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Global University Rankings in the Polish Context: the University of Warsaw, a Case Study

Forthcoming in: Maria Yudkevich, Philip G. Altbach and Laura E. Rumbley, eds.,
*The Global Academic Rankings Game. Changing Institutional Policy, Practice, and
Academic Life*
New York: Routledge. 2016.

University rankings are a topic of controversy and contention in many countries. Poland is no exception. This chapter analyzes aspects of rankings in the Polish context. Poland is a particularly interesting case, since it is a middle-sized country with a middle-tier higher education system. Among the questions discussed here are: what is the impact of global university rankings on the Polish national flagship university, the University of Warsaw? Are the changes in funding and governance occurring in Polish higher education, and in our case study institution, directly or indirectly linked to rankings? Are rankings driving the push for planned changes both in the system and in the case study institution, or do these developments merely happen to be concurrent? How do academics and administrators view global rankings? What are their perceptions of global rankings with reference to the institution and to their own academic careers? How, if at all, do global rankings relate to national rankings? Is the institutional culture of the case study university changing more due to ongoing reforms, global rankings, or national rankings? These questions are discussed in a context of ongoing higher education reforms, rooted in the OECD discourse of the increasing role of competition in research and of competitive research funding in higher education funding.

Poland: an overview of changes (1990-2013)

Polish higher education has changed fundamentally since the end of the Communist regime in 1989, both quantitatively (higher participation rates, numbers of students, faculty and institutions) and qualitatively (regained institutional autonomy and academic freedom, shared governance, emergent public-private duality, new competitive research funding and fee regimes). The gradual political, economic and social integration of Poland with the European Union has been accompanied by the gradual integration with Western European

higher education and research systems, already involved in the European integration processes (Kwiek & Kurkiewicz, 2012; Maassen & Olsen, 2007).

Polish higher education is a dual (public-private) highly differentiated, strongly marketized and hugely expanded system, with all the ensuing consequences of rapid changes for both institutions and the academic profession. Since 1989, the system has witnessed a phenomenal rise in the number of public and private institutions, a rise and fall in the number of students (from 0.40 million in 1989 up to 1.95 million in 2006 and down to 1.55 million in 2013), as well as a rise in the number of doctoral students (from about 2,000 in 1990 to about 43,000 in 2013) and in the number of academics (from 40,000 to 99,000 in the same period). The expansion from elite to mass to universal higher education was abrupt: while at the end of the communist period the gross enrollment rate was about 10 percent (1989), after three years, the system became mass (15.5 percent in 1992), and within the next fifteen years, a universal one (51.1 percent in 2007 and beyond), to refer to Martin Trow's terms. Consistent with what Trow (2010) suggested in the 1970s, conceptions of participation in higher education have changed in Poland over the last three decades from a "privilege" of birth or talent (throughout the 1980s and before, although heavily centrally planned); to a "right" for those who have certain formal qualifications (the 1990s); to an "obligation" (pp. 94-95) for children from the middle classes (the 2000s and beyond; see Antonowicz, 2012 and Kwiek 2013b).

Because, until the collapse of communism, access to higher education was heavily restricted, when the massification processes were finally released they could hardly be stopped: massification resulted from a combination of policy decisions (especially the new law on higher education in 1990) and powerful social pressures. Similar structural changes occurred across the region (Kwiek, 2001; Scott 2007; Slantcheva, & Levy 2007).

In the 1990s, Polish higher education policy was focused mostly on educational expansion, financially supported by both public and private sources of funding. The inflow of public funding to the public sector in the expansion period was significant, but equally significant was the inflow of private funding from fees to both sectors. While the private sector is overwhelmingly reliant on tuition fees, the public sector during the peak of expansion (especially in 2000-2005) was also heavily reliant on tuition fees from part-timers which provided 16-20 percent of its operating budget in that period. The processes of privatization are currently in retreat: we term the ongoing changes the "de-privatization" or "re-publicization" of higher education (Kwiek, 2014a). Under declining demographics, the number of fee-paying students in the public sector decreased dramatically by more than 40 percent in the period 2005-2013 (Main Statistical Office: GUS, 2014, p. 63); as did the share of income from fee-paying students in the public sector, from 16.6 percent in 2005 to 10.6 percent in 2013 (pp. 190-194). The number of private institutions is only just beginning to decrease, but the number of mergers and acquisitions in the private sector is on the rise. Specifically, private sector enrolments have been shrinking dramatically; by 40 percent in the period 2007-2013 (from 660,000 to 398,000 students).

The recent Polish reforms

Until 2010, from a structural perspective of funding and governance, Polish universities remained largely unreformed, following the initial radical changes right after

the collapse of communism in 1989: their adaptations to new postcommunist and market realities were much slower than the adaptations of other public sector institutions, including social assistance, pension schemes, healthcare provision, and primary and secondary education. The latter were substantially reformed in the period from the mid-1990s to the mid-2000s. In the two decades of 1990-2010, the higher education system was controlled by two new laws on higher education: the 1990 Law and the 2005 Law; but the core of the system, including its relatively non-competitive funding modes, heavily collegial governance modes, and a complicated, obsolete, multi-level system of academic degrees and careers, remained largely untouched until the early 2010s.

Organization studies show that the potential for changes and the range of possible reforms is always relatively limited, and the period for institutional adaptation – relatively long. It is therefore difficult to assume that the intentional direction of changes in the academic sector as a whole will coincide with the actual direction of changes. Often in the history of the university, significant scope for changes remains determined on the one hand, by the redefined tradition; and on the other hand, by sheer contingency. “Great expectations”, as shown three decades ago by Cerych and Sabatier (1986), often lead to “mixed performance”. On the one hand, policymakers tend to view institutions, higher education institutions included, as “incomplete” (Brunsson, & Sahlin-Andersson, 2010). Reforms are renewed attempts to make universities “complete” organizations. But on the other hand, universities are heavily path-dependent, reform-resistant institutions, with strong roots in their (national) organizational heritage. Polish reforms are heavily reliant on global (and EU-level) concepts of the university and its functioning in a postindustrial age: in particular, they are rooted in the OECD discourse, following the publication of an influential OECD report on Polish higher education right before the launch of new reforms in 2009.

In theoretical terms, Polish universities in the 2009-2012 period of reforms were given more autonomy (with one reservation: the ongoing passage is from prior “low formal autonomy but high actual autonomy” to “higher formal autonomy (...) but lower autonomy in reality”, as Tom Christensen (2011, p. 511) summarized his recent study of university governance reforms). They were also given more funding – but it was made available according to new rules of the game. More generally, OECD-inspired reforms were heavily influenced by globalized rules of the game: in a kind of “catching-up” process, Polish reforms are bringing universities closer to what Francisco O. Ramirez and Christensen (2013) termed “global rules of the game” that increasingly impinge on universities.

