

Central European Review of Economics & Finance

Vol. 24, No. 2 (2018), pp. 5–19

DOI: 10.24136/ceref.2018.007

Received: 25 January 2018. Accepted: 3 April 2018

Edward MOLENDOWSKI¹

THE PILLARS OF THE POLISH ECONOMY'S INTERNATIONALLY COMPETITIVE POSITION IN THE POST-ACCESSION PERIOD²

The article presents the results of an analysis which attempts to identify the most important factors determining changes in the Polish economy's internationally competitive position compared to the other new member states of the European Union (EU-10) in the years 2004–2017. The hypothesis that, among the EU-10 states, Poland belongs to those where varied effects of membership have clearly occurred has been put forward. This has greatly influenced the formation of the internationally competitive position of the economy. In the research, analysis of the secondary data concerning the pillars of the economy's competitiveness specified in the Global Competitiveness Report has been applied. This has been compiled by the World Economic Forum. The article ends with a summary of the most important conclusions drawn from the presented analysis.

Keywords: international competitiveness of economy, factors determining the competitive position of the economy, effects of EU membership, Poland compared to new member states.

JEL Classification Codes: E2, E6, F4, F5.

Introduction

Similarly to other new EU members states, Poland has experienced a number of successes and failures in the post-accession period. The accession became an impulse for changes following the those initiated back in the early 1990s, and the first years of

¹ Associate Professor, Ph.D. Habil., Cracow University of Economics.

² The publication was co-financed from funds allocated to the Faculty of Economics and International Relations at the Cracow University of Economics as a subsidy for maintaining the research capacity

membership allowed the building of relatively permanent and stable bases for further development. They became the major factor for the improvement of the economy's internationally competitive position.

Based on the results of earlier analyses conducted by other scholars, the presented research has adopted the assumption that in the contemporary world economy, in order to achieve the developmental goals of the economy, the following are required: strategic building of international position, taking into consideration: ability to identify and promote 'sectors of the future' [Sung, 2006, pp. 38–42), development of human resources (Cho, Moon, 2000, p. 142), technological abilities and their institutional conditioning [Miozzo, Walsh, 2006), and the ability to adapt to the changing external conditions (Oziewicz, 2007, p. 22–23). These 'strategic behaviours' of economies can be connected 'in the guise' of building macro-competitiveness.

The aim of the analysis presented in the article was to identify the most important factors determining changes in the Polish economy's internationally competitive position compared to other new EU member states (EU-10) in the years 2004–2017. The hypothesis that was adopted was that among the EU-10 states, Poland is one country whose internationally competitive position improved the most in the post-accession period. Therefore, it seemed important to analyse how particular factors influenced the formation of this position. The analysis is based on indicators presented in the Global Competitiveness Report, compiled by the World Economic Forum. These Reports are among the most comprehensive and most frequently quoted rankings of the international competitiveness of economies.

1. Standards and methods of measuring an economy's international competitiveness

'Countries, just like international corporations, compete on the world markets.' This provocative statement, announced by Bill Clinton in 1993, has been generating heated discussions for years (Dunn, 1994; Thurow, 1994; Krugman 1994; Wziątek-Kubiak, 2004; Olczyk, 2008; Aigigner, 2006), encouraging the creation of many rankings and comparisons of individual countries' positions in the global economy (see more: Żmuda & Molendowski, 2016, pp. 323–343).

The assessment of an economy's international competitiveness consists in defining its competitive position (Bossak 2000) or an economy's competitive ability (Misala 2008). In recent years, there have been numerous standards of a national economy's international competitiveness as well as methods to measure it. This concerns both measuring a national economy's international competitive ability and its internationally competitive position in a given period. The determinants defining the competitiveness of individual countries have become the subject of analyses for many researchers and international bodies.

One such body is the International Institute for Management Development (IMD). The Institute publishes the results of its research in the annual World Competitiveness Yearbook report including several dozen countries. Since 2004, the World Bank has also been preparing an annual report called *Doing Business*, dedicated to an analysis of conditions for doing business in the researched countries. Foreign Direct Investment Confidence Index, drawn up yearly by the consultancy company A. T. Kearney, is often comparatively used to assess an economy's international competitiveness. A measure of a country's international competitive ability is also the Human Development Index (HDI), published by UNDP, which is a synthetic measure of the standard of living in any given country.

In recent years, *The Global Competitiveness Report* has been one of the most comprehensive and most frequently quoted rankings of economies' international competitiveness. It results from the annual comparative study of conditions for countries' economic development, conducted by the World Economic Forum³.

The ranking categorises analysed countries according to their competitiveness resulting from an indicator devised for this purpose. Currently (in 2017), it is calculated on the basis of 114 factors, arranged in 12 pillars which are divided into 3 categories for individual countries: basic requirements, efficiency enhancers, and innovation and sophistication factors. Under each factor, individual countries are given ratings from 1 to 7, where 1 is the lowest score, and 7 – the highest possible (WEF 2017, p. 11).

