

UNIVERSITY OF TWENTE.



Institutional Autonomy of Universities in Theory and Practice

A qualitative Research on decentralized Financial and Human Resource Competences

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1. Introduction

Higher education is considered to be among the most important factors towards the knowledge based economy. However, traditional higher education systems have been accused of being inefficient, ineffective, wasting public resources, and in some regards of low quality. The 1980's and 1990's evidenced a tremendous shift away from the traditional system towards a new system which is based on private sector principles and managerialism.

There were several drivers facilitating the transformation. The most important drivers relate to economic, political, and social concerns. The new administrative style of public service providers was dubbed New Public Management (NPM) and reflects the shift from public administration to public management (Enders, de Boer, & Weyer, 2013). First success stories of NPM oriented reforms encouraged other governments to follow. By now the concept spread around the globe dominating public service policies in various areas. Regional and international players such as the EU Commission, the International Monetary Fund, the OECD, and the World Bank, promote the concept heavily facilitating its expansion. The NPM ideology reformed and restructured national higher education systems and its institutions. Consequently, the reformation process included the restructuring of the institutional governance structure as well. According to Benz (2007), governance in political science is defined as "the coordination and control of autonomous but interdependent actors either by an external authority or by internal mechanism of self regulation or self-control". From a more detailed view, "government refers to the institutionalized power to make and implement decisions in a state whereas governance [...] stands for network-like, horizontal structures of cooperation between public and private actors" (Benz, 2007). In reference to the European University Association (EUA)¹ and Enders et al. (2013), institutional autonomy is the university's ability to make decisions on academic matters, financial issues, staffing policies, and organizational structures on the one hand, and "the exemption of constraints on the actual use of such competencies" (Enders et al., 2013) on the other hand. However, this New Public Management approach is far from being perfect, and new threats and challenges emerged in the reformed higher education environment. Especially in the traditionally centrally regulated areas of finance and human resources, the restructuring process formally shifted competences to the decentralized levels. Autonomy is considered to be a major driver to empower universities in the competitive environment and strengthen them for the new challenges. However, it is important whether and to what extent this autonomy is implemented in reality. Therefore, this research identified the granting of institutional autonomy as central aspect for the purpose of this paper. In particular, it focuses on the relation between real and formal institutional autonomy.

¹<http://www.eua.be/eua-work-and-policy-area/governance-autonomy-and-funding/governance-autonomy.aspx>

my in the areas of finance and human resources. Several studies such as Sporn (2003) assessed the tendency towards divergence and convergence and found that at the national and international level systems are increasingly converging. Contrastingly, at institutional, departmental, and faculty level the author evidenced more and more differences indicating a trend towards divergence. In other words, this means that while institutions receive the same formal autonomy in one law, the real autonomy at decentralized levels tends to differ. This paper, therefore, draws special attention towards institutional autonomy, especially at faculty level. Particularly, it deals with the potential differences between formal and real autonomy within universities in the areas of finance and human resources in order to further the understanding of autonomy in use. The project utilizes the principal agent theory which is very influential in the analysis of the relationship between state and university. Based on the theory's assumptions of opportunism, preference maximization, and the positive effects of a well designed system, several reasons are presented to expect real and formal autonomy to differ. Therefore, the following research question developed:

Does universities' degree of formal autonomy resemble the same degree of real autonomy, and if so to what extent?

To answer this research question, one higher education system has been selected and assessed. The paper analyses the higher education legal framework of North Rhine-Westphalia (NRW). Data is gathered from several universities in the German federal state through a structured questionnaire. In order to be able to fulfill the objectives of the research, it is important to understand first, the theoretical background of the new reform ideology which introduced institutional autonomy to higher education institutions (HEIs). It is crucial for the understanding to present the New Public Management in full colors. After the theoretical background is presented, it is applied to the higher education sector, in particular financial and human resource management in universities. The research design and its methodology are covered in chapter three. The following chapter highlights the findings of the formal and real autonomy analysis. In relation to the first, the study analysis legal as well as policy documents at the state level, while the second utilizes expert interviews. The final chapter provides the interpretation of the findings and the conclusion.

2. Theoretical background of New Public Management

For the purpose to understand the New Public Management approach and its reforms fully, one needs to understand its theoretical basis first. Referring to Boston, Martin, Pallot, & Walsh (1996), the NPM approach is based on the theories of public choice, transaction cost economics, and principal agent. From the perspective of Ferlie, Pettigrew, Ashburner, and Fitzgerald (1996, in Tolofari, 2005), two theories need to be added to the list, namely the theory of microeconomic, and the theo-

ry of the new economic sociology. The following section presents a brief overview of the five theories. However, the emphasis lies on the principal agent theory due to its importance for this research. A more detailed description of the related theories is presented in the work of Boston et al. (1996).

The *Public choice theory* refers to the utilization of economic solutions to traditional political problems. It studies political behavior in general and of self-interested agents and their interactions in the public sphere. It assumes rationalism, preference maximization, and the desire for autonomy as major characteristic in man. The theory dubs this *homo economicus*. While central authorities try to provide everything in the public space, the level of bureaucracy is increasing consequently. Academics such as Larbi (1999) criticize at this point the poor reward system which facilitates low performance, the inefficient use of funding, growing agent expenditure and an emphasis on service supply. Caused by the lack of adequate control mechanisms, public agents tend to engage in budget maximizing behavior. The NPM reforms were therefore, implemented in order to increase efficiency and effectiveness. The chosen solution was market orientation and business-like governance principles.

The *theory of transaction cost economics* emphasizes the efficiency in economic exchange in general and of public service delivery in relation to public administration. A fundamental element is that merits and costs of a project are estimated including alternative methods, the costs of maintaining the status quo, and opportunity costs (Boston et al., 1996). Every step of a project from planning to evaluation is taken into account. In relation to Tolofari (2005), "the safeguards against opportunism and contract abandonment arise from the assumption within the transaction cost theory", opportunistic behavior, bounded rationalism, and asset specificity. Yet another theory worth mentioning here is the *Microeconomic theory* which, in essence studies the market place and the interactions of actors within it. In accordance with Tolofari (2005), the theory is highly influential in the new corporate style managerialism due to its emphasis on neo-liberalism, efficiency, and the forces of the market. Last but not least, the theory of the *new economic sociology* is strongly related to the concept of embeddedness of Karl Polanyi and its revision by Granovetter (Machado, 2011). The concept assumes that economic rationality is embedded within social relations. This means that economic behavior in the market is determined by social relations such as reputation, trust, commitment, and obligation (Ferlie et al., 1996, in Tolofari, 2005).

Besides the other theories which provide the theoretical background of NPM, this paper identifies the principal agent theory as essential for understanding the current state-university relationship as well as the potential differences between real and formal autonomy. The *Principal Agent theory* provides an economic analysis of contractual co-operations between individuals, groups, and organizations. These agreements occur in situations where externalities (i.e. goal con-

flicts and different risk preferences) and information asymmetries prevent the market from proper functioning. Therefore, the principal delegates authority to the agent in order to achieve a better outcome in terms of efficiency and effectiveness. The theory studies problems which arise through asymmetric preferences, asymmetric information, and different attitudes to uncertainty and risk between principal and agent. Consequently, it assumes asymmetric information between the contractual partners, opportunism and maximization of own preferences, and positive effects of a well designed system. These three main assumptions have implications on the relationship between principal and agent. Caused by asymmetric information between the two, the agent tends to use the leeway to follow its own preferences instead of following the principal's goals. This phenomenon is termed agency slack or agency drift. Opportunistic behavior and interest maximization of the agent may lead to conflicts in cases where the principal's and agent's preferences differ. The third implies "that the rational design of institutions will help to overcome these typical problems in the relationship" (Enders et al., 2013) because due to their nature, the agent is risk averse while the principal in contrast is risk neutral. The risk aversion results from the agent's dependency on the principal for funding because "reductions in income endanger the existence of the agent. The principal can diversify, while the agent cannot" (Saam, 2007). This explains its risk neutrality.

The theory asks positive and normative questions on the relation between agent and principle, and on incentive and control mechanisms. In reference to the theory, the aim is to provide the agent with incentives to submit information and converge to the preferences of the principal in order to reduce potential conflicts of interests. This requires a well-designed system of incentive and control mechanisms. According to the *principal agent theory*, institutional autonomy is considered to be part and parcel of the new control system. "The strengthening of universities as strategic organizational actors with capacities for managerial self-regulation and internal control, and new tools of governmental control are expected to increase organizational performance" (Enders et al., 2013). This approach gained more and more popularity in the last decades, especially in continental Europe. In agreement with de Boer, Enders, and Leisyte (2007), "Universities are supposed to act as social entities that possess a certain degree of autonomy and sovereignty, with self-interested goals as well as with rational means, commanding independent resources and visible boundaries" (Enders et al., 2013). These changes can be observed as well in the newly acquired competences of HEIs in relation to financial and human resource matters. The competences are accompanied with a control system which is altering the principal - agent relationship of HEIs and within HEIs. Based on these theories a new steering approach evolved, called new public management which is presented in the next section.

2.1 New Public Management

The last three decades evidenced a tremendous shift within western higher education regimes as well as in other parts of the world, advocating business principles such as efficiency and effectiveness (de Boer & File, 2009; Amaral, 2009; Tirronen, Nokkala, & Hölttä, 2007; Lange, 2008; Tolofari, 2005; Ferlie, Musselin, & Andresani, 2008). This development can be mainly regarded as response to public budget constraints and in a broader sense to increasing globalization pressures (Gruenning, 2001).

Most of these shifts represent restructuring and repositioning efforts in the individual countries (Sporn, 2003; Lange, 2008). The success stories of the early years drew a lot of attention to the new restructuring reforms (Gruenning, 2001). However, there is no one-size-fits-all recipe and various governments implemented differing approaches, adjusting the model to their individual contexts (Sporn, 2003; Tolofari, 2005; Enders et al., 2013). Meaning, the decision to choose what kind of NPM principles are appropriate depends to a more or lesser extent on various national factors, such as economic, legal, political, and social circumstances. Despite the various approaches and their differences, the academic literature seems to suggest that from a global perspective, governments are restructuring their higher education systems in an increasingly similar fashion, in favor of NPM principles (Sporn, 2003). In consequence governance systems and the level of HEIs' autonomy change. Consequently, the role of central authorities is affected as well. However, interestingly to note here is "that differences do not occur so much at the system or international level, but rather at the institutional, departmental, or individual faculty levels" (Sporn, 2003). Consequently, this means that to certain degree governance systems do differ but that more variations do occur at the institutional level within a certain higher education regime. Therefore, the study aims to assess the real autonomy of several institutions and their faculties. The impact of New Public Management reforms and the related changes in both, the internal governance systems and the institutional autonomy regime, are presented in a following section. But first it is important to illustrate the reasons for the introduction of New Public Management reforms in order to understand its fast international rise and prevalence.

2.1.1 Reasons for the introduction of NPM

According to Slaughter and Leslie (1997), the main driver of change is the state, which heavily reduced its public expenditure on higher education in order to save resources and consequently increase the competition for tuition fees, research funds, and other competitive resources (Lange, 2008). Tolofari (2005) agrees in this aspect and affirms that an economic downturn was the major cause for reforms. However, there were additional motors which were interrelated and affecting each other. In total, the academic literature identifies five categories of factors which drive the NPM reform process, including economic, political, social, intellectual, and technological factors.

From an economic perspective, the reforms can be explained by the effects of the economic and fiscal crises of the early second half of the 20th century. During this time many countries were challenged with public debts, high unemployment, and fiscal shortcomings such as the UK, Japan, or the USA as well as countries in Africa and Latin America (Tolofari, 2005; Lange, 2008; Ferlie et al., 2008). In this situation many nation states felt the need to increase the efficiency of public services in order to reduce the public burden.

The political drivers of NPM arose through the shift of power in the political landscape during the 1980's which strengthened the New Right in the USA and the UK. Boston et al (1996) explain this development as "general ideological shift to the right and consequent preference for a smaller public sector and a more extensive reliance on market mechanisms". In accordance with the new ideological argument, the old public sector is characterized by over-bureaucratization, low performance, and high costs and assumed to be cured by the market which in theory "is an effective allocator of resources, and efficient coordinating mechanism, a rational decision-making process and in addition, encourages resourcefulness and enterprise" (Tolofari, 2005). Therefore, top-down policy reforms were implemented such as marketization, consumer orientation, and privatization, aiming to raise efficiency, accountability and performance (Larbi, 1999; Ferlie et al., 2008). Moreover, the reforms were not solely advocated on the national level in top-down fashion but as well on the international and regional levels by players such as the International Monetary Fund (IMF), the World Bank, and the European Commission (Lange, 2008; Ferlie et al., 2008). Furthermore, in several developing countries, universities function as symbols of modernization (Lange, 2008).

In regard to the social drivers, NPM advocates argue firstly that the old system left no room for social involvement and participation "and thus decentralization, community control, and maximum feasible public participation in government decision making were stressed" in the reforms (Tolofari, 2005). The democratizing efforts resulted in the creation of new institutional governance organs which opened the door for external stakeholders (Ferlie et al., 2008). Secondly, many of the OECD members are experiencing a demographic change towards an ageing population which is affecting the public expenditures including the provision of social services, the tax regime, and the labor market (Bleiklie, 1998; Tolofari, 2005; Lange, 2008).

The intellectual drivers for NPM reforms were academia and the advancement of the theoretical framework which promoted the new ideology and its model by for instance, providing policy advice and creating international academic forums (Cohen & Eimicke, 1998, Lynn, 2003, in Tolofari, 2005).

Technology is another element promoting NPM principles in at least two ways. Firstly, the development and rise of the information and communication technology (ICT) provide the vehicle for the quick spread of the NPM principles worldwide. Secondly, the pace at which the theory spread could not have been achieved without ICT (Tolofari, 2005). It eases the availability and sharing of information. Furthermore, "ICT has enabled coordination among loosely connected networks or devolved, decentralized entities" (Tolofari, 2005).

These five drivers explain the global spread of NPM and its international prevalence over other ideologies and reform approaches. However, besides local and institutional differences, there are several guiding principles which are present to various extents in most reforming countries.

2.1.2 NPM principles

After displaying the rationales of the reforms, it is essential to outline the underlying principles of the restructuring process in higher education sectors. The three E's are at the heart of the NPM ideology. They refer to *Economy* or market orientation in the acquisition and use of resources, *Efficiency* in the use of resources, and *Effectiveness* in the achievement of objectives. These three fundamentals are leading the New Public Management approach and from these, more specific principles derive.

In total the principles can be grouped into three categories on which NPM is based, markets or quasi-markets (i.e. privatization, corporatization, commercialization, marketization, parsimony, and competition), auditing including management and monitoring systems and performance measurements (i.e. managerialism, output orientation, accreditation and performance specifications), and strong corporate management (i.e. disaggregation, stakeholder influence, decentralization, and parsimony) (Ferlie et al., 2008; Tolofari, 2005). Now the question arises in how far these principles are applied to the real world and how they changed the national higher education systems and institutions.

2.1.3 Impact of NPM

The knowledge based economy is the new designated aspiration of many nation states as well as of regions such as the EU as it is proclaimed in the Lisbon Strategy. According to the international consensus, the governance of HEIs is considered to be the main determinant of their future performance and competitiveness (Lange, 2008; Ferlie et al., 2008). Governments aim to strengthen HEIs' ability to attract human and monetary capital and consequently ensure their national and international competitiveness. The identified means towards this target is not only a redefinition of HEIs main functions but a redefinition of the state's role in the higher education system as well (Bleiklie, 1998).

According to Ferlie et al. (2008), the academic literature evidenced a fundamental shift away from the traditional command and control interventions to an evaluative governance model, - from administration to management, utilizing supervision instead of dirigisme, and regulation instead of rules (Neave, 1986; Van Vught, 1989; 1995; and Neave and van Vught, 1991; 1994, in Ferlie et al., 2008). Academics refer to this as the *Evaluative State* (Ferlie et al., 2008; Bleiklie, 1998; Neave, 1988, in Amaral, 2009). Bleiklie (1998) explains "when emphasis shifts from rule production and rule adherence to goal formulation and performance control, evaluation becomes a core activity and thus changes the way the state goes about its business of governance". This new governance mode implies that reforms are directed towards decentralization and centralization. These contradicting tendencies have consequences for the internal governance structure of HEIs and their relationship to central authorities (Bleiklie, 1998). On the one hand, delegation and the reduction of state intervention are emphasized. On the other hand, this new governance mode requires a strong leadership regime. As a result, disciplinary competences are disconnected from power and authority, executive functions and administrative systems are empowered, and academic performance is redefined in accordance to measurable quantitative indicators (Bleiklie, 1998). At this point, the research asks how the above mentioned principles changed the governance system in the higher education sectors and its institutions. Ferlie et al. (2008) identified the following ten symptoms:

1. Market based reforms (competition for students and funding, emphasis on diversity and choice, inclusion of the private sector).
2. The development of real prices for teaching fees and research contracts.
3. A hardening of soft budgetary constraints.
4. The introduction of higher student fees.
5. The elaboration of explicit measurement and monitoring performance and the development of audit and checking systems.
6. The concentration of funds in the top performing HEIs.
7. Vertical steering through explicit target setting and performance contracts.
8. A strengthening of rectorates and the inclusion of private sector principles in HEIs' governance.
9. A stronger emphasis on managerialism.
10. Performance based funding of faculties and private sector principles in human resource management.

After presenting this short overview of NPM symptoms, the resulting changes to the higher education sector are demonstrated which relate to output orientation, stakeholder influence, accreditation, and corporatization. In order to increase the efficient and effective use of the public budget, governments tie resource allocation mechanisms to performances and outputs, and hence, regulate research by this (Lange, 2008). Monitoring is relocated away from parliamentary control into the institutions. Consequently, legitimacy becomes a mixture of internal self-control through performance indicators, quality assurance mechanisms, and external public monitoring agencies

(Lange, 2008). The results of these monitoring mechanisms are connected to budget allocations. Power's (1999) *Audit Society* emerged as a consequence of the quest for increased accountability and public control. Internal control mechanisms gained increasing importance and institutional performance is made auditable by various indicators which determine the amount of funding. In the opinion of Power (1999) the emphasis on audits might have unintended implications for HEIs.

Another reform aspect occupied by NPM is the increasing influence of external stakeholders (Lange, 2008). This development is confirmed in the book "*Governing Higher Education: National Perspectives on Institutional Governance*" by Amaral, Jones, and Karseth (2002). According to Bleiklie (1998), Amaral and Magalhães (2002), and Enders et al. (2013), the increasing power of external stakeholders contradicts heavily with the Humboldtian understanding of higher education governance. Under the Humboldtian approach, the government is supposed to protect universities from external and internal threats in order "to safeguard and guarantee institutional autonomy and the search for knowledge for the sake of knowledge itself" (Bleiklie, 1998). Currently, the state introduced itself as one of the key external stakeholders by the disempowerment of the traditional decision making organ (academic senate) and the parallel establishment of a new governance hierarchy, with the Board of Trustees at the top, in which the state guarantees the representation of its own interests in various ways. For example, Dutch universities introduced the *Raad van Toezicht* in 1997, in which external members are appointed by the Ministry of Education and the entire organ is accountable to the Minister of Education (Maassen, 2002). By such measures, the state tries to protect its interests and ensures its representation. This development illustrates the withdrawal of trust from the top. At the same time, there is a loss of trust from the bottom observable for instance in the decreasing involvement of internal stakeholders at Dutch universities which in turn may create new management problems (de Boer, 2002).

A relatively new aspect in the NPM landscape is accreditation which was introduced as such in the Bologna process. Its European-wide harmonization efforts of study programs and curricula as well as its demand for competition require similar quality standards and similar quality assurance systems (Lange, 2008) which are ensured by the accreditation process. However, accreditation itself is not new. In earlier days, study programs and diplomas were authorized by a public agency and /or an independent authority (i.e. the Netherlands). Institutional accreditation is another classical tool of quality assurance. Traditionally, accreditation is considered as the key factor in a well-designed quality assurance system (Lange, 2008). However, from the perspective of modern governance theories, accreditation can be regarded as stakeholder tool for external steering and control by the funding authority, mainly the state, as well as by the customers of academic output (economy and state). According to Schwarz and Westerheijden (2004), a central element of NPM oriented quality assur-

ance systems is the reduction of governmental interference and the delegation of authority to independent, yet state supervised, agencies. Many accreditation processes include peer-review based evaluations which require strong administrative self-governance capacities. This approach is heavily promoted through Bologna-based arguments (Lange, 2008). However, besides all harmonization efforts, the comparative study by Schwarz and Westerheijden (2004) demonstrates various differences in the European member states and argues that a common quality assurance system is far from being existent.