Changes in university funding and governance in Poland, and, by extension, at the University of Warsaw, are linked directly to recent reforms; but indirectly, they are also linked to global pressures. Reforms at the national level were strongly influenced by global rankings as an external reference point. Therefore, indirectly, current changes are linked to global rankings. Both subsequent versions of the ministerial document “Rationale for the Amendment to the Law on Higher Education” (for instance, Ministry of Science and Higher Education: MoSHE, 2010) and two major national strategies for higher education (FRP (Fundacja Rektorów Polskich), 2009 and EY, & IBNGR (Instytut Badań nad Gospodarką Rynkową), 2010) have specific sections referring to global and European rankings. Usually they are located in the passages most critical of the current state of the Polish system. For instance:

The position of Polish universities on the international scene is very weak. The best Polish universities are ranked far behind the elite in international rankings, and statistics showing the results of research activities (the number of publications and citations and submitted patents) are equally depressing (EY, & IBNGR, 2010, pp. 5-6).

In a similar vein, “The Rationale...” (MoSHE, 2010, p. 4) links the ongoing reforms to European rankings: “it is important for the best Polish universities to be among the top twenty in European rankings by 2020”.

National rankings

As in other European countries, there are several competing annual national rankings, the most important being those produced by the educational magazine *Perspektywy* (together with a daily *Rzeczpospolita*) and two popular weeklies, *Wprost* and *Polityka*. The *Perspektywy* ranking in its 15th edition of 2014 is the most technically sophisticated, notably because the *Perspektywy* Foundation acts as an official secretariat to the IREG (International Ranking Expert Group). Its ranking consists of several separate rankings, of which the most important is the Ranking of Academic Institutions (both public and private). The other rankings are the Ranking of Private Graduate Institutions, the Ranking of Private Undergraduate Institutions (the former awarding master’s degrees and the latter awarding only bachelor’s degrees), and the Ranking of Public Higher Professional Schools. In the *Perspektywy* ranking, there are also separate rankings for 40 major study programs. Different criteria are applied to different rankings with different intensities (that is, their relative weights differ substantially).

The Ranking of Academic Institutions applies six groups of criteria: prestige, research potential, research effectiveness, innovation, study conditions and the internationalization of studies. In the last decade, the relative strength of research-related and internationalization-related criteria increased and the relative strength of study conditions decreased. In 2014, the share of the six major criteria was as follows: research potential was 15 percent, research effectiveness 30 percent, prestige 25 percent, internationalization 15 percent, study conditions 10 percent, and innovation 5 percent (measured by 33 more specific criteria). The major criteria evolve in time: in the first edition of this ranking in 2000, there were only three criteria: prestige (50 percent), research power (30 percent) and study conditions (20 percent), measured by 15 more specific criteria. In 2005 the criterion of internationalization was added, in 2010 – that of innovation; finally, in 2011 the criterion of research power was divided into two: research potential and research effectiveness. The decisions about the ranking’s construction are taken by the Board of the “*Perspektywy*” Educational Foundation. From a European comparative perspective, the *Perspektywy* ranking focuses on institutional research achievements to a greater degree than others (45 percent linked directly to research): *The Independent* and *The Guardian* in the UK, *Le Nouvel Observateur* in France, *El Mundo* in Spain and *La Repubblica* in Italy, from among the most widely known, focusing on academic research to a much smaller degree. The University of Warsaw was ranked first in

2011, second in 2012 and 2013 (after the Jagiellonian University) and first in 2014 (the ranks and the categories can be accessed from Perspektywy, 2015).

Global rankings

Only two Polish universities are listed in the Academic Ranking of World Universities: the University of Warsaw (UW) and the Jagiellonian University in Cracow. In the years 2003-2014 both institutions were ranked in the top four hundred (ranks 301-400); with one exception (the Jagiellonian University was ranked in the top five hundred in 2003). Moreover, from 2012 onwards, Physics at the UW has been ranked between 151 and 200 in the Academic Ranking of World Universities by Study Field.

Polish institutions first appeared in the extended *Times Higher Education (THE)* World University Rankings in the 2011-2012 edition. Both leading Polish universities were located in the first half of the top four hundred (301-350). In 2012-2013 both their scores worsened and fell to the second half of the top four hundred (350-400). The last edition of the THE rankings has seen the disappearance of the Jagiellonian University from the list and a slight move up of the UW, back to the first half of the top four hundred (301-350).

In 2014 the THE released for the first time its BRICS & Emerging Economies Rankings where four Polish universities gained positions among the top 100 institutions. The UW was 23rd (overall score: 35.1), the Jagiellonian University was 41st (28.6), the Warsaw University of Technology 64th (24.7) and the University of Łódź 100th (17.3). However, in its 2015 edition only two Polish universities remained, and both slid by about 20 ranks: The UW was 46th (31.3) and the Jagiellonian University was 58th (28.9). From among Central European universities, in 2015 there were only two universities from the Czech Republic (Charles University in Prague, 31st, and Masaryk University in Brno, 59th) and two from Hungary (Semmelweis University from Budapest, 55th, and the University of Debrecen, 67th).

In Quacquarelli Symonds (QS) World University Rankings, the rank for the UW in 2014 was 335 and for the Jagiellonian University was 371 (and in the years 2007-2013 the ranks were similar). The weakest points of the UW are the low level of internationalization (both for faculty and students), weak research productivity and low scientific impact in respect of the faculty. The UW scores far better when ranked across subject divisions, with English Language and Literature, Linguistics, Modern Languages, Philosophy, and Physics in ranks 101-150, and Geography and Mathematics in ranks 151-200 (QS 2015). Similar conclusions can be drawn from an analysis of the (rarely used for international comparisons) “Performance Ranking of Scientific Papers for World Universities” carried out by the Higher Education Evaluation & Accreditation Council of Taiwan and published annually by the National Taiwan University (NTU). In general rankings of the NTU (2007-2014), the UW ranks in between the second half of the top four hundred and the first half of the top five hundred (351-445). In 2014, the UW ranked 403 and the Jagiellonian University – 349. However, in the rankings by fields or subjects of science, the UW performs much better, especially in its strongest areas: Mathematics (rank 128) and Physics (rank 138) (NTU 2015).

The UW is in the process of implementing institutional financial policies that would promote research activities and improve the level of research funding. Global rankings are gradually becoming its natural point of reference, although this is not acknowledged in

official strategic documents yet. More research funding means more competitive research and, gradually, better scores in global rankings. The four best performing research-oriented faculties of the UW are the Faculty of Physics; the Faculty of Chemistry; the Faculty of Biology; and the Faculty of Mathematics, Computing and Mechanics. Together with the Jagiellonian University, the UW is the best performing institutional applicant for competitive research grants from the newly created National Research Council (or NCN). With its strong will to become a more research-intensive and more internationalized institution (the leader in research excellence in the region of Central and Eastern Europe), the UW is willing to use its recently increased autonomy to have an ever greater share of the research funding available in Poland through competitive grants.

