

Autonomy Without Accountability in Resource Allocation Reforms: Blending Old and New Logic in Universities¹

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Submitted: 17.10.2021. Final acceptance: 7.03.2022

Abstract

Purpose: The article explores changes in the institutional autonomy and accountability resulting from university reforms carried out over a period of 28 years under the influence of the traditional public administration and new public management logic.

Design/methodology/approach: This qualitative study uses rich empirical material, which includes archival documents as well as 16 semi-structured, in-depth interviews with deans, professors, representatives of the Ministry of Science and Higher Education, and HEI experts. For analysis, we used the general inductive approach. Institutional logic has been used as the theoretical framework to analyze changes in resource allocation, autonomy, and accountability of HEIs.

Findings: Following the idea of reform as routine, our study shows that the implemented reforms have proven ineffective in comprehensively increasing the autonomy and accountability of HEIs and that they tend to turn into a routine. However, over the past 30 years, a certain increase in autonomy, combined with accountability shifts from input toward output control mechanisms can be observed. An important finding of this research is also the limited understanding of the concept of accountability by the top management of universities and by the ministry’s representatives. Moreover, this illustrates that accountability is understood only as a formal obligation to report to the funding agency and is treated as an integral part of the Polish HE landscape, increasing from reform to reform.

Originality/Value: This article explores the evolution of the Polish state funding systems of universities and analyzes the development from a stable traditional funding model – that was in place before the collapse of the communist system – to a complex multi-tier system and to recent attempts at reforming the HE field, aimed at increasing the autonomy and accountability of Polish universities. More efforts should be made by policymakers to create a sustainable balance between autonomy and accountability in the HE field.

Keywords: autonomy, accountability, resource allocation, reforms, higher education, Poland.

JEL: M4, M40, M49

¹ Research financed by Poland’s National Science Centre, grant No. 2015/19/B/HS4/02903.

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Introduction

The article explores how universities' financing systems developed, and how these reforms impacted their autonomy and accountability. The financing system of universities constitutes a central policy instrument, and its funding is regarded as the main channel through which authority is exercised. Thus, changes in the funding system can be expected to have an important effect on the behavior of universities. Moreover, the funding of universities is interrelated with the autonomy and accountability of higher education institutions (HEIs).⁶ The movement toward new approaches to organizing government–university relations – as well as the autonomy of and control over universities – was inspired by the growing popularity of the new public management (NPM) logic, which substitutes or integrates into the traditional public administration (PA) logic (Enders et al., 2013). The growing reforms based on NPM policies and techniques promote competition and business approaches modeled after the private sector and markets (Steccolini et al., 2020). As a result, academic cultures moved toward accountingization, economization, and marketization (Saunders, 2006; Funck and Karlsson, 2019; Parker et al., 2021; Scott, 2015; Sułkowski, 2016) reflected in performance management systems (Argento and van Helden, 2021; Dobija et al., 2019; Kallio et al., 2021), professionalization of management (Hood, 2000; Parker, 2011), customer orientation and focus on efficiency and results (Bleiklie and Michelsen, 2013; Ferlie et al., 2008), and internationalization (Dobija et al., 2018; Guthrie et al., 2021). All these not only impact the autonomy of HEIs but also their accountability (Argento et al., 2020). As a result of more autonomy given to HEIs, a simultaneous process of tightening accountability and social control emerged, described already in 1997 by Power as the “audit society” (1997).

Today, the autonomy of universities is an important topic in policy debates, as it is a key concept related to university reforms in Europe. How universities are to “be governed, organized, and funded” is being widely discussed (Maasen et al., 2017, p. 4). Policies and research literature regularly clamor for the autonomy of HEIs as the key to creating stronger, better, higher quality, and more competitive universities, which can respond rapidly to the changing demands of the environment in which they operate (Curaj et al., 2012). Currently, we are experiencing a transformation in the relationship between politics and universities toward a greater independence of the latter in exchange for the implementation of better accountability systems (Rybkowski, 2015). Accountability entails that the actions taken by universities are transparent, thereby engendering higher levels of trust in the university among members of the

⁶ For the list of abbreviations, see Appendix 3.

general public (Michavila and Martinez, 2018). As reported by Michavila and Martinez (2018), not only autonomy and accountability but also funding should be analyzed to assess the university system, as these three elements are interconnected. The literature suggests that the higher the funding, the greater the autonomy, which subsequently leads to higher accountability (Chiang, 2004; Michavila and Martinez, 2018). However, this view ignores the context (Chiang, 2004). As mentioned by Neave (1988), autonomy should be “contextually and politically defined” (p. 31). The importance of context in analyzing the autonomy and accountability of universities is one of the contributions we make in this article.

Furthermore, we particularly refer to the notion of reforms suggested by Brunsson (2006), who proposes the recognition of administrative reforms not as dramatic organizational changes aimed at solving “administrative problems once and for all” (p. 1) but as reflections of organizational stability beyond organizational change. Reforms are self-referential – they are driven by reforms – and they ensue owing to problems, solutions, and forgetfulness.

This article aims to enhance the understanding of how state allocation system reforms shape the institutional autonomy and accountability of institutions (universities), organizations (departments, faculties, research centers, etc.), and individual academics. Therefore, the following two research questions have been formulated:

1. How has the NPM logic influenced the traditional funding system in Polish universities over the last 28 years?
2. How has the NPM logic influenced the autonomy and accountability of Polish universities at different levels (institutional, organizational, and individual)?

Based on the above objectives, a qualitative approach has been adopted in the present study. The analysis covers a period of 28 years between 1990 and 2018; it is based on 16 interviews with different stakeholders and witnesses of the changes that have occurred in the higher education (HE) funding system.

This article makes two important contributions: first, it provides new insights regarding changes in the funding models of universities in Central and Eastern Europe (CEE) under the influence of the traditional PA and NPM logic. Thus far, the literature has focused on the USA and other Western countries (Capano and Pritoni, 2019; Dobbins et al., 2011; Fielden, 2008; Nokkala and Bladh, 2014; Salmi, 2007). According to Scott (2002), universities in CEE are “consequently engaged in a process of catching up with the West that has been difficult and is still incomplete” (p. 137). The present study

considers the context wherein universities operate, and CEE countries pay considerable attention to the institutional autonomy of universities. This is a common tendency in post-authoritarian states that do not have an uninterrupted HE tradition (Pūraitė et al., 2017). These states tend to meticulously regulate and define various rights, which may have a paradoxical effect: if academic freedom and institutional autonomy are overly regulated, they lose their essence (Thorens 2006). Therefore, the present study adds to the literature on the autonomy and accountability of HEIs by incorporating a new context vis-à-vis Poland's financing reforms. The Polish HE system has undergone substantial changes. The first HE Act effectuated in 1991, right after the transformation from the centrally planned (or command) economy to a market one. Throughout the past 28 years, Poland has also undergone numerous changes in the context of resource allocation for universities under the influence of the old PA and NPM logic.

Second, the article analyzes the effects of the HEI reform on autonomy and accountability. Most existing studies are quantitative in nature, sometimes supplemented by document analysis (Dobbins et al., 2011; Fielden, 2008; Rozmus and Cyran, 2009; Rybkowski, 2015). Individuals' perceptions, experiences, and shared meanings (Silverman, 1997) can provide new insights and add to the existing literature on the accountability of public universities (Kallio et al., 2022).

The article is organized as follows. Section 2 will delineate the theoretical framework based on the theory of institutional logic related to public sector reforms and the literature review on changes in resource allocation in the university field. Then, Section 3 will describe research methods, while Section 4 will delineate the empirical analysis. Finally, Section 5 will provide a discussion and conclusions.

Literature Review

Theoretical Framework

Institutional logic “represent frames of reference that condition actors' choices for sense-making, the vocabulary they use to motivate action, and their sense of self and identity” (Thornton et al., 2012, p. 2). Put differently, when making strategic decisions and operational choices, organizations are influenced by the institutional logic to which they are exposed, as it may define expectations and legitimate activities and become embodied in organizational structures and practices (McPherson and Sauder, 2013). Each point of the logic is associated with a distinctive mode of rationalization, defining relationships among subjects, practices, and objectives (Scott, 2014). “While

a single logic may dominate a given field of activity, research has shown that multiple logic may co-exist in the same field, thus simultaneously influencing organizations in that field” (Battilana and Lee, 2014, p. 402). Logic may “peacefully co-exist, compete, supersede each other, blend or hybridize, or reach a temporary ‘truce’” (Meyer and Höllerer, 2017, p. 1251). Battilana and Lee (2014) also suggest that different institutional logic can be combined in a more robust way to create hybrid models.