These transformations often imply a redefinition of the political game. In earlier days, universities were regarded as public agencies or in the Humboldtian approach as autonomous cultural institutions (Bleiklie, 1998). Nowadays, universities increasingly fulfill the image of corporate enterprises (Rhodes, 1996; Bleiklie, 1998; Amaral, 2009), - the producers of knowledge, education, and research services with efficiency as its core value. The principles of new public management, management by objectives, and managerialism justified and legitimized worldwide public restructuring reforms (Bleiklie, 1998). In recent years, there seems to be a trend towards an emphasis on quality but the most important focus of corporatized universities remains efficiency (Bleiklie, 1998). Therefore, manager functions of the executives are strengthened and equipped with new powers leading to a reduction of the traditional academic collegiality (Tolofari, 2005). Furthermore, the central control of the rector is increased by new methods of devolution. The new executive structure decreased not only the collegial culture but the power of disciplines in the decision making process as well in order to take quick and flexible decisions in executive fashion.

Moreover, the new freedoms and functions of HEIs increased the need for an expanded periphery of additional university organs which are created in regard to matters concerning for instance intellectual property rights, public and private partnerships, knowledge transfer, and the acquisition of income sources. Additional features are the enhanced flexibility of university personnel and reputation management which is considered to be very important in the competitive environment of the quasi-markets (Tolofari, 2005).

As illustrated above, the NPM principles transformed the higher education sector in various ways. Now the question arises whether different environments (i.e. nation states) identify the same solutions to similar problems. In other words, is there a tendency to convergence? This question is covered in the next section.

2.1.4 Trend towards convergence

The global trend of higher education reforms utilizing NPM principles reflects the increasing popularity of the concept (Varghese & Martin, 2013; Ferlie et al., 2008; Polidano, 1999; Sporn, 2003).

However, despite its global success, academics dispute whether there is a tendency towards convergence or towards divergence. In order to get an overview of the discourse, the following section presents the various applications of NPM in the higher education sector.

Lange (2008) argues that a homogeneous implementation of NPM principles is far from being existent. The author strengthens this statement by drawing evidence from various national segmented and homogeneous higher education systems. Contrastingly, however, Sporn (2003) found trends of worldwide convergence towards globalization, internationalization, market-orientation, competition, the influence of NPM principles, long term strategies, and the importance of accountability and quality. In general, five global trends emerged as a consequence of NPM and its popularity, namely marketization, autonomy, harmonization, quality control, and expansion. There is no doubt of the NPM prevalence in the administration of public services provision. However, instruments to achieve the NPM objectives might vary but the goals are increasingly converging. Differences occur mainly at the institutional, departmental, or faculty levels (Sporn, 2003). The academic literature identified several elements in higher education sectors which demonstrate tendencies towards convergence. These include a movement towards stratification and consolidation, the institutional governance structure, the new funding regime, the granting of independent legal status and autonomy, as well as the quality assurance frameworks (Amaral, 2009; Schwarz & Westerheijden, 2004). Due to the scope of this research a more detailed assessment of national reforms is presented in the appendix (7.5.1).

2.1.5 Dilemmas

The above illustrated developments in the higher education sector raise new dilemmas which affect the future design of universities (Bleiklie, 1998). The first dilemma results from the converging of private and public functions in higher education institutions. In other words, while central authorities establish decentralizing measures such as delegation which facilitate corporate business oriented responsibilities, they maintain their power of political administrative managerial control as well as their authority to reward and punish centralized. This means, in accordance with Bleiklie (1998), that measures which pull in the direction of decentralization are accompanied by measures pushing towards centralization.

The second dilemma is caused by the shift of authority in the relation between administrative and disciplinary leadership. In recent years, there is a trend of increasing power of HEI administrators. One very important development worth mentioning here is "the transformation of administrative activity from concentrating on support functions for disciplinary communities to concentrating on planning and management" (Bleiklie, 1998). This may hint to the increasing

bureaucratization of higher education institutions. An additional factor is the academization of administrators. These developments provide the battleground for future conflicts.

The third dilemma relates to the disciplinary authority towards the institution and the disciplines. It seems that the traditional clear cut division of labor (decisions on teaching was institutional authority and research individual responsibility) is blurring. Bleiklie (1998) assumes that "this will enhance the tendency of stronger political-administrative steering ambitions applied to the content of research already noted in connection with the allocation of basic funds to research programs which are now about to be applied more systematically by public authorities". An additional dilemma resulting partly from the above presented developments is the loss of trust which is covered in more details in the following section.

2.1.6 Loss of trust

Recent academic literature demonstrates a decrease in trust in public higher education institutions. NPM can be considered as response to this phenomenon. In essence, the agent, in this case the university was regarded as inefficient and ineffective, wasting public resources; - in other words, did not follow the principal's preferences, or was unable to perform as the principal wished. Therefore, in order to make the agent comply, various measures were introduced such as market orientation and competition, report and control systems, accreditation, and performance orientation. According to Schwarz and Westerheijden (2004), there is a tendency from state approval towards accreditation systems. "All recently implemented quality systems are based on accreditation rather than on quality assessment (e.g. Germany, Austria, Norway, and Portugal)" (Amaral, 2009). This development might demonstrate an increasing loss of trust in HEIs. Amaral (2009) found that, the Netherlands, Portugal, and Belgium (Flanders) replaced their national quality assurance agencies with independent accrediting bodies. There are as well additional measures reflecting the increasing lack of trust from central authorities in HEIs. This is confirmed by Ferlie et al. (2008) who state that "there is increased suspicion of the performance of traditional publicly funded service systems by publics, politicians and policy makers so that the government may need to exercise its countervailing power to counter excessive endogeneity or to champion powerless consumers". One measure in this regard, which is increasing in popularity, is the performance based contract which provide the government with output control and by this, control the institution's potential desire to follow its own preferences.

In reference to Power (1999), another element demonstrating the loss of trust is the development of the audit society which is promoted by NPM worldwide. Under NPM principles, the quantitative assessment and evaluation of public service providers is justified and legitimized. This is considered as structural shift in trust and legitimization (Lange, 2008). Administrations and profes-

sions are not trusted to act responsibly according to political targets and stakeholders if it is not demonstrated and justified by quantitative output indicators. This means that trust shifted towards performance indexes and indicators. However, the problem is that these display only an image of what they are intended to measure. The estimated reality might deviate from social-oriented goals because the three E's are more easily assessed than the effectiveness towards long-term goals (Lange, 2008). "As the means becomes the end, there is continuing over-commitment to create politically acceptable images of control [which result in] poor quality goods, and the development of survival skills to show that, often impossible, targets were achieved. Games are played around an indicator culture where auditable performance is an end in itself and real long term planning is impossible" (Power, 1999). The loss of trust and the resulting emphasis on audits and reports is a consequence of the increasing levels of autonomy. An additional consequence is the introduction of the council which is regarded as strengthening the legitimacy of the autonomy and counteracting the loss of trust by its external control functions (art. 1 §21 HZG) (Muench, 2008). However, Muench (2008) explains that this element raises new challenges and problems such as a strong reliance on the audit regime, and a general strengthening of the standardization and bureaucratization process. In reference to its external control functions, the council's composition is not fully guaranteeing a separation of power because it contains internal university members besides its external members. Therefore, it is argued that it is not completely equipped for that task. According to Muench (2008), the introduction of the council is a response to the lack of trust in the university's autonomy, consequently reducing the self-regulating abilities of scientists and faculties.

2.2 Autonomy

According to the NPM theory, autonomy of higher education institutions is essential in order to establish World Class Universities (Salmi, 2009; The Economist, 2005), overcome the current challenges and remain nationally competitive (Lange, 2008). A similar perspective is taken by the European University Association which "strongly believes that increasing institutional autonomy is key to enabling universities to respond to these new demands" (Estermann & Nokkala, 2009). Ferlie et al. (2008) agree in this aspect, stating that "increasing the autonomy of more strongly governed universities has repeatedly been affirmed as the best option to achieve such objectives". In reference to Enders et al. (2013), "autonomy refers to both the actor's self (having ability or capacity) and the actor's relationship to its environment (independence of freedom from external control)".

2.2.1 Institutional Autonomy

At the core of the NPM oriented transformation process of higher education systems is the aspect of institutional autonomy. In accordance with Estermann and Nokkala (2009) "*Institutional* autonomy

refers to the constantly changing relations between the state and higher education institutions and the degree of control exerted by the state, depending on the national context and circumstances" and can be measured by assessing the institution's ability to make decisions in various areas.

According to the academic literature, a lot of evidence exists illustrating a trend away from the classical top-down state regulatory approach towards steering from a distance. However, public administrators still remain a central force in the regulation of the higher education system. The transformation represents a tremendous shift in the understanding of autonomy. According to Neave (1988; in Enders et al., 2013), "autonomy is contextually and politically defined". It is argued, that the NPM narratives inevitably facilitated "a shift towards the organizational autonomy of universities as emerging actors in the field of higher education, and point to contextual and political factors which account for the reformulation of university autonomy" (Enders et al., 2013). Autonomy, in its classical understanding, is defined as the capacity or ability of an entity to act and the degree of freedom from external interference. Before the reformation process set in during the last decades of the 20th century, universities were traditionally characterized by a high level of self-governance with autonomous academics at its core (Enders, 2006). For example scientists played an essential part within the governance framework and had a high level of freedom in research and teaching. This is especially true for Germany and its Humboldtian tradition.

Nowadays, the understanding of the role and functions of universities shifted towards what Enders et al. (2013) termed "a distinctive social institution which deserves special status in terms of autonomy and academic freedom based on a social compact that evolved between higher education, the state and society". They further argue, that "the belief that the university requires autonomy from substantial political or corporate influence to function optimally was in turn linked to the role of the state as the guardian of the university in substantive matters, guaranteed state funding, at least in continental Europe, strong professional self-governance and protection of academic freedom". In the European approach of higher education, the modern university was strongly connected to the emergence of the nation state. The relation between the two was characterized by a strong state and autonomous academics. In other words, the role of the state was twofold. The first was to regulate, fund and control HEIs, and the second was to safeguard the autonomy of universities as social entities, and the freedoms of academics to which substantial powers were delegated. As a consequence, universities were able to develop constitutive and normative principals without external interference (Olsen, 2007; in Enders et al., 2013). However, capacity and authority for self-regulation did not evolve with the result of a bottom heavy form of organization. Furthermore, it can be characterized by a low capability for collective action, weak leadership, low potential for major organizational change, and ineffective and weak organizational interference (Enders et al., 2013). At that time, the

academics were seen as the main actors instead of the organization itself (de Boer et al., 2007). But this changed during the reformation process.

As it is presented above, the NPM reforms amended the coordination framework of HEIs. Changes in the regulatory regime and the funding system of the higher education sectors demonstrate the national aspirations to transform into knowledge based economies emphasizing the massification of higher education and its outputs. The new higher education systems were characterized by an extended size, increased costs, less elitist, more economically oriented, and closer to policy goals. These shifts can be observed in various instances including the European Union which highlights the importance of state supervision, output control, and a market-like environment (Bologna process). In short, the new approach was heavily influenced by NPM principles. Additional features such as the transition of HEIs towards knowledge enterprises, a market-like environment, a strong leadership and management system, as well as an emphasis on accountability confirm this NPM influence.

2.2.2 Formal vs. real autonomy

The loss of trust demonstrated above is a result of the NPM principles and can be explained by the interrelated *Principal-Agent Theory* assumptions. As already stated before, the theory assumes an agency drift by HEIs from governmental goals towards their own preferences and by faculties from the central HEI administration. Therefore, in order to remain in control, central authorities implement various measures to counteract these tendencies. As demonstrated by Amaral (2009), "governments frequently replace one form of control with another". Additionally Ferlie et al. (2008), state that there is an increasing loss of trust in the performance of traditional publicly funded service providers. However, survival skills and indicator satisfaction are developed and practiced by HEIs. In reference to Lange (2008), academics utilize formal structures to define their area of influence according to their individual and disciplinary preferences. Gläser (2006, in Lange, 2008) agrees in this point and attests academics the pursuit of autonomous interests. Moreover, the author adds that "changes in the formal autonomy situation of universities do matter but there are good reasons to assume that autonomy in practice is not a perfect copy of formal autonomy".

Based on the *Principal-Agent Theory*, formal and real autonomy can differ in situations of informational asymmetries and goal conflicts. The former occur when "the agent possesses more or better information about the details of the individual task assigned to him, his own action, abilities, and preferences compared to the principal". The latter emerge in "a situation where the principal's and the agent's desires and interests concerning certain ends are in conflict with each other and that,

they would therefore prefer different courses of action” (Kivistö, 2007). These two are the key assumptions of *Principal-Agent Theory* which are presented subsequently.

2.2.3 Agency drift

Agency drift occurs on the one hand due to goal conflicts, and on the other hand due to asymmetric information. Traditionally, goal conflicts represent the key emphasis of *Principal-Agent Theory* because it investigates when and for what reasons the agent starts to follow its own interests (Shapiro, 2005). Different preferences of principal and agent are the starting point for goal conflicts. According to the theory both intend to maximize their interests (income of agents and returns of principal). "With the instrument of the contract, the principal restricts the agent's actions to the defined goals and reduces other tasks that run contrary to these goals" (Ahmad et al., 2012). There are official and operative goals formulated in the contracts between central authorities and HEIs. The former defines the general tasks of each university which are transferred to its statutes. The latter relates to specific daily functions and objectives of HEIs. "Operative and official goals may go hand-in-hand at most times, but oftentimes, in day-to-day running of the university operative goals may obscure or detract from the broader official goal (Rizzo, House, & Lirtzman, 1970; in Ahmad et al., 2012). In other words, the agent might hold asymmetric information to deviate from the agreed contract goals.

As shown by Ahmad et al. (2012), "informational asymmetries relate to the efficacy of information flow and interaction between the principal and the agents in performing a specific task". In regard to the gathering of information, mostly the principal is dependent on the agent's report. Generally speaking, this problem occurs because in most cases the university (agent) is closer to the information, having direct access, and is therefore holding superior as well as more accurate information about performance indicators, mandated functions, and operational organization compared to the principal. Consequently, on the one hand, central authorities (principal) lack direct and full access, on the other hand, the university (agent) might engage in activities which hide particular information from the principal in cases where it is beneficial to the agent (Perrow, 1993, in Ahmad et al., 2012). This asymmetric information relate to the agent's competencies, intentions, knowledge, and actions (Saam, 2007). In these situations, the principal needs to engage in expensive activities in order to obtain the hidden information and monitor the agent properly.

These "informational asymmetries in HEIs are caused by three factors – a lag of time between purchase and consumption of the educational service, diverse types of consumers with different educational needs and the nature of each educational service which is a complex mix of services that cannot be measured in a standard manner" (Ben-Ner & Hoomissen, 1991; in Ahmad et al., 2012). The quality and amount of information determines the principal's level of control over the agent

(Vetschera, 1998). In reference to the evidence of Vetschera (1998), this means that in situations of full access to information the principal can steer the agent towards the principal's objectives. Contrastingly, in opposite situations (minimal information) the principal is more limited in its steering efforts.

As mentioned by Jacobs and Van Der Ploeg (2006; in Ahmad et al., 2012) "information asymmetries and goal conflicts resulting from agency problems in higher education can be found in funding arrangements, governance structures, students selection, appointment of academic staff, and other regulations" (Ahmad et al., 2012). According to Saam (2007), there are eight solutions for the above presented agency problems, i.e. reward systems, monitoring systems, vertical integration, game theoretical solutions, self-selection solutions, signaling, bonding, and screening.

2.3 Hypotheses

Obviously, there are several reasons to expect differences between the formal and real autonomy of universities. Based on the *Principal-Agent Theory* assumptions (asymmetric information, opportunism and goal conflicts/maximization of own preferences, and positive effects of a well-designed system), HEIs tend to commit *agency drift*. In this paper, special attention is drawn towards the area of autonomy, particularly the differences between formal and real autonomy at institutional level in order to assess whether there is a tendency to convergence or divergence.

As highlighted by Sporn (2003), "differences do not occur so much at the system or international level, but rather at the institutional, departmental, or individual faculty levels". Based on the findings of Rizzo, House, and Lirtzman (1970; in Ahmad et al., 2012) official and operative goals may differ in day-to-day activities. Consequently, real autonomy might show variation from the mandated formal autonomy. Enders et al. (2013) found that HEI executives anticipate the position of the central authority. Consequently, the "formal autonomy of the university will be higher than the actual level of autonomy used because university leadership anticipates the government's position" (Enders et al., 2013). A similar picture is expected to be present in faculty and HEI's central administration. Following this line of argumentation, this paper argues that as a consequence, it is expected that real institutional autonomy differs from the formal institutional autonomy to various degrees. "Changes in the formal autonomy situation of universities do matter but there are good reasons to assume that autonomy in practice is not a perfect copy of formal autonomy. Formal rules for autonomy might be implemented or not, and they cannot prescribe in advance practices in universities" (Enders et al., 2013). As it is presented above "there are conceptual arguments for expecting that the degree of formal autonomy granted to universities does not necessarily translate into the same degree of real autonomy" (Enders et al., 2013). Furthermore, it is assumed that the deans represent an important part of the institution and therefore in consequence represent the institutional autonomy as

well. This allows the research to compare the formal autonomy of HEIs granted by the current higher education law with the real autonomy perceived by deans and chancellors.

Based on the above it is hypothesized that the real autonomy of universities differs from the formal autonomy. In order to test this expectation, the formally granted autonomy of universities and their real autonomy need to be identified (chapter 4.). As it is explained later, formal autonomy is determined by reviewing legal as well as policy documents at the state and federal level. The real autonomy is assessed by interviewing persons in leading positions at universities' central and decentralized levels.

3. Research design and methodology

The following chapter illustrates the study design and the various analysis instruments used in this research in order to provide a nuanced picture with a high level of transparency in regard to the data gathering. Qualitative interviews are utilized to survey academic personnel in HEIs. Therefore, partly narrative interviews with an open protocol are conducted. This method of qualitative interviews allows the interviewee an individual thematization of personal relevant topics without a theory or topic guided structure by the interviewer which reduces the potential to influence the interviewee in his or her answers (Volkman, 2008). This leaves the interviewee room for individual rationales and priority setting on topics, which may have not been or were only partly covered. A questionnaire for example obtains this to a considerably lesser extent. In other words, this method of data gathering suits in the sense that interviewees can respond freely to the topics providing insights in their views and experiences.

Based on its complexity and importance, the interview protocol is dealt with separately. The interview type is an expert interview with academic personnel in management positions, namely chancellors and deans who serve as representatives for the perceptions and perspectives of this particular group. Chancellors and deans were chosen as experts, not only because they belong to this occupational group or hold exclusive knowledge, but particularly because they put their attitudes, action orientation and norms into practice and by this influence the HEI's functioning. This assigns their experiences, knowledge and perceptions a character of social importance (Bogner & Menz, 2005b).

In order to stay focused in the variety of diverging explanations of the term expert, yet illustrate its importance, the definition of Bogner and Menz (2005a) is given. This understanding of the term represents the basis for the research method of the study. The authors explain in this regard:

"Der Expert verfügt über technisches, Prozess- und Deutungswissen, das sich auf sein spezifisches professionelles oder berufliches Handlungsfeld bezieht. Insofern besteht das Expertenwissen nicht allein aus

systematisiertem, reflexiv zugänglichem Fach- oder Sonderwissen, sondern es weist zu großen Teilen den Charakter von Praxis- oder Handlungswissen auf, in das verschiedene und durchaus disparate Handlungsmaximen und individuelle Entscheidungsregeln, kollektive Orientierungen und soziale Deutungsmuster einfließen. Das Wissen des Experten, seine Handlungsorientierungen, Relevanzen usw. weisen zudem - und das ist entscheidend - die Chance auf, in der Praxis in einem bestimmten organisationalen Funktionskontext hegemonial zu werden, d.h., der Experte besitzt die Möglichkeit zur (zumindest partiellen) Durchsetzung seiner Orientierungen. Indem das Wissen des Experten praxiswirksam wird, strukturiert es die Handlungsbedingungen anderer Akteure in seinem Aktionsfeld in relevanter Weise mit" (Bogner & Menz, 2005a).