The University of Warsaw: an institutional context

The beginning of Warsaw University is related to two schools from the Napoleonic era – the Law School founded in 1808 and the School of Medicine founded one year later. Both of these schools were transformed into two important faculties of the University and they were designed to educate the specialists needed in the every-day life of the Duchy of Warsaw. On 19 November 1816, the Emperor of Russia and King of Poland, Alexander the First, signed the Royal University of Warsaw Foundation Act, with the University officially launched one and a half years later, on 14 May 1818.

During the academic year 2013/2014 there were 45,793 students enrolled in different Bachelor's or Master's programs; 31,396 being full-time students and 14,397 studying part-time. Full-time students amounted to around 69% of the total student population, and 3,927 students were enrolled in various postgraduate programs. The total enrollments in the last two decades were on the rise until 2005 and then they were slowly declining: there were 38,917 students in 1995, 50,261 in 2000, and 56,858 in 2005. Since 2005, the total enrollments decreased to 45,793 in 2013. The decline was caused by the Polish demographics and in particular it is seen in decreasing enrollments of fee-paying part-timers (in 2013 their number decreased by 45 percent compared with the peak in 2005). There were 3,167 doctoral candidates, among them 441 enrolled in part-time programs and 207 international students. The total number of them has been on the rise since 1990, and in the last ten years it increased by 42 percent. The academic staff in 2013 was 3,225 and non-academic staff about 3,846; with the number of new publications being about 7,000. There were 2,069 non-academic staff employed full time. The University administration employed 992 full-time employees. In 2013, from an academic perspective, 326 doctoral degrees were awarded, as well as 117 Habilitation degrees and 42 professorial titles. The leading concepts for the University's activities are the Humboldtian unity of teaching and research, and the harmonious development of all branches of knowledge represented in its curriculum. Its mission is defined as follows: "We seek to be the best Polish university and a leading university in Europe. We recognize our particular responsibility toward Central and Eastern Europe".

The University is managed by the Rector. Together with the Vice-Rectors, the Rector oversees administration and finance, makes key decisions, represents the University externally, and is in charge of staff, undergraduates and postgraduates. The Senate is the University's most important governing body. It has the authority to ratify documents which are of key importance to the University; such as bylaws, the mission statement and

strategies for development, as set out by the Rector, financial and investment plans, and course regulations. The University has a total of 20 autonomous faculties, and some of them are divided into separate institutes (52 in total). There are also 38 autonomous units (29 of them being academic units) under the supervision of the Rector. The governance model is slowly changing in the direction promoted by recent higher education reforms (Kwiek 2014a): faculties are becoming ever more autonomous, especially in financial terms.

Its total budget in 2013 was about 1.2 billion PLN (or 320 million dollars) and its research budget was about a quarter of that (301 million PLN or 80.3 million dollars); this being the second highest institutional budget after the Jagiellonian University in Cracow (with its Collegium Medicum), the oldest Polish university (founded in 1364) and its only national competitor. Research at Warsaw University is financed mostly from grants received from national and international research programs. The University is the most effective of all Polish higher education institutions in acquiring funding through competitive calls, and its scholars are usually the largest group of winners in national research programs.

The UW is predominantly publicly funded (about 90 percent of the total operating budget in 2013 was public: either directly, through state subsidies, or indirectly, through research agencies and European Union funds). In the past ten years the structure and the level of income at the University have changed substantially. Income from research plays an increasingly important role in the overall structure of revenues. The total income has doubled since 2003. The share of state subsidies in total income has increased from 58.7 percent in 2003 to 62.6 percent in 2013. The ministerial subsidy for teaching has a decreased share in the overall structure of the budget, from 40.3 percent in 2003 to 37.3 percent in 2013. Nevertheless, in spite of the dramatically decreasing number of students, the level of the subsidy has increased since 2012 by 14.4 percent. Quite the opposite trend can be observed in the context of the income generated from tuition-based teaching. This is due to the contraction of the Polish system as a whole (see Kwiek 2013b). In 2003, income from tuition fees accounted for 21.7 percent of the total budget, but in 2013 it represented merely 10.6 percent. The share of research funds increased substantially in the last ten years: from 11.9 percent in 2003 to 26.1 percent in 2013. The core of research funding comes from the direct Ministerial subsidy for research (75.7 percent) and about one-fifth comes from national competitive research projects (21.5 percent). The share of European Union (international) funding in the total operating budget is high and reaches 10.2 percent (122.36 million PLN or 32.5 million dollars), mostly owing to EU Structural Funds spent on poorer EU member states.

A Qualitative Analysis

The qualitative research that informs this paper comes from 10 semi-structured in-depth interviews conducted with junior and senior academics and junior and senior administrators from the University of Warsaw. The interviews lasted between about 30 and 90 minutes and a semi-structured protocol was used. The interviews were recorded, and then transcribed verbatim. We will discuss the findings from empirical qualitative research in several steps. First, we focus on the question whether the University is concerned about its position in global rankings. Next we discuss whether global rankings are influencing the

University's mission and its operating goals. Then we focus on individual perceptions about the impact of global rankings on the functioning of the University. After that the themes discussed are global rankings, research grants, and changing employment patterns, as well as global rankings vs a national research assessment exercise ("parametrization"). And finally, we briefly discuss the issue of global rankings and individual academic careers as this emerges from the qualitative material.

Is the University concerned about its position in global rankings?

The faculty and administrators interviewed clearly confirm that the senior university management is very much concerned about the university's position in various global rankings. The mid-level management (deans of faculties and directors of departments) are less concerned. The least concerned are academics. Senior management are especially concerned because the relatively low position of the University (compared with national and institutional ambitions) provides ammunition for mass-media criticism of Polish higher education and its low levels of internationalization. Global rankings according to most interviewees are believed to be important locally, mostly because they are widely commented on by the national media and politicians. The academic community of the University in general is worried about global rankings because

for public opinion it is one the most fundamental pieces of information. An intermediary role is played by the media. On the basis of such pieces of information a public perception of the weakness of Polish universities is being built. For most journalists it is a good opportunity to complain how poor we are faring. (Interview 1/administrator/female).

The most important global university rankings for Warsaw University are therefore, on the one hand, those discussed in the media and by politicians (in the specific Polish context there is only one important global ranking: the Academic Ranking of World Universities, other major rankings have traditionally been disregarded); and on the other hand those in which the University fares well, for instance the Webometrics ranking of universities (Interview 2/administrator/male). There is a general perception that global rankings are somehow important at all levels. Their importance differs, and while at the level of the rectorate they matter directly, at the level of academics they matter indirectly, mostly via a changing academic culture towards a more audit-oriented approach, with closer links to measurable research outputs. In one academic's view:

Such global rankings as the AWRU and others are publicized, but they are mostly important to the rector himself. As far as particular academics and faculties are concerned, internal rankings at the level of faculties and the University are much more important. On a national scale, national rankings are more important, they are the source of good and bad feelings. Whether the University is the top three or four hundred institutions in the AWRU does not matter much. (...) There are not more important global rankings or less important global rankings at an individual level because nobody cares too much about them (Interview 4/faculty/female).