Until the early 1980s, the dominant logic for the public sector has been commonly referred to as “traditional PA” or the “Weberian paradigm” (Osborne, 2006). Regarding traditional PA, the “rule of law” predominates; politics and administration are distinctly separated; politicians are responsible for defining general policies, whereas the administration is responsible for executing them; control is hierarchical and bureaucratic, exerted through rules, formal procedures, and norms; the focus is on input control and commitment to incremental budgeting; and the hegemony of professionals in the service delivery system is commonly accepted. In CEE, the most important influence is not the Weberian model but the Russian/Soviet model. The Soviet regimes certainly had plenty of bureaucracy, albeit not the Weberian type, and its relationships with political power were certainly fundamentally different from those in Western liberal democracies. The collapse of Soviet-style communism provides an empirical example of the inefficiency of governance based on an all-embracing administrative system, associated with a high level of centralization, along with a command-and-control culture (Pollitt, 2009).

During the past few decades, the management of public sector organizations has undergone major changes. Hood (2000) identifies several components of the NPM, namely hands-on professional management in the public sector, explicit standards and measures of performance, greater emphasis on output controls, a shift to the disaggregation of units in the public sector, a shift toward greater competition in the public sector, stress on private sector styles of management, and emphasis on a greater discipline and parsimony in resource use. Notably, NPM is the umbrella term that defines these changes. The scientific debate has shown how NPM reforms – inspired by neoliberal ideologies – have introduced business-type managerial and market principles, logic, and tools from the private to the public sector (Hood, 2000; Sułkowski, 2016). Another key element of the NPM logic is the growing use of markets, competition, and contracts for resource allocation and service delivery within public services (Osborne, 2006).

The institutional logic concept – specifically the presence of multiple, competing logic – has been frequently used with reference to interactions across tiers of government. In particular, the literature has long highlighted that differences in the adoption and

rejection of the NPM logic exist not only across countries but also within them (for a detailed analysis and selection of country-specific references, see “Country files and tables of events” in Pollitt and Bouckaert, 2004). Consequently, organizations operating in a policy area like HE, in which the traditional PA logic has remained dominant, will coexist with other organizations, in which the managerial logic has gained widespread acceptance.

The outcome of public management reforms can generate different results: sedimentation/layering, replacement, or no change at all (e.g. Hyndman et al., 2014). Independent of the administrative context of a given country, in times of relative stability and economic prosperity (evolution), instead of replacing existing concepts and ideas, new elements have been introduced atop or alongside them, leading to a sedimentation pattern (Hyndman et al., 2014; Polzer et al., 2016).

Since the 1980s, the NPM logic has been penetrating the public HE sector in many countries. The main goal of the initiated reforms was to increase the performance of this sector and make it more market-oriented. Generally, key NPM elements include disaggregation, competition, customer orientation, and focus on efficiency and results (Ferlie et al., 2008; Pollitt 1993). The NPM is based on principles of empowerment and subsidiarity, while more hierarchical structures, Taylorized processes, and formalized surveillance and control systems are being simultaneously introduced in PA. Moreover, PA workers are expected to develop “businesslike” and proactive – if not entrepreneurial – attitudes. Meanwhile, workers’ tasks, attitudes, and performances are systematically defined, closely monitored, regularly appraised, and tightly controlled by a new breed of managers (Diefenbach, 2009). Essentially, NPM in HE entails the principles of “value for money” and “management by objectives,” which especially involve the appropriate use of contracts and linking performance to funding (Jongbloed, 2006). Consistent with the concept of governance, new steering mechanisms have been adopted, thereby granting universities greater autonomy, strengthening institutional management, and increasing the available amounts of competitive funds. The NPM-based reform of the HE system has engendered a wave of neoliberalism in universities worldwide (De Vries and Nemeč, 2013; Scott, 2015), thereby inducing them to embrace corporate culture (Trowler, 1998, p. 29). Attempts by universities to transform their basic teaching, research, and service functions into revenue-generating operations, such as participation in technology transfers, creation of spin-off companies, and focus on patenting and licensing, have been previously highlighted by scholars (Saunders, 2006). Another observed trend is the concentration of financial resources in top academic institutions, which translates into growing disparities among universities. The evaluation methods of their activities are becoming increas-

ingly formalized and are managed by independent accreditation institutions, whose audits are envisaged to have a positive impact on the activity of agents toward improving the quality of management, teaching, and research (Bleiklie and Michelsen 2013). The NPM logic topic has been explored in the literature on performance-oriented resource allocation in HE, along with its effects on the autonomy and accountability of universities, faculties, departments, and academics (Bebbington, 2021; Dobija et al., 2019; Funck and Karlsson, 2019; Parkerm 2013; Argento et al., 2020; Parker, 2020). Performance measurement systems rely on student polls for teaching and journal metrics for research-supported managerial interventions (Argento and van Helden, 2021). The increased focus on performance management seems to be relevant in the HE sector, and it is a consequence of reforms, such as corporatization, marketization, managerialization, and modernization (Parker, 2011). This rapidly changing context affects universities and their research communities, as well as the effects of university corporatization on research and teaching (Funck and Karlsson, 2019; Parker and Guthrie, 2005; Parker, 2012). This weakening phenomenon of professional control structures and intensification of professional labor is named the “McDonaldization” of society, as the changes in the political, institutional, and funding environments of universities increase the power of management and diminish the autonomy of academics (Andrew et al., 2020; Grossi et al., 2020; Parker and Jary, 1995; Narayan et al., 2017).

Changes in Resource Allocation

All universities require funding to accomplish their mission, and it is one of the main “tools” employed by governments (public funding agents, research councils, ministries, etc.) and university leaders (department heads, boards, deans, etc.) as part of the adopted governance framework. Therefore, funding is beyond a mechanism of allocating resources to institutions. Instead, funding is a set of instruments designed to allow HEIs to achieve their goals and pursue national objectives adopted in an increasing number of countries (Schmidt, 2012). Universities have several funding options, including state and private funding, as well as a specific kind of hybrid or shared funding that combines state and private resources. According to Whitley and Gläser (2007), funding allocations are the most powerful instruments employed in HE policies. They determine not only the actual allocation of financial resources but probably also the character and direction of education and research. Accountability is essential in any relationship between a provider and a recipient of funds, regardless of the funding source. Both private and public funders will want to ensure that the funds entrusted to the recipient are used according to the funder’s intentions. Therefore, a recipient of funds should be accountable to the funder. Simply put, accountability means “the requirement to demonstrate responsible actions to some external constituenc(y)ies”

(Berdahl, 1990, p. 171). Accountability processes require reporting, explanation, and justification of how the accountant reports to the accountee (De Boer and Goedegebuure, 2003; Nkrumah-Young and Powell, 2008).

There exist two general models – political – and market-based systems – that can be linked to resource allocation models (Ferlie et al., 1996; Nkrumah-Young and Powell, 2008). The political-based system dominates in the classic PA logic. As HE and research are regarded as public goods, the control exercised by public authorities is justified (Ferlie et al., 2008). In this model, the recipients of funds are regarded as agents of the fund provider, and the control system is based on ex-ante input control and careful monitoring of the input of resources, often in the form of line-item budgets. Input indicators may include the number of enrolled students, the number of employees, or the space used by universities. Input-oriented allocation schemes do not support efficient resource consumption. In the political-based model system, in which the academic organization is separated from the administrative organization, *accountability* is mainly focused on ex-ante controls, such as student intake quotas, curricula, exams, or staff employment (Kogan, 2004). The academic organization is managed by scholars according to the principles of scientific independence and autonomy, while the administrative organization is managed by administrators who pursue bureaucratic principles and are subordinated to the academic community (Tahar and Boutellier, 2013).