The positioning of a given country in the appropriate groups defining the level of development is crucial when calculating the synthetic index of competitive position. The values assigned to individual groups of pillars depend on the analysed country's GDP per capita.

In the WEF ranking, basic requirements are of key importance for economies where development is based mostly on traditional factors of production (their GDP per capita does not exceed USD 2000). Efficiency enhancers are crucial for economies whose development is based mostly on investment (GDP per capita in the scope of USD 3000–17000). Innovation and sophistication factors are especially important for countries whose development is driven by innovations. These are countries on the highest (third) level of economic development (their GDP per capita exceeds USD 17000). It is worth emphasising that among the factors determining a country's competitive position, efficiency enhancers have been given the greatest importance. Basic requirements, on

³ This report was first published in 1979 and new countries are systematically added to it (in 2017 – 140 countries). Initially, it included the Competitiveness Index ranking devised under the supervision of Prof. J Sachs, in which the bases of mid- and long-term rapid economic development were identified. In 2000, its name was changed to the Growth Competitiveness Index, to differentiate it from the current microeconomic index appearing under various names in various reports. Since 2004, it has been replaced by the Global Competitiveness Index. It is devised by the World Economic Forum in cooperation with Prof. X. Sala-i-Martin and with the use of Prof. M. Porter's research [WEF 2017].

the other hand, play a relatively significant role in defining the competitive position of those countries with the lowest level of economic development (WEF 2017, p. 320).

2. Changes in Poland's competitive position compared to new member states

The results of the economy competitiveness study conducted by the World Economic Forum allow us to state that the position and competitiveness of the Polish economy in the international arena was relatively low (compared to the new member states) in the early 2000s.

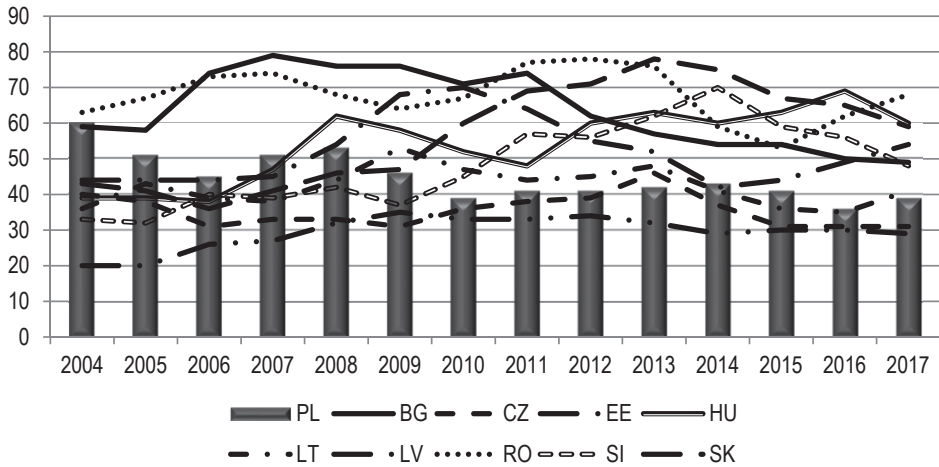
Based on the data compiled in Table 1 and Table 2 (illustration in graphs 1 and 2), it can be unequivocally concluded that in the post-accession period (the years 2004–2017) the position of Poland changed dramatically. While in 2004 the Polish economy ranked 60th in terms of competitiveness (3.98 points), in the following two years its competitiveness scored much better – position 51 and 45 (4.00 and 4.39 points respectively). In the period of the world crisis, the worst result was achieved by Poland in 2008, occupying 53rd position (4.28 points) in the ranking. The next two years were marked by a clear improvement of the position – 46th and 39th (4.33 and 4.51 points). In the following five years (2011–2015), the competitiveness of the Polish economy was assessed on a comparatively similar level (position 41–43, 4.46 points). However, in 2016 Poland considerably improved its position and was ranked 36th (4.56 points). Unfortunately, this positive trend proved impossible to maintain in 2017 (it slipped back to the 39th position – 4.59 points). Nevertheless, over the analysed period (2004 – 2017), Poland improved its position in the ranking by as many as 21 positions (by 0.61 points) in result.

As shown in graphs 1 and 2, it is difficult to indicate a uniform trend in forming the competitive position of the Polish economy in the entire period between 2004–2017. In the first years after the accession (2005–2006), the competitive position of the Polish economy improved clearly. In the years 2007–2008, this positive trend was reversed, yet in the years 2009–2010 there was another improvement. As a consequence of these changes, Poland's position in the ranking improved from position 60 in 2004 to position 39 in 2010. However, in the following five years (2011–2015), this positive trend was reversed (or stopped). In 2016, yet another considerable improvement of the position took place, which allowed Poland to take the 36th position in the ranking. This was the highest position in the entire post-accession period. Unfortunately, this positive trend proved impossible to maintain in 2017.