This means that the expert possesses technical, process and explanatory knowledge in his professional or occupational field. Besides the professional or specialised knowledge, the expert has a huge amount of practical knowledge and know-how. Important is that the expert has the opportunity to put his orientations into practice and by this implementation, the action conditions of other players in his field are influenced significantly. The interview setting or framework such as the interview length, or place, orientates as far as it was possible, to the suggestions of Gläser and Laudel (2009). A profound analysis of the literature of financial and human resource management in HEIs should provide common grounds for the interview between expert and quasi-expert. By this, it was expected to obtain a more differentiated and more sophisticated information exchange than between layman and expert (Pfadenhauer, 2005). The interviewees were asked to limit their answers to their faculty and their perception of autonomy within it. Only the chancellors were to some extent asked about their experiences at the central level parallel to the decentralized level.

Four Universities in NRW which established an excellence initiative were selected in order to observe a homogenous sample. Of these four only two allowed interviews at the central level, the rectorate. While the response rate at the central level was approximately 30% (in total 6 universities were asked for interviews at the central level, first, with 2 responses, and second, at the decentralized level with only 5 responses out of 40 interview requests), the response at the decentralized level was much lower 12.5%. This response rate did not allow a limitation to a certain faculty, department, or field such as medical faculty. Consequently, while the HEIs form a homogenous set, the internal group of deans is heterogeneous.

After the transcription of the interviews, the coding of the text material, and the transfer of the codes into a category system, the interviews were compared on the basis of the individual categories. The aim of the analysis was to reduce the material, while preserving its essence to build a reasonable corpus which is still the image of the basic material (Mayring, 2000). Therefore, the macro operators, paraphrase, generalisation, first reduction, and second reduction were utilized.

The following section presents the transcription in more details to make the reader understand this step in a transparent manner. The interview recordings were completely transcribed. In other words, the exact wording was retained. There were several reasons for this. Firstly, the answers of the interviewees were, despite repetition of words and cancelled sentences very comprehensible, and secondly this decision was made to avoid falsification of the original interview by the researcher. There were a few passages in the interviews where words were incomprehensible which were marked accordingly. The names of the interviewees together with the names of the universities and their localities were anonymized with the result that no conclusions about the individuals and the participating HEIs can be drawn. The explanations and advices from Gläser and Laudel (2004) as well as Kuckartz, Dresing, Rädiker und Stefer (2007) were utilized as basis for the transcription. The colloquial phrases and abbreviations of the original text were preserved, because they were known forms of informal phrasing. After each interview, an interview report was compiled to record the interview situation and setting, as well as potential factors of influence on the statements of interviewees. These are considered in the analysis of the data for the purpose to be able to order and assess potential impacts on the interviews (Gläser & Laudel, 2009). Therefore, these reports are presented in more details in a following section (3.4).

3.1 Interview protocol

In accordance with the suggestions of Leitner and Wroblewski (2005), an interview protocol (appendix (7.6)) was constructed from the theoretical basis of university management, in particular financial and human resource management. It is formed by a couple of thematic main emphases, which are introduced by an open question which can be answered by the interviewee instantly (Flick, 2004). In contrast to the standardized questionnaires and interviews, there is no strict order or temporal target when which question is asked, in order to preserve the subjective perception of the interviewee. This means that the researcher decides according to the situation, the moment when a particular question is raised, when to return to the protocol, and when special follow-up questions are asked. Consequently, this fact ascribes the researcher a huge responsibility because he needs to listen consciously and take notes in order to stay on top of which topics were already covered as well as to pose follow-up and details questions (Flick, 2004). Hopf (1978) refers to this way of dealing with the interview protocol by the researcher as a process of continuing spontaneous operationalization, which requires constant improvising by the researcher. The advantage of an open interview protocol is that while it limits the thematic framework, the interviewee's answers are not restricted. It safeguards the openness of the interview because it is employed as thematic guideline instead of a rigid or inflexible construct which presets the sequences of the interview. The examination of the topics of the researcher's interests in the process of the protocol construction allows only then the unbu-

reaucratic handling of the protocol and the researcher's status as quasi-expert (Meuser & Nagel, 2005a). In relation to this, Hopf (1978) describes the problem of protocol bureaucracy which manifests in the linear checking off of topics because this strategy limits the interviews' openness and prevents potential context information as well as potential new perspectives and insights. Furthermore in regard to Gläser and Laudel (2009), the interview should always resemble a natural conversation whereas the behaviour of the interviewer always complies with the interviewee. The analysis of the interviews focuses on thematic related sections of the interviewees' statements. According to Meuser & Nagel (2005a), it is irrelevant for the analysis when in the interview the statements were made. At the beginning of the interviews an introductory question which was easily answered, was raised in order to allow the interviewee a simple entry point, to establish a pleasant and comfortable environment, as well as to set the role of interviewee and interviewer (Gläser & Laudel, 2009). At the end of the interviews, the last question had a similar nature, - easy to answer and openly posed. Its openness enabled the interviewee to set the content himself resulting in an open room for unplanned aspects.

Overall, the protocol includes features which help to classify and assess the interviewees' perception of autonomy, as well as financial and human resource management. In accordance with Gläser and Laudel (2009) the protocol was not used to standardize the interviews but provided an overview of the selected topics which needed to be covered in each interview. The basic interview protocol can be found in the appendix (7.6).

3.2 Methodology of interview analysis

The research utilized the software MAXQDA 11 for the analysis of the interview transcripts. The second reduction of the interview transcripts is included in the appendix (7.7). Two categories were established to assess the transcripts. The categories were named *financial management*, and *human resource management*. In relation to these categories, various codes were generated which developed mainly from the theoretical preliminary considerations. However, to some extent codes were generated by the data of the interviews which were then assigned to a category. With these codes, the individual statements of the interviewees in form of the interview transcripts were encoded and as subcategories assigned to one of the categories. For the purpose to keep focus multiple coding was refused as far as possible. The separate codings were transferred into an Excel file and analysed by employing the summary technique of Mayring (2000) which utilizes the steps paraphrasing, generalizing, and reduction. Subsequently, the paraphrases, generalizations, and reductions were transmitted into a Word chart in order to maintain a clear overview. Following this, the second reduction encapsulates them. By means of the second reduction data, the different categories were defined and coding rules as well as *Ankerbeispiele* were established (Mayring, 2000). In reference to

the chart's comprehensiveness, only one example category K1 high autonomy of budget is presented at this point. A definition for each category (financial and human resource management) is included in the appendix (7.4). The subsequent sections present the interview data, and the interview reports, as well as the categories, subcategories and indicators.

Autonomy Category	Definition	Ankerbeispiel	Rules of coding
K1: High Autonomy	The budget is highly autonomous, if, 1. financial competences in personnel or non-personnel matters exist, 2. the budget is bound to target agreements, 3. the resource allocation is autonomous.	1. „Budgetverwaltung im Rahmen von Personalstellen die dezentralisiert an den Fakultäten passiert. Und das gibt eine gewisse Autonomie in den Entscheidungen“ (U3D1). 2. „Zielvereinbarung die dann den Rahmen setzt, aber im Rahmen dessen bewirtschaften da die Fakultäten den Großteil des Budgets. das ist ein sehr sehr dezentrales Model“ (E). 3. „im Prinzip ja, die Fakultät ist zuständig letztendlich, wir haben hier ein budgetiertes personal, aber das ist für die Fakultät budgetiert und das wird auch von der Fakultät verwaltet, Dh. wir haben keine Budgetierung der Institute oder Abteilungen sondern wir machen das in der Fakultät, genauso haben wir eine Verteilung die wir autonom vornehmen können bezüglich der Zuweisung von Sach-mitteln. das machen wir in der Fakultät sicherlich autonom“ (U3D2).	An interviewee needs to demonstrate high autonomy levels on all three subcategories otherwise he ² is coded in another category.

Tab. 1: Definition of Category K1 high autonomy of Budget

3.3 Interview data

At first, the demographic data of the interviewees are presented in the following chart. The relevant information includes sex, HEI, position, age, and the anonymized name.

Number of interviewee	Sex	HEI	Position	Age in years	Anonymized to
1.	Male	Extern	Executive Director		Extern
2.	Male	HEI 2	Chancellor	68	U2K1
3.	Male	HEI 1	Chancellor	55	U1K1
4.	Male	HEI 4	Dean for Finances	60	U4D1
5.	Male	HEI 3	Dean	60	U3D2
6.	Female	HEI 3	Faculty Manager	52	U3D1
7.	Male	HEI 2	Dean for Finances	52	U2D1
8.	Male	HEI 1	Dean	58	U1D1
9.	Female	HEI 1	Dean	N/A	N/A

Tab. 2: Information of Observed Cases

As it is displayed in the chart, all cases of the sample except one were males. One of the cases is an external expert which is used as reference. The anonymization procedure was executed in relation to the examples of Gläser and Laudel (2009). Four Universities were selected and were given a number from 1 to 4 in order to keep the interviewees' affiliation. Therefore, the interviewees received the letter U for University with a number according to their institution. The following letter represents their position with K for chancellor and D for dean. Due to the fact that there were two deans representing HEI 3, they needed an ordering as well, i.e. U3D1, and U3D2. For reasons of con-

² In contrast to Meuser and Nagel (2005), this research does not switch from male to female form in casual sequence but dispense with adding the female form and only the male form is used while the statements refer to both sexes, in order to maintain its readability (Meuser & Nagel, 2005; Gläser & Laudel, 2009; Bogner & Menz, 2005).

sistency, the chancellors were given a number as well, - in this case a 1. The anonymization was not solely for protection and preservation of the individual's privacy, but was as well utilized for the purpose to segregate the interviewee as individual (Volkman, 2008).

3.4 Interview reports

The following illustrates the different interview reports. Because there is not yet a standardised scientific form for interview reports, the remarks and examples of Gläser and Laudel (2009) were utilized. The interview reports include the following features: circumstance of interview confirmation, framework conditions such as place, duration, and disturbing factors, remarks on the interview conduct, as well as remarks on the post-interview phase. Due to similarities in regard to the features of the report, only the significant aspects are presented. An extensive list of each feature for every interview is included in the interview report in the appendix (7.8).

All interviewees participated willingly in the research, although three of the interviews were conducted via telephone. Besides the different interview setting, there were no special or disturbing factors affecting the interviewees' completion. The different setting had no influence on the labelling of pauses and interruptions and they were marked in the same fashion as the face to face interview. Important to mention here is that interviewee 9 abort the telephone interview with the explanation of feeling unable to answer the questions. This might have been prevented in a personal interview but due to the setting of a telephone interview (and the easiness to end it) and the interviewer's failure to establish a comfortable conversation atmosphere, the interviewee insisted to end the interview. Therefore, this case was excluded from the research, was not transcribed, and was not considered in the analysis. Due to the fact, that neither gestures and facial expressions, nor conversation analytical aspects were assessed, the telephone interviews were included in the analysis. Prior to the interviews, the researcher told the interviewees that it is about financial and personnel autonomy in HEIs in NRW. Only after some of the interviewees requested additional information on the topic more details were given. Nevertheless, the researcher left some aspects open, in order to prevent that interviewees prepared or get influenced in their explanations in a certain way. Furthermore, this was supposed to antagonize socially desired answers (Gläser & Laudel, 2009). The spontaneous answers of the interviewees should present a clear and undistorted picture of their attitude and perception of the issues at hand.

The interviews were conducted five out of eight times either in the interviewee's office or in a separate room of the respective HEI. The remaining three were telephone interviews as it was already mentioned. The answers did not seem to be influenced by the conditions of a telephone

interview, but this setup slowed down and complicated the transcription process in some instances where words were incomprehensible. As already stated these were marked as such.

All interviews were coined by a pleasant atmosphere and social interaction between interviewee and interviewer. The duration of the interviews was divided into pure interview time and overall time which contained the preliminary talk, the interview, and the closing dialogue. The pure interview time ranged from 30 minutes (U3D1, U3D2) to 115 minutes (U2K), whereas the overall time showed a similar range from 38 minutes (U3D2) to 120 minutes (U2K). The telephone interviews were the shortest in interview time as well as in overall time. This can be explained by the short preliminary talk and the short closing dialogue which was the result of the indirect interaction and the absence of a personal small talk. The longest interview and overall time in case U2K can be explained by the extensive elaboration of the interviewee's answers and the interviewer's failure to streamline the interview in a more adequate manner. While two of the closing dialogues were extensive (U3D1, U2D1), two fell short because of time concerns and subsequent appointments (E, U4D1), and four were cancelled on similar basis (U1K, U2K, U3D2, U1D1). In general, all interviewees with whom the researcher held a closing dialogue stated their positive opinion on the interview overall, as well as on the conduct and the organisation, and expressed their interests on the results of the research.

3.5 Categories, subcategories and indicators

In order to analyse the interviews adequately, two categories were established as mentioned before, financial management (autonomy) and human resource management (autonomy). While the category financial management is composed of two subcategories, budget, as well as asset accumulation and economic activity, human resource management has no subcategories and is made up of several indicators. The subsequent chart presents an overview of the individual categories with their respective subcategories and indicators.

Category	Subcategory	Indicator	Indicator	Indicator	Indicator
Financial management	Budget	Global budget	Target-bond	Budget management	
	Asset Accumulation & Economic Activity	Company participation	Investment, credit, & revenue generation	Use of reserves	
Human Resource management		Resource allocation	Financial remuneration	Appellate Right & recruitment	Employer feature

Tab. 3: Categories, Subcategories and Indicators

The research emphasizes the aspects of financial and human resources affairs. These two were identified to cover the administrative side of the university's institutional autonomy. Traditionally, finance and personnel issues used to be heavily state controlled. One example is the employment plan of civil servants. While HEIs became autonomous gaining various competences, the new freedoms should cover the financial and personnel areas as well, especially in the budget, asset accumulation and economic activities, and human resource issues.

In order to be able to answer the research question, whether Universities' degree of formal autonomy resembles the same degree of real autonomy, several indicators were identified and classified to one of the two financial subcategories or the human resource category. In total, the indicators cover ten areas (Tab. 3). The financial category was subdivided into budget matters and asset accumulation and economic activities. In accordance with the above presented NPM logic, institutional autonomy needs to be accompanied with certain competences. In regard to financial matters, the trend heads into the direction of less and less public resources. Therefore, in order for HEIs to become financially less dependent, HEIs require administrative flexibility, independent decision-making, and independent disposal of resources (Konegen-Grenier, 2013). Consequently, the research identified on the one hand the budget as subcategory with the indicators global budget, target-bond, and budget management, and on the other hand asset accumulation and economic activities as second subcategory which include the indicators company participation, investment, credit and revenue generation, and the use of reserves.

Following the NPM logic, a similar argument exists for the human resource area. In order to match their designated image of a self-steering autonomous university, they need sufficient leeway to develop their own leader and human resource concepts (Konegen-Grenier, 2013). Therefore, the research observed areas of independent competences in reference to appointment and recruitment, as well as decision-making power in employment plans and remuneration. The employer feature is another important attribute in the management of human resources. The next sections cover the financial and human resource management in NRW's HEIs in more details.

3.6. NPM financial management in higher education

Besides the decrease in public funding of HEIs, it remains their main financial source. The NPM ideology affected not only the general governance but the financial governance, or financial management as well. In line with its argumentation, it is not sufficient to provide autonomy solely but it needs parallel to that financial security and autonomous financial management competences (Ziegele, 2009; Wang, Cheng, & Liu, 2012).

While the traditional system was structured by regulations, directive, and cameral budget, struggling with ineffectiveness and inefficiency, the NPM ideology introduced a paradigm shift towards self-regulation, autonomy, competition, and performance indicators. In more details, the traditional system can be characterized by its input orientation, process political interventions, ex ante steering, and details steering. However, these attributes led to various consequences according to Ziegele (2008). Input orientation facilitates uneconomic behaviour. Therefore, NPM favours output orientation which connects the funding to the outcomes. Process political interventions foster

bypass strategies. In contrast, NPM advocates basic regulatory measures to provide a financial framework which activates incentives and sanctions for autonomous decisions. Ex-ante steering produces inflexibility while ex-post steering measures the results' compliance with the central objectives leaving HEIs with flexibility to achieve these objectives. Details steering eradicates the advantages of decentralized autonomy. Contrastingly, NPM advocates the opposite in order to unlock HEIs full potential and facilitate the knowledge based economy. Therefore, steering is limited to a few goals with high priority. This is in line with the study of de Boer and File (2009) which states that high levels of flexibility and autonomy ease the specialisation process, promote better educational and research performance and facilitate excellence within HEI systems.

In more general terms, NPM aims to steer on all levels in order to balance the stress ratio between competing goals of the central and decentralized levels (Ziegele, 2008). At the state-HEI level, the balance is ensured by target agreements between individual HEI and the state. However, preferably, most decisions should be taken at the decentralized level due to its principal-agent problematic, - proximity, asymmetric information, and self-responsibility to increase flexibility, as well as efficiency, and effectiveness; while the central level sets a framework with general objectives (de Boer & File, 2009). Furthermore Ziegele (2008) explains that decentralized autonomy is a prerequisite to engage in internal competition. In order to implement competition for public funding, an incentive system needs to be established which rewards the achievement of central goals (Ziegele, 2008). Therefore, another NPM instrument is budgeting which fulfils three functions: an incentive/flexibility function, a legitimacy function, and an autonomy protection function. All three of them preserve and safeguard the NPM logic.

In order to describe the funding of HEIs, it is important to distinguish between the external funding and internal funding structure. In general, external funding includes basic funding, resources for quality improvements, the higher education pact, and third party funding and stems mainly from the state. In NRW, the basic funding takes the form of a real global budget with a few general allocations called annual state grant. Of this state grant, a percentage is allocated by the performance oriented resource allocation formula (*Leistungsorientierte Mittelvergabe (LOM)*). In NRW it amounts to 14% (Ziegele, 2008). The resources for quality improvements and the higher education pact are multiple year framework agreements between the state and HEIs, whereby the higher education pact aims to compensate the loss of tuition fees and the increase in enrolments caused by the doubled high school graduates. Another multiple year arrangement is the higher education agreement NRW 2015 which defines the performances of the federal state and HEIs. Yet another measure is target agreements for innovation support and profiling. In NRW, these agreements are made between individual HEI and the federal state using money from the innovation fund. The internal

funding regulations are varying among universities. But four approaches can be observed, namely income maximization (orientation to public funding indicators) versus profiling, income diversification (various different and independent sources), price policy of teaching, and research support (research individuals and positions HEIs) (Ziegele, 2008). The composition of these is determined by the HEIs' strategy.

In the following the internal financing instruments are presented, resource allocation, financial management, and controlling. The internal resource allocation in HEIs functions in a threefold structure. After the individual HEI received its funds from the ministry, the resources are allocated to the faculties, departments, institutes, and central institutions such as libraries, sport facilities, and student service centres. In general the resources are allocated through three instruments, formula, target agreements, and lump sum. In formulas, funding is based on the achieving of actual figures of certain indicators such as performance, work load, graduates, output, third party funding etc. Target agreements bargain and allocate the resources according to qualitative statements and quantitative normative figures. Lump sums, in contrast, are fixed amounts of money which are assigned at a defined level. These instruments are used to various degrees and differ in their composition in between HEIs.

In the process of deregulation and with the implementation of global budgets, faculties are more and more enabled to manage their decentralized budgets (Ziegele, 2008). The freedoms in this regard depend on the legal provisions in the country. In the case of this research, they depend on the national, federal, and HEI internal legal frameworks which are analysed in chapter 4. In line with the NPM argumentation, decentralization is a desired goal. The distribution of spending power occurs at central and decentralized level whereby the HEI needs to balance centrality and decentralism in order to preserve the rectorate's ability to act and parallel empower decentralized units with flexible instruments to take financial responsibilities. In the opinion of Ziegele (2008), both tendencies need to be combined. However, decentralization requires framework conditions in relation to decentralized management competences, information tools, controlling, and implementation strategies. Regarding these frameworks, HEIs face several design challenges. First, HEIs need to decide to steer the resources of the personnel costs by monetary size or positions, actual figures or average personnel costs. Second, ministerial frameworks demand internal provisions if the freedoms are not fully transferred to the decentralized units (Ziegele, 2008). Moreover he observed a trend towards increasing HEI internal regulations and rising financial competences of deans which need to be established by internal provisions. Regulations can serve as restrictions against malpractice. When potential malpractices are excluded by rule, then trust in the decentralized global budgets increases and disincentives can be avoided. Furthermore, internal regulations demonstrate the HEI's self-

regulation abilities which strengthen the state's trust and in turn safeguard the HEI's autonomy (Ziegele, 2008). The third challenge concerns internal markets. On the basis of the NPM principles, internal markets are utilized to establish a supply-demand relation and incentives for internal customer orientation to introduce and strengthen competition and market orientation. Controlling is the third instrument in the financing of HEIs. As a result of research limitations, this area is not covered extensively. However, controlling is an important cornerstone of the system since it facilitates its legitimacy for public funding by a reporting system and ensures its proper functioning (Ziegele, 2008).

