularly striking in the case of road infrastructure. In 2012 alone 953 kilometres of expressways were completed. For comparison, by 2011 only slightly over 1700 kilometres of such roads had been built. What is important, the effects of Euro 2012 will still be noticeable at least until the end of 2014, when all projects undertaken in connection with the event will have been completed.

Such considerable infrastructural needs of Poland necessitated massive outlays. Euro 2012 proved to be the most expensive of the UEFA European Championships organised in the 21st century and, in all likelihood, in the whole history of the tournament. A highly disadvantageous fact for our country was the complete absence of commitment of private funds in the financing of the preparations. The public-private partnership program, in which high hopes had been placed in connection with the organisation of Euro 2012, turned out to be a total failure. It is noteworthy that it is an unprecedented case of financing a sporting event of this type exclusively from public sources.

The most frequently recognised legacy of the Championships are the stadiums. The future management of these venues will have an influence on the general cost-benefit ratio of their construction/extension. The difficulties in generating sufficient revenues to cover the costs of maintenance and debt service are already being experienced. The study indicated some feasible ways of fund acquisition involving the organisation of both sporting and non-sporting events.

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