Table 1. The position of Poland compared to the EU-10 countries in competitiveness studies conducted by the World Economic Forum in the years 2004–2017

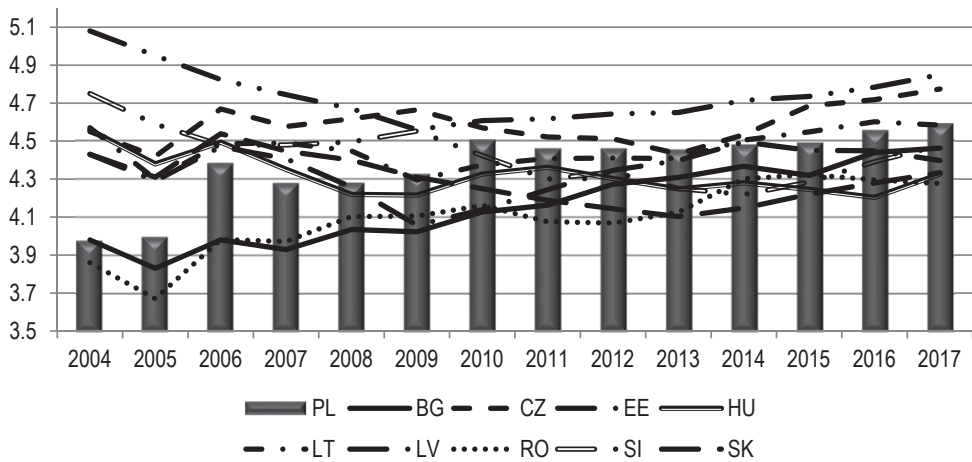
YEARS	BG	CZ	EE	HU	LT	LV	PL	RO	SI	SK
Position in the ranking										
2004	59	40	20	39	36	44	60	63	33	43
2005	58	38	20	39	43	44	51	67	32	41
2006	74	31	26	38	39	44	45	73	40	36
2007	79	33	27	47	38	45	51	74	39	41
2008	76	33	32	62	44	54	53	68	42	46
2009	76	31	35	58	53	68	46	64	37	47
2010	71	36	33	52	47	70	39	67	45	60
2011	74	38	33	48	44	64	41	77	57	69
2012	62	39	34	60	45	55	41	78	56	71
2013	57	46	32	63	48	52	42	76	62	78
2014	54	37	29	60	41	42	43	59	70	75
2015	54	31	30	63	36	44	41	53	59	67
2016	50	31	30	69	35	49	36	62	56	65
2017	49	31	29	60	41	54	39	68	48	59
2004–2017	10	9	-9	-21	-5	-10	21	-5	-15	-16
GCI value										
2004	3.98	4.55	5.08	4.56	4.57	4.43	3.98	3.86	4.75	4.43
2005	3.83	4.42	4.95	4.38	4.3	4.29	4.00	3.67	4.59	4.31
2006	3.98	4.67	4.82	4.49	4.49	4.47	4.39	3.98	4.48	4.54
2007	3.93	4.58	4.74	4.35	4.49	4.41	4.28	3.97	4.48	4.45
2008	4.03	4.62	4.67	4.22	4.45	4.26	4.28	4.10	4.50	4.40
2009	4.02	4.67	4.56	4.22	4.30	4.06	4.33	4.11	4.55	4.31
2010	4.13	4.57	4.61	4.33	4.38	4.14	4.51	4.16	4.42	4.25
2011	4.16	4.52	4.62	4.36	4.41	4.24	4.46	4.08	4.30	4.19
2012	4.27	4.51	4.64	4.30	4.41	4.35	4.46	4.07	4.34	4.14
2013	4.31	4.43	4.65	4.25	4.41	4.40	4.46	4.13	4.25	4.10
2014	4.37	4.53	4.71	4.28	4.51	4.50	4.48	4.30	4.22	4.15
2015	4.32	4.69	4.74	4.25	4.55	4.45	4.49	4.32	4.28	4.22
2016	4.44	4.72	4.78	4.20	4.60	4.45	4.56	4.30	4.39	4.28
2017	4.46	4.77	4.85	4.33	4.58	4.40	4.59	4.28	4.48	4.33
2004–2017	0.48	0.22	-0.23	-0.23	0.01	-0.03	0.61	0.42	-0.27	-0.1

Source: The Global Competitiveness Index Historical Dataset © 2007–2016: The Global Competitiveness Index Historical Dataset © 2005–2015; Global Competitiveness Index (GCI), 2004–2005, Scores; Global Competitiveness Index (GCI), 2005–2006, Scores, The Global Competitiveness Report 2017–2018, World Economic Forum (for the respective years).