The NPM logic advocates global budgets at the HEI level as well as at the faculty level. As mentioned before, centrality and decentralism need to be combined; here, various paths in the decentralisation process are possible too. In general decentralized global budgets are divided into four parts. Firstly, the faculty receives part of the budget for special functions which are allocated in advance. Secondly, the basic budget covers the personnel costs. Thirdly, the performance budget rewards the fulfilment of certain performance indicators, and fourthly, is the research budget for which the faculties must compete. Variations in freedoms, or better, autonomy capacities refer to the use of non-personnel and investment resources, generation and use of income and reserves, target boundedness, decentralized personnel costs (use of personnel costs, leave positions vacant, hire personnel), the participation in internal markets, economic activities, and building and construction operations. Therefore, the level of decentralisation partly requires and depends on the internal framework conditions and provisions (Ziegele, 2008). According to Federkeil and Ziegele (2001), the degree of autonomy depends on the extent of freedoms, budget restrictions, additional other restrictions, and internal resource allocation mechanisms. The two authors found that in the German higher education sector differences mainly regard the freedoms in personnel and construction costs. However, the legal environment of NRW in relation to higher education is presented in chapter 4.1.

3.7 NPM human resource management in higher education

As already stated, NPM affected not solely financial issues but personnel issues as well. In general, the steering approach shifted its focus from input to output and outcome. Experts of science are now supposed to manage within the new framework. In other words, the dealing of human resources in HEIs has changed from administration to management as well. NPM promotes a strengthening of the strategic guidance at the political level parallel to a relief of details intervention. Politic is supposed to set goals, provide resources, and control the performance of HEIs. It is rather concerning a final steering which focuses on the 'what' instead of the 'how'. It is HEIs' responsibility to generate the products and achieve the goals as contracted.

However, personnel administration or management in HEIs is a special case, because HEIs have been or still are public institutions and not private organizations with employer feature. Therefore, most of the staff has civil servant status. Moreover, higher education in Germany is a legislative regulated system. The service law alone led to the impression that human resource in higher education is a highly rigid regulated area which restricts the development of human resource management. Other factors relate to the organizational culture of HEIs in reference to personnel development, selection or promotion. Often these factors are not determined collectively by the institution but vary in between the faculties based on the natural talent of the responsible persons (Pellert & Widmann, 2008). Again, this might indicate that differences of real and formal autonomy occur at the institutional, departmental levels rather than at the national and international level. Nevertheless, Pellert and Widmann (2008) found that, human resource management requires collectively agreed standards which are hard to implement due to the traditionally high individual autonomy within HEIs. However, recent reforms shifted the autonomy focus towards institutional autonomy of HEIs. Similar to the developments in the financial area, the steering approach in the field of human resources changed. Similar to the questions of the legal status of HEIs, universities should have competences in regard to matters of human resources from a NPM perspective. In order to fulfill NPM functions and responsibilities, HEIs require sufficient leeway from the legislator to establish human resource concepts and strategies, and competences in appointments and recruitment in general, as well as decision making powers in reference to employment plans and remuneration in order to survive in the competitive national and international environment (Konegen-Grenier, 2013).

4. Findings

The next chapter presents the findings of the formal and real autonomy of HEIs which are based on the one hand on a literature review of mainly legal as well as policy documents, and on the other hand on the conclusions of the expert interviews, respectively.

4.1 Analysis of the formal autonomy

Since several years, Germany's higher education sector is in constant change. Each federal state implemented or is in the process of implementing reforms which reallocate competences and authorities (Kamm & Simoleit, 2007). Similar processes occurred at the national level as well which strengthened the position of federal states. The federalism reforms I and II overruled the national Framework Act of Higher Education and de facto had put it out of effect. This reduced the competences of central authorities in the higher education sector heavily. Nevertheless, federal jurisdiction is complemented by national coordination and support initiatives as well as by agreements at the *Kultusministerkonferenz* (Kamm & Simoleit, 2007). However, it is important to mention that central

authorities did not dissolve completely from the picture. The guiding direction is still set by European and national authorities and provides the same restrictions, incentives, and commands for each federal state.

North Rhine Westphalia possesses a vast higher education sector which in total amount to 37 institutions of higher education with the largest number of enrollments (Destatis, 2015). According to Data from Destatis (2015), the number of new students is almost twice as high as the second largest federal higher education sector in Germany, Bavaria (66.290 in winter semester 2015/16) and the number of students is growing continuously. In a period of ten years this number rose from 500.000 to 700.000 in October 2014 (MIWF, 2015a). According to a study of the ministry of statistics, every fourth student decided to attend classes in NRW in 2011 (Brugger, Threin, Wolters, 2013).

As the largest higher education sector in Germany, NRW received six billion Euros annually in 2014 (Horstkotte, 2014). The Higher Education Agreement NRW 2015 (*Hochschulvereinbarung NRW 2015*) guarantees the financial security of HEIs and provides a basic funding of at least 4 billion per year until 2015 (MIWF, 2015a). According to evidence of the European University Association (EUA) (Estermann, Nokkala, & Steinell, 2011), the previous higher education law (*Hochschulfreiheitsgesetz (HFG)*) established NRW at the European top in relation to internal autonomy (Estermann et al., 2011). This demonstrates how important policies and their effects are. However, before the higher education acts of NRW are presented, it is useful to highlight the German legal framework in relation to higher education in order to understand the whole picture. The last decade experienced essential changes in the relation between the central government and the federal states. Therefore, the last national higher education law, the so called Framework Act of Higher Education (*Hochschulrahmengesetz (HRG)*) as well as its 'executioners', the federalism reforms I and II, are briefly presented in the following. A more detailed illustration of the national reforms is provided in the appendix (7.5.2) due to the length limitation of this research. This approach enables the presentation of insights to the evolution of present higher education jurisdiction in Germany's federal states without extending the scope.

4.1.1 The Framework Act for Higher Education

The Framework Act for Higher Education (HRG) provides the general guidelines for higher education in Germany. However, in the wake of the federalism reform, most of the rules and regulations expired. Consequently, the potential risk of different regulations in the federal states, as well as among HEIs, increased.

The HRG regulated all state and state recognized HEIs according to §1 HRG. The act stipulated the general functions of HEIs, the internal organization, the legal status, and the standards for adjust-

ing the federal law accordingly (Bundesministerium für Bildung und Forschung (BMBF), 2005). The German Constitution states in Article 30 that the federal states have cultural sovereignty including the area of higher education. In other words, central (national) authorities had no responsibilities or capacities to govern the higher education sector. Furthermore, Article 5 of the constitution declares that the freedom of art and science, research and teaching is a fundamental basic law. In 1969, the central government acquired the competences to establish a framework act for higher education through Article 75 No. 1a as a consequence of wide variations between the federal states (Gewerkschaft Erziehung und Wissenschaft (GEW), 2015). Seven years later, in 1976 the first HRG was introduced. However, over the years several amendments to the HRG were implemented reflecting a shift towards deregulation and the reduction of normative steering including the openness to alternative leadership models, third party funded research, the universities' mandate to set up study regulations, as well as competences to organize and manage their internal and external affairs (GEW, 2015). This last issue in effect abrogated a third of the framework act relating to institutional autonomy (GEW, 2015)

Constitutional Court decisions in 2004 and 2005 strengthened the position of the federal states and consequently transferred competences to the federal states in 2006 in the federalism reform I leaving the central government with competences in relation to admissions and degrees. The federalism reform II altered the German federalism even further. As a result the relation between the state and the federal states changed and as a consequence, the autonomy of the federal states was affected as well. These changes are highlighted in the next section.

Based on constitutional law, higher education in Germany traditionally falls for most parts under the legislation of the federal states (art. 30 *Grundgesetz* (GG)). The implementation of the federalism reform I represented a further reduction of central control and competencies. In particular, the reform abolished almost completely the option for central authorities to implement framework regulations at the national level (GEW, 2015a). Moreover, it intended to strengthen the decision-making ability and the capacity to act, as well as to clarify responsibilities, and increase the effectiveness and efficiency of task compliance (BMBF, 2015).

The subsequent federalism reform II which was integrated into Constitutional Law in 2009 amended several articles (art. 109III and 115II GG) and implemented a debt brake for the central government and federal states. Various critics of the reform claimed that it heavily restricted the steering competences of central authorities and implied an artificial reduction of the strongly required financial resource provision of central authorities for HEIs (GEW, 2015). Additional changes concerned civil servant responsibilities which were transferred to the federal states in the Civil Serv-

ant Status Law (2009). The service law reorganization act (*Dienstrechtsneuordnungsgesetz*) was implemented as well in 2009 regulating the civil service status.

Another consequence relates to the abolishment of collective funding of university facilities and large equipment. However, this does not apply to research facilities and equipment which means that research and research funding remains a joint task of the state and the federal states. Furthermore, in December 2014, a new revision of article 91b GG was implemented which extended cooperation options in research between the state and its federal states aiming to strengthen key functions of HEIs. The revision introduced an additional long-term support mechanism for HEIs, individual institutes or institute networks. Furthermore, it eases the cooperation between HEIs and non-university bodies essentially by flexible and more efficient funding mechanisms for collective actions of state and federal states (GEW, 2015a). Therefore, the revision represents a big step towards increased (long-term) cooperation between state and federal states in respect to science and research. Further detailed information on the relationship between the state and the federal states is presented in the appendix (7.5.2).

4.1.2 Higher education in North Rhine-Westphalia

The reform process in NRW set in as early as 1999 with the introduction of the quality pact. This initiative aimed to amend the relation between the federal government and the HEIs by reducing central steering and increasing institutional autonomy (Kamm & Simoleit, 2007). In line with the set direction are the follow-up amendments to the higher education law of NRW which are presented in the next section.

In April 2000, the higher education law of NRW was implemented introducing several fundamental changes to its higher education institutions. Additionally, it incorporated the college laws and higher education laws under one umbrella. One of the most important aspects in this process was the reallocation of competences (Kamm & Simoleit, 2007). The ministry's power was reduced by losing the provision on building permission in matters such as the establishment, alteration, and abolishment of faculties, scientific facilities and institutions, as well as doctoral regulations to the HEIs. However, study programs were not affected and their establishment, alteration, and abolishment still needed the approval of the ministry. The law affected the internal organization of HEIs directly transferring competences from one organ to another, for example from senate to rectorate, from the faculty council to the deans, and from convent to the newly introduced extended senate. However, powers did not solely move horizontally from one organ to another but vertically as well transferring competences from university level to faculty level such as the enactment of doctoral and examination regulations (Kamm & Simoleit, 2007). The autonomy of HEIs is further strengthened by

providing them the freedom to regulate certain issues internally in the university statutes. These freedoms concern, for example decisions about rectorate or presidium, faculty management by a dean or deanery, the composition of bodies such as the rectorate, senate, extended senate, and faculty council, as well as the leadership structure of university bodies (Landesregierung Nordrhein-Westfalen (LR NRW): Hochschulgesetz, 2000).

Already in 2004, the higher education reform development law was implemented but lasted only three years and was then replaced by the *Hochschulfreiheitsgesetz* (HFG) in 2007. On the one side, the HFG shaped the higher education landscape further towards the neo-liberal ideal and on the other side, the act restructured the higher education law fundamentally (Knauff, 2007; Kamm & Simoleit, 2007; Horst & Fragel, 2008; Dilger, 2013). Especially article 1 represented a tremendous shift in the framework conditions for institutional competition in the region. In other words, NRW successfully increased its HEIs' competitiveness for the national and international challenge positioning itself among the EU top performers in reference to autonomy (Estermann et al., 2011). One key measure in this regard was the granting of independent legal status of HEIs in combination with increased competences. Consequently, the internal organization was restructured and competences were reallocated (LR NRW: HFG, 2006). Due to framework provisions of this research, a detailed analysis of the reform measures of the HFG is included in the appendix (7.5.3).

4.1.3 The *Hochschulzukunftsgesetz*

The *Hochschulzukunftsgesetz* (HZG) of NRW entered into force in October 2014 with the beginning of the winter semester 2014/2015 and with a one year transitional period. The Minister of Innovation, Science, and Research, Svenja Schulze referred to the newly implemented HZG as cornerstone in the creation of the higher education landscape in NRW (Ministerium für Wissenschaft und Forschung (MIWF), 2015). The HFG provided HEIs with extended competences on the one hand, and reduced the power of the ministry on the other hand. The new higher education law re-strengthened the ministry again and redistributed competences within HEIs. However, before the HZG could be implemented, a broad dialogue process involved various stakeholders in order to satisfy "all sides" since the draft laws drew fierce criticism from various sides (Burchard, 2014; Hild, 2014; Kamerichs, 2014; Konegen-Grenier, 2013). Further details on the criticism are presented in the detailed analysis of the HFG in the appendix (7.5.3). Nevertheless, according to Schulze this criticism was taken into account and the implemented HZG is the best possible result incorporating the various interests and demands (MIWF, 2015).

The HZG has taken up the critics and is regarded as a response to newly identified challenges. In order to meet these challenges the federal framework and its institutions needed to be positioned

accordingly from the ministry's perspective (LR NRW, 2014). The national changes in the secondary education system caused twice as much high school graduates who demanded access to higher education. This trend is accompanied by the demographic change. Both require measures which in the short term provide an increase and in the long term a decrease of places at universities without neglecting the necessary quality adjustments (LR NRW, 2014). The transition towards the knowledge based economy needs to be supported by corresponding changes in the study programs as well as in the compatibility of work and study. These changes include a redefinition of priorities, a reallocation of funding, and the identification and activation of cooperation and partnerships (LR NRW, 2014). In contrast to framework decisions at the federal level, HEIs are expected to further facilitate profiling and differentiation activities. From the ministry's perspective, previous years confirmed that the present environment is insufficient for the challenges. In order to cope with the new challenges, the law strengthens the public responsibility and democratic participation in regard to the relation between federal state and HEIs as well as within HEIs. In addition, it includes necessary amendments which result from previous jurisdictions. Basically, the changes to the higher education framework relate to three areas, the relation between federal state and HEIs, internal organization of HEIs, and equality and diversity. These changes are presented in the following section.

Firstly, the new law states that federal state authorities and HEIs are expected to increase their cooperation and enhance their partnership. In this regard, the law emphasizes the role of the federal state and strengthens its position as designer in relation to a common framework, high quality, a large study program portfolio, and diversity. The core of the new higher education system is represented by the higher education development plan of NRW and a modernized funding system which later is expected to fund HEIs in compliance with a strategic budgeting. Secondly, autonomous universities require a modern and professional management with a clear structure and definite competences in order to fulfill its research and education objectives. A similar perspective is taken by the HZG. Democratic participation, the unity of decision making power and responsibility, market orientation and related profiling, as well as dynamic flexibility are fundamental elements of the new law. Corporation style executives and leadership are necessities in the reformed environment. The rectorate remains responsible for the strategy and operative procedures while democratic participation is strengthened again on all levels of the university. The competences of the senate are re-strengthened as well since it is the body with the highest legitimacy established through direct elections. In addition, the student union law (*Studentenwerksgesetz*) is amended in order to facilitate the transition from student union towards service providers. And thirdly, the participation of students is strengthened and further promoted in combination with a well-designed study environment. Another emphasis is gender equality which is a response to the underrepresentation of women in science

and research. Apart from that, the new law takes the increasing heterogeneity of students into account and creates the legal basis for institutions to adjust their conditions of studying.

The development strategy of the federal higher education system is overall responsibility of NRW and is collectively decided by the ministry and HEIs. Previously, the ministry was solely responsible for the federal development strategy to which the performance agreements between ministry and HEI contributed. The individual university development plan (UDP) was designed by the rectorate and approved by the council. In other words, HEIs had the competence to set its own development plan without ministry interference (art. 1 §16I HFG NRW). This changed with the new law. In reference to article 1 §6II HZG NRW, the ministry established a binding federal development plan (*Landeshochschulentwicklungsplan*) for all HEIs which set a balanced range of services, subject diversity, and the number of study seats. The individual development plans have to be in concert with the federal development plan. The ministry concluded performance contracts with each university which established strategic goals, performance or financial objectives, and an instrument to measure the implementation process. In case such a contract cannot be concluded mutually, the ministry has the authority to set certain objectives alone after consultation with the rectorate and council.

The new law (HZG) rearranged the competences of the decision making bodies in the internal governance structure of HEIs in order to balance the internal forces more equally (MIWF, 2015) and react to the democratic deficit critic. One fundamental feature of the HZG is the re-strengthening of the ministry. Within the institutional governance framework, the council's competences increased as well, especially in relation to the supervision of the economic management. Article 1 §21 HZG NRW stipulates that the council needs to consist predominantly of external members. The senate is re-strengthened and now, takes part in the election process of the presidium or rectorate in compliance with article 1 §22I HZG NRW. In this organ each group of the university must be represented equally. In addition, HEIs are now obliged to safeguard a qualified representation with equal voting rights (art. 1 §22II HZG NRW). The rectorate is responsible for the fundamental orientation and steering of the university among others (art. 1 §16 HZG NRW). On the basis of the new law (art. 1 §17I HZG NRW), the members of the rectorate are elected by the higher education election committee (*Hochschulwahlversammlung*). This body consists to one half of all members of the senate and to the other half of all members of the council. Each vote in the HE election meeting has the same weight. In order to be elected, members of the rectorate require a majority vote in the election meeting and in both respective halves. In other words, this means, that the members of the rectorate require approval of both, the senate and the council, to be elected. By this, democratic legitimacy of the rectorate is enhanced. In contrast, prior to the HZG, members of the rectorate were elected by the council and approved by the senate. In cases where the senate did not approve the election, the

council had the possibility to bypass the senate's approval by qualified majority. The term rectorate is defined as a rule in the new law. Nevertheless, there still is the possibility to replace the rectorate by a presidium in the university statutes. Consequently, the rector is then replaced by a president. In the previous *Hochschulfreiheitsgesetz* the regulations in regard to the presidium were reversed. The HZG increases the competences of the council especially in regard to monitoring activities of the university's economic management which belongs to the tasks of the rectorate. A new element introduced by the HZG (art. 1 §22b HZG NRW) is the option to establish a university conference which needs to be included in the university statutes then. The university conference consists of the rectorate, the senate, the university council, the deans, a representative of the students in the faculty boards, the General Student's Committee, the equal opportunities officer, and the staff council according to §105 (*Landespersonalvertretungsgesetzes*), the ombudsman for disabled people, and the ombudsman for disabled or chronically ill students (art. 1 §22bII HZG NRW).

Another new instrument for participation is the member initiative (*Mitgliederinitiative*) at the university level as well as at the faculty level (art. 1 §11b HZG NRW). In case of success, the relevant body needs to advise and decide on that matter. The member initiative is successful if four percent of all members or three percent of all students of the university or a faculty support it. Moreover, the regulations for gender equality are intensified. This means that all bodies of the university need to be filled in conformance with the gender equality principle (art. 1 §11c HZG NRW). Exceptions to this rule are only allowed in justified cases. In contrast to the HFG, which designated one equal opportunities officer per university, the new HZG introduces equal opportunities officers for each faculty whereby several faculties can appoint a common officer (art. 1 §24III HZG NRW). This illustrates the trend towards increasing bureaucratization and managerialism.

Transparency was another topic fought over. While transparency advocates demand that politics should be more responsive to the general public than to industrial interests (Kamerichs, 2014), opponents claim that under a more open approach the cooperation between industry and HEIs might at best suffer, - at worst come to a deadlock. However, under the HZG, the ministry and the general public are provided with more and better information on the usage of the HEIs' basic funding. For example, article 1 §20V HZG NRW stipulates that the salary of the presidium must be made public. Certainly, this level of transparency does not fully apply to third party research. In contrast to the demand by critics for more transparency, article 1 §71a HZG NRW states that the general public can be informed after the research is completed (art. 1 §71aI HZG NRW) and only if a company secret is not revealed and no damage emerges thereof (art. 1 §71aIII HZG NRW). This approach seems to be a compromise for opponents as well as for advocates.