However, the market-based model following the NPM logic stresses the role of competition and managerial tools in the HE sector. Thus, teaching and research are no longer regarded as public goods but as commodities. The state is expected to prompt market forces and react to market failures (Ferlie et al., 2008). This approach assumes that the recipient of funds has more influence, autonomy, and responsibility regarding the use of funds. In this approach, control shifts from ex-ante input control to ex-post output control (Ferlie et al., 1996), evaluations (Ferlie et al., 2008), or from rules to regulations, as described by Amaral et al. (2000). The number of graduates, publications, or patents can be used in output-driven allocation models to ensure better efficiency in the use of funds. In the market-based model, two dimensions are possible, and citizens are considered to be consumers; thus, control is exercised as ex-post evaluation against qualified standards. The market-based model is distinguishable because *accountability as management* is based on ex-post control mechanisms grounded in quantitative and qualitative dimensions of performance (Tahar and Boutellier, 2013).

Changes in the Accountability and Autonomy of Universities: The Research Framework

The two resource allocation models connected with the traditional PA and NPM models relate to different levels and contents of universities' autonomy and accountability. Table 1 presents the main differences.

Table 1. Emerging institutional logic of university reforms

	PA Logic	NPM Logic
Resource allocation	Centralized and political-based model	Decentralized and market-based model
Autonomy (organizational and financial)	Lower	Higher
Accountability	Ex-ante control Main focus on inputs	Ex-post control Main focus on outputs

Source: own elaboration.

The market-based allocation model allows for a greater degree of autonomy of the organizations that receive funding. The recipient of funds is no longer provided with line-item budgets that disallow freedom in deciding about the spending of funds. In the market-based approach, funds are allocated based on more open arrangements. An example of a different approach is the formula-based allocations of funds. A set of parameters grouped in the form of a formula can be used to compute how funds are allocated between different universities (Schnitzer and Kazemzadeh, 1995; Weiler, 2000). These changes result in the transition from a system of control that operates ex-ante, through the specification of inputs and a predefined set of rules and regulations, to a steering system that works largely ex-post through meeting performance criteria against which HEIs are evaluated, whereupon budgets for subsequent years are allocated (Amaral et al., 2000; Weiler, 2000). As Nkrumah-Young and Powell (2008) argue, reduced state intervention in HEIs' operation implies that governments are less concerned with how funds are spent (on inputs) and are increasingly interested in outputs from funds. They conclude that output models may provide better accountability, as HEI will use comparison-enabled mechanisms, such as benchmarking or judging based on results (Nkrumah-Young and Powell, 2008).

University reformation involves the transition from a system of control that operates ex-ante – based on a set of rules and regulations established in advance – to a steering system that mainly functions ex-post through the allocation of resources depending

on the performance of a given institution. However, ex-post measures are often in flux (ter Bogt and Scapens, 2012) and are, thus, more difficult to plan. Moreover, these new accountability demands have their consequences, for instance in the form of managerialism and increased demands on bureaucracy.

Autonomy refers to the Greek *autos* (“self”) and *nomos* (“law”), which is understood as the “power to govern without outside controls” (Berdahl, 1990, p. 171; Enders et al., 2013). Notably, autonomy is not synonymous with academic freedom, namely the freedom of individual academics to pursue teaching and research activities while treated without discrimination (Berdahl, 1990).⁷ Merton (1996) posits that if both the market and the state become overly intrusive, academic autonomy can be threatened, while autonomy should be based on self-regulatory associations (Narayan et al., 2017).

In 2009, based on the European University Association’s (EUA) Lisbon Declaration (2007), Estermann and Nokkala (2009) describe four dimensions of HE autonomy: organizational, financial, staffing, and academic. Particularly, these elements indicate the university’s ability to decide on:

- *organizational* structures and institution governance: competences in establishing governing bodies, leadership, and who is accountable to whom;
- *financial* issues: ways of acquiring and allocating funding, the ability to charge tuition fees, accumulate surplus funds, borrow and raise money from different sources, ownership of real estate, as well as reporting procedures as accountability tools;
- *staffing* matters: capacity to recruit staff, responsibility for the terms of employment, and issues relating to employment contracts;
- *academic* matters: capacity to define the academic profile, introduce or terminate degree programs, define the structure and content of degree programs, roles, and responsibilities regarding the quality assurance of programs and degrees, and the extent of control over student admissions. Furthermore, according to the EUA’s Lisbon Declaration (2007), academic autonomy also includes research.

Along with greater autonomy, there are demands for “accountability” to ensure homogeneity and standardization (Neave, 2009). Since the mid-2000s, accountability has been perceived as an instrument of “modernization” for universities. These new account-

⁷ However, autonomy may also impact the extent of academic freedom at the level of individual employees within universities (Watermeyer 2019).

ability mechanisms are linked with the performance of universities, and they include research reviews, performance-based funding, and quality monitoring instruments (Beerens, 2011; Santiago et al., 2008). Greater accountability and autonomy are enforced to establish a global knowledge economy and enhance universities' responsiveness to social demands (European Commission, 2005, p. 9; Westerheijden, 2008) as well as relieve the government of micro-responsibilities by transferring them to the institutions (Enders et al., 2013). Moreover, the content of accountability changed along with the increased autonomy, moving from detailed input data to more global outcome accountability based on (mostly) quantitative and (some) qualitative dimensions of performance (Tahal and Boutellier, 2013). Based on the ex-post performance criteria, the following year's budgets are allocated (Weiler, 2000). However, this leads to increased managerialism in universities, as they focus on satisfying the needs of different external stakeholders (Diefenbach, 2009). Thus, despite the higher autonomy of HEIs from the state, the output-based accountability pressures institutions to "fit" into standardized performance measures set by the state. As Diefenbach (2009) argues, NPM orientation is "based on too artificially and narrowly designed concepts of measurement and accountability" (p. 895). Watermeyer's (2019) concept of competitive accountability in academic life is a form of public accountability through a research governance technology and performance-based demand for academic researchers as producers of socioeconomic impacts. Thus, universities, faculties, departments, and academics alike compete with each other through performance metrics that emphasize publications in top international journals, which are promoted as high-impact outputs.

The drive toward greater managerial autonomy and weaker ex-ante regulation is stimulated by the NPM logic in public sector organizations (Beerens, 2011; Pollitt and Bouckaert, 2004). As reported by Berdahl (1990), there ought to be a balance between autonomy and accountability, as unbridled autonomy can make universities societally unresponsive, while excessive accountability can crush academic ethos. Furthermore, the NPM logic received criticism for its increasing trends of university commercialization, which leads to managerialization (Diefenbach, 2009). We also observe the weakening of the professional self-regulation of HEI through individual competitiveness and lack of support to strengthen collegial processes at departmental and institutional levels.

Research Method

For our study, we adopted a qualitative approach, as dictated by the nature and context of the study. Qualitative research is suitable for exploring problems and developing a thorough understanding of how a specific phenomenon is experienced within the

chosen context (Cassell and Symon, 1994; Creswell, 2012). These features were present in this study, as it was exploratory toward providing an in-depth investigation of changes to the institutional autonomy and accountability that resulted from state allocation system reforms over the period of 28 years.

Data Collection

Data were collected in the summer and autumn of 2018. The empirical material included 16 semi-structured, one-to-one interviews with current and former deans, professors, representatives of the Ministry of Science, and HE and HEI experts (for interview details, see Appendix 1). A purposive sampling technique was used to select the most appropriate participants from groups of interest (public and private universities, ministries, etc.), thereby enabling comparisons across those groups (Patton, 1990). The participants were selected based on their ability to generate a variety of perspectives. The very high level of expertise of these interviewees was highlighted.

The semi-structured interviews allowed us to observe the studied phenomenon from different perspectives (Miller and Glassner, 1997) and specifically analyze the participants' perceptions of the reforms and how they affected universities, faculties, and academics. Data confidentiality was guaranteed to encourage openness and motivate honest answers. The interview scenario included questions concerning, for instance, the Polish funding model and its evolution over the past 28 years (chronologically), as well as its influence on the autonomy and accountability of institutions (see Attachment 2).

Data collection was conducted until saturation was reached, namely the point where data gathered in subsequent interviews no longer produced new thematic insights (Guest et al., 2006). All the interviews were conducted in Polish, recorded, and transcribed.