Other interviewees indicate that global rankings may have a powerful impact on individual academics from several perspectives. One is the prestige that their employing institution has abroad (much more so than its prestige in Poland where it always holds either the first or the second position in national rankings, above or below the Jagiellonian University). Another is its global standing in the market for international students and its relative strength as a partner in international cooperation. In particular, academics link the University's position to the level of possible international research cooperation: the higher the University is in the rankings, the better the position of individual academics in international, and especially European, research teams.

Therefore, the general academic perception is that good positions in global and European rankings (and especially among universities in the region of Central and Eastern Europe) are very important for research opportunities provided by international research collaboration (Interview 1/administrator/female). A natural reference point for both the University of Warsaw and the Jagiellonian University is Charles University in Prague, which has always been much higher in the ARWU Ranking: a popular explanation (Interview 1/administrator/female, Interview 3/faculty/male) being that the Czech university is highly internationalized due to its Slovak students (which is indeed the case: among the 10 percent of international students registered there in 2013, more than four out of five were Slovaks).

As Jens-Christian Smeby and Åse Gornitzka (2008) argue in their study of the changing internationalization of Norwegian academics across two decades, the integration of researchers into transnational academic communities is dependent on two separate factors: the motivation on the part of the researcher and his/her attractiveness as a researcher to international colleagues. Both factors are closely linked: "the researcher needs to have the motivation in order to make the effort to engaging internationally. Attractiveness refers to the extent to which international colleagues perceive a researcher as a relevant and interesting partner" (Smeby, & Gornitzka, 2008, p. 43; see Kwiek, 2001). Another relevant factor is the availability of resources. Academics from Warsaw University clearly link their attractiveness to potential international research partners to the position of their university in global rankings.

A limited role for global rankings is stressed in several interviews with both academics and managers. For instance, one faculty member concludes his discussion of the topic by saying that:

The rector and the deans are worried about positions in the rankings. But average academics are rather not concerned, although it certainly depends on individual perceptions. The management of our university likes concrete 'hard' data because they make it possible to assess the progress made (Interview 5/faculty/male).

The rectorial team "is very much concerned about rankings. In Poland they are the best but in the world – it looks bad. They would like very much to be higher to decrease this discrepancy", the same faculty member stresses. Similarly, another interviewee emphasizes that the positions in rankings "are interesting to the University for the university management; the average academic is rather not interested in them" (Interview 2/administrator/male). Not surprisingly, rankings "do not concern the average academic" (Interview 4/faculty/female).

At the same time, at the senior management level, there seems to be no “ranking frenzy”. There is a clear understanding of the current possibilities in funding, infrastructure and human resources; and of the limited scope of possible changes that can be introduced in the near future. Most factors relating to the University’s position in global rankings are believed to be beyond the scope of the University (“beyond the scope” is one of the most frequently used expressions when external factors are discussed in interviews). These critical external factors include the complicated history of Poland (and Central Europe in general) in the last half a century and the relegation of universities to a subservient role in the ideological apparatus of the communist state. They also include the communist-period division of labor in the higher education and research system between Polish universities and the institutes of the Polish Academy of Sciences (PAS). In this system, universities were principally teaching institutions and the PAS institutes were strictly research institutions, with no teaching obligations. However, Polish universities have been gradually regaining their traditional research roles since the early 1990s. Today, the PAS is an important part of the Polish research system and, increasingly, part of its higher education systems, especially at the level of doctoral studies. The links between the UW and the Warsaw-based PAS institutes are weak but further integration is expected. In terms of global rankings, the research output of the PAS does not exist as the PAS institutes are not affiliated to universities. The interviewees also mention among the critical external factors the low levels of public funding made available to universities in the whole postcommunist transition period, and especially in the 1990s.

The senior management is believed to have a well-balanced attitude to global rankings. This can be summarized as follows: it is good to have stable or higher positions in global rankings but there is no direct link, and none is expected in the future, between global rankings and any organizational changes at the University:

The University approaches the issue of rankings from a distance. It does not ignore them but also does not attach to much importance to them. The intention is to provide a rational compromise view. The attitude of rectors is cold, balanced. The University is the best in Poland and ambitions are higher. It wants to look good in global rankings. All is well if there are good results in the rankings but there will be no organizational changes (and especially dramatic changes) because of them (Interview 7/faculty/female).

At the level of deans of faculties, directors of departments, and academics, the ongoing increased national competition in research output – linked to research funding as strong as never before (Kwiek, 2014a) – seems more important than international competition. The reference point for academics, departments and faculties at Warsaw University is other Polish academics, departments and faculties. The role of global rankings is therefore much lower than the role of national output-based research assessment exercises, periodically performed and being increasingly linked to the allocation of funding. Both leading Polish universities are in the ARWU ranking in the same 301-400 bracket. And in the case of faculties (so-called basic academic units), competition is based on a clear disciplinary basis. Faculties of physics compete for funding and prestige with faculties of physics, as do faculties of chemistry or mathematics (the three most globally visible academic areas in the last two decades, Kwiek, 2012). Especially because following

the 2009-2012 wave of higher education reforms, both institutional-level and individual-level research funding are ever more closely linked to measurable research outputs. In this period, for the first time, Poland implemented a performance-based research funding system. Global rankings are not directly linked to funding levels; and Polish universities do not compete among themselves globally; however, the national results of research assessment exercises (with clear benchmarking mechanisms and marks allocated to all basic academic units in a given research area) are. Therefore, from a disciplinary (rather than an institutional) perspective, as one interviewee put it:

It is more important how the University looks in the context of other Polish universities than how it looks in the context of international universities. The pressure linked to the existence of global rankings is unfelt. The criteria linked to the functioning of the University are influenced by the criteria used in the National Qualification Frameworks, in the Ministry, or in the National Research Council. These criteria have an influence on grants and prestige at a scale that lies in the field of interest of academics and the University (that is, us) (Interview 4/faculty/female).

The University's senior management is concerned about global rankings because rankings tend to be used internally in Poland as an argument to support the claim that Polish universities are unreformed, unproductive, and non-competitive in Europe. There seem to be growing resentment against Polish universities and although the University of Warsaw "is not ideal, it deserves to be discussed seriously rather than be hit at every opportunity" (Interview 1/administrator/female). Some interviewees consistently link the relatively low position of the University in global rankings to external constraints, especially historical circumstances and the budgetary situation of the state. But others are much more critical of the University and link its low position in rankings to a lack of institutional will to change the institution. As a senior faculty member remarked:

There is no will to change anything. (...) When ranking results are publicized in the press, we grumble a bit by saying that again we are low in the rankings, but apart from this, nothing happens (Interview 3/faculty/male).

In particular, a position in global rankings is not an institutional priority:

For the University, it is not a goal to be high in the AWRU ranking. (...) Were the University in the first dozen, we would be boasting about it. When we are winning the *Perspektywy* or *Wprost* national rankings, this is on the main page of the University's website (Interview 3/faculty/male).