Graph 1. Changes in the competitive position of Poland compared to EU-10 countries in the studies conducted by the World Economic Forum in the years 2004–2016

Source: Author's dataset based on the data in Table 1.



Graph 2. Changes in the GCI value for Poland compared to EU-10 countries in the years 2004–2016

Source: Author's dataset based on the data in Table 2.

An important element of the presented analysis was a comparison of Poland's results with those of other new EU member states. They are, as is known, those countries which were economically the most successful among all the Central and Eastern European countries in the transformation period (after 1990). The accession to the European Union became an impulse for permanent changes and for building a quite sustainable

and stable foundation for their development. However, in the WEF competitiveness rankings, they achieved rather various results (see Table 1 and Graphs 1 and 2). At the beginning of this period (2004), Poland's competitiveness (position 60) was assessed as relatively the worst. Only Romania scored lower (63rd place), and Bulgaria occupied a similar position (59th place). The position of Poland differed greatly from the position of the Visegrád Group countries (V4). At that time, the Czech Republic, Hungary and Slovakia had much higher positions (40, 39 and 43, respectively). Also the Baltic states: Estonia, Lithuania and Latvia ranked higher (20th, 36th and 44th position in the ranking respectively), were rated higher.

In the following years, until the year 2007, Poland still held a worse position than the other V4 countries and the Baltic states. In 2008 – Hungary, and in 2009 Slovakia, Lithuania and Latvia slipped behind Poland. In the first years after the crisis (2010–2012), Poland already ranked higher than 8 out of the 10 new member states. This situation continued until the end of the analysed period (2017). As a result, only Estonia and the Czech Republic ranked above Poland (29 and 31 respectively) in 2017. In this way, by achieving 39th place, Poland improved its position in the ranking the most (compared to the studied countries) as it advanced by 21 positions. Apart from Poland, only Bulgaria and the Czech Republic improved their rankings (by 10 and 9 positions respectively).

It is worth emphasising that, analysing the data illustrated in graphs 1 and 2, it can be decidedly stated that between the years 2004–2017 Poland was the most successful at improving the international competitive position of its economy compared to the studied countries. While in the WEF ranking Poland improved by 21 positions (by 0.61 point), Bulgaria and the Czech Republic improved by 10 and 9 positions (by 0.48 and 0.22 points respectively). At the same time, 7 of the EU-10 countries ranked lower: Hungary – by as many as 21 positions, Slovakia – down by 16, Slovenia – by 15, Latvia – by 10, Estonia – by 9, and Romania and Lithuania – down by 5 positions.

Owing to that, Poland, from a country with one of the worst positions in the ranking in 2004, became a state with a much better position compared to two partners from the Visegrád Group (Slovakia and Hungary), two Baltic states (Latvia and Lithuania) and Bulgaria, Romania and Slovenia. As a result of these changes, Poland joined the EU-10 leaders of the WEF ranking for 2017, i.e. Estonia and the Czech Republic (WEF, 2017, s. 11; Boguszewski 2016, s. 21–28).

3. Pillars (factors) determining Poland's competitive position compared to EU-10 countries

As already mentioned, the result of the annual comparative study of countries' economic development conditions conducted by the World Economic Forum is the ranking of economies' international competitiveness – *The Global Competitiveness Report*. Currently (in 2017), it is calculated on the basis of 114 factors, arranged in 12 pillars

which are divided into 3 categories: basic requirements, efficiency enhancers, and innovation and sophistication factors. Table 2 includes a list of factors on the basis of which the competitive position of the analysed countries is assessed.

Table 2. Classification of factors determining a country's competitive position according to the *Global Competitiveness Report*

GLOBAL COMPETITIVENESS INDEX		
Basic requirements	Effectiveness enhancers	Innovation and sophistication factors
Pillar 1 – Institutions Pillar 2 – Infrastructure Pillar 3 – Macroeconomic environment Pillar 4 – Health and primary education	Pillar 5 – Higher education and training Pillar 6 – Goods market efficiency Pillar 7 – Labour market efficiency Pillar 8 – Financial market development Pillar 9 – Technological readiness Pillar 10 – Market size	Pillar 11 – Business sophistication Pillar 12 – Innovation
↓	↓	↓
Development determined by traditional factors	Development determined by investment	Development determined by innovation

Source: Author's dataset based on *The Global Competitiveness Report 2017–2018*, Klaus Schwab (ed.), World Economic Forum, Geneva 2017.

It is worth emphasising that among the factors determining a country's competitive position, efficiency enhancers have been given the greatest importance. Basic requirements, on the other hand, play a relatively significant role in defining the competitive position of the countries with the lowest level of economic development (WEF, 2017, p. 22).

Obviously, an analysis of long-term trends plays a special role in analyses of this type. Therefore, the analysis presented in the article attempts to identify the main trends characterising the changes in Poland's competitive position and the factors determining it compared to the EU-10 countries in 2017 as contrasted with 2006⁴. The most important data illustrating these trends has been compiled in Table 3 (presented in Graphs 3 and 4).