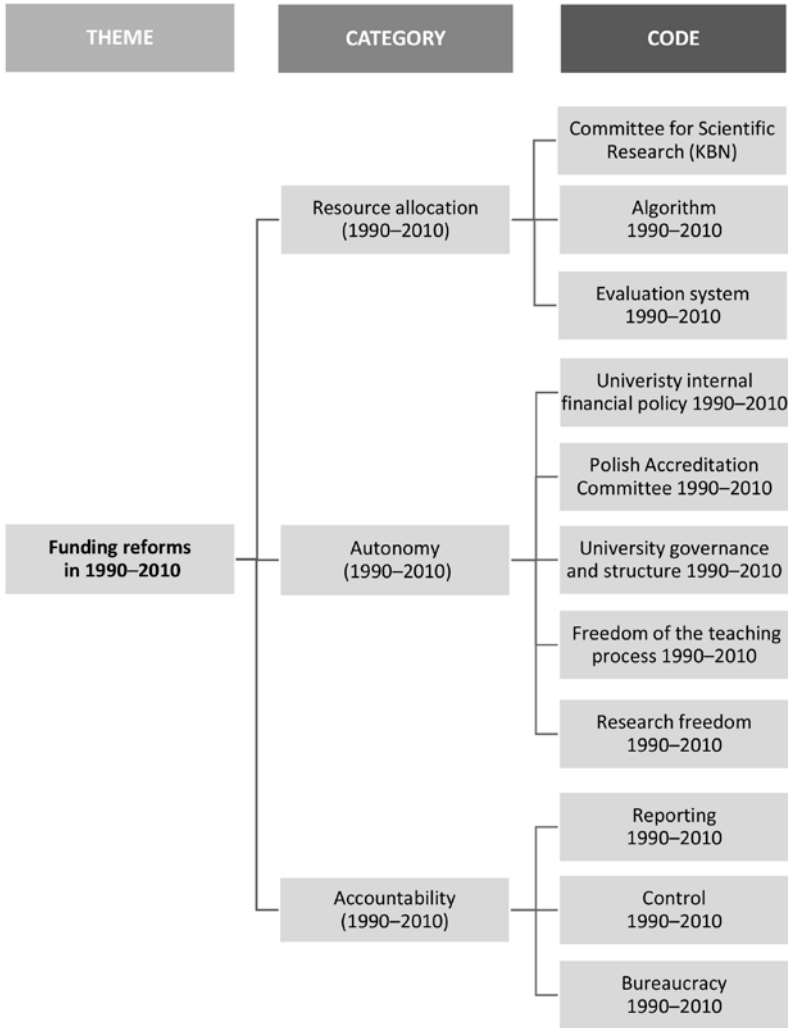
Besides interview data, the research involved the analysis of archival sources documenting regulatory changes, such as parliamentary acts and various HEI reports. Multiple information sources were used to establish the reliability and validity of the research. The achieved data triangulation strengthened our findings.

Data Analysis

While inspecting historical documents and empirical data, we carefully analyzed policies related to changes in HEIs' funding from the perspective of four types of autonomy, as discussed in the theoretical section. Furthermore, we focused our analysis on the interviewees' personal opinions vis-à-vis the impact of the reforms on the autonomy

and accountability to see how the changes were perceived by the key actors involved. Notably, most interviewees identified accountability with official reporting, thus limiting its meaning to formal paperwork required by various bodies.

Figure 1. Coding example



Source: own elaboration.

All interviews were recorded, transcribed, and exported into MAXQDA, a qualitative data analysis software. The data were analyzed using the general inductive method (Thomas, 2006). The purpose of the inductive approach is to generate findings emerging from the dominant themes in the raw data and to establish clear and transparent

connections between these themes and with the goal of developing a model about “the underlying structure of experiences or processes that are evident in the text data” (Thomas, 2006, p. 237). We generated initial codes by reading the text reflectively. Next, we defined more abstract conceptual categories (Scott and Medaugh, 2017). Finally, we established connections between categories further into generic core themes (Thomas, 2006). An example of the emerged codes, categories, and themes is available in Figure 1.

To establish the trustworthiness, authenticity, and credibility of our research, we took several steps. In this study, validity was ensured by clear, in-depth presentation of our methods, researchers’ triangulation, and by providing a thick description of findings (Lincoln and Guba, 1990).

To ensure reliability, two researchers independently performed an in-depth reading of the text, summarizing interviews and identifying the possible codes and categories to promote analytical rigor (Gibbs, 2007; Guba and Lincoln, 1994). Notably, the codes and categories were reviewed and compared between the researchers; in the case of professional disagreements, a consensus was reached (Saldaña, 2012). Moreover, we performed a proper audit trail of our qualitative analysis process. The multiple sources used in our study enabled triangulation. Through this procedure, the process was given independence to increase reliability (Lincoln and Guba, 1990).

Findings

Context: The Polish Higher Education Sector

Under communism, HEIs in Poland were controlled entirely by the state. The HE system was limited in terms of the number of institutions; certain restrictions were also applied by the state to their entry into the market. The state controlled the program contents as well as the number of students admitted to the study (10% of secondary education graduates). Moreover, the state controlled the budget spending and HR policy.

The introduction of the transition process in 1990 brought significant changes to HEIs. As early as September 1990, a new HE Act was implemented, giving rise to a free, liberal, and autonomous HE system in the country. Far from being perfect, the new HE Act introduced necessary regulations for the HE system to begin a process of catching up with the Western university model as a contributor to society. The changes initiated in 1990 included all aspects of the functioning of universities: student life, faculty management, research, third mission, and internal processes. Furthermore, the new

regulation allowed for the establishment of non-public HEIs, which indirectly influenced the acceleration of changes in the HE public sector, as all HEIs started to compete for the same candidates. Moreover, research activities, student scholarships, and some infrastructure projects were also gradually made available to the private sector.

The 30-year period after the introduction of the 1990 HE Act can be divided into three distinct periods, which correspond to the changes in the HEI and research regulation: 1990–2010, 2010–2018, and post-2018. The first period involved radical adjustments, the second was the period of thinking about prestige, and finally, the period of catching up with prestige. The HE – and research-related changes in these periods are presented below.

HE System: Students and Study Programs

The state was more concerned with HE funding and linked funding to the number of admitted students, while research funding was very limited (Kwiek, 2019). Therefore, the number of students steadily increased; approximately 50% of secondary education graduates entered the HE system each year as compared to 10% before 1990. The 1990 HE Act not only partially privatized HE by allowing the establishment of the private sector and allowing public schools to offer full tuition-based part-time programs but also wholly introduced relative freedom in the creation of study programs by providing specific minimum requirements. This enabled the first attempts to meet the growing demands of a fast-developing economy. This was also a period of introducing the first initiatives on quality control through the establishment of program accreditation committees, which later evolved into the Polish Accreditation Committee. The period after 2010 can be described as a time of intensified efforts to make HEIs more competitive on the international scene. The focus was placed on building the prestige of Polish HEIs through not only enhancing the quality and internationalization of the student body but also strengthening the links with business and society through a set of incentives (Kwiek, 2019). However, these actions were generally ineffective partially because of the very low level of state funding: approximately 1.2% of the gross domestic product (GDP) for the HE sector, which translates to 9000 USD per student, far below the EU average. In terms of internationalization, Poland is still below the EU average with a ratio of 4% of the total student population.

Nonetheless, the Polish HE system must develop responses to the recent demographic trends, resulting in the reduced number of students, increasing industry demands for specific competence values mostly on the job market, and digitalization of the economy. The new 2018 HE Act is supposed to help achieve these goals by giving HEI full freedom in the creation of study programs, strengthening the role of the Polish Accreditation

Committee, and promoting international accreditations. Moreover, HEIs are encouraged to tighten their links with the industry. Linking the level of state subsidy to the student-to-faculty ratio is intended to increase the quality of HEIs and their internationalization.

Research

The period of 1990–2010 was characterized by a withdrawal of the state not only from financing research but also from the interest in research outcomes, while underfinanced research lacked well-defined goals and generally served the local needs. Consequently, this period could be described as a time of the decline in the prestige of academic workers. The increasing student enrolment, teaching demands, and high demands for a highly skilled workforce outside of the HE sector – together with generally low salary levels in the Polish academia – resulted in a loss of academic talent. Those, who remained tried to increase their income by occupying multiple positions in both the public and private sectors. A set of interventions were designed to reverse the process. The creation of the research funding agencies as well as setting limits for multiple appointments and linking the publication effort with funding were examples of such interventions. However, these interventions were not fully effective, and they instead initiated a new trend of focusing on the quantity rather than quality of research output.