The HZG promotes the participation of students and strengthens their position. This is especially visible in the *Studienbeirat* which now incorporates the students more in the decision making process, particularly in the organization of study programs. Within their faculties they are included in the new *Studienbeirat* which's tasks include advisory functions to the dean and the faculty council in regard to teaching and study, especially in regard to study reforms and the evaluation of study and teachings. A further advisory function of the *Studienbeirat* relates to the exam regulations of the faculty council (art. 1 §29VIII HZG NRW). Additional alterations in this regard refer to the administrative board (*Verwaltungsrat*), the staff council's conference (*Personalrätekonferenz*), and the representatives assembly (*Vertreterversammlung*). Apart from that, the administrative board which is an organ of the student union, is expanded by two members, one additional student and one additional staff (art. 4 §4 HZG NRW, 2014). The staff councils conference of the student unions is created through the amendment of the NRW law on staff councils (*Landespersonalvertretungsgesetz*) in article 10, and the representatives assembly is created to strengthen the cooperation between student unions, universities, and local authorities and to advise in development matters (art. 4 §10, HZG NRW, 2014). This increased influence of students is evidencing the emphasis on participation and stakeholder influence which is an element of the NPM ideology.

Due to the heterogeneous student body and the students' various personal circumstances, the HZG provides now the option for HEIs to offer part time study programs in order to enable more people to study. This provides increased access to HEIs for students with vocational or family responsibilities (art. 1 §64IIa HZG NRW). Besides, e-learning is promoted and HEIs should introduce online study programs in order to diversify their portfolio (art. 1 §3III (2) HZG NRW). Diversity management is now a legal obligation of HEIs in order to counter the challenges of an increasing heterogeneous student body (art. 1 §3IV (3) HZG NRW). These developments highlight the aspirations towards the knowledge based economy. The HZG terminates with a few exceptions compulsory attendance (art. 1 §64IIa HZG NRW). Another element being terminated is the possibility to exmatriculate long time students under certain conditions (art. 1 §51III HZG NRW). In order to facilitate a successful study and ease the transition from school to university, HEIs can prescribe an admission test in their statutes to assess students' aptitude (art. 1 §48IX HZG NRW). This ability illustrates HEIs' autonomy in such matters. The new law reacts to the increasing heterogeneity of students stipulating the introduction of an ombudsman for disabled or chronically ill students (art. 1 §62b HZG NRW). The details for this are set out in the university statutes. The ombudsman has the tasks to satisfy the special needs, ensure compensations in relation to admission, study, and exams (art. 1 §62bII HZG NRW). As a consequence of the increasing heterogeneity, the HZG prescribes universities to conduct diversity management (art. 1 §3IV HZG NRW). Parallel to that the HZG aims to improve working conditions at NRW's universities. For this purpose, the federal state and the HEIs mutually develop a framework

codex for good working conditions relating to employment limitations and part-time employment, work environment, training opportunities, and health management (art. 1 §34a HZG NRW). In addition, article 1 §6V HZG NRW, enables the ministry upon approval by the parliament to set framework provisions in relation to HEIs' personnel, economic, and budget matters. In this regard, the ministry strengthened its interfering power to set certain principles, standards, and rules. Moreover, working conditions are expected to be more family friendly in order to combine family and profession. Gender equality is emphasized in the HZG introducing binding quota regulations. Article 1 §37a HZG NRW stipulates that the proportion of women professors in higher education is expected to be at least as high as in secondary education. This approach follows the so called cascade model (MIWF, 2015). Another paragraph (art. 1 §21III (3) HZG NRW) relates to the council and states that not less than 40% of members need to be women. In order to achieve group parity student assistants' interests are now represented in a special position as well (art. 1 §46a HZG NRW). Moreover, HZG extends the staff council. Student assistants will have a representative as well. The *Studierendenwerke* of NRW are enabled to hold a staff councils conference (art. 10 HZG NRW). In cases of promotion, the HZG introduces schemes for cooperation between universities and polytechnics/universities of applied science (art. 1 §67, 67a HZG NRW). These schemes facilitate enhanced cooperation and partnerships between polytechnics and universities. Here again the inclusive character of the NPM logic gets visible.

The HZG reduced the extended institutional autonomy provided in the HFG of 2007 (MIWF, 2015). Consequently, the ministry of innovation, science and research is re-strengthened in the steering of the federal higher education system. In 2006, the HFG was heavily criticized for the increase of autonomy. Autonomy extensions were mainly exercised by the executives and by the newly introduced council. Consequently, the senate's competences and participation capacities were fundamentally reduced and the ministry's functions were minimized to supervising tasks and with only a few options to influence the higher education system. These were the main points of critic. Nevertheless, HFG was implemented. The HZG takes up this critic again and provides the ministry with more competences and the senate with more powers, but it is not critic free. Some argue for further democratisation proposing a stronger senate and a weaker or abolished council while others criticize the new limited autonomy and the re-conveyance of competences to the ministry. Besides this, the HZG illustrates its orientation towards NPM principles in various instances.

4.1.4 Formal autonomy in the *Hochschulzukunftsgesetz*

The following section presents the analysis of the HZG in terms of financial and human resource autonomy presenting the formal external framework in accordance with the indicators.

The first subcategory of financial management is the budget. In reference to the first indicator global budget, the HZG states in article 1 §5II that the public funding covers the running costs and investments of HEIs to guarantee the compliance of their duties. Paragraph 5III declares that the state grant becomes asset of the HEI, as well as the income and assets of its legally dependent foundations exposing the global character of the HEIs' budget. This is in line with the NPM logic where the global budget is established by law (Konegen-Grenier, 2013). In NRW, HEIs receive real global budgets which are based on target agreements and higher education pacts, and are subdivided into basic budget, performance budget, and investment budget (Ziegele, 2008). This is confirmed by Hüther, Jacob, Seidler, and Wilke (2011). Referring to their findings, global budgets are state of the art. An additional aspect important to mention here, is article 1 §5IX HZG which enables the ministry to interfere by implementing framework provisions for the economic management and accounting system, for the attestation of the proper use of funds, and the annual accounts as well. The federal audit office examines the economic management of HEIs. These measures demonstrate the ministry's reluctance to provide full autonomy in financial matters. By these provisions, the ministry safeguards an option for interference. The second indicator analyses whether the budget is target bonded. In regard to the HZG (art. 1 §5I) the public funding is based on the functions, the contractually agreed obligations and the performance. This demonstrates the connection between public funding and target agreements of HEIs and the ministry. On top of this, each University had to sign the Higher Education Agreement NRW 2015 which outlines the ministry's funding obligations and HEIs' performance obligations. As it was mentioned earlier, the budget is partly based on target agreements between the individual HEI and the ministry. This resembles the NPM principles recommending multi-annual target agreements (Konegen-Grenier, 2013). Essential in this aspect is whether this system is mirrored in the internal organization of the HEIs' financial management. The third indicator refers to the competences in the budget management. The HZG declares in article 1 §19I that the chancellor manages the budget of the HEI and allocates the resources to the faculties. The senate in this regard has the competence to influence the principles of the central allocation mechanism (art. 1 §22I (5) HZG). In addition, the law (art. 1 §27I) prescribes deans to allocate resources within the faculties in compliance with the faculty's allocation scheme. Target agreements, as well as global budgets are rated as success models through increased flexibility, strengthened rationality, and higher efficiency and effectiveness (Hüther et al., 2011).

Summing up, the formal financial autonomy of HEIs in NRW is relatively high with global budgets, multiyear target bonded budgets, and autonomous budget management. Yet, the ministry reserved itself the opportunity to interfere by framework conditions besides the report and control systems. Nevertheless, internal financial decentralization is promoted by the HZG in relation to the resource allocation in faculties.

In relation to the second subcategory, Asset Accumulation and Economic Activities, the HZG provides competences to the HEIs, for instance in regard to the first indicator, company participation, article 1 §5VII presents the criteria for HEIs to establish, participate, take-over, or expand companies. While the NPM ideology advocates no authorization requirements from the ministry (Konegen-Grenier, 2013), criteria in this regard function as a form of prerequisite serving as limiting factor. Therefore, this provision is not complying with every aspect of the NPM principles. Nevertheless, important to mention here is that there is the possibility to participate in companies. The second indicator, investment, credit, and revenue generation is covered by article 1 §5V which states that credits for reimbursement can be raised if it follows commercial business principles and audited annual accounts exist, and article 1 §5II which outlines that the state grant can be used for investments. In addition to article 1 §5V, the *Wirtschaftsführungsverordnung* NRW says in article 1 §6 while meeting requirements HEIs can raise credits double the size of reserves. In regard to the NPM logic, HEIs should be allowed to invest independently, raise credits, and generate revenue from interest earnings at least within own income (Konegen-Grenier, 2013). The third indicator, use of reserves and income is addressed in article 1 §5III, income and assets of foundations are transferred to the HEIs accounts and reserves can be build and used. Moreover, article 1 §29II and IV enables the HEIs to charge for services. In the opinion of Konegen-Grenier (2013), NPM advocates the build-up and use of reserves and income for asset accumulation as another part of the income diversification process. From an NPM perspective, autonomy in these areas is important in order to enable HEIs to engage in entrepreneurial activities to counteract the decreasing public funding and compete on the international and national level.

Summing up, the level of autonomy in matters of the second subcategory is lower than in the first subcategory. While company participation and investment, credit, and revenue generation are enabled, the ministry set certain criteria limiting the HEIs autonomy. In relation to the use of reserves and income, the HZG provides an autonomous reserve management.

The category of human resource management contains four indicators. The first is (human) resource allocation. The HZG deals with this issue in several paragraphs, article 1 §19I says that the chancellor provides positions to the faculties, the senate can influence the principles of the allocation mechanism (art. 1 §22I (5) HZG), and deans distribute positions within the faculties (art. 1 §27I HZG). This is clearly in line with NPM which favors the independent allocation of positions within HEIs (Konegen-Grenier, 2013). The second indicator is financial remuneration, which is dealt with in the HZG in article 1 §39III, the HEIs set the amount of remuneration for teaching. Konegen-Grenier (2013) found that, NPM promotes independent decisions of HEIs on performance based remuneration. Based on data of the conducted interviews, performance based remuneration does exist in

NRW, but it is not fully implemented and represents just a percentage of employers' income. The third indicator refers to the appellate right and recruitment. The recruitment procedure is regulated in article 1 §38 HZG. The rectorate advertises the vacancy publicly on suggestions of the faculty. The faculty then sends the rector a list of nominations with two external expert reports. The senate sets the appellate regulation. However in reference to article 1 §37I HZG, the rector acts on the faculty's suggestion but also against or without its suggestion in certain cases, and then appoints professors. In certain instances the rector can request a new suggestion as well. In addition, the rector appoints professors, junior professors, and academic staff while the chancellor appoints the non-academic staff (art. 1 §33II HZG). Yet, supreme authority has the ministry (art. 1 §33II HZG). In parts, this is what NPM endorses, - the HEI's capacity to independently appoint academic and non-academic staff without any authorization requirements from the ministry (Konegen-Grenier, 2013). Hüther et al. (2011) evidenced that the full right of appeal leads to a significant acceleration of the process and enables rapid decisions in situations of competition. Furthermore, the authors argue that this competence shift was accompanied by an increased responsibility for quality assurance and controlling. The fourth indicator is the employer feature. This aspect is dealt with in several paragraphs, article 1 §2III HZG says that personnel is at the service of the university, and article 1 §33II states that the rector appoints the academic personnel while the chancellor appoints the non-academic personnel. The supervisor of the civil servants is the supervising office in accordance with article 1 §2II (1) of the federal civil service law which is the ministry, but it can delegate competences to the rectorate. Additionally, the ministry is the supervisor of the members of the rectorate and it can delegate related competences to the board of trustees (art. 1 §33III HZG). Moreover, the paragraph 33III of article 1 HZG states that the immediate supervisor of the academic personnel is the rector and the chancellor functions as the immediate supervisor of the non-academic personnel. Again, the law resonates with the NPM logic promoting the employer feature of HEIs (Konegen-Grenier, 2013), but it is not fully in line with NPM due to the ministry's clause on its supervisory functions. Nevertheless, the law has a clear NPM character. The potential advantage of the employer feature is its flexibility in creating or abolishing civil servant positions. Albeit, there is a danger that pension expenses and salary increases are transferred to the HEIs (Hüther et al., 2011).

Summing up, the autonomy of human resource management resembles only partly with the NPM principles. The HZG states that HEIs allocate their positions independently and are enabled to set remuneration for teaching, but this represents only a part of the income. The recruitment procedure is highly regulated in the HZG but HEIs can independently decide on academic and non-academic appointments. With the provision of the employer feature, the level of autonomy increased. In total the statutes of the HZG provide a partial autonomy with interference possibilities for the ministry.

This section presented the formal autonomy of HEIs in NRW in the areas of financial and human resource management in relation to its level of compliance with the NPM ideology. Obviously, the law follows the NPM principles but with some restraints where the ministry maintained its influence in some form or another. The tables 28 – 31 display the formal competences provided by the HZG in comparison to the NPM principles.

4.1.5 Internal frameworks: The University Development Plans

The internal formal framework of HEIs in regard to financial and human resource management is partly build by the UDP, which sets the main objectives and the key strategies to achieve them, mostly including among others the resource allocation mechanism. Therefore, the study includes the UDPs in order to illustrate the individual implementation strategies of the NRW agenda. Of the four observed universities, only one had not yet introduced a UDP at the time of the study. In accordance with the anonymization of the data, the numbering of universities was defined in a coherent manner.

The UDP of U1 identified key objectives, such as improvements in research, teaching, and internationalization in order to increase its attractiveness and strengthen its positioning on the regional, national, and international level, as main strategy. Four central areas were identified, i.e. recruitment and development of personnel, gender and diversity, internationalization, and information, consulting, and support. For the purpose of this study, only the first is presented in more details because merely this aspect relates to the research question directly. In order to improve the recruitment and development of personnel, the UDP U1 identified several strategies, which are presented in the following. In order to facilitate the key objectives, the human resource structure is reformed in order to strengthen its autonomous capacities. On the one side, U1 aims at a strengthening of the strategic orientation in the recruitment process, parallel to a professionalization of the appellate procedure. One measure in this regard is to identify personnel development as central task of the human resource department. The attractiveness of U1 as employer is raised by increasing the family orientation and friendliness as a workplace. On the other side, the development of junior scientific staff is supported by several measures. For instance, U1 established international and national graduate schools providing qualification, mentoring, and coaching programs to strengthen profile based research areas and support the postgraduate education. Another measure includes the international research master programs which are specialized and aligned with the graduation programs and the research priorities. Besides, the HEI introduced a dual career track to facilitate the recruitment of scientific personnel. Accompanying the reform of the human resource structure is the introduction of the new resource allocation model. Besides the increasing importance of performance based components in the financing system, growing national and international competition for resources, students, and scientists, and the progressive differentiation of the higher education

system, an explicit strategy orientation and steering is essential to prevent resource losses, and thereby avert steep cuts in research, teaching, and administrative support. The new resource allocation model emphasizes a targeted resource allocation with various indicators forming a combination of stability oriented basic components, incentive oriented performance components, as well as profile and innovation oriented strategic components. This model is guided by the internal strategy and profile, and the criteria of the external financing system of NRW. It clearly emphasizes target agreements and performance based budgets which demonstrate the NPM orientation. The allocation mechanism incorporates workload and performance in research and teaching of the individual faculties, as well as subject cultural differences and comparison at the same time. In general, the faculty budget is composed of 70% basic budget based on teaching workload and external indicators, 20% performance budget, and 10% strategy budget. Summing up, the new resource allocation model of U1 includes an assessable set of components in the key areas, research, teaching, internationalization, and gender equality.

The current UDP U2 represents the third phase of its long term development strategy 2000-2025. While phase I and II aimed at the modernization of the study system and the creation of flexible support structures for research and research priorities, as well as the support of the young academic generation, respectively, the phase III emphasizes the strengthening of the internationalization process. Therefore, the UDP U2 identifies the following objectives: increase the university's international visibility and competitiveness through interdisciplinary and worldwide cooperation in research and teaching, improve the conditions for top level research, improve the conditions for a successful study, and a strengthening of the university's resource basis. Moreover, it outlines various strategic areas, internationalization, recruitment and human resource development, gender equality, support of talent, inclusion and diversity, and university communication. The achievement of these objectives is accompanied by a reallocation of resources. For the purpose of this research, only recruitment and human resource development relate to the study's research question and are therefore presented in the following besides the changed allocation of funds. For U2 the recruitment policy is one of the key strategic areas in the internationalization process. Appellate decisions are based on quality standards in research and teaching performance, special eligibility and commitment in teaching, interdisciplinary research, and third party funding. Positions are internationally advertised illustrating a part of the internationalization strategy. While personnel costs are often consuming a lot of the budget, the U2's resource distribution presents a similar pattern which allocates the largest part of the resources to recruitment negotiations and negotiations with professors to remain in office. This development can be assigned to the growing national and international competition for excellent scientists in the NPM oriented environment as well as the HEI's efforts to position itself at the top. In order to promote human resource development, young scientists are

encouraged towards early research autonomy in research schools, career tracks, and junior professorships. The traditional resource allocation of U2, which had its own indicators, needs a modernization based on external benchmarks. Therefore, internal target agreements with duration of three years which are based on performance components are made with all units of the university, faculties, academic institutions, central bodies and service units, and the central administration demonstrating its NPM character. In regard to the outlined objectives and the highly competitive environment, the redistribution of resources is indispensable, especially for the purpose of the target agreements. The guiding principle of the new allocation mechanism is the performance related resource allocation. In other words, the budget of faculties is based on their performance on subject specific benchmarks as well as structural and dynamic components. The former refers to the basic budget, which each faculty obtains. The latter is performance related and is based on the individual target agreements of faculties, such as target values for graduates, and third party funding, as well as the faculty's contribution to the HEI's key objectives. The faculties developed and established procedures for the performance based allocation of structural budget adaptations. At this point, it would be interesting to assess the level of decentralization within U2 and whether and with what capacities decentralized units were empowered to compete in the new environment. However, due to the limited size of this research, this information needs to be obtained in another study. Anyways, this indicates a high level of decentralized autonomy and intra-institutional competition.

The UDP U3 presents itself as international operating, cooperation and focus oriented research university. The key priorities of the university management are human resource recruitment, strategic orientation, quality assurance, resources and income, and decentralization. In most of these priorities, the decentralization emphasis is highlighted, i.e. in regard to recruitment, the UDP U3 states that one of the key functions of faculties is to have a quality related appellate policy to support the aspirations of a research university; in reference to resources and income, the university aims to use its cost-saving opportunities and optimization potential on all levels; and in relation to decentralization, the degree of faculty autonomy increased steadily over the last years. Furthermore, the faculties bear the performance and result responsibility, while the central administration performs a coordinating task. The organization of U3 is characterized by a collegial and cooperative model between the central and decentralized bodies. Besides, various measures to support the young generation of scientists, such as national and international graduate schools, structured promotions, and diverse postgraduate models of faculties, the university is internationally active in the recruitment of students and scientists and aims at outstanding talents able to further support the university's objectives. Moreover, in exceptional cases, there is the instrument for excellence recruitments where the rector recruits proactively in coordination with the faculty and without advertising the office publicly. Internal recruitment is possible but highly regulated and therefore

very rare. This is confirmed by one of the interviewees (U3D1). The extension of the terms of service (*Emeritierungsordnung*) is another measure to retain excellent scientists. As already stated, the level of decentralization at U3 is high. The faculties established their individual tenure tracks resulting in a variety of procedures and they are individually responsible to increase their quality with each professor appointment which illustrates their competences in this regard. The university three has decentralized and autonomous budgets regulated in the *Hochschulwirtschaftsführungsverordnung*. Unfortunately, these documents could not be accessed. According to the UDP U3 the university aims to transfer the autonomy logic to all levels. Due to the decreasing public funding and increasing costs, the central administration of U3 has implemented a funding scenario till 2018 which estimates income and costs for the following years. Important to mention is, that the faculties decide autonomously on the savings which is again evidencing the level of autonomy. The faculties receive a continual budget. An adapted scheme is applied to the personnel costs. Besides these levels of autonomy, the UDP U3 aims to find a reasonable limit of decentralization in reference to substantial competences on the one hand, and to the critical amount of the budget on the other hand. This is evidenced for instance in the allocation of funds which separates personnel costs from the general budget. Another measure in this regard aims at the professionalization of the decision making structure through the introduction of faculty managers.