The data presented in Table 3 shows that in 2006, Poland's competitive position (4.39 points) was mostly influenced (4.62 points) by basic requirements (pillars) and – to a lesser degree – by effectiveness enhancers (4.33 points). The position was least significantly influenced by innovation factors (3.73 points).

⁴The analysis only includes the period to 2006, as the rankings for previous years used a different classification of factors determining the competitive position of the studied countries.

Table 3. The formation of factor (pillar) values determining Poland's and other EU-10 countries' competitive position in the years 2006 and 2017

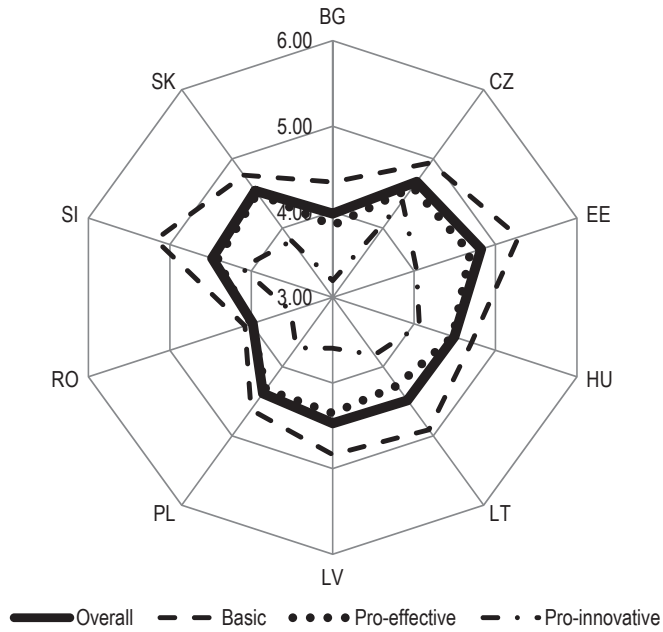
Countries	2006*				2017			
	Overall	Basic	Proeffective	Proinnovative	Overall	Basic	Proeffective	Proinnovative
BG	3.98	4.35	3.84	3.20	4.46	4.77	4.40	3.57
CZ	4.67	4.94	4.59	4.39	4.77	5.35	4.86	4.24
EE	4.82	5.28	4.69	4.03	4.85	5.66	4.92	4.20
HU	4.49	4.71	4.48	4.06	4.33	4.65	4.44	3.52
LT	4.49	4.91	4.28	3.83	4.58	5.15	4.57	4.04
LV	4.47	4.84	4.35	3.59	4.40	5.01	4.40	3.65
PL	4.39	4.62	4.33	3.73	4.59	4.99	4.65	3.75
RO	3.98	4.08	4.00	3.51	4.28	4.57	4.28	3.28
SI	4.48	5.18	4.42	4.11	4.48	5.14	4.39	4.18
SK	4.54	4.76	4.50	3.82	4.33	4.83	4.46	3.76

*The data presented in this Table only includes the period to 2006, as the WEF rankings for previous years used a different classification of factors determining the competitive position of the studied countries.

Source: Author's dataset based on the data in Table 1.

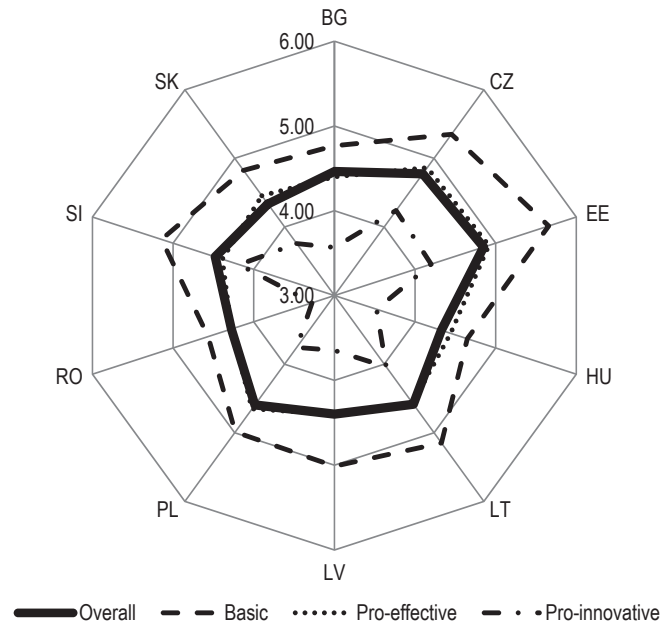
It is worth emphasising that in 2006, factors included in the basic pillars had the most considerable influence on the formation of the competitive position of all the analysed countries. The relevant indices for this group reached the highest values for Estonia, Slovenia, the Czech Republic, Lithuania and Latvia. In all these countries, the indices for the basic requirements were higher than the GCI values overall. The biggest difference between the values of basic indices and the overall indices occurred in the case of Slovenia, Lithuania and Bulgaria. On the other hand, effectiveness enhancers in all these countries had similar (slightly lower) values to those characteristic of basic requirements. Innovation factors had the lowest values (especially in the case of Bulgaria, Romania and Latvia). It can be clearly seen in Graph 3.