Indeed, in all interviews, national rankings are a natural reference category for global rankings. The interviewees stress that the "scale of global rankings lies beyond the possibilities of the average academic at the University. Much more can be said about the impact of Polish rankings" (Interview 4/faculty/female). National rankings appeal to the academic imagination in the University much more strongly than global rankings. Global rankings are rarely discussed while national rankings are discussed quite often: "they are discussed in the University's Senate; they are also discussed in the academic community.

Global rankings are not” (Interview 8/faculty/male). “Much better known and useful are Polish rankings, and global rankings are less known because we are in a worse position in them” (Interview 9/faculty/male). “The University is concerned about both national and global rankings, but it is more concerned with national rankings because it is the leader in them” (Interview 10/administrator/female). Interviewees emphasize the role of global rankings based on research activities on the Web, such as for instance the “Webometrics Ranking of World Universities”; an initiative of the Cybermetrics Lab, a research group belonging to the Consejo Superior de Investigaciones Científicas (CSIC), the largest public research body in Spain. The University of Warsaw was ranked 335th in 2014, while the Jagiellonian University was ranked 299th and the University of Poznan 250th. The impact of web-based rankings is viewed as “one of the major arguments to completely restructure university-level and faculty-level websites” (Interview 6/faculty/male).

Are global rankings influencing the University’s mission and its operating goals?

Interviews clearly show that the impact of global rankings on the University’s mission and operating goals is indirect. There are no direct references to global rankings either in current or previous institutional strategies or in lower-level faculty strategies. Global rankings are perceived as influencing the University’s operations to a much lower degree than national rankings (which may have an impact on student intake in different faculties), on the one hand, and national research assessment exercises on the other hand. The major reason for their low impact is the institutional focus on securing public funding, which is more important at the moment than securing prestige. More public funding can only come through more students or through more research-based institutional and individual funding. As the Polish system has been shrinking since 2006 (Kwiek, 2014a), the demographic challenge is viewed as potentially threatening the future of the University. While the University’s position in global rankings is not directly mentioned among institutional goals, increasing some other goals may indirectly advance its position. A good example is the internationalization of studies. As a senior administrator explains with reference to ranking positions among institutional goals:

We do not have such goals in our strategy which would state that we want to be higher in the rankings. (...) But some goals such as for instance the increasing attractiveness of the University to foreigners may contribute to a higher position in rankings. This is not happening with rankings in mind, though, but with the level of studies in mind (Interview 1/administrator/female).

The University is preparing a new institutional strategy at the moment, but it is not clear whether references to global rankings will be made in the document or not. In response to several decades of strong hierarchical control under communism, after 1989 Polish higher education became a “republic of scholars”, with powerful academic bodies. The Polish system is one of the most collegial in Europe (Kwiek, in press) and the work on this strategy is a joint endeavor. There are usually several versions of the document under discussion and, as a result of the collegial process, the final shape of the document cannot be guaranteed:

Particular faculties may have different methods of action, and consequently institutional strategies as a rule are quite soft. Observations at the faculty level indicate that the necessity to prepare mission- or strategy-related documents at the lower level of the University (for instance, at the level of faculties) is treated as a necessary evil (Interview 2/administrator/male).

The level of interest in institutional strategies decreases with the level of university organization, and the lowest level is believed to be among academics.

The collegial governance model in all Polish universities, and in such old and prestigious ones as the University of Warsaw in particular, makes university-level goals difficult to be agreed on. The power of university rectors compared with that of university senates and faculty boards is currently higher than prior to the 2009-2012 reforms, but is still relatively small. From among a number of reasons, the most important ones are traditionally powerful senates and the relative financial independence of faculties. Faculties to a large extent are funded separately on the basis of teaching assessment exercises (or a system of grades given by the Polish Accreditation Committee), on the basis of “parametrization” results which assesses academic research output, combined with individual-level funding for academics coming from the two major national research sponsoring councils: the National Research Council (the NCN, for fundamental research) and the National Council for Research and Development (the NCBR, for applied research). Consequently, the funding leverage available to the senior management team is low. As a senior administrator explains the task of including higher positions in global rankings among the University’s goals,

The University is a federation of professors who cannot be ordered to take a concrete research activity – because there is academic freedom. That is the reason why the causative power of the rector is very limited. The rector may provide encouragement and create conditions but the decision belongs to the scholar (Interview 2/administrator/male).

The role of funding in university governance is crucial: the mission and vision of the University are important but something else is a critical operational criterion; this is the financial stability of the institution and its faculties and the success in winning research funding, as funding “is rather loosely related to the University’s position in global rankings. In seeking national research funds, global rankings are not a parameter. (...) They essentially matter in seeking international research partnerships” (Interview 2/administrator/male). At the level of faculties, global rankings do not in general seem to play a role; they may play some role in selected faculties which are present in the rankings in their disciplinary sub-rankings (such as the Faculty of Physics or the Faculty of Mathematics, Computing and Mechanics). Such an attitude is commented on by a senior faculty, “We do not think we are participating in this competition at all. We close our eyes as if there is no such thing as global rankings” (Interview 3/faculty/male).

On the one hand, the senior management team cannot formulate institutional goals independently from the senate and the faculties (the university being a “federation of professors” as mentioned above, or a collegially-governed “community of scholars”

(Kwiek, in press). But on the other hand, it is not clear to what extent the position of the University in global rankings could be their explicit goal, should the management team actually be able to prepare an institutional strategy independently from the senate and the professorial body. The University is proud to have its own visions, missions, and statutes and to be somehow independent from the “ranking frenzy”: “the idea is not to give in to rankings but to keep on working” (Interview 6/faculty/male).

Consequently, Warsaw University does not make any direct staff or organizational decisions to gain a higher position in global rankings and global rankings are absent from its operational goals. However, indirectly, there is ongoing reflection on how ranking results can be translated into the daily operations of the institution: a reflection on

What has to be done, in which criteria are we faring better, which criteria have to be taken care of more. The rectors have to keep some distance from it all because rankings are often being adapted to institutions that are working on the basis of different principles (for instance, they are private institutions). (Interview 7/faculty/female).

But for the University, especially regarding the way it is currently being funded, these criteria are only marginally relevant.

Directly, the University is much more concerned about the requirements of the parametrization assessment procedures and how to meet them, about the Ministerial list of refereed journals and how to collect more publication points etc. This is real, here and now, while global rankings are somehow unreal, out there. The methodologies of global rankings are believed to

Sometimes refer to such things that are beyond the capacities of the University, for instance the number of Nobel-prize winners. (...) These are things which the University is not able to achieve today. They probably also go beyond the horizons of thinking for our rectors (Interview 8/faculty/male).

Not surprisingly, as another interviewee put it, “global rankings do not have any influence on the University’s mission and its operational goals” (Interview 9/faculty/male). Thus, if at all, references to global rankings in the University’s mission are “indirect” (Interview 10/administrator/female).