The period after 2010 can be described as a time of intensified efforts to make HEIs more competitive on the international scene. The focus was on building the prestige of the Polish HEI faculty and research as well as re-establishing links with business and society through a set of incentives (Kwiek, 2019). Again, the low level of funding – constituting approximately 1.03% of the GDP for R&D (giving Poland the 23rd position among the 28 EU countries) – was one of the main reasons for these actions to be ineffective (Banyś, 2019; Grabińska, 2014). Moreover, the academic promotion and HEI evaluation systems did not encourage the dissemination of research output in more prestigious publication outlets or international cooperation on both institutional and individual bases. However, the changes introduced in the last HEI regulation in 2018 have reduced these deficiencies. For instance, the evaluation system now values publications in top international academic journals more than those in Polish journals. Moreover, universities are encouraged to provide accounts of their contribution to the third mission.

Radical Adjustment: Funding Reforms Between 1990 and 2010

The transition from the centrally planned economy to the market one engendered radical changes in the HE system. During the communist period, HEI financing was based on a central plan, while teaching and research inclined toward satisfying state demands. The main feature of the HE system designed in the early 1990s was the separation of

funding for research and teaching. On January 12, 1991, the Act on the Committee for Scientific Research was adopted (KBN). The Committee is a governmental body responsible for research at the state level, as well as the distribution of research grants.

Resource Allocation

The new HE Act introduced in 1990 generally focused on HE, student, faculty, and organizational issues and introduced a radical change in HEI systems by allowing the establishment of private HEIs. The Act enabled HEIs to decide on the scope of research and number of students to enroll, while the state regulated a great deal of HEI activities, including conditions and rules, which needed to be met when offering a degree program, such as degree name, program minimum, or requirement of minimal faculty qualifications. According to the reform, teaching funds were based on a pre-set algorithm starting from 1992 (Pakuła, 1994) and were used to cover not only the teaching expenditure but also the cost of maintenance and remodeling of academic facilities.

The main concern related to the use of the algorithm was the allocation of funding to various programs and degrees. The HEIs pushed for a system where funds would be allocated based not only on the number of students but also on the cost for each student. Changes in the algorithm parameters have been used by the Ministry to adjust HEI behavior in terms of the number of enrolled students – thereby tremendously increasing the number of students – and consequently, to the permanent underinvestment of HEIs (Bargieł, 2005; Rozmus and Pado, 2009). Furthermore, HEIs tried to compensate for the shrinking of the funds granted by the state by admitting tuition-paying students. This, combined with the quality of teaching not being monitored, had a negative impact on quality. The State Accreditation Committee (PKA) started its activities in the early 2000s.

Research funding was based on the evaluation system designed by the KBN at the early stage (1991–1999) and peer-review evaluations, which were performed by experts drawn from academia. Thereafter, a more objective parametric evaluation was adopted based on a set of pre-defined parameters; for instance, the number of publications, number of doctoral defenses, or number of research grants. Both private and public HEIs were allowed to compete for research funds and, most importantly, individual academics.

Autonomy

It was the first time since the end of the Second World War that Polish universities could decide on the number of students they could admit and the kind of research they could conduct. However, the state continued to regulate a great portion of HEI's activities based on inputs (names of the degree, requirements of the programs, qualifications

of the faculty, etc.), while leaving outputs unmonitored (quality of teaching, number of graduates). In the opinion of our interviewees: “At the beginning, there was quite large [autonomy], perhaps even too large. There wasn’t even an external evaluation of the quality of teaching after the year 1990” (P5). The academic environment itself was pushing for the external evaluation of teaching in the form of PKA, which the interviewees believed increased the autonomy.

Some may say that the PKA decreased the autonomy, as somebody was evaluating, enabling, or prohibiting new programs, but in fact, it led to the increase of the autonomy ... as there could be new programs and courses, and the program autonomy increased, whereas in the circumstances of the obligation to be evaluated by PKA (P5).

Thus, the new Act increased *organizational autonomy*, whereas certain solutions remained unchanged. Specifically, *staffing autonomy* remained restricted, as universities were required to comply with the norms imposed by the state in terms of who could and could not be hired.

The reform translated into an increased *financial and academic autonomy* for scholars and institutions. From a research perspective, the change allowed academics to become more autonomous from their institutions in terms of research funding, and from the state when it comes to the choice of research topics.

[I]n 1991, for the first time, the organization of research fund distribution was left in the hands of academics, after the KBN was established. This is when the first individual grants were awarded by the Committee. It means that for the first time an academic, and not an institution, could apply for a research grant. Before the 1990s, institutions received money for research based on the needs of the State. Starting from 1991, HEIs could do the kind of research they wished, they did not need to comply with the demand of the national central plan (P12).

Accountability

During the discussed period, accountability was mostly focused on inputs in both research and teaching funds. Funds were allocated based on the measured ex-ante control (number of students, professors, and cost of running programs) rather than on results. However, first attempts were made to introduce output-based resource allocation into research funding. In the interviewees’ opinion, the accountability of HEIs is now rather limited, while the system itself remains underdeveloped: “Twenty years ago, the only report for the ministry was the general report on research activities

carried out within the institution” (P1). Throughout the interviews, it became visible that, at the time, even HEI experts had a limited understanding of accountability needs, whereas most of them could not even specify what was monitored and measured, despite being aware of the existing funding schemes.

Summary of Changes in the Funding System (1990–2010)

The time of transition brought significant changes to HEIs in terms of autonomy, which impacted all its elements. Universities could decide on the number of students they would admit, the scope of research, and (to a certain degree) the courses they would teach. However, the *staffing autonomy* remained rather restricted by governmental regulations, which imposed certain rules on minimal qualifications of faculties. However, until the 2000s, it seemed that the increased autonomy led to a gradual decrease in the quality of teaching. For the first time in Poland, private HEIs could be established; public entities received funding based on the number of students while admitting an unlimited number of tuition-paying students with no formal teaching evaluation. Regarding research funding, the creation of the KBN was a significant change for the HEIs, as it enabled a higher degree of *financial and academic autonomy*. Although the KBN was vastly criticized, it enabled universities and individual researchers to gain greater autonomy in terms of their research. Notwithstanding the apparent increase of each dimension of autonomy, the level of autonomy of institutions remained low. Furthermore, accountability was typically focused on ex-ante control, and therefore on inputs rather than outputs. It was not until 2002 that teaching evaluation, known as PKA, was created. Despite being perceived by some as a constraint on autonomy, it had a positive impact on the sector. It seems that the PA logic prevailed, mainly in the form of focus on ex-ante control and limited organizational and financial autonomy of the university.

Thinking About Prestige: Funding Reforms in 2010–2018

Reforms that began in 2010 were to modernize the HE sector and facilitate the shift toward the market-based model. It was the first attempt to move from the PA logic to the NPM logic. The main purpose of these reforms was to improve the quality of both research and teaching and to adjust the sector to market needs.

Resource Allocation

Resource allocation mechanisms were transformed in this period. Funding for teaching was still offered to public HEIs and related to full-time programs only. Compared to the previously applied algorithm, particular elements of the formula underwent certain modifications, while the general principles remained unchanged. Owing to

the constant transfer rate, the minimum subsidy was known upfront; consequently, HEIs could expect that the subsidy amount would not decrease. However, subsidies that were not fully spent within a given year could not be transferred to the following year, while future funding would be decreased. Each subsidy was “marked,” allocated to specific tasks, separate for teaching and research, and could be spent only on what it was initially assigned.

Regarding research funding at the university level, just as in the previous period, the number of funds depended on the results of parametric evaluations based on scientific activities. The results of such evaluations served as the basis for assigning units to a given scientific category: A+ (top level), A (very good), B (satisfactory), and C (unsatisfactory).

The new algorithm was to promote the best HEIs. However, it turned out that reaching a higher category did not result in obtaining more funds, as scientific categories were only some of the many algorithm elements. Moreover, the weight of the criteria was not determined beforehand; thus, HEIs were unable to prepare for the evaluation.

Another change related to the introduction of a rule defining the number of undergraduate, graduate, and doctoral students per one academic teacher. The state imposed specific requirements on HEIs: to ensure the quality of teaching, there needed to be a maximum of 13 students per teacher. As a result, HEIs radically adjusted their student intakes.

Changes to the allocation of research funds to individual academics were introduced in 2010. The aim was to ensure that funds were used efficiently and with a view to financing quality research projects. Two new separate governmental bodies were created – the National Science Centre (NCN) and the National Centre for Research and Development (NCBiR)⁸ – whose goal was to provide research with competitive project-based funding. The two new institutions replaced the KBN, which provided mostly small grants so that more academics could receive funding; however, this resulted in calls for projects not being competitive enough to improve the quality of research.