As shown earlier, in the period from 2017 there was a visible improvement in the assessment of the Polish economy's competitiveness (up to 4.59 points). This improvement was possible mainly due to a higher score for basic requirements (4.99 points) and, to a lesser degree, for efficiency enhancers (4.65 points). Yet, it is worth reiterating that the improvement in the basic requirements group was relatively bigger (by 0.37 points) than that in the efficiency enhancers (by 0.32 points). At the same time, Poland's score in the innovation factors group, comparatively low in 2006 (3.73 points), basically remained stable in the period to 2017 (it went up slightly to 3.75 points). The changes are shown in Graph 4.



Graph 3. Factors determining Poland's and other EU-10 countries' competitive position in 2006.

Source: Author's dataset based on Table 2.



Graph 4. ChaFactors determining Poland's and other EU-10 countries' competitive position in 2017.

Source: Author's dataset based on the data from Table 2.

The analysis of the relevant data included in the WEF Reports (compiled in Table 4) also indicates that, in the studied period (2006–2017), Poland's competitive position improved for most (9 out of 12) factors determining it.

However, decidedly the biggest improvement took place in the basic requirements group which, according to the WEF, plays the most important role in defining the competitive position of the countries with the lowest level of economic development. The following pillars should be listed here: infrastructure (improvement by 1.41 points), institutions (up by 0.37 point) and macroeconomic environment (up by 0.09 point). At the same time, the score for health and primary education visibly worsened (by as much as 0.24 point).

In the pro-effective factors group, a clear improvement took place only in the technological readiness pillar (up by 1.5 points) and slightly in the goods market efficiency (up by 0.3 of a point) and higher education (up by 0.25 of a point). A visible deterioration of the score occurred in regard to the labour market efficiency factor (by as much as 0.3 point). Unfortunately, there were no noticeable successes in the pro-innovative factors group. The values of the indices in 2017 were only marginally higher than in 2006 (in the case of the innovation factors there was even a small decline – by 0.03 of a point).

It is worth emphasising that in the case of Poland compared to the other EU-10 countries, relatively the most favourable changes in the formation of the competitive position took place in the post-accession period. As already proven, the competitive position of Poland and all the EU-10 countries in 2006 was determined by basic requirements (the value of the GCI in the basic requirements group – and individual pillars – exceeded the overall value). Yet, the value of the GCI in the pro-effective and pro-quality group was noticeably low.

On the other hand, in 2017, the pro-effective factors grew slightly in importance in the case of seven (including Poland) of the studied countries. The overall value of the index and for individual pillars was only marginally lower than the indices in the basic requirements group. In the case of Poland, Estonia, the Czech Republic and Hungary, it moderately exceeded the overall value of the index.

It should be stressed that in the pro-innovative factors group, both in the case of Poland and other EU-10 countries, no significant changes took place. After over 10 years, the overall value of the index for this group and the indices for individual pillars included in this group remained basically on the same level.

Table 4. The formation of values for individual factors determining Poland's competitive position compared to other EU-10 countries in the years 2006 and 2017