The fourth university was at the time of the research working on a UDP, in compliance with the new higher education law (HZG). Therefore, only information on the resource allocation model was obtained by request of the researcher. The model of U4 is as follows, the university allocates budgets to each faculty. The amount of the budget is determined by a basic budget, investment budget and non-personnel costs. The latter two are based on performance related indicators, such as graduates, third party funding, positions, and promotions. In order to control budget fluctuations, capping limits were established to restrict the maximum loss or win in the reallocation process. In addition, small faculties receive a minimum value for each professorship. The decentralized allocation of the resources is a task of the faculties. This illustrates partly the decentralization approach of U4, in regard to decentralized financial management. However, due to the limited obtainable information, a detailed assessment cannot be presented.

The observed UDPs of the analyzed HEIs shall now be compared in a nutshell. Important to mention is that the approach of U4 is not taken into account because U4 had not introduced a UDP yet. When the UDP U3 is compared to the other UDPs, the level of decentralization in U3 is obvious. While the UDPs of U1 and U2 provide the overall strategy, U3's faculties present their internal mission plans and strategies in full details themselves. Again, this illustrates the decentralized approach of U3 and its faculties' level of autonomy. Summing up, the university development plans outline in

more or less details the overall strategy and priorities. All three identified internationalization, decentralization, cost efficiency, research, and gender equality among others. These objectives are related to the provisions of the Higher Education Agreement 2015. One of the instruments to achieve the defined goals is the reallocation of resources. All four universities introduced some kind of performance related model. This as well as their emphasis on the four above mentioned objectives indicate a tendency to convergence when the general direction is observed. However, interesting here is that the decentralization level differs within the HEIs. This is confirmed by the external expert interview who stated that the level of decentralization varies in accordance with the specific characteristics of the university. Based on the analysis of UDP3, the research found that the decentralization approach differs from the other universities in regard to the U3's objectives, strategies, and identified measures. The level of decentralization of U3 is high in comparison to the other universities. In accordance with the UDP, the decentralization and autonomy principles are transferred to all levels. This is observable in the recruitment procedure where the faculty has the responsibility to improve its quality with each appointment delegating a high level of autonomy. Another example concerns the faculty's responsibility to contribute its individual strategy in the UDP which needs to be consistent with the HEI's overall strategy. At this point the question rises whether this will be observable in the real autonomy.

4.2 Analysis of the real autonomy

The following section highlights the analysis of the real autonomy in the categories of financial and human resource management. At the end of the chapter, the distribution of the categories and the overall institutional autonomy is illustrated.

4.2.1 Category Financial Management

Based on the above presented financial system, seven indicators were selected in order to analyse the variations between real and formal financial autonomy. Other aspects have been left out due to limitation reasons. The first subcategory assesses the faculty's competences in reference to the budget. The budget in NRW's HEIs has a global character and is often connected and based on various target agreements to ensure compliance. Budget management refers to the faculty's competences to allocate and administer resources.

The analysis differentiates between *high autonomy (K1)*, *medium autonomy (K2)*, *low autonomy (K3)* and *not deducible or not available (K4)*. Only interviewees, who indicated high autonomy on all three indicators, global budget, target bond, and budget management, were ranked in the high autonomy group (K1). If only two of the three indicators were perceived as positive, the interviewee was grouped in K2 (medium autonomy). But if only one indicator was observed as positive, in refer-

ence to autonomy, the participant was included in group K3 (low autonomy). However, in the case that two of the three indicators were not deducible because either the answer was refused or was not classifiable, the interviewee was assigned to group K4 (not deducible). A group representing no autonomy was not included since it is assumed that after the HFG³ each HEI established at least a certain level of autonomy. The analysis utilized the data of the second reduction of the answers of the interviewees. For reasons of readability and size, only the most important and outstanding reductions are elaborated on and assigned to the respective interviewees.

4.2.2 Subcategory Budget

According to the analysis of the subcategory budget, all groups are represented. Yet, there is a clear tendency towards high and medium levels of autonomy. In reference to the indicator global budgets, high and low levels of autonomy are almost equally represented with four and three interviewees respectively, and one who was non deducible. Besides this, it is important to mention that deans and chancellors confirmed each other's answer, i.e. "faculties do not have global budgets" (U2K1, U2D1 (low autonomy)); "faculties have a high level of financial autonomy" (U1K1), "faculties have a global budget" (U1D1; and U3D1, U3D2 (high autonomy)). In regard to the indicator target bonded, the distribution is equally spread over high and low autonomy with two non deducible. Interesting here is that while U1K1 is confirmed by U1D1 (low autonomy), and U3D1 by U3D2 (high autonomy), U2K1 (low autonomy) is not in accordance with U2D1 (high autonomy). According to U2K1 faculties of U2 are not bound by target agreements and are steered through a controlling system. Anyhow, contrastingly U2D1 states that the faculty budget is bound to target agreements. This might be explained by diverse understandings of the term or various levels of implementation because the recent UDP U2 states that the new resource allocation mechanism includes internal target agreements with all units of the university which are related to certain benchmarks (UDP U2). Again U3D1 and U3D2 illustrate consistency in their answers of partly target bonded budgets. The UDP U3 declares the introduction of a new performance or target related resource allocation mechanism. The third indicator presents a coherent picture with seven of the participants stating a high level of autonomy in budget management. Nevertheless, besides the congruence only U1K1, U3D1 and U3D2 perceive the budget management as fully autonomous while U1D1 states its connectedness to specifications and U2D1 describes it as partly autonomous.

³ Compare with HFG analysis in appendix (7.5.3)

Subcategory	K1	K2	K3	K4
Budget	U3D2; U3D1	U1K1; U2D1; U1D1	U2K1;	U4D1

Tab. 4: Subcategory: Budget (Total)

Level of Autonomy⁴: K1 = high autonomy (3/3 positive); K2 = medium autonomy (2/3 positive); K3 = low autonomy (1/3 positive); K4 = not deducible (2/3 negative)

In summary, the distribution in table 4 shows a tendency towards high and medium levels of autonomy which might be explained by the legislation. While article 1 §27I HZG prescribes that deans allocate resources within faculties, the two other indicators are less clearly regulated by the HZG for faculties. Furthermore, article 1 §19I HZG declares that the chancellor allocates the resources to the faculties. The provisions on the budget (art. 1 §5II HZG and §5III HZG) and target agreements (art. 1 §5I HZG) concern the HEI but not its internal units directly. The first states that the state grant covers the running costs and investments (art. 1 §5II HZG) and become HEI asset after their allocation (art. 1 §5III HZG), and the second says that the state grant is based on the duties, the contractually agreed commitment, and the rendered achievements. However, the provisions are directed to the HEIs which from an NPM perspective provide the guiding principles on how to manage these affairs internally (Ziegele, 2008). The UDPs of U1, U2, and U3 as well as the information of U4 in regard to target bonded budgets, state the introduction of target or performance related allocations. As already stated, the global budget of HEIs is state of the art (Ziegele, 2008; Hüther et al., 2011). One interesting aspect is the ranking of U2K1 in the low autonomy group (K3) while U2D1 is grouped in K2 (medium autonomy) which means that the dean perceived the level of autonomy higher than the chancellor. This might be explained by their different positions and the increasing decentralization process. While faculties had traditionally low levels of autonomy, the recent trend heads into the opposite direction.

4.2.3 Subcategory Asset Accumulation and Economic Activity

The second financial subcategory, asset accumulation and economic activities, studies the faculty's freedom in various economic activities. Company participation refers to the faculty's ability to establish, absorb, essentially expand, or participate in companies. Investment, credit, and revenue generation deals with the capacities of faculties to do investments, raise credits, and generate revenue, for instance by providing services, let rooms or facilities, or charge for services. The use of reserves and income concerns the faculty's freedom to build up and use reserves and income.

The analysis of this subcategory utilizes the characteristics of *high autonomy* (K5), *medium autonomy* (K6), *low autonomy* (K7), and *not deducible/not available* (K8). Interviewees who perceived three of the three indicators as positive or as having competences were categorized as high

⁴ There is no level of no autonomy since it is assumed that after the HFG each HEI established at least a certain level of autonomy

autonomy (K5). If two of the three indicators were positive interviewees were grouped as medium autonomy (K6) and as low autonomy (K7) if only one of the three indicators were perceived positively. In case that two or three indicators were non deducible or not available, the interviewee was assigned in K8 (N/A). The indicators solely distinguish between high and low autonomy as well as not available.

The first indicator is company participation. None of the participants perceived the level of autonomy at the faculty as high in this regard, and were therefore ranked in the low autonomy group with two providing no answer being grouped in the not available group (U1D1, U4D1). All stated that the participation in companies is managed centrally (E, U1K1, U2K1, U3D1, U3D2, U2D1). However, it seems that in U2 the impulse for such an activity can come from the faculty (U2K1, U2D1). The second indicator investment, credit and revenue generation displays a similar picture. All interviewees experienced low levels of autonomy with decentralized investments, credits and revenue generation and were therefore grouped in the low autonomy group. According to the interviews, faculties are not allowed to be economically active, raise credits or do investments (E, U2K1, U1K1, U2D1, U3D1, U3D2, U4D1). The third indicator is the use of reserves. Again, the interviewees perceived it similarly, with all identifying a high level of autonomy in the build-up and use of reserves. In other words, faculties have an autonomous reserve management (E, U1K1, U2K1, U1D1, U2D1, U3D1, U3D2, U4D1). However, besides similarities, there are various sharing models (E) and limiting measures (U2K1, U1D1, U4D1). Another interesting feature is presented by U3D2, who stated that despite the competences in regard to the use of reserves and income, the faculty cannot build up reserves because of decreasing funding and an increasingly competitive environment within the university (U3D2).

Subcategory	K5	K6	K7	K8
Asset Accumulation & Economic Activity (total)			E; U2K1; U1K1; U4D1; U3D2; U3D1; U2D1; U1D1	

Tab. 5: Subcategory: Asset Accumulation & Economic Activity (Total)

Level of Autonomy: K5= high autonomy (3/3 positive); K6= medium autonomy (2/3 positive); K7= low autonomy (1/3 positive); K8= not deducible (2/3 not available)

Summing up, all interviewees perceived faculty autonomy as low in regard to the subcategory asset accumulation and economic activity. In contrast, according to the HZG, HEIs receive a lot of competences in reference to all three indicators. The first is covered by article 1 §5VII HZG which defines the requirement for HEIs to participate in any form in companies. The second is referred to in article 1 §5II and §5V HZG in relation to investments and credits, respectively. In accordance with the HZG, the HEIs receive the state grant for their running costs and investments (art. 1 §5II HZG), and are allowed under certain circumstances to raise credits to cover their expenses (art. 1 §5V HZG). The generation and use of reserves is stipulated in article 1 §5III HZG which states that unspent resources

are available in the following budget year. The generation of reserves is an important measure for the faculty's financial autonomy. However, without additional measures and competences which promote the entrepreneurial character not only of HEIs but within HEIs, the way towards financial independence of HEIs can be long. Not only the environment between HEIs is increasingly competitive but the competition within HEIs is rising as well requiring faculties to position themselves and be economically active.

Category	A1	A2	A3	A4
Financial Management (total)		U1K1; U3D2; U3D1; U2D1; U1D1	E; U2K1; U4D1	

Tab. 6: Category: Financial Management (Total)

Level of Autonomy: A1= high autonomy (2/2 K1); A2 = medium autonomy (1/2 K2); A3= low autonomy (1/2 K3); A4= not deducible (2/2 not available)

Both subcategories of the category financial management needed to be characterized as high autonomy in order to be grouped in *A1 high financial autonomy*⁵. None of the participants were classified in A1. Most of them ranked in group A2 demonstrating *medium financial autonomy* (U1K1, U3D1, U3D1, U2D1, U1D1) while three (two (U2K1, U4D1) plus the external expert (E)) qualified for group A3 perceiving the financial autonomy of faculties as low. The data does not show major differences between chancellors and deans and the different grouping might be explained by the different decentralization approaches of the four Universities since U1 and U3 respondents are in the same group. Contrastingly, in U2 differences were found between chancellor (A3) and dean (A2).

When the real financial autonomy is compared to the formal financial autonomy, the following picture reveals. While the subcategory budget shows 71% of the respondents perceiving their autonomy as high (28%) and medium (43%), 100% of the respondents perceived their autonomy as low in the subcategory asset accumulation and economic activity. The subcategory budget presented some variations with at least 50% of the respondents perceiving the autonomy as granted in the HZG (art. 1 §5, §19, §27). While global budget and target agreements are provided to the HEIs, this might suggest an adoption of central provisions in the HEIs' decentralization process. According to the external expert interview, the running non-personnel costs are very decentralized with a trend towards decentralized global budgets but with differences in the personnel costs and the central influence on these. In addition, the budget and the level of its management autonomy depends on the HEI's development plan and target agreements. The variations might suggest different stages and different approaches of the decentralization process. Another explanation might be the different subject culture since the research studied a heterogeneous group. In regard to the budget, it seems that HEIs are more and more willing to delegate competences to the faculties. Asset accumulation and economic activities seems to be a different case. While the HZG provides competences to the HEIs (art. 1

⁵ check Appendix for *Overview of Categories* and *Definition of Categories*

§5 and §29 HZG), these are not transferred to the decentralized units except the generation and use of reserves. Under the assumption that competences should be delegated to the decentralized units and HEIs are supposed to include the HZG principles into their internal statutes (from an NPM perspective), the research found that there is a great difference between real and formal autonomy in regard to the subcategory asset accumulation and economic activities, especially in relation to company participation and investments, credits, and revenue generation, and minor differences in the subcategory budget.

In total the formal autonomy of HEIs in relation to financial management is high. The HZG provides global budgets, target agreements, autonomous budget management, requirements for company participation, and for investments, credits, and revenue generation, as well as an autonomous reserve management. However, according to the analysis, these competences seemed to be not fully transferred to the faculties. Deans and chancellors perceived the level of faculty autonomy in financial terms as medium to low. This is reflected as well in the dean's general perception of financial autonomy which shows 80% experiencing the autonomy as not sufficient. Formal and real autonomy are only congruent in two indicators, namely budget management, and the use of reserves. In both, respondents experienced high levels of financial autonomy at the faculty level similar to the legally provided competences. In reference to this, the HZG provides competences directly to the faculties (art.1 §27I HZG, & art.1 §5III HZG) leaving no room for deviation. The four other indicators were less positively perceived. But important to mention here is that the HZG leaves certain room to maneuver on the central-decentralized scope. This is evidenced in the indicators, global budget and target bond which show variations in the perception of autonomy. In relation to the former, almost half of respondents (43%) demonstrated low levels of autonomy. The latter was even less clear with half of respondents experiencing their competences as restricted. Formally, the level of autonomy in both is high (art. 1 §5I - III HZG) but in reality only 57% and 50% experienced their competences as autonomous. This means, that both indicators show only a partial congruence with the provisions of the HZG.

Besides this general negative perception, some positive effects were evidenced. For example, while the interviewees U4D1, U3D1, and U1D1 identified flexibility and planning security as effect of the increased autonomy, U2D1 agrees with them stating that the financial autonomy of faculties indeed increased but claims that it is still too centrally organized. Nevertheless, almost all respondents had at least some points of criticism illustrating the overall negative perception. Every dean perceived the laws and specifications in one regard or the other as restricting the financial autonomy of faculties. While U4D1, U3D2, U3D1 demand participation in the negotiations of the specifications of the resource allocation mechanism, U3D1, U3D2, U2D1, and U1D1 are advocating the reduction of

special programs and financial restrictions. Another aspect under critic is the underfunding which limits the autonomy and restricts planning security (U4D1, U3D1, U2D1, U1D1). All four named temporary special programs as factors in this regard. The interviewee U4D1 named the increase in temporary contracts according to the duration of special programs and U1D1 criticized the central steering through the strategy budget as additional factors. Another aspect accompanying autonomy is the reporting and controlling systems which increased enormously over time and is very time consuming (U2D1). In accordance with U3D2 the faculty is lacking experience and expertise in financial autonomy to achieve its full potential.

According to the interviews, especially U2K1, the reasons for this are on the one hand the distrust of the central administration of the faculties' management competences, and on the other hand the unwillingness or inability of faculties to manage. In regard to the unwillingness, faculty leaders might prefer to focus on academic matters such as in the traditional model. In relation to the inability, the faculty culture might be less economically or management oriented, and deans might be therefore not schooled in or familiar with management functions. Furthermore, as it is stated before, the reforms transferred functions to the faculties and strengthened the positions of deans, however, this implies that the acquired competences are new to them and might have therefore less understanding on how to use them. This is confirmed by U3D2.

4.2.4 Category Human Resource Management

The indicators of human resource management refer to the above mentioned competences. In total the research included four indicators. Resource allocation, in this regard refers to the faculty's competences to distribute positions including the ability to leave positions vacant, for instance in order to maintain its account balance or build up reserves. Financial remuneration of professors deals with the freedom of faculties to negotiate the remuneration of professors independently. The appellate right and recruitment indicator assesses the competences of faculties to recruit and appellate. And the last indicator, employer feature relates to the HEIs ability to employ academic staff. Traditionally, professors were employed by the ministry.

The category studied how deans and chancellors perceived the autonomy of faculties in relation to human resource issues. The characteristics are fourfold in *high autonomy*, *medium autonomy*, *low autonomy*, and *non deducible* or *not available*. Interviewees must perceive the autonomy of at least three indicators as high in order to be assigned with the characteristic high human resource autonomy. In case only 2 or 1 indicator was experienced as high, the interviewee was assigned medium or low personnel autonomy, respectively. If two of the three indicators could not be answered than the interviewee was assigned to the not available group.

Most of the interviewees experienced the level of autonomy in relation to human resource issues as low (85%), while 14% perceived it as medium (U4D1) (excluding the external (E) who was non deducible and was therefore grouped in A8. This distribution is mainly caused by the interviewee's (U4D1) perception of autonomy in regard to the indicator financial remuneration. This outlier represents a good starting point for the analysis. According to U4D1, there is a certain level of autonomy to negotiate salaries within the financial range. Nonetheless, the others agree that financial remuneration of professors is negotiated by the rectorate with no influence by the faculty. Despite the consensus of the rector's power, U2D1 acknowledges a weak influence on remuneration by negotiating the equipment of professors' positions such as facilities, staff, and resources. Nevertheless, U2D1 was assigned to the low autonomy group because a weak influence is not enough for being classified in the high autonomy group. The indicator appellate right and recruitment shows consensus in low autonomy of faculties, however, in varying degrees. While all agree that the appointment is done by the rector, this is not the case in relation to the faculty's influence in the appointment procedure. The interviewees (U4D1, U3D1, U1D1) experienced a certain but limited influence in the procedure. Nevertheless, according to the external expert, the faculty's autonomy in appellate decisions decreased in favour of the central administration. For instance in regard to U1K1, the rectorate is enabled to steer appointments by the allocation of positions and resources, and influence the procedure (U4D1, U3D2, U2D1, U1D1). Furthermore, the appointment procedure is a highly regulated process (U4D1). The allocation of resources (positions) is the third indicator of the category human resource management. The majority (85%) of the respondents perceived the faculty's autonomy as high. However, according to the external expert, the resource allocation model is decided centrally with various degrees of faculty participation. Yet, chancellors and deans perceive the faculty's competences in the allocation of positions as autonomous (U2K1, U1K1, U3D1, U1D1). However, in contrast to U3D1, U3D2 states that the faculty is not autonomous in the allocation of positions perceiving its level of autonomy as low. Furthermore, the interviewee added that the rector has personnel autonomy not the faculty and claimed that the dean's position needs a strengthening. This contradicting finding suggests that the level of autonomy within one HEI might vary in between faculties. This is confirmed by the external expert who said that the human resource autonomy depends on the level of decentralized personnel responsibilities which might vary from faculty to faculty. The indicator employment feature does not show any variations besides two interviewees with no response of whom one is the external expert. All perceived the autonomy of faculties in this regard as non-existent and agreed that only the rector has the employer feature. Nevertheless, they were classified as low autonomy while in relation to this indicator it should be no autonomy, in order to keep the coherence. Besides the exclusiveness of the rectors' employer feature, some of the deans perceived the changes of the reform in this regard as positive, especially in relation to their level of influence.

For example, U1D1 experienced that the rector can be more easily influenced in informal ways than the ministry. Furthermore, the process of the appointment procedure is more streamlined (U1D1, U2D1) and U4D1 attests a high level of influence in the appointment procedure at faculty level, but according to U1K1, the HEIs autonomy in human resources management is only limited by the employment plan.