From the perspective of institutions, research funding benefitted individuals. The structure of promotion changed with a focus on publications and the ability to attract grants.

⁸ Although NCBiR had been formally established in 2007, it was not implemented until 2010 (*Dziennik Ustaw* 96/616).

Autonomy

Consequently, the standards of scientific research projects increased due to the rising “expectations set for the grantee” (P1). Owing to changes in research funding, institutions became independent in this regard from the Ministry. Interviewees emphasized that the new model of financing research has afforded opportunities, especially for the younger generation of academics, allowing them to become largely independent from the financing of floor research.

Thus, according to interviewees, the creation of granting institutions increased *academic autonomy (research)*, as scholars were solely responsible for their research funds. It also encouraged academics to form research groups and jointly apply for funds, rather than work solely based on individual resources.

Scholars received greater autonomy in deciding their research topics and teams. Grants gave them more decision-making ability/flexibility, compared to the formal internal structure of universities. “Grant holders are de facto independent research employees ... they have all the decision-making powers and, for example, may employ research assistants within specific grants (P2).” Thus, individual academics also gained *financial autonomy* allowing them greater freedom in the use of funds. While the institution had little or no access to the granting of funds and often had to cover administrative costs of the grant from its own budget. As the funds remained “marked” and assigned to specific purposes, HEIs were not allowed to use them to cover grant administration costs.

Thus, it seems that despite giving the HEIs more *financial autonomy and academic (research) autonomy* at the individual and organizational levels, making it less dependent on the ministry, “so that the university president doesn’t have to worry that if he/she criticized the minister, the minister would cut funding for his/her university” (P5), at the institutional level, financial autonomy was limited due to “marked” funds. Thus, HEIs were unable to spend them according to their needs and were obliged to allocate them in line with the plan devised by state authorities.

Changes to the HEI funding model affected the autonomy of institutions. Considering the subsidy for teaching activity, the high number of regulations impose numerous requirements on HEIs that limit their *academic autonomy*, while the introduced staff-to-student ratio has had a negative effect on the *organizational and staffing autonomy* of HEIs. Nonetheless, HEIs could adopt their own statutes, decide on the research they wished to pursue, and appoint academics to monitor this research.

Accountability

The ministry has imposed an obligation on HEIs to report throughout the newly created POL-on system to gather data on HEIs and their scientific units. Nevertheless, the system could not be used as an internal IT system for HEIs, which made it necessary to simultaneously maintain two sets of data: personal data and data sent to POL-on.

Keeping this data consistent and identical is problematic in many situations because when some definition changes in POL-on, it remains just as it was before in internal systems, and then you have to go through everything again Moreover, POL-on became an interpreter of the Ministry's regulation, and therefore, it determines what can and cannot be implemented Thus, programmers that create the system became the interpreters of governmental policies (P2).

From an institutional perspective, the interviewees point toward bureaucracy and red tape. The number of required documents grew at a fast pace, and it was treated as a precautionary mechanism in the event of inspection:

A common thing you see when you do your best to protect yourself by multiplying the number of documents The idea is to create, produce tons of documents at all levels only to have everything documented, just in case, which leads to absurd situations (P6).

Thus, the accountability at individual and institutional levels seems to be limited to formal reports created "just in case" (P6). Consequently, academics were spending vast amounts of their time reporting, without any sufficient support from the university's administrative offices. However, it seems that academics have been concerned with the amount of bureaucracy imposed internally by the university rather than with formal ministerial requirements.

Moreover, interviewees emphasized that growing accountability imposed by institutions for individual academics discourages applications for minor grants – often aimed at young scholars – mostly due to the obligation of time-consuming and often complicated reporting:

Reporting falls on the grantee and is depressing, there is so much paperwork. People think, "Why should I [apply for a grant] when all I will do is report." And this is a weakness also connected with the university's internal policy (P12).

It seems that the Ministry of Science and Higher Education (MSHE) started to pay more attention to output measurements, and thus to performance, while requiring more accountability from HEIs and academics. Moreover, the MSHE seemingly has no coherent vision for the type of information needed. Thus, with a vast increase in the financial and research autonomy of individuals, there appeared a higher degree of accountability, imposed by the institutions rather than the government.

Summary of Changes to the Funding System (2010–2018)

Between 2010 and 2018, the major change related to the allocation of research funds. The creation of two separate bodies – NCN and NCBiR – had a positive effect on the *financial autonomy* of HEIs as a whole as well as on individual researchers, which seems crucial for the academic autonomy of universities. The bodies enhanced the competitiveness of researchers and positively impacted the quality of their research. The new formula in the algorithm increased the *financial autonomy* of HEIs in terms of teaching activities. Even if it could be viewed as a sign of *decreased organizational and staffing autonomy*, the newly imposed student-to-staff ratio was received rather enthusiastically, as it resulted in a greater quality of teaching. Nevertheless, along with greater autonomy appeared an increase in accountability, which was somewhere in between ex-ante and ex-post control. However, accountability remained limited to official reporting based on inputs, with new output measures being only introduced. The higher degree of reporting requirements proved demotivating for scholars, a recurring piece of information in our interviews.

It seems that the reforms introduced between 2010 and 2018 resulted in the sedimentation and layering of the pre-existing PA logic and the newly added NPM logic, evidenced by the co-existence of ex-ante and ex-post control mechanisms. Consequently, reforms boosted organizational and financial autonomy, even though both remained rather limited. Therefore, this period can be perceived as the time of the first attempts of the Polish HE sector at implementing the NPM logic.

Catching Up with Prestige: New Higher Education Reforms (from 2018 to Date)

Resource Allocation

The new Higher Education Act, called “Constitution for Science” or “Act 2.0,” is to replace four acts currently in force: the Higher Education Act, the Act on the Principles of Financing Science, the Act on Academic Degrees and Titles, and the Act on Student Loans. Act 2.0 assumes the consolidation of funds into a single subsidy dedicated to

institutions, which combines funds for research, teaching, and so on, allowing HEIs a greater discretion in allocating funds. Moreover, Act 2.0 assumes that institutions will have the right to decide whether and which organizational units will exist in the university.

Act 2.0 places greater importance on the institution's output evaluation. However, Act 2.0 also significantly changes how universities are to be evaluated; until 2018, faculties had been the subject of evaluation; pursuant to Act 2.0, scientific disciplines will be evaluated.

Autonomy

Act 2.0 assumes evaluation based on scientific disciplines, which will penetrate different institutional structures: faculties, departments, and research centers. This is a major change for institutions. The change will be fundamental especially in the case of large universities with multiple faculties and research centers, and even more for highly interdisciplinary institutions. Thus, faculties are no longer subject to evaluation; instead, institutions as a whole are assessed in the context of specific disciplines. In the eyes of the interviewees, this change may have a significant effect on the organizational autonomy of HEIs. As universities adjust to the new evaluation system, new agendas will arise also in the context of *staffing autonomy*:

Now that disciplines are evaluated, isn't it an interference with the autonomy of universities? It may happen that we will adjust the structure of the university to evaluation needs, and thus hire those that fit those needs (P12).

Thus, interviewees fear interdisciplinarity will no longer be sought after and prioritized. Institutions will specifically focus on selected disciplines, as these will become the subject of evaluation, while impacting researchers' choice of disciplines, thus negatively affecting *the academic (research) autonomy*.

It is an enormous interference with researchers' autonomy. When I spoke with one of the vice-ministers, who is directly responsible for this, he replied "we had to put it in place to eradicate researchers' dishonesty." It's hopeless (P11).

The Act also proposes a solution to increased *organizational autonomy*, as it allows institutions to decide on the existence of their faculties. Therefore, the university president acquires more control over the shaping of the university's policy, while the organizational autonomy of deans and faculty councils is significantly diminished.

I have been a dean twice, so I have experience. Until now, there was large autonomy for the faculties. This autonomy will be limited by the new Act, and so we are heading exactly in the opposite direction of development (P12).

From the perspective of financial autonomy, a university's subsidy will no longer be "marked" under Act 2.0. Moreover, if these funds are not used within a given year, they are automatically transferred to the following year. From the perspective of *financial autonomy*, interviewees claim it is a major and positive change, as universities will be able to independently decide on the distribution of funds between research, teaching, and administration:

One of the things that have limited the autonomy is the "marking" of money and determining what it should be spent on. If this can be overcome, and the university becomes free to manage its budget, ... it will significantly boost its autonomy (P1).