Specification	Years	BG	CZ	EE	HU	LT	LV	PL	RO	SI	SK
Global Competitiveness Index (GCI)	2006	3.98	4.67	4.82	4.49	4.49	4.47	4.39	3.98	4.48	4.54
	2017	4.46	4.77	4.85	4.33	4.58	4.40	4.59	4.28	4.48	4.33
Basic requirements	2006	4.35	4.94	5.28	4.71	4.91	4.84	4.62	4.08	5.18	4.76
	2017	4.77	5.35	5.66	4.65	5.15	5.01	4.99	4.57	5.14	4.83
1 – Institutions	2006	3.05	3.89	4.67	4.21	3.79	3.96	3.64	3.32	4.26	3.98
	2017	3.48	4.16	5.04	3.46	4.13	3.76	3.84	3.70	4.05	3.51
2 – Infrastructure	2006	2.92	4.42	4.34	3.85	4.04	3.85	3.29	2.71	4.35	3.72
	2017	4.06	4.61	5.09	4.36	4.65	4.40	4.70	3.82	4.80	4.29
3 – Macroeconomic environment	2006	5.38	5.43	5.87	4.53	5.62	5.44	5.10	4.46	5.62	5.41
	2017	5.72	6.23	6.07	5.13	5.61	5.77	5.20	5.25	5.23	5.40
4 – Health and primary education	2006	6.04	6.04	6.25	6.23	6.19	6.09	6.46	5.83	6.48	5.95
	2017	5.80	6.40	6.43	5.65	6.20	6.11	6.22	5.49	6.49	6.10
Efficiency enhancers	2006	3.84	4.59	4.69	4.48	4.28	4.35	4.33	4.00	4.42	4.50
	2017	4.40	4.86	4.92	4.44	4.57	4.40	4.65	4.28	4.39	4.46
5 – Higher education and training	2006	4.02	4.95	5.22	4.87	4.93	4.89	4.73	4.18	5.08	4.45
	2017	4.62	5.25	5.52	4.33	5.16	4.95	4.98	4.41	5.37	4.54
6 – Goods market efficiency	2006	3.75	4.69	5.01	4.42	4.38	4.48	4.26	4.04	4.60	4.59
	2017	4.32	4.66	5.09	4.38	4.57	4.42	4.55	4.14	4.64	4.48
7 – Labour market efficiency	2006	4.12	4.62	4.74	4.50	4.43	4.58	4.44	4.01	4.36	4.73
	2017	4.25	4.49	5.02	4.21	4.33	4.47	4.14	3.97	4.10	4.01
8 – Financial market development	2006	4.14	4.36	4.76	4.58	4.36	4.82	4.10	3.90	4.53	4.95
	2017	4.14	4.80	4.85	4.31	4.10	4.05	4.17	3.74	3.45	4.55
9 – Technological readiness	2006	2.91	4.38	5.05	3.97	3.79	3.87	3.39	3.28	4.27	4.12
	2017	5.13	5.50	5.91	5.09	5.62	5.27	4.89	4.78	5.37	5.08
10 – Market size	2006	4.12	4.55	3.36	4.52	3.78	3.49	5.06	4.58	3.67	4.16
	2017	3.92	4.49	3.10	4.33	3.62	3.24	5.17	4.61	3.41	4.08
Innovation and sophistication factors	2006	3.20	4.39	4.03	4.06	3.83	3.59	3.73	3.51	4.11	3.82
	2017	3.57	4.24	4.20	3.52	4.04	3.65	3.75	3.28	4.18	3.76
11 – Business sophistication	2006	3.40	4.80	4.38	4.40	4.31	4.11	4.03	3.96	4.61	4.21
	2017	3.82	4.61	4.36	3.68	4.35	4.07	4.11	3.47	4.38	4.19
12 – Innovation	2006	2.99	3.97	3.69	3.73	3.35	3.08	3.43	3.07	3.62	3.43
	2017	3.32	3.87	4.04	3.36	3.73	3.22	3.40	3.08	3.98	3.33

Source: Author's dataset based on the data in Table 1.

Conclusions

Accession to the European Union provided Poland and other EU-10 countries with an opportunity for rapid economic growth with a simultaneous conversion and modernisation. This considerably influenced the improvement of the countries' international competitive position.

The most important literature on the subject presented in the article indicates that an economy's competitiveness should be recognised in a dynamic way, through the lens of the development of available (domestic and foreign) factors of production, through the abilities of seizing opportunities connected with the progress of globalisation, and through the adapting abilities of companies, sectors and the whole economy to the changing conditions of the external environment so, in effect, the ability to achieve developmental aims. Such an approach to an economy's competitiveness was adopted by the authors of the Global Competitiveness Report, devised by scholars centred around the World Economic Forum.

Analysis of the WEF Reports for the years 2004–2017 indicates unambiguously that Poland, compared to the new member states (EU-10), was relatively the most successful in improving its economy's international competitive position. At the beginning of this period, Poland's competitiveness (60th place) was assessed much more poorly than that of 8 out of the 10 analysed countries. In 2017, however, Poland's position had rallied and became stronger in comparison with the majority of the studied countries. Only Estonia and the Czech Republic were slightly ahead of it. It is worth mentioning that, in 2017 compared to 2004, as many as seven of the analysed countries' positions deteriorated. Those included Hungary (down by 21 positions), Slovakia (down by 16), Slovenia (by 15), Latvia (by 10), Estonia (by 9), as well as Lithuania and Romania (down by 5 positions).

When studying the influence of the individual factors (pillars) on the formation of international competitive position, it should be stated that Poland owes these successes to an improvement in the score for most of them. Their values in 2017 were higher than in 2006 for as many as 9 (out of 12) pillars. Definitely the biggest improvement took place in the basic requirements group (infrastructure, institutions, macroeconomic environment). In the efficiency enhancers group, only technological readiness improved significantly, and goods market efficiency and higher education became only marginally better. Unfortunately, there were no noticeable successes in the efficiency enhancers group.