The historical past matters: under communism, universities were involved in research only through a limited number of so-called “key research programs”, coordinated by the communist party. Consequently, “it is very difficult for the University to become a research university today” (Interview 1/administrator/female). Universities from Central and Eastern Europe are not well known in Western Europe, and therefore are also not considered as prestigious. Both history and funding regimes do matter for the positions in global and European rankings:

Public universities, such as the University of Warsaw and the Jagiellonian University, have different histories, different funding modes. Global rankings so far are not as important here in Poland as in the West. The University of Warsaw is also in a more difficult situation because it does not have those faculties which are the

most attractive to the business sector – such as medicine or pharmacy (Interview 7/faculty/female).

Individual perceptions of the impact of global rankings on the functioning of the university

Individual perceptions vary but there is no basic difference between the official relative indifference found in institutional documents at the university level and the individual relative indifference shown by the interviewees. Both academics and managers fit their institution perfectly, share its values and norms, and support the distanced attitude taken by senior management. The reason for this lack of divergence is clear: with the University in the 301-400 rank, it is very hard to have either strong feelings or an emotional attitude (found, in contrast, with respect to national rankings). All the interviewees showed what one of them termed a “cold, practical, rational” attitude (Interview 7/administrator/female). Disciplinary global rankings may be relevant but aggregate global rankings should be viewed with suspicion as they are “always a kind of generalization” (Interview 1/administrator/female). Global rankings are needed as an external reference point which makes it possible to compare the University with other institutions in the region, though. They are also natural reference points for global partners of the University who may know next to nothing about it.

“To keep a distance” from rankings which are always “relative” is a common theme in our interviews. Universities should take a long-term approach (eternity, truth, etc.) and it is good that the University “does not focus on increasing its impact factor or position in rankings. (...) My attitude to both university rankings and the rankings of individual academics is very distanced” (Interview 1/administrator/female). “One has to keep a distance from the University’s position in rankings and it is pointless to change the current functioning of the University in accordance with the rankings’ methodologies”. (Interview 7/faculty/female). Senior management’s attitude to rankings is viewed as “rational, balanced, with no frenzy. They are happy about the successes but they do not act with global rankings in view” (Interview 7/faculty/female). There is full coherence between individual perceptions of rankings and how they are officially referred to at senior university levels.

Interviewees recognize that global rankings have several advantages, although their impact is not direct. For instance, they link rankings to the potentially higher research productivity of individual academics (rather than faculties or the University as a whole). A focus on rankings might increase the dramatically low research productivity in Polish higher education (as shown in detail from a European comparative perspective of 11 countries in Kwiek, 2014b), especially in connection with higher levels of internationalization in research (Kwiek, 2015), and might also increase the internationalization of studies. The most visible link between rankings and the University is through a possible increase in internationalization. While rankings are not a goal in institutional strategies, internationalization of teaching and research clearly is (the whole conception of the 2009-2012 wave of reforms was built around the idea of “internationalization”, and especially “higher international visibility of the Polish knowledge production”). Another advantage of rankings for the University is through their potential “mobilizing effect”. They could be viewed as a mirror, should the University be

high up, but “our presence in the top four hundred is just mobilizing. Rankings are criticized for not showing a reliable picture but they can have a mobilizing aspect” (Interview 2/administrator/male). This mobilizing effect is linked to the low competition among Polish academics: “the increasing impact of global rankings brings about the possibility to refer to universities beyond Poland, which is a positive feature. (...) A negative feature of rankings is their automation and generalization. When using rankings, we certainly have to be aware of this” (Interview 7/faculty/female).

Global rankings are viewed as closely related to international cooperation at the level of institutions rather than at the level of individual academics. The modest rankings of the University make it more difficult to sign institutional agreements with stronger international partners; at the same time, the modest rankings are not viewed as impeding individual-level cooperation with international colleagues. The current impact of rankings on the University is small but it could be higher if the state intervened through incentive mechanisms. Such incentive mechanisms are operating in selected private sector institutions which are struggling to keep their high positions in national rankings and to have stable student numbers (Kwiek 2011).

Global rankings, research grants, and changing employment patterns

Recent reforms, clearly referring to the idea of “competition”, introduced a renewed system of research grants made available to competing academics and their teams from the two newly founded national councils. Warsaw University, together with the Jagiellonian University, is a national leader in both seeking grants (the number of research proposals) and securing them (the number of grants and the total volume of grant-based research funding). Nevertheless, being a leader in grant-collection does not mean being a research university, and having an ever better access to research funding does not mean new opportunities to steer the development of the University:

The University is far from being a research university. Research funding today can have an impact on the institutional development only to a very limited degree. Research grants are individualized, fitting the needs of principal investigators (rather than the needs of the institutions as a whole) (Interview 1/administrator/female).

The role of competitive grant-based funding in both the governance and funding of the University has been increasing: “in terms of both publications and grants, we have mass mobilization” (Interview 4/faculty/female) which means, in a military-like terminology, that all able-bodied men (and women) are joining the forces. As mentioned above, institutional subsidies for research, traditionally provided by the state to basic academic units (usually faculties), small as they were, are now being gradually replaced by individual research grants available on a very competitive basis. Most research grant programs available in fundamental research are for young academics under 35, consistent with the guiding principles of reforms. The gradual demise of faculty-level subsidies has led to changes in research patterns (only grant-based research is now technically possible, and there are no bridging funds or loose research funds not earmarked for specific purposes). And the growth in the number and size of research grants has led to new governance

structures and employment patterns: the appearance of short-term grant-based academic positions. Unheard of before 2010, these positions are purely research-focused, with no teaching duties (Interview 2/administrator/male). They do not offer any job security and tend to replace new standard full-time (as well as teaching and research) academic positions. Interviewees do not see this as a good answer to the generational gap that exists at the University.

In various faculties of Warsaw University, new clauses in employment contracts are being introduced. At the central university level, there are only general frameworks for academic duties in employment contracts that are specified at the level of deans of faculties. These new requirements are assessed as effective: “the academic knows that he or she has to either have publications in high impact journals or to win a grant. There is a growing awareness at the University that one has to distinguish oneself in something” (Interview 1/administrator/female). Consequently, the number of grant applications is on the rise. Principal investigators are mostly young academics and the major research areas are physics, chemistry, mathematics and biology, as well as the social sciences (Interview 10/administrator/female).

Global rankings vs. a research assessment exercise

Interestingly, our interviewees did not link the periodic national research assessment exercise to global rankings, even though the link clearly exists via the much wider idea of measuring research output and ranking its producers, both institutions and individual academics. We suggest there is a strong link between the “audit culture” and the increasing role of various accountability techniques in higher education, global rankings, and national “parametrization” based on output measurements of publications (but still not citations and impact factors).

There is a close ideological affinity between measuring the research output of individuals and institutions at national and international levels, and the eventual measuring and comparing national higher education systems. While the link between measuring individual research performance and institutional research performance is clear, the link to predominantly research-based global rankings is not so clear among the interviewees. As remarked by a faculty member:

Academics expectations have become higher but this is not a result of global rankings. What is happening right now is a result of the ongoing institutional assessments. The parametrization of academic units is being transferred to the level of individual academics. The achievements of academic units are a function of the achievements of particular academics (Interview 4/faculty/female).