However, Act 2.0 also introduced changes regarding the entity/person deciding on the allocation of funds. Thus far, faculties received funding based on their own faculty evaluation, whereas now funds are transferred to the university and then distributed among faculties or departments by the university president. Similarly, as in the case of organizational autonomy, depending on the perspective, university president, or dean, Act 2.0 has a different meaning in organizational autonomy.

From the university perspective, the university receives funds, and the university president distributes those subjectively or in accordance with the standards in place. Therefore, it is more flexible and perhaps even more effective... and this is a positive effect ..., whereas from the perspective of universities' units – including faculties which are large and strong – they become completely dependent on the university presidents' decisions ... this solution is unacceptable (P12).

Therefore, the system becomes more centralized and less dispersed, which shifts the power onto university presidents. As the *organizational and financial autonomy* at the institutional level increases, the *organizational and financial autonomy* of specific units diminishes.

From the perspective of individual academics, Act 2.0 puts greater emphasis on the output of universities in the context of the research. Thus, Act 2.0 puts greater pressure to publish articles in top international journals. As the evaluation of the entire discipline

will be based on each academic's output and not on the sum of outputs, as it used to be, this will diminish *research autonomy* and push academics to publish "what counts" for the institution.

Accountability

Seemingly, with increased autonomy, the new Act also brings an increased need for accountability, as the new Act brings about a shift from input to output measurements. From an institutional perspective, it seems that despite the opinion of representatives of the Ministry that we have interviewed, who are convinced that reporting obligations will significantly lessen, other interviewees are less optimistic. As previously emphasized, with respect to the perspective of institutions, accountability is mostly associated with the preparation of tedious reports.

I don't know. Everyone is afraid that it will be worse, of course, because there is never less [accountability], the administrative work never decreases, it's always growing, so we have no idea what it will be like (P1).

Furthermore, as evaluation by the Committee for the Evaluation of Scientific Units (KEJN) will no longer concern scientific units but whole disciplines, research reporting will shift from units to individuals, therefore employees will be obliged to report on their research activities. This means that the burden will be shifted even further onto scholars. One of the interviewees described it as a "radical change" (P14): it will neither increase nor decrease, but rather its "philosophy will change radically" (P14). Therefore, based on academics' declaration about disciplines, new types of units will be created. Organizational units will not have any formal control over individuals' reporting, so the legal structure and philosophy of reporting will change. Thus, it may create ambiguity and chaos, as institutions will have to adapt and create new systems. Furthermore, under Act 2.0, universities are to enjoy greater flexibility in terms of their reporting to MSHE: there will be no templates for specific documents. It seems that HEIs officials are rather skeptical about this approach, which as previously discussed, may further contribute to the overproduction of documents "just in case."

Summary of Changes to the Funding System (from 2018 to Date)

Act 2.0 will have a profound impact on how institutions are evaluated, financed, and managed. Act 2.0 affects all aspects of autonomy, although we cannot definitely state whether it does so in a positive or negative manner. It seems that despite granting university presidents greater power and thus universities more autonomy, the autonomy of faculties will significantly diminish.

In general, and compared to the previous Act, the new law contains less detailed prescriptions. On the one hand, it means that HEIs will have more freedom and organizational autonomy to operate and regulate themselves based on their own statutes; on the other hand, the situation creates ambiguity, which may result in returning to more traditional and less flexible institutions. One of the interviewees commented on it in the following manner:

I think that the reform gives too much autonomy to universities ..., which are not ready for it because this autonomy will allow them to insert the old system into new solutions ... universities did not get any external mechanisms forcing or encouraging radical changes that would require quality (P13).

Consequently, universities may be willing to retain their status quo. In this regard, it is difficult to evaluate Act 2.0 in the context of autonomy, as it remains ambiguous and either decreases or increases the overall autonomy, depending on the perspective.

Regardless of the above observed that Act 2.0 moves away from the PA to further embrace the ideas of the NPM logic.

Discussion and Concluding Remarks

In many countries, the HE sector has been undergoing important transformations. The introduction of NPM in HEIs affected not only how universities are governed and managed but also influenced how they are funded (Maasen et al., 2017). The increased independence and autonomy of HEI calls for relevant accountability systems. Above, we have analyzed how the transformation of the HEIs from the traditional Weberian to the NPM model influenced the funding system in the HE sector as well as HEIs' autonomy and accountability. To answer the research questions, we studied a set of reforms of the Polish HE system over the span of 30 years.

As Brunsson (2006) suggests, reforms do not bring changes that could solve existing problems once and for all. Instead, the referential nature of any reform only leads to further reforms. However, a new reform does not bring any change but rather confirms the stability of the system. Around the world, HEIs undergo a series of reforms with a focus on increased efficiency. Universities respond to such reforms rationally by adjusting their activities to report the maximum efficiency possible; however, the actual efficiency very often does not match the declared efficiency. This provides an

impulse for further improvement—usually a new reform—and so the reform cycle starts again. At best, small improvements can be attained through the implementation of major changes related to the enforcement of the new reform.

To analyze the trajectory of resource allocation reforms in Poland and their impact on autonomy and accountability, we conducted a qualitative study of the Polish HE system. Our findings showcase the evolution of the Polish national funding from a stable traditional funding model before the collapse of the Communist system – characterized by the absence of autonomy and by controls based on inputs rather than outputs – to a market-based model of funding that afforded substantial autonomy to universities in terms of the use of both funds and output-based controls. Intermediary steps between the two models were a series of reforms that created a complex multi-tier funding system – separated for teaching and research – in which additional mechanisms were added to the system. A summary of our findings is presented in Table 2.

Table 2. Changes to the funding system and its effects on autonomy and accountability.

Years	Changes to HEI funding for teaching	Changes to HEI funding for research	Effects on autonomy	Effects on accountability
1990–2010	Algorithm based on the costs of teaching programs and degrees. Introduction of cost weights for different programs.	Grants given to HEIs. Peer-review evaluation changed to a hybrid including peer-review evaluation and parametric evaluation based on a set of different parameters, followed by parametric evaluation.	Compared to the previous period, a greater financial, academic, and organizational autonomy. Still, the overall autonomy remains rather limited.	Accountability regarding inputs (teaching and university funds) and accountability regarding the performance (individual research grants).
2010–2018	An algorithm based on the cost of teaching programs and degrees. Further adjustment of weights for different education programs. Extra resources allocated based on different parameters (the number of PhD students, staff, conferences,	Grant awarded to university units (faculties, institutes). Parametric evaluation based on a set of different parameters (with a mix of inputs and outputs) related to specific units. Parameters underwent several adjustments.	Some increase in financial autonomy, especially on the faculty level. Decrease in the academic, organizational, and staffing autonomy at the university level.	Accountability regarding inputs (teaching) and outputs (research). Accountability regarding the performance (individual research grants).

	academic degrees, research, and internationalization). Multiple sources of funding from different governmental grants.		
2018–now	Grants replaced by subsidies. Subsidies given to HEIs instead of academic units. Parametric evaluation based on a set of parameters (a mix of inputs and outputs).	Increased autonomy of institutions that limits the autonomy of deans. Decreased academic freedom of scholars.	Accountability regarding inputs (teaching) to a lesser degree, accountability regarding outputs. With a focus on quality and impact. Accountability regarding the performance (individual research grants).

Source: own elaboration.

This article has documented that throughout the past 30 years, the Polish system has undergone a gradual change from earmarked to block funding (Weiler, 2000). These 30 years of reforms within the Polish HE system can be divided into three main periods. The first analyzed period (1990–2010) is an example of political-based system (strongly influenced by the PA logic). Funding for research was allocated to HEI by the KBN; it was first based on peer-review evaluations and then gradually changed to a hybrid of peer-review – and parameter-based evaluation. It was not until 1999 that a new, more objective parametric evaluation was introduced. This new system of resource allocation introduced more competition between public and private universities. The system was characterized by a strong focus on the ex-ante control of resource allocation, based on line-item budgets. The reporting was mainly focused on input measures and the protection of interests of the academic community. It was a typical example of earmarked funding with limited autonomy for HEIs along with limited accountability.