It is also worth emphasising that such an impressive advancement of Poland in the quoted WEF reports is attributed especially to dynamic GDP growth, particularly during the world economic crisis. As is known, in the entire analysed post-accession period, Poland stood out from the new EU member states with the highest GDP growth index (Molendowski 2015, pp. 5–18; Molendowski 2016, pp. 125–135). Due to that, despite a deterioration in the public finance situation, the Polish economy was considered one of the most stable economies on the continent macroeconomically.

References

- Aiginger K. (2006). Competitiveness: From a Dangerous Obsession to a Welfare Creating Ability with Positive Externalities, „Journal of Industry, Competition and Trade”, No. 2, pp. 161–177.
- Boguszewski P. (2016). Globalny raport konkurencyjności 2016–17 Światowego Forum Ekonomicznego, NBP, Warszawa.
- Bossak J. (2000). Międzynarodowa konkurencyjność gospodarki kraju i przedsiębiorstwa. Zagadnienia teoretyczne i metodologiczne. [In:] Konkurencyjność gospodarki Polski w dobie integracji z Unią Europejską, Bossak J., Bieńkowski W. (ed.), Wydawnictwo SGH, Warszawa.
- Cho D., Moon H. (1998). A nation's international competitiveness in different stages of economic development, „Advances in Competitiveness Research”, Vol. 6, No. 1, pp. 5–19.
- Dunn M.H. (1994). Do Nations Compete Economically? A Critical Comment on Prof. Krugman's Essay „Com-petitiveness: A Dangerous Obsession”, „Intereconomics”, November/December, pp. 303–308.
- Krugman P. (1994). Competiveness: A Dangerous Obsession, „Foreign Affairs”, Vol.73, No 2, pp. 28–44.
- Miozzo M., Walsh V. (2006). International Competitiveness and Technological Change, Oxford University Press, New York.
- Misala J; Misztal P., Młynarzewska I., Siek E. (2008). Międzynarodowa konkurencyjność gospodarki Polski w okresie 1990–2007, Politechnika Radomska, Radom.
- Molendowski E. (2015). 10 Years of Membership in the European Union – Poland in Comparison with the Visegrad Group countries, “Central European Review of Economics & Finance”, Vol. 10, No. 4, pp. 5–18.
- Molendowski E. (2016). Dekada członkostwa w Unii Europejskiej – Polska na tle nowych państw członkowskich, „Studia i Materiały Miscellanea Oeconomicae” No 3, tom 1, pp. 125–135.
- Olczyk M. (2008). Konkurencyjność. Teoria i praktyka, CeDeWu, Warszawa.
- Oziewicz E. (2007). Dylematy rozwoju gospodarczego krajów Azji Południowo-Wschodniej na tle procesów globalizacyjnych, Wydawnictwo Naukowe Uniwersytetu Gdańskiego, Gdańsk.
- Sung J. (2006). Exploring Economic Success of Singapore, Edward Elgar, Northampton.
- Thurow L.C. (1994). Microchips, not potato chips, „Foreign Affairs”, Vol. 73, pp. 189–192.
- WEF (2006). The Global Competitiveness Report 2006–2007. World Economic Forum. Basingstoke and New York: Palgrave Macmillan.
- WEF (2007). The Global Competitiveness Report 2007–2008. Basingstoke and New York: Palgrave Macmillan.
- WEF (2008). The Global Competitiveness Report 2008–2009. Geneva: World Economic Forum.
- WEF (2009). The Global Competitiveness Report 2009–2010. Geneva: World Economic Forum.
- WEF (2010). The Global Competitiveness Report 2010–2011. Geneva: World Economic Forum.
- WEF (2011). The Global Competitiveness Report 2011–2012. Geneva: World Economic Forum.

- WEF (2012). The Global Competitiveness Report 2012–2013. Geneva: World Economic Forum.
- WEF (2013). The Global Competitiveness Report 2013–2014. Geneva: World Economic Forum.
- WEF (2014). The Global Competitiveness Report 2014–2015. Geneva: World Economic Forum.
- WEF (2015). The Global Competitiveness Report 2015–2016. Geneva: World Economic Forum.
- WEF (2016). The Global Competitiveness Report 2016–2017. Geneva: World Economic Forum.
- WEF (2017). The Global Competitiveness Report 2017–2018. Geneva: World Economic Forum.
- Weresa M. A. (2008). Definicje, determinanty oraz sposoby pomiaru konkurencyjności krajów [In:] Czynniki i miary międzynarodowej konkurencyjności gospodarek w kontekście globalizacji – wstępne wyniki badań, „Prace i Materiały” nr 284, SGH, Warszawa.
- Wziętek-Kubiak A. (2004). Kontrowersje wokół konkurencyjności w teorii ekonomii, „Ekonomista”, No. 6, pp. 805–807.
- Żmuda M., Molendowski E. (2016). W poszukiwaniu istoty konkurencyjności gospodarki narodowej: studium interdyscyplinarne, „Finanse, Rynki Finansowe, Ubezpieczenia” nr 3 (81), pp. 323–333.