In total this means, that most of the interviewees were assigned to the low autonomy group, with only one (U4D1) being represented in the medium human resource autonomy group. An interesting finding is, when chancellors are compared to deans of the same institution that they are assigned to the same group (U2K1-U2D1; U1K1-U1D1, U3D1-U3D2). This finding might suggest that besides potential detail differences between faculties of the same HEI the general perception of the autonomy within a HEI is similar.

Now the real autonomy of human resource management is compared to the formally granted autonomy. While the HZG provides competences in relation to financial remuneration to the HEIs, article 1 §39III HZG states that HEIs set the remuneration for teaching, demonstrating a high level of autonomy, but, the interviewees, except U4D1, experienced low levels of autonomy. The real autonomy in reference to resource allocation (positions) was perceived by the interviewees as high. The competences in these matters are provided by article 1 §19I HZG which says that the chancellor allocates positions to the faculties, while the deans perform this task within the faculties (art. 1 §27I HZG). In addition, the senate comments and recommends on the central position allocation schemes (art. 1 §22V HZG). In this aspect, real and formal autonomy match. In reference to the indicator appellate right and recruitment, the findings in the real autonomy indicate that faculties have low levels of autonomy in the recruitment and appointment procedures, with all perceiving similar levels of autonomy. A similar picture prevails in the indicator employer feature with the majority of respondents experiencing the faculty competences as very limited (U1K1, U2K1, U4D1, U3D2, U3D1, U1D1). In relation to the former indicator appellate right and recruitment, the formal autonomy of HEIs is high enabling the rector to appoint professors on the suggestions of the faculty (art. 1 §37I HZG). While in most of the federal states the employer feature remained within the ministry, NRW (since 2007) and Berlin (since 2003) in this regard are the exceptions within Germany (Hüther et al., 2011). In addition, article 1 §38 HZG regulates the appointment procedure, prescribing the guiding principles, while, the senate decrees the internal procedures in the HEI's appointment statutes (art. 1 §38IV HZG). This illustrates the level of institutional autonomy provided in the HZG leaving room for HEIs to manoeuvre. In regard to the latter, the formal human resource autonomy granted to HEIs, in particular the employer feature, is expanded by the HZG. According to article 1 §33III HZG the immediate supervisor of the administrative personnel is the chancellor. The rector is the immediate

supervisor of the academic personnel, instead of the ministry as it was previous to the HFG. Therefore, the formal autonomy is high in this regard.

According to the results, the interviewees experienced the personnel autonomy of faculties as low to medium. When these results are compared to the formal autonomy of HEIs, it gets obvious that there are differences. The analysis of the formal autonomy demonstrates that the HZG provides the HEIs with a great amount of human resource autonomy. However, in the observed cases it is not transmitted to the decentralized units. Nevertheless, from a NPM perspective, faculties have better information on their human resource status and affairs, as well as their strategy to position themselves on a local, regional, national, and international level in order to compete for resources on all levels. The external expert stated that faculty autonomy in human resource issues, especially appellate decisions, was reduced in favour of the central administration. These findings indicate a wide gap between real and formal human resource autonomy. While the institution is granted sufficient leeway (Hüther et al., 2011), the decentralized units of the observed cases in comparison demonstrate a very restricted human resource management. Konnegen-Grenier (2013) explains that universities can only fulfil the ideal of the self-sufficient and autonomous HEI if the legislator provides enough freedom to develop leadership models and human resource concepts. Furthermore, the author argues that in order to develop such models and concepts, the HEIs require autonomous competences in regard to appointments, recruitment, as well as employment plans and remuneration. A similar logic can be adopted in relation to the faculties representing a part of the institution. This is confirmed by the general perception of deans considering the level of autonomy as not sufficient. Yet, in comparison to the general perception of financial autonomy which was experienced by 80% as not sufficient, deans experienced the human resource autonomy in general as less negative with only 60%. Only U4D1 and U3D1 were classified in the positive group attesting a high and sufficient level of human resource autonomy, respectively. For U4D1, one salient example is the appointment of professors and staff without external influences. This perspective is heavily contradicting with the view of U3D2 who states that faculties do not have personnel autonomy and demands a strengthening of the dean's position. Others perceive the level of human resource autonomy as restricted by various factors such as the duration of temporary programs (U4D1), the criteria of the German Research Foundation (DFG) and the quality criteria in the appointment process (U2D1), and appointment regulations of third party research positions (U1D1).

The two positive perceptions might be explained by the subject culture as well, because when a dean wants to focus on academic affairs instead of management affairs even the lowest level of autonomy will be sufficient for him since he does not want to manage anyways. Therefore, in order to enable faculties to achieve its full potential and utilize the given level of autonomy totally, deans

need to be willingly trained in management issues. Another possibility is what several universities are testing; the introduction of faculty managers, but on the contrary, this option consumes resources which are not directly targeted at academic affairs and enhances the bureaucratization process. Nevertheless, the question rises whether this investment pays off.

Category	A5	A6	A7	A8
Human resource management (Total)		U4D1	U2K1; U1K1; U3D2; U3D1; U2D1; U1D1	E

Tab. 7: Category: Human Resource Management (Total)

Level of Autonomy: A5= high autonomy (at least 3/4 high); A6= medium autonomy (2/4 high); A7= low autonomy (1/4 high); A8 = N/A (2/4 N/A)

4.3 Institutional autonomy

The overall category institutional autonomy combines the two categories of financial and human resource management (Tab. 8; Tab. 9). Interviewees were identified as perceiving their competences as either high, medium, low or not available based on their classification in the other two categories. The levels of autonomy are defined as follows. In order to be grouped in *A9 high autonomy* interviewees needed to show high levels of autonomy in both categories, financial and human resource management. In case an interviewee perceived one of the two categories as medium and the other as high or low, he was grouped in *A10 medium autonomy*. The group *A11 low autonomy* was represented by interviewees who perceived competences in both categories as low or one as low and one not available. In order to be grouped in *A12 not available* the interviewees had to be classified in both categories as not available.

Table 9 presents the distribution of interviewees in relation to the institutional autonomy in which financial management and human resource management are combined. It illustrates that the majority of the interviewees (75%) were grouped in the medium autonomy group A10, with only two (U2K1 and E) being classified in the low autonomy group A11. This indicates that decentralized institutional autonomy in relation to finance and human resources in reality is perceived as medium to low. Interesting to note here, is that U2K1 experienced the level of the decentralized units as lower than the dean U2D1. Contrastingly, U1 and U3 do not show divergence between its interviewees. When the results of the analysis of the formal autonomy (table 28 – 31) are included, a conflicting picture appears which presents a high level of formal autonomy.

Category	High Autonomy	Medium Autonomy	Low Autonomy	Not Available
Financial Management (total)		U1K1; U3D2; U3D1; U2D1; U1D1	E; U2K1; U4D1	
Human resource management (Total)		U4D1	U2K1; U1K1; U3D2; U3D1; U2D1; U1D1	E
Institutional Autonomy (Total)		U4D1; U1K1; U3D2; U3D1; U2D1; U1D1	U2K1; E	

Tab. 8: Overview: Institutional Autonomy (Total)

Category	A9	A10	A11	A12
Institutional Autonomy (Total)		U4D1; U1K1; U3D2; U3D1; U2D1; U1D1	U2K1; E	

Tab. 9: Overview: Institutional Autonomy

Level of Autonomy: A9 = high autonomy (2/2 high); A10 = medium autonomy (1/2 medium & (1/2 high or low autonomy); A11 = low autonomy ((2/2 low) & (1/2 low & 1/2 N/A); A12 = N/A (2/2 N/A)

5. Interpretation of findings and conclusion

On the basis of the theoretical framework, conceptual arguments urged to expect that the real autonomy do not necessarily mirror precisely the formally granted competences. In order to test this empirically, legal documents as well as policy documents at federal and university level were analyzed to identify the formal autonomy provided to HEIs. The real autonomy of HEIs was assessed by conducting semi-open expert interviews with persons in leading positions at HEIs' central and decentralized levels. As it is illustrated, the study observed great differences between formal and real autonomy. In both categories, interviewees perceived their competences as less autonomous as they are formally granted. Consequently, the overall picture does not differ tremendously from that. While the analysis of the formal institutional autonomy evidenced high levels, the real institutional autonomy showed medium to low levels.

In both categories, none of the respondents experienced their competences as fully autonomous being ranked in the high autonomy groups A1 and A5. While in the financial category the majority perceived their freedoms as partial autonomy or medium autonomy, the human resource category demonstrated a low autonomy level. These findings of the real autonomy are contradicting with the formally granted autonomy which provides a lot of competences to NRW's HEIs. Therefore, this research demonstrated a divergence between real and formal institutional autonomy at faculty level, in particular in financial and human resource relations.

Real and formal autonomy only matched in three of ten indicators. The first and second are the indicators budget management and human resource allocation which are interrelated and highly regulated in the HZG providing competences directly to the faculty level (art. 1 §27 I HZG). The third is use of reserves. In contrast to the other two, the HZG does not provide competences to the faculty directly. This indicates that competences in certain areas are transferred to the decentralized units which in turn implies, that in other areas the central administration refuses to push the decentralization process further and delegate competences to the faculties. A similar conclusion can be drawn from the indicator global budget which showed that U1 and U3 provided their faculties with global budgets while the faculty budgets of U2 were not perceived as being global in nature. This seems to suggest that certain factors and regulations might reduce or restrict the competences in reality on the one hand, as well as that different universities have different decentralization approaches on the other hand. A similar result in reference to decentralization was found in the analysis of the UDPs.

Furthermore, according to U2K1 who is confirmed by U3D1, some faculties have little affinity to act autonomous based on volition, culture, and upbringing. Besides these factors, U2K1 and U3D2 added that management abilities of faculties depend on the personnel experience and expertise as well as the availability of personnel within the faculty. These statements seem to indicate that in addition to the decentralization approach, the decentralized autonomy depends on various faculty characteristics. One measure which is tackling this lack of management abilities is the establishment of faculty managers who run the day to day operations as well as non-academic affairs. Several universities are engaging in pilot tests to identify best practices. This finding sustains the statements of Hüther et al (2011) who evidenced a growing bureaucratization within HEIs. In accordance with U3D2, faculty managers are not increasing the competences but are better trained to utilize these. In other words, faculty administration is professionalized to be able to use the competences more effectively, be more economically active, become financially more independent in order to compete for various resources and increase its trustworthiness. However, the down turn of the bureaucratization process is that competences are transferred from the faculty councils to the deans reducing the academic collegial self administration competences even more, in favour of management competences of central and decentralized administration (Hüther et al., 2011). Furthermore, the introduction of faculty managers costs money which is consequently not actively directed towards academic activities and illustrates the central loss of trust in the abilities of the decentralized units to manage their affairs and the strengthening of management and bureaucratization processes. Another factor drawing resources to non-academic activities are the report and control systems which are legitimizing the autonomy from a NPM perspective but tie a lot of forces on all levels according to Hüther et al. (2011) despite other criticisms.

The overall institutional autonomy is based on the two dimensions under observation and leaves out the other two dimensions of the concept, - organizational and academic autonomy. In regard to the findings of the formal autonomy analysis, institutional autonomy can be considered to be high since both dimensions, finance and human resources, can be characterized as formally receiving a lot of competences. However, the majority of the Interviewees (75%) were classified in the medium autonomy group while the remaining 25% represented the low autonomy group. This result indicates that the institutional autonomy is perceived as medium to low. While the formally granted autonomy is high, the perceptions of reality demonstrate a contrasting picture, in reference to the research.

From a *principal agent theory* perspective, the divergence between real and formal autonomy might be explained on the one hand by the principal's loss of trust and on the other hand by conflicting preferences of the principal and the agent. Both emphasize the faculty's inability to adapt to the

challenges of the new environment. While the central administration refuses to delegate competences in certain areas to the faculties because of the faculty's assumed inability to manage, not all faculties are willing or able to execute management functions leading to a conflict of interests. Furthermore, the research found that while the institutional autonomy at the central HEI level increased further, these competences were not delegated to the decentralized levels. It seems that while the rectors demand trust from the ministry in form of increased autonomy, they refuse to transfer trust as well as competences to the faculties and enable them to be more financially independent and economically active in order to participate in the new environment efficient and effectively as well as to strengthen the HEIs from within. Besides these, the results of the interviews indicate that the faculty might not be equipped properly to function in accordance with the NPM principles. Moreover, interviewees perceived faculties to lack experience and expertise on the one hand, and its culture, willingness, and upbringing as potentially conflicting with NPM principles on the other hand. Therefore, the introduction of faculty managers or management training for faculty staff seems to be a strategy in order to re-strengthen central trust in decentralized units and empower them to utilize their full potential in the new environment and respond to the new challenges. However, in relation to this, it is important to not be captured by academic capitalism (Slaughter & Leslie, 2001) and stay academically and economically independent from private interests.

Generalizations from these findings are restricted on the basis of the limiting provisions of the master thesis' framework such as the scope and the time frame. The small sample size is an additional limiting factor. This aspect relates additionally to the low participation turn-out of chancellors and deans which makes generalizations extremely difficult, especially in regard to the findings in the individual HEIs between chancellor and dean. Furthermore, the research focuses on the financial and human resource autonomy exclusively leaving the other aspects of institutional autonomy out. Another limitation is the heterogeneity of the observed faculties. For these limitations, this research raises no claim to completeness and the results represent only tendencies which need to be tested in a more comprehensive research with an increased number of universities and interviewees as well as the inclusion of all autonomy aspects. Other follow up research might highlight the effectiveness of faculty managers by for example comparing homogeneous faculties with and without faculty managers. Another interesting future research might study the management autonomy of a homogeneous group of faculties which are very economically active and have large third party research co-operations such as in medicine, pharmacy, or economic sciences. Beyond that is an additional worthwhile aspect requiring observation which concerns the loss of trust within HEIs and its potential effect that comes with it when faculty managers are introduced. In relation to this topic, an interesting aspect is the council's role on institutional autonomy and the replacement of trust by audits. Moreover, the research found that the level of decentralization varies from faculty to faculty but it

could not be completely identified what the factors are which determine this level. A future study in this direction would be interesting and important for stakeholders, policy makers, central authorities of HEIs, faculty managers and staff, as well as researchers.

Overall, this research aimed at improving the understanding on autonomy in use in order to position universities in the new national and international environments and equip them with competences to face and react to the new challenges. Additionally, the analysis of NRW's autonomy approach provide insights on best practices, challenges and unintended backlashes which can be used by policy makers, university administrators, faculty managers and staff, researchers and other local, regional, national, as well as international stakeholders.

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7. Appendix

7.1. Category-tables with distribution

7.1.1 Category Financial Management

Sub-categories Budget, Asset Accumulation and Economic Activity

7.1.1.1 Sub-category Budget

Indicator	High Autonomy	Low Autonomy	Not Available
Global Budget	4 (C+D)	3 (C+D)	1 (E)
Target-bond	3 (D)	3 (C+D)	2 (E+D)
Budget Management	6 (C+D)	0	2 (E+D)

Tab. 10: Overview Budget

7.1.1.1.A Indicators

Global Budget	High Autonomy	Low Autonomy	Not Available
E			X
U2K1		X	
U1K1	X		
U4D1		X	
U3D2	X		
U3D1	x		
U2D1		X	
U1D1	x		

Tab. 11: Indicator Global Budget

Target-bond	High Autonomy	Low Autonomy	Not Available
E			X
U2K1		X	
U1K1		X	
U4D1			X
U3D2	X		
U3D1	X		
U2D1	X		
U1D1		X	

Tab. 12: Indicator Target-bond

Budget Management	High Autonomy	Low Autonomy	Not Available
E			X
U2K1	X		
U1K1	X		
U4D1			X
U3D2	X		
U3D1	X		
U2D1	X		
U1D1	X		

Tab. 13: Indicator Budget Management

Subcategory	K1	K2	K3	K4
Budget	U3D2; U3D1	U1K1; U2D1; U1D1	U2K1;	U4D1

Tab. 14: Subcategory Budget (Total)

Level of Autonomy: K1 = 3/3 positive (High Autonomy); K2 = 2/3 positive (Medium Autonomy); K3 = 1/3 positive (Low Autonomy); K4 = 2/3 N/A

7.1.1.2 Subcategory Asset Accumulation and Economic Activity

Indicator	High Autonomy	Low Autonomy	Not Available
Company Participation		6 (E+C+D)	2 (D)
Investment, Credit & Revenue Generation		7 (C+D)	1 (E)
Use of Reserves	8 (E+C+D)		

Tab. 15: Overview Asset Accumulation and Economic Activity

7.1.1.2.A Indicators

Company Participation	High Autonomy	Low Autonomy	Not Available
E		X	
U2K1		X	
U1K1		X	
U4D1			X
U3D2		X	
U3D1		X	
U2D1		X	
U1D1			X

Tab. 16: Indicator Company Participation

Investment, Credit & Revenue Generation	High Autonomy	Low Autonomy	Not Available
E			X
U2K1		X	
U1K1		X	
U4D1		X	
U3D2		X	
U3D1		X	
U2D1		X	
U1D1		X	

Tab. 17: Indicator Investment, Credit and Revenue Generation

Use of Reserves	High Autonomy	Low Autonomy	Not Available
E	X		
U2K1	X		
U1K1	X		
U4D1	X		
U3D2	X		
U3D1	X		
U2D1	X		
U1D1	X		

Tab. 18: Indicator Use of Reserves

Subcategory	K5	K6	K7	K8
Asset Accumulation & Economic Activity (Total)			E; U2K1; U1K1; U4D1; U3D2; U3D1; U2D1; U1D1	

Tab. 19: Subcategory: Asset Accumulation & Economic Activity (Total)

Level of Autonomy: K5= high autonomy (3/3 positive); K6= medium autonomy (2/3 positive); K7= low autonomy (1/3 positive); K8= N/A (2/3 N/A)

Category	A1	A2	A3	A4
Financial Management (Total)		U1K1; U3D2; U3D1; U2D1; U1D1	E; U2K1; U4D1	

Tab. 20: Financial Management (Total)

Level of Autonomy: A1= high autonomy (2/2 K1); A2 = medium autonomy (1/2 K2); A3= low autonomy (1/2 K3); A4= N/A (2/2 N/A)

7.1.2. Category Human Resource Management

Indicator	High Autonomy	Low Autonomy	Not Available
Resource Allocation	6 (C+D)	2 (E+D)	
Financial Remuneration	1 (D)	7 (C+D)	1 (E)
Appellate Right & Recruitment		8 (E+C+D)	
Employer Feature		6 (C+D)	2 (E+D)

Tab. 21: Overview Human Resource Management

7.1.2.A Indicators

Resource Allocation	High Autonomy	Low Autonomy	Not Available
E		X	
U2K1	X		
U1K1	X		
U4D1	X		
U3D2	X		
U3D1		X	
U2D1	X		
U1D1	X		

Tab. 22: Indicator Resource Allocation

Financial Remuneration	High Autonomy	Low Autonomy	Not Available
E			X
U2K1		X	
U1K1		X	
U4D1	X		
U3D2		X	
U3D1		X	
U2D1		X	
U1D1		X	

Tab. 23: Indicator Financial Remuneration

Appellate Right & Recruitment	High Autonomy	Low Autonomy	Not Available
E		X	
U2K1		X	
U1K1		X	
U4D1		X	
U3D2		X	
U3D1		X	
U2D1		X	
U1D1		X	

Tab. 24: Indicator Appellate Right and Recruitment

Employer Feature	High Autonomy	Low Autonomy	Not Available
E			X
U2K1		X	
U1K1		X	
U4D1		X	
U3D2		X	
U3D1			X
U2D1		X	
U1D1		X	

Tab. 25: Indicator Employer Feature

Category	A5	A6	A7	A8
Human resource management (Total)		U4D1	U2K1; U1K1; U3D2; U3D1; U2D1; U1D1	E

Tab. 26: Human Resource Management (Total)

Level of Autonomy: A5= high autonomy (at least 3/4 high); A6= medium autonomy (2/4 high); A7= low autonomy (1/4 high); A8 = N/A (2/4 N/A)

Category	A9	A10	A11	A12
Financial Management (total)		U1K1; U3D1; U1D1	U3D2; U2D1; E; U2K1; U4D1	
Human resource management (Total)		U4D1	U2K1; U3D2; U2D1; U1K1; U3D1; U1D1	E
Institutional Autonomy (Total)		U4D1; U3D2; U2D1; U1D1	U1K1; U3D1; U2K1; E	

Tab. 27: Overview Institutional Autonomy (Total)

7.2. HZG provisions

7.2.1 Financial Management

	Global Budget		Target Agreement		Budget Management		Company Participation		Investment, Credit, & Revenue Generation		Use of Reserves	
Autonomy Level	High A.	Low A.	High A.	Low A.	High A.	Low A.	High A.	Low A.	High A.	Low A.	High A.	Low A.
HZG	§5II; §5III		§5I		§19I(1); §27I		§5VII		§5II; §5V; §29II, IV		§5III	

Tab. 28: HZG Provisions Financial Management⁶

Financial management	NPM	HZG ⁷
Global Budget	Established by law	x §5II; §5III state grant becomes HEI asset
Target-bond	Multi-annual target agreements	§5I The public funding is based on the HEI's functions, the contracted duties, and its performance.
Budget Management	HEI executives allocate funds and decide independently on design of cost and performance accounting	x §19I(1) chancellor allocates resources to faculties x fac §27I deans allocate positions and resources within faculties
Company Participation	establishment of, or participation in companies shall not require authorization	x §5VII criteria for participation but authorization from ministry is not required
Investment, Credit & Revenue Generation	right to make investments, borrowing and generate from interest income, at least within own revenue	§5V (credit criteria for reimbursement: commercial business principles, audited annual accounts, ministry sets credit limit) §5 II (state grant for running costs & investment) §29II, IV charge for services
Use of Reserves	use of reserves and income for asset growth	§5III HEIs can build up reserves, funding as well as income and revenue legal entities becomes asset of HEIs and can be used in a succeeding year

Tab. 29: NPM and HZG Provisions Financial Management

⁶ The mentioned paragraphs concern article 1 of the HZG

⁷ The mentioned paragraphs concern article 1 of the HZG

7.2.2 Human Resource Management

	Resource Allocation		Financial Remuneration		Appellate Right & Recruitment		Employer Feature	
Level of Autonomy	High A.	Low A.	High A.	Low A.	High A.	Low A.	High A.	Low A.
HZG ⁸	§19I; §22I(5); §27I		§39(3)		§37(1); §38		§33(3)	

Tab. 30: HZG Provisions Human Resource Management

Human Resource Management	NPM	HZG ⁹
Resource Allocation	HEI central administration allocates funds	§19I chancellor allocates position and resources to faculties §22I(5) senate recommends. §27I deans allocate positions and resources within faculties
Financial remuneration	HEI decides independently on performance related allowances	§34I federal agreement on tariffs applies to university employees. §39(3) HEI set remuneration for teaching
Appellate Right & Recruitment	independent appointments without authorization by the ministry	§33(2) rector appoints profs §37(1) rector appoints profs on faculty's suggestion §38 appointment procedure
Employer Feature	HEI executives are supervisors of employees not ministry/minster	§33(3) immediate supervisor is rector (scientific p.) and chancellor (administrative p.)