The social and institutional pressure to publish more is increasing. And it is exactly such pressure that may indirectly lead to the better visibility of Warsaw University in global rankings: “young academics are collaborating, they are publishing in international co-authorship with their colleagues, and therefore, over the passage of time, such international collaboration will be translated into more global indicators” (Interview 4/faculty/female). The starting point is both the social pressure to publish; the academic awareness that internationally recognized, high-impact journals are a source of prestige;

and a system of incentives which are both monetary and non-monetary. They include rector's and deans' awards for research productivity, as well as various fellowships available from the Foundation for Polish Science or from the Ministry. And this is actually the case: "young academics no older than 35 are being clearly financially rewarded for their research activities; which, additionally reinforces their motivation" (Interview 4/faculty/female). Asked about the direct impact of global rankings on the University, including on working and publishing patterns, academic attitudes and academic behaviors, the interviewees are unanimous in their comments: "The assessment of the University and its income depends to a large extent on Polish rankings rather than global rankings" (the impact of national rankings on income is certainly through students rather than through research) (Interview 6/faculty/male). There is a link between the University's attitude and academics' attitudes:

As the University does not feel a significant impact of global rankings on its functioning, the same goes for its academics. I am not particularly interested, although the poor rank of the University somehow gives food for thought about the future (Interview 6/faculty/male).

Local requirements of the parametrization exercise are clearly more important for ongoing institutional transformations than global rankings: "faculties which have more publications and more grants, fare better. They receive higher assessments, higher categories and become leading centers. This is all interconnected but comes from local requirements, not global ones" (Interview 8/faculty/male). Thus, in general, the methodology of the research assessment exercise is not directly correlated with rankings methodologies but it is clearly intended to increase research output of Polish universities.

Global rankings and individual academic careers

Finally, we have been interested in the links between global rankings and individual academic careers at the University. Again, the links are indirect but clearly stated: global rankings are believed to promote research and the internationalization of research, and especially the internationalization of publication channels (see Kwiek 2015). The interviewees feel increasing pressures to do research and to publish research results in international journals. But they also clearly see the downside of these general pressures: global rankings and institutional pressures to publish more might lead to distortions in academic work: the potential threat is that the university might exert pressures to produce specific types of research outputs (e.g. journal articles rather than books). Rankings have no reported influence on academic careers for the simple reason that only a handful of Polish universities are globally ranked and only two of them are listed in the AWRU ranking. What is important in academic careers is how faculties are assessed at the institutional level and nationally:

As for my academic career, global rankings do not matter much. What matters is how my faculty is assessed at the level of the University and in Poland. What matters is the quality of actions taken by my faculty (Interview 4/faculty/female).

Rankings “do not have any impact on my academic career” (Interview 8/faculty/male). At the same time, from an international perspective “the poor ranking of the University makes me wonder about my professional strategy and my chances to pursue further my academic career” (Interview 6/faculty/male). In a similar vein, another academic explained the complicated relationship between rankings and her individual career:

I am not planning to move to a more highly ranked university. The criteria used by many rankings do not relate to the Polish career path at all. (...) The only convergence between global rankings and academic work in Poland is the need to publish and to do research. The higher quality of both publishing and research, the better for the academic and for their institution (Interview 7/faculty/female).

Rankings can have various negative consequences in the view of interviewees view. They may be gradually changing the essence of academic work: global rankings translated into individual academics’ levels should not replace the traditional account of science in which theory-building and the development of science are what matters most. Consequently, “rankings can have a negative influence on the assessments of individual academics; but fortunately, the University does not care about them too much” (Interview 8/faculty/male). Another negative impact of the ranking culture is that sometimes the scientific value of a research product does not matter: “what matters is what this product gives to the University, to the faculty, and into what it can be recalculated” (Interview 10/administrator/female).

Conclusion

Poland is represented in major global university rankings by only two universities, the University of Warsaw and the Jagiellonian University in Cracow. In this chapter, we sought to define the impact of rankings on the first named institution. As could be expected in a system with only modest research intensity in the university sector (on the research productivity of Polish academics, see Kwiek, 2014b and Kwiek, 2015), rankings play the most important role as an external reference point in two types of Polish discussions about the future of higher education: discussions by policymakers (to promote reforms); and discussions in the media (to bash Polish universities for their low international standing).

At the level of the case study university, global rankings matter predominantly for the senior management team, albeit with clear reservations on their part. The lower one is in the institutional hierarchy, the smaller the role of rankings; at the level of individual academics, their role is marginal. Certainly, there is no “obsession” with rankings at any institutional level, as in many parts of the world (Hazelkorn, 2011). From among the many reasons, perhaps the most important one is a consistent disbelief in the current competitiveness of Polish universities (as opposed to selected academics or faculties) on a global scale, linked to half a century of their communist history and the last quarter of a century of their postcommunist transformations. The times are changing but it is clear that the three complementary sets of factors at play in top global universities are not actually at play in the University of Warsaw: there is no high concentration of talent (faculty and students), there are no abundant resources (to offer a rich learning environment and to conduct advanced research), and there are no favorable governance features leading to

strategic visions, innovation, and flexibility (Salmi, 2009). In each case the three factors are actually changing, but the speed of these changes is not satisfactory.

It is also clear that the progress towards becoming a research university is too slow: too small is the extent to which the University, as in Altbach's (2011) definition "provides the link between global science and scholarship and a nation's scientific system", to which it is both a "national" and an "international" institution (that links to global intellectual and scientific trends), and to which it is a truly central institution of the "global knowledge society" (p. 11). What could be interpreted as the pessimisms of the Polish academic community is in fact their realism. And this realism – an awareness of the time needed for the University to become a world-class, research university, highly ranked in both global and European rankings under current conditions of funding, human resources and governance – tends to determine their reluctance to take rankings seriously. Polish academics are aware that elite status is not self-declared, it is "confirmed by the outside world on the basis of international recognition" (Salmi, 2011, p. 226). Global rankings are part of the global recognition game. And this global research game is still not the game of the University, notwithstanding that selected academics and selected faculties are participating in it despite national barriers. The University of Warsaw is still not participating in the "battle for world-class excellence" or in the global "reputation race" (Hazelkorn, 2011). What Altbach (2011) terms "the 'spirit' of the research university" (p. 15) and "the research university professor" (pp. 18-20) still do not exist either in Poland, or in the case study university. The Polish system is huge (over 100 public institutions) and needs strong differentiation, with a few institutions much better staffed, funded and governed at the top. Recent reforms have incrementally brought about some very positive changes (elements of competition, system differentiation, merit pay, managerial governance etc.) but they are still not radical enough to allow any Polish university to become either a world-class or research university in the foreseeable future. The University of Warsaw is a perfect example that illustrates Altbach and Balán's (2007) argument that "not all countries can afford 'world-class' universities, but most can – and must – have universities that fully participate in the world of research and development" (p. vii). Following this advice, the University of Warsaw is the best Polish candidate to move consistently up in the global university rankings.