In 2010, a new reform was introduced to ensure more efficient and effective use of resources allocated to research outputs, in a manner coherent with international standards. Two new national agencies were created (NCN and NCBiR) with the aim of taking over the responsibilities of the Ministry of Science and Higher Education in allocating research funds. This period was characterized by a mix of earmarked and block funding as, on the one hand, teaching resource allocation is mostly based on ex-ante control mechanisms, while on the other hand, research shifts toward the market-based system. It seems that this period was marked by the first attempt toward

market-based resource allocation. However, the funding of HEI was very much dispersed through several various streams allocated to various activities of HEIs. An incremental change occurred in relation to research funding allocation. However, like in the previous stage, HEIs had limited autonomy in terms of using the resources entrusted with them. The concept of accountability was still considered in a very narrow sense as reporting remained oriented more toward input – than output-based indicators.

The subsequent reform introduced in 2018 sought to bring a radical change into HEI. Multiple grants were replaced by a subsidy, giving HEIs much freedom in the use of resources. The subsidy is granted based on parameters relevant to teaching and research, and it is mainly focused on outputs and impact. As discussed by Weiler (2000), such a change is the most significant step in the transition toward block grant funding, which enables HEIs to use funds more freely. However, with the growing financial autonomy of institutions, at the same time the financial autonomy of faculties significantly decreases. Traditional input-based measures were complemented with output-based measures, especially for research.

Our research documented that the funding model has multiple effects on different types of autonomy, thus the relationship between the funding model and autonomy is not necessarily linear, as previously discussed (Chiang, 2004; Michavilla and Martinez, 2018). Thus, it seems that the change toward a more market-based funding model does not necessarily lead to greater autonomy in general, but rather boosts some of its dimensions. Moreover, our results indicate that research autonomy could become an additional element of HEIs' autonomy. Estermann and Nokkala (2009) and Rybkowski (2015) largely neglect research autonomy (in the context of both institutions and scholars), while this type of autonomy appears in the EUA's Lisbon Declaration (2007). We believe that research autonomy should constitute a separate, fifth element of the autonomy, as research, its quality (measured by the number of publications in top journals, research grants, citations, etc.), and its impact on society (the third mission) become a crucial element of HEIs' evaluation. As stated by the OECD in 1997 (qtd. after Geuna and Martin, 2003, p. 227), "research evaluation is introduced in many industrialized countries, because of the demand for greater accountability and as a consequence of diminished funding." Furthermore, research is an incremental part of HEIs, hence treating it as an element of academic autonomy (Lisbon Declaration, 2007) fails to appropriately reflect its significance and relevance within the modern HE field.

Moreover, the article documented the ambiguity in the autonomy of HEIs, as reforms had a different impact on individual levels of their autonomy. Thus, reform may have both a positive and negative effect on autonomy, depending on the analyzed perspective.

Similarly, our findings showcase that greater autonomy does not necessarily lead to greater accountability, as previously argued by Chiang (2004) and Michavilla and Martinez (2018). As emphasized by representatives of the Ministry, the most recent Act 2.0 would increase the autonomy of institutions while simultaneously decreasing their accountability.

One of the most important findings of this research is the limited understanding of accountability by HEIs, which is visible across different levels of the university hierarchy. Not only were university presidents and deans unable to specify the need for accountability; many ministry representatives and HE experts outright ignored this need. Moreover, it seems that the understanding of the need for accountability is limited. After all, in the Weberian model accountability is generally perceived as reporting to the funding organization, thus regarded as a bureaucratic obligation related to formal accountability rather than an account of the ways in which resources are used to benefit society.

Based on our study, we conclude that policymakers should pay more attention to the competing tensions created by the plurality of institutional logic related to the performance-based steering of universities. Therefore, accountability and autonomy should be better balanced when designing performance-based resource allocation models for universities.

Overall, the changes in resource allocation to the Polish HEIs over the 30-year-period tended to be incremental and led to the gradual evolution from political-based allocation to market-based and then the competitive allocation of teaching and research funds (Tahar and Boutellier, 2013). Our findings are coherent with other study findings regarding Polish and foreign universities (Agaard, 2017; Heinecke, 2016, Parker, 2011; Parker, 2012; Parker, 2013).

Considering reforms as a reflection of organizational stability beyond organizational change (Brunsson, 2006), we may anticipate that further reforms will stress the importance of accountability and social control leading to an even higher accountingization (Parker et al., 2021). However, this may not be the desired direction. Since accounting and performance measurement systems are socially, politically, and culturally constructed (Power, 1997), they influence the creation of organizations, society, and political values (Steccolini et al., 2020), also directly affecting the functioning of universities (Dobija et al., 2019). A recent stream of articles calls for a reassessment and rethink of the role of the university (Andrew et al., 2020; Bebbington, 2021; Carnegie et al., 2021; Funck and Karlsson, 2019; Guthrie et al., 2021; Parker et al., 2021). The Covid-19 pandemic

revealed that universities in the quest for efficiency became vulnerable and unprepared to deal with crises. Critics of the NPM ideology and related managerialism argue that the current system can be devastating for the university as a critical voice in society, thus affecting university legitimization and transparency (Parker et al., 2020). Bebbington (2021) even suggests that the current crises may be a chance for a radical reimagining and reconsidering of the foundation of the HEI.

This research has certain limitations. We used the secondary sources to trace the trajectory of the reform in HEI regarding funding allocation as well as expectations regarding autonomy and accountability by using official documents: parliamentary acts, resolutions adopted at the Ministry level, and internal documents from several universities. The collected materials were enriched by a series of interviews. A part of the empirical evidence was based on a limited number of interviews. However, as the aim of the article was to analyze changes introduced into HEI funding models and the impact of these changes on autonomy and accountability, we decided to collect data from those who have witnessed these changes.

Further research could be undertaken to comprehensively explore the link between the intended consequences of the 2018 reform (Act 2.0) and its actual and future outcomes. The transition toward the market-based funding model and, consequently, offering more autonomy to universities can be considered a radical change in the Polish HEI system. Investigating actual outcomes could elucidate the impacts of the reform and investigate whether the change is radical or whether another cycle of reforms will be needed to reform the existing system hopefully influenced by post-NPM logic, which will be more oriented toward public values and the quality-of-service delivery.

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Appendix 1. Interviews details

Reference code	Position	Institutions	Duration
P1	Professor, expert on HEI funding	public university, expert organization	22 min
P2	Professor, university president	public university	49 min
P3	Associate professor, expert in the MSHE	MSHE, public university	
P4	Professor, university president	non-public university	26 min
P5	Professor, expert, head of expert organization, former university president, former member of the MSHE	public university, expert organization, MSHE	46 min
P6	Professor, expert on HEI funding	public university, organization	41 min
P7	Professor, undersecretary of state	MSHE	61 min
P8	Team member in the MSHE	MSHE	
P9	Professor, member of organization of young academics	non-public university	5 min
P10	Professor, university president	public university	60 min
P11	Professor, dean, former university vice-president for research	public university	58 min
P12	Professor, former university president	non-public university	36 min
P13	Professor, expert of Polish HEIs	public university	24 min
P14	Head of Science and Didactics office	non-public university	57 min
P15	Professor, vice-dean	public university	40 min
P16	Professor, former undersecretary of state	public university	24 min

Source: own elaboration.

Appendix 2. Interview scenario

1. How would you describe the current HEI funding model in Poland? How would you describe it works?
2. How has the Polish university public funding system changed in relation to basic funding between 1990 and 2017?

3. How has the Polish university public funding system changed in relation to research funding between 1990 and 2017?
4. How can this change process be characterized?
5. Can you think of any other mechanisms of funding of HEI not discussed so far? What would they be? What are the results and consequences of introducing them in HEIs?
6. How has the changes in the Polish university funding system impacted the autonomy of HEIs?
7. How has the changes in the Polish university funding system impacted the external accountability requirement of the HEIs in general?
8. How is your university funding model different from the one used in private/public HEI?
9. How could the planned reform impact the autonomy of your institution? How could it impact HEI in general?
10. How could the planned reforms impact the external accountability of your institutions? How could it impact HEI in general?

Appendix 3. List of abbreviations used in the text

Abbreviation	Full name (in English)
HEI	Higher Education Institution
HE	Higher Education
MSHE	Ministry of Science and Higher Education
HERD	Higher Education Research and Development
KBN	Committee for Scientific Research
PKA	State Accreditation Committee
NCN	National Science Centre
NCBiR	National Center for Research and Development
KEJN	Committee for the Evaluation of Scientific Units

Source: own elaboration.