Acknowledgements

The author gratefully acknowledges the support of the National Research Council (NCN) through its research grant (UMO-2013/10/M/HS6/00561). He is also very grateful to Dr. Krystian Szadkowski who collected and analyzed the institutional-level data and Dr. Marcelina Smużewska who conducted the interviews. Particularly, he owes his debt to Philip G. Altbach, Laura E. Rumbley and Maria Yudkevich for the invitation to their project and their comments on the initial version of this chapter.

References:

- Altbach, P. G. (2011). The past, present, and future of the research university". In P. G. Altbach, & J. Salmi (Eds.), *The road to academic excellence: The making of world-class research universities* (pp. 11-32). Washington, D.C.: The World Bank.

- Altbach, P. G., & J. Balán, eds. (2011). Preface. In *World Class Worldwide: Transforming Research Universities in Asia and Latin America*. (pp. vii-viii). Baltimore: The John Hopkins University Press.
- Antonowicz, D. (2012). External influences and local responses. Changes in Polish higher education 1990-2005. In M. Kwiek, & P. Maassen (Eds.), *National higher education reforms in a European context: Comparative reflections on Poland and Norway*. Frankfurt and New York: Peter Lang.
- Brunsson, N., Sahlin-Andersson, K. (2000). Constructing organizations: The example of public sector reform". *Organization Studies*, 21(4), 721-746.
- Cerych, L., & Sabatier, P. (1986). *Great expectations and mixed performance: The implementation of higher education reforms in Europe*. Trentham: European Institute of Education and Social Policy.
- Christensen, T. (2011). University governance reforms: Potential problems of more autonomy?". *Higher Education*, 62, 503-517.
- Ernest and Young, & IBNGR (2010). *Strategia rozwoju szkolnictwa wyższego do 2020 roku* [Higher Education Development Strategy until 2020]. Prepared for the Ministry of Science and Higher Education (MSHE). Warsaw: MSHE.
- Ernest and Young, & IBNGR (Instytut Badań nad Gospodarką Rynkową) (2009). *Diagnoza szkolnictwa wyższego w Polsce* [The Diagnosis of Higher Education in Poland]. Prepared for the Ministry of Science and Higher Education (MSHE). Warsaw: MSHE.
- FRP (Fundacja Rektorów Polskich) (2009). *Polskie szkolnictwo wyższe. Stan, uwarunkowania i perspektywy* [Polish Higher Education. The Current Condition, Determinants, and Perspectives]. Warsaw: University of Warsaw Press.
- GUS (Main Statistical Office) (2014). *Higher Education Institutions and Their Finances in 2013*. Warsaw: GUS (Main Statistical Office).
- Hazelkorn, E. (2011). *Rankings and the Reshaping of Higher Education. The Battle for World-Class Excellence*. New York: Palgrave.
- Kwiek, M. (2011). The public/private dynamics in Polish higher education: demand-absorbing private growth and its implications. *Higher Education Forum*. Vol. 8. 37-59.
- Kwiek, M. (2012). Changing higher education policies: From the deinstitutionalization to the reinstitutionalization of the research mission in Polish universities". *Science and Public Policy*, 39, 641-654.
- Kwiek, M. (2013a). *Knowledge production in European universities. States, markets, and academic entrepreneurialism*. Frankfurt and New York: Peter Lang.
- Kwiek, M. (2013b). From system expansion to system contraction: Access to higher education in Poland. *Comparative Education Review*, 57(3), 553-576.
- Kwiek, M. (2014a). Structural changes in the Polish higher education system (1990-2010): A synthetic view". *European Journal of Higher Education*, 4(3), 266-280.
- Kwiek, M. (2014b). The internationalization of the Polish academic profession. A European comparative approach". *Zeitschrift für Pädagogik*, 60(5), 681-695.
- Kwiek, M. (2015). The internationalization of research in Europe. A quantitative study of 11 national systems from a micro-level perspective. *Journal of Studies in International Education*, 19(2) (online first: <http://jsi.sagepub.com/content/early/2015/02/25/1028315315572898.abstract>).
- Kwiek, M. (in press). The unfading power of collegiality? University governance in Poland in a European comparative and quantitative perspective. *International Journal of Educational Development*. Manuscript submitted for publication.
- Kwiek, M., & Kurkiewicz, A. (Eds.). (2012). *The Modernisation of European Universities. Cross-National Academic Perspectives*. Frankfurt and New York: Peter Lang.
- Maassen, P., & Olsen, J. P. (Eds.). (2007). *University Dynamics and European Integration*. Dordrecht: Springer.
- MoSHE (Ministry of Science and Higher Education) (2010). Projekt założony projektu ustawy o zmianie ustawy – Prawo o szkolnictwie wyższym oraz niektórych innych ustaw. Warsaw: Ministerstwo Nauki i Szkolnictwa Wyższego MoSHE.
- NTU (2015). Performance Ranking of Scientific Papers for World Universities. Available from <http://nturanking.lis.ntu.edu.tw> .

- Perspektywy (2015). Ranking Szkół Wyższych [Ranking of Higher Education Institutions]. Available from <http://www.perspektywy.pl>.
- QS (2015). Quacquarelli Symonds (QS) World University Rankings. Available from <http://www.topuniversities.com>.
- Ramirez, F. O., & Christensen, T. (2013). The formalization of the university: Rules, roots, and routes. *Higher Education*, 65, 695-708.
- Salmi, J. (2011). The road to academic excellence: Lessons of experience. In: P. G. Altbach, J., Salmi (Eds.), *The road to academic excellence: The making of world-class research universities* (pp. 323-347). Washington, D.C.: The World Bank.
- Salmi, J. (2009). *The challenge of establishing world-class research universities*. Washington DC: World Bank.
- Scott, P. (2007). Reflections on private higher education tendencies in Central and Eastern Europe. In S. Slantcheva, & D. C. Levy (Eds.), *Private higher education in post-communist Europe. In search of legitimacy* (pp. 299-316). New York: Palgrave.
- Slantcheva, S. & Levy, D. C. (Eds.). (2007). *Private higher education in post-communist Europe. In search of legitimacy*. New York: Palgrave/Macmillan.
- Smeby, J., & Trondal, J. (2005). Globalisation or europeanisation? International contact among university staff. *Higher Education*, 49, 449-466.
- Smeby, J. & Gornitzka, Å. (2008). All cosmopolitans now? The changing international contacts of university researchers". In Å. Gornitzka, & Langfeldt, L. (Eds.). *Borderless knowledge. Understanding "new" internationalisation of research and higher education in Norway* (pp. 37-50). Dordrecht: Springer.
- Trow, M. (2010). Problems in transition from elite to mass higher education. In M. Burrage (Ed.). *Twentieth-century higher education. Elite to mass to universal* (pp. 86-142). Baltimore: Johns Hopkins University Press.