Tab. 31: NPM and HZG Provisions Human Resource Management

7.3. Overview of categories

7.3.1. Category Financial Management

A1 High Autonomy (2/2 K1)

A2 Medium Autonomy (1/2 K2)

A3 Low Autonomy (1/2 K3)

A4 Not Available (2/2 N/A)

⁸ The mentioned paragraphs concern article 1 of the HZG

⁹ The mentioned paragraphs concern article 1 of the HZG

7.3.1.1 Subcategory Budget (3 Indicators)

K1 High Autonomy (3/3 positive)

K2 Medium Autonomy (2/3 positive)

K3 Low Autonomy (1/3 positive)

K4 Not Available (2/3 N/A)

7.3.1.2. Subcategory Asset Accumulation & Economic Activities

K5 High Autonomy (3/3 positive)

K6 Medium Autonomy (2/3 positive)

K7 Low Autonomy (1/3 positive)

K8 Not Available (2/3 N/A)

7.3.2. Category Human Resource Management

A5 High Autonomy (at least 3/4 positive)

A6 Medium Autonomy (2/4 positive)

A7 Low Autonomy (1/4 positive)

A8 Not Available (2/4 N/A)

7.4. Definition of autonomy categories

Autonomy Category	Definition	Ankerbeispiel	Rules of coding
K1: High Autonomy	The budget is highly autonomous, if, 1. financial competences in personnel or non-personnel matters exist, 2. the budget is bound to target agreements, 3. the resource allocation is autonomous.	„Budgetverwaltung im Rahmen von Personalstellen die dezentralisiert an den Fakultäten passiert. Und das gibt eine gewisse Autonomie in den Entscheidungen“ (U3D1). „Zielvereinbarung die dann den Rahmen setzt, aber im Rahmen dessen bewirtschaften da die Fakultäten den Großteil des Budgets. das ist ein sehr sehr dezentrales Model“ (E). „im Prinzip ja, die Fakultät ist zuständig letztendlich, wir haben hier ein budgetiertes personal, aber das ist für die Fakultät budgetiert und das wird auch von der Fakultät verwaltet, Dh. wir haben keine Budgetierung der Institute oder Abteilungen sondern wir machen das in der Fakultät, genauso haben wir eine Verteilung die wir autonom vornehmen können bezüglich der Zuweisung von Sachmitteln. das machen wir in der Fakultät sicherlich autonom“ (U3D2).	An interviewee needs to demonstrate high autonomy levels on all three sub-categories otherwise he is coded in another category.

Tab. 32: Category K1 High Autonomy of Subcategory Budget

Autonomy Category	Definition	Ankerbeispiel	Rules of coding
A7: Low Autonomy	The human resource management has a low autonomy if, 1. the resource allocation (positions) is not autonomous competence of the faculty 2.the financial remuneration is negotiated by the central administration 3.appellate right and recruitment are competences of the rector 4. the rector has the employer feature	"Ansonsten haben wir einen festen Pool von stellen der halt vergeben ist und der dementsprechend nur besetzt werden kann wenn er frei wird." (U3D1) "Auf Vergütung haben wir keinen Einfluss, das kann ich vorwegnehmen, also da haben wir kein Mitbestimmungsrecht." (U3D1) "Berufungspolitik ist was anderes, da können wir natürlich auch Beispiele sehen, dass Berufungen nicht durchgeführt werden oder Berufungen praktisch gestoppt werden oder erst mal abgewartet wird vom Rektorat. Da haben wir schon starke Einschränkungen." (U1D1) "Kann ich nicht beurteilen, ich selbst bin ja kein Dienstherr, ich bin ja nur Dekan und der Dienstherr ist der Rektor" (U3D2).	The interviewee needs to perceive his competences at least in one of the four indicators as positive in order to be grouped in A7 low autonomy.

Tab. 33: Category A7 Low Autonomy of Category Human Resource Management

7.5. Excluded chapters

7.5.1 Trend towards convergence - assessment of converging reforms

In the transformation process towards the knowledge based economy, many Western nation states are promoting "a stratified higher education system with a few research universities concentrating significant funding and a number of higher education institutions for provision of mass higher education, with limited research capacity" (Amaral, 2009). Therefore, national central governments implemented policies towards that goal, such as federations, mergers and other forms of institutional association. However, despite the various forms of institutional association, there is a common tendency aiming to increase international competitiveness and boost the transformation towards the knowledge based economy.

"The introduction of market-type regulation mechanisms was accompanied by substantial changes in the university governance, either because governments intended to give institutions what were considered more efficient governance and management mechanisms, or because the emergence of New Public Management induced a movement towards governance mechanisms more similar to the private sector" (Amaral, 2009). One example for the changes in the institutional structure is the increasing introduction of external stakeholders in the top decision making bodies which Amaral (2009) found in several European countries such as the UK, Austria, Denmark, Sweden, France and Portugal.

Another change brought by the transformation is the granting of independent legal status of public HEIs such as in the UK, Australia, and Austria (Amaral, 2009). Another element of change in this regard is the introduction of universities as foundations under private law. In Germany, Finland, and Portugal this element found its way into national law to varying degrees (Amaral, 2009). By granting independent legal status, managerial autonomy increases and external interference is reduced as much as possible. "However, transforming a public university into a foundation presents difficulties in restructuring internal management and, with the exception of Germany, staff may resist moving from a public service status to a foundation employee" (Amaral, 2009).

However, that does not mean that central authorities lost control rather that it replaced it with another form of control such as funding instruments (Amaral, 2009). These range from lump-sum and block grant budgets over targeted funding to performance based contracts. The latter is gaining in popularity in recent years since it enables central authorities to exert control over outputs of HEIs. Examples of forms of performance based contracts between public service providers (HEIs) and central government can be found in Denmark, Spain, France, Austria, Switzerland, Germany, and Portugal (Amaral, 2009).

Instead of the traditional ex ante control mechanisms, the transformation process introduced parallel to the provision of autonomy ex post control instruments such as quality assessment. According to Schwarz and Westerheijden (2004) less than half of the EU member states had supra-institutional quality assurance frameworks at the beginning of the 1990's. Within ten years, in 2003, all EU members except Greece had introduced some form of a quality assurance system. However, besides the common elements of internal self-evaluation, external evaluation, external review panel, and public reporting, there are differences as well in regard to the ownership of the system and the punishment regime.

7.5.2 Relationship between state and federal states

The framework act for higher education section (4.1) gives a glimpse on the relation between the central government and the federal states, in other words, the German federalism in the area of higher education. This relationship demonstrates the level of autonomy between the state and the federal states. Based on constitutional law, higher education in Germany traditionally falls for most parts under the legislation of the federal states (art. 30 *Grundgesetz* (GG)). In 2006, the implementation of the federalism reform represented a further reduction of central control and competencies. In particular, the reform abolished almost completely the option for central authorities to implement framework regulations at the national level (GEW, 2015a). In addition, the subsequent federalism reform II which was integrated into Constitutional Law in 2009 amended several articles (art. 109III and 115II GG) and implemented a debt brake for the central government and federal states. Various critics of the reform claim that it might lead to the further reduction of influence and control of central authorities (GEW, 2015a).

In 2006, the federalism reform entered into force which was seen as strongest constitutional reform with tremendous consequences for the higher education system (GEW, 2015a). The reform intended to strengthen the decision-making ability and the capacity to act, as well as to clarify responsibilities, and increase the effectiveness and efficiency of task compliance (BMBF, 2015). Particularly, the Excellence Initiative, the Quality Pact for Teaching, and the Higher Education Pact 2020 demonstrate the success of the federalism reform to establish a constructive framework for collective actions of state and federal states. As already stated, the option for central framework regulations was almost completely canceled out besides admissions and degrees. Nevertheless, these competences follow the framework of competing legislation. This means, that federal legislations are allowed to deviate from the central ones (GEW, 2015a). Nevertheless, the Standing Conference of the Ministers of Education and Cultural Affairs of the federal states

(Kultusministerkonferenz) decided to define common objectives in order to facilitate mobility, guarantee the approval of degrees, as well as their quality (GEW, 2015a). Additional consequences related to the shift of regulatory competences of the central government towards the federal states in regard to civil servants. In 2009, the Civil Servant Status Law (*Beamtenstatusgesetz*) replaced the Civil Service Framework Law (*Beamtenrechtsrahmengesetz*), which centrally regulated basic civil service law issues. According to the new law, salaries and pensions of civil servants are now sole responsibility of the federal states. This affected most of university professors (GEW, 2015a). In addition, the service law reorganization act (*Dienstrechtsneuordnungsgesetz*) was implemented in 2009 as well regulating the civil service status of fulltime academic and executive personnel at (public) HEIs. Another consequence relates to the collective funding of university facilities and large equipment. Formerly, the federal state and the central government shared the costs but nowadays, the reform abolished this option. However, this does not apply to research facilities and equipment. In other words, this means that research and research funding remains a joint task of the state and the federal states. Various constitutional regulations, the Joint Science Conference (*Gemeinsame Wissenschaftskonferenz*), and the German Council of Science and Humanities (*Wissenschaftsrat*) guide, define and regulate these joint tasks.

The second federalism reform was established in 2009 intending to implement a revision of the funding regime, especially under the aspect of Germany's federal character. Two years later, in 2011, the debt brake for federal states and the central government was introduced, revising the basic law once again. In more details, this implied on the one side, an absolute new debt ban for federal states, and on the other side, a maximal annual new debt growth of 0.35 % of the gross domestic product at the national level. According to critics, this heavily restricted the steering competences of central authorities and implied an artificial reduction of the strongly required financial resource provision of public authorities for HEIs (GEW, 2015).

In December 2014, a new revision of article 91b GG was implemented which extended cooperation options in research between the state and its federal states aiming to strengthen key functions of HEIs. Formerly, state and federal states were only allowed to collectively fund non-university research institutions (art. 91b paragraph 1 no. 1 GG), while HEIs, in accordance with article 91b § 1 II GG were only supported by the state through thematically restricted and temporary projects (BMBF, 2014). The revision introduced an additional long-term support mechanism for HEIs, individual institutes or institute networks. Furthermore, it eases the cooperation between HEIs and non-university bodies essentially by lesser complex and more efficient funding mechanisms for collective actions of state and federal states (GEW, 2015a). Therefore, the revision represents a big

step towards increased (long-term) cooperation between state and federal states in respect to science and research. The revised article 91b § I GG reads as follows:

"(1) The Federation and the Länder may mutually agree to cooperate in cases of supra-regional importance in the promotion of: 1. research facilities and projects apart from institutions of higher education; 2. scientific projects and research at institutions of higher education; 3. construction of facilities at institutions of higher education, including large scientific installations. Agreements under clause 2 of paragraph (1) shall require the consent of all Länder. (2) The Federation and the Länder may mutually agree to cooperate for the assessment of the performance of educational systems in international comparison and in drafting relevant reports and recommendations. (3) The apportionment of costs shall be regulated in the pertinent agreement" (Juris, 2014).

7.5.3 Detailed Analysis of the *Hochschulfreiheitsgesetz*

The HFG established a modified presidium constitution as principle but left open the option for rectorate constitutions which then needed to be incorporated into the university statutes. Yet, in this case, article 1 §14 II HFG NRW applied adjusting the rectorate constitution in accordance with the presidium constitution of the HFG. NRW followed the path of several other federal states in introducing the university council (Knauff, 2007). The HFG in article 1 §14 I HFG NRW established it as central organ next to presidium, president, and senate. Referring to article 1 §21 HFG NRW, the university council fulfilled advisory and supervisory functions of the presidium and had important decision making power. However, besides these top-down regulations, the HFG, particularly article 1 §15 II 1, 3 HFG NRW, granted HEIs a high level of autonomy by allowing various detail decisions to be taken at the institutional level in the university statutes, including the competences of the president. As described by Knauff (2007), the HFG represented a tremendous step towards institutional autonomy not only in regard to previous jurisdictions but as well in comparison to other federal states. As already mentioned, this was evidenced in the EUA autonomy report of 2011 which testified NRW's high level performance in reference to autonomy.

The presidium led the university on the basis of article 1 §16 I 1 HFG NRW and functioned as executive board. This Paragraph provided it with full competences which are only restricted by other regulations of the HFG NRW. The presidium was able to exert influence through the development plan (art. 1 § 16I HFG NRW). In relation to the other organs, it implemented the decisions of senate and council and is obligated to give them information and account. Conversely, the presidium can command all other organs except the university council to give information and take actions in their functional responsibility. Furthermore, the presidium had the task to supervise the university in legislative and economic issues (art. 1 §16IV HFG NRW).

The HFG granted the president a central role but only set certain standards and rules in relation to its legal position (art. 1 §15I Nr. 1 HG NW, §16 I 3 HG NW, §17I (2), II HG NW, §18I, II, III (1), (2) HG NW, §27IV (3), V (1) HG NW, §33II (1), III (2) HG NW, §37 f. HG NW) and left the essential aspects to the university statutes article 1 §15II HG NRW. This represents a high degree of institutional autonomy which enables a definite strengthening of this position depending on how many options of article 1 § 15II HFG NRW are established in the university statutes (Knauff, 2007).

The introduction of the university council as central body was among the most fundamental changes in the amended higher education law (Knauff, 2007). With this approach, NRW followed the footsteps of several other federal states. However, besides the similar approach, there are various differences in regard to the council's composition, competences and functions (Knauff, 2007). The provisions in this regard in the HFG, in particular article 1 §21 HFG NRW, are very loose, leaving room for HEIs to develop a certain model in their university statutes. Important to note here are the possible options in the university statutes. The council is composed of six, eight, or ten members (art. 1 §21VI (4) HFG NRW) of which at least half needed to be external (art. 1 §21VIII HFG NRW) in order to connect with industry and society. Members are elected by two-thirds of the votes in the election committee and are approved by the senate and the ministry. The chair must be held by an external. The council functions not purely as advisor and supervisor of the presidium (art. 1 §21II HFG NRW) but holds substantial operative functions as well such as through statements on the reports of the presidium (Nr. 4) and approvals of the university development plan and performance contracts, among others, according to article 1 §21I (2) HFG NRW. These activities display the operative influence of the university council. Furthermore, the council can occupy additional areas and functions in compliance with article 1 §21VI HFG NRW. The senate lost in importance after the implementation of the HFG although it is listed as central organ of HEIs according to article 1 §14I (4) HFG NRW. The extended senate is abolished in the HFG. The composition and the chair are regulated through the university statutes, thereby increasing the institutional autonomy further. In addition, the HFG strengthened the democratic participation within HEIs and their organs, particularly in reference to the academic and student self-governance bodies. Another aspect of the HFG is the competence transfer to appoint professors from ministry to HEI.

As it is evidenced, the HFG changed the legal basis of HEIs in NRW tremendously as well as its internal organization. The introduction of the presidium constitution and the university council which is equipped with extensive competences are among the most prominent examples for the changing internal organization (Knauff, 2007). In addition, and even more important, the HFG provides HEIs with extensive autonomy especially in relation to the room for manoeuvre in the university statutes. Parallel to this development is the general aim to reduce the influence and control of the ministry

(Kamm & Simoleit, 2007; Dilger, 2013). Kamm and Simoleit (2007) refer to this as a reallocation of competences in favor of HEIs. Nevertheless, the ministry has not lost all of its powers and determines the overall innovation strategy and the development frameworks in which HEIs can move, as well as the performance contracts with the HEIs. In addition, from the perspective of Dilger (2013), the state retained its control through the university council by the ministry's approval of council members and in the election process of the executives with its new voting power. He argues further, that the HFG reduced the control and influence of the state in some areas but was extended and reinforced in other areas such as the university council which elected, supervised or even formed the strengthened executive level. Additionally he explains that the state retained its crucial control and influence anyhow through the provision of the majority of HEIs' funding and through its laws.

Before the HZG was implemented, its draft versions drew fierce criticism. Main criticism came from rectors and was directed towards the re-strengthening of the ministry and the reduction in autonomy. Draft laws proposed that the parliament is only involved in the planning principles for HEIs, while the concrete higher education development planning is negotiated without the involvement of the parliament. Especially the development of framework conditions concerning good working conditions, a common structure of economic plans, or the ministry's interference in issues of human resources and the budget of individual HEIs met heavy resistance from the rectors besides the democracy reservations (Burchard, 2014). Notwithstanding, under the final HZG framework, conditions are decided by the parliament. In addition, the federal higher education development plan is approved by the parliament as well (Spiegel, 2014). Study success and measures to ensure study success is emphasized in the HZG. However, according to critics, HEIs need to remain flexible and autonomous in order to counter university drop-outs to facilitate study success instead of the ministry's interference and the linkage of financial resources to specific performances (Hild, 2014). Dilger (2013) argues in favour of internal autonomy as well and proposes to provide HEIs with more options and freedoms to regulate their university councils themselves, i.e. composition in favour of internal members (majority or purely internal members), abolishment, etc., in order to diversify the higher education landscape of NRW, increase its competitiveness and identify best practices.

Torsten Bultmann from the association of democratic scientists (*Bund demokratischer Wissenschaftlerinnen und Wissenschaftler (BdWi)*) formulates his critic to the new HZG more sceptical and demands a reinforcement of democratic principles instead of a strengthening of corporative ideas. HEIs need to be positioned in such a way to strengthen the social, civil, and democratic development and responsibility. From his perspective the draft HZG satisfies HEIs

executives' and industry's interests rather than social, democratic and civil responsibilities (Kamerichs, 2014) demanding a return to HEIs' traditional function to serve the general public.

Transparency in relation to third party research funding is another aspect under critic. The draft HZG stipulated that information of research projects are supposed to be made public only if investors agree and only after the completion of the research. Kamerichs (2014) has the opinion that the draft HZG favours specific (industrial) interests over the interests of the general public. Contrastingly rectors claim if such a provision is implemented that the success of the cooperation between HEIs and industry is being jeopardized. This might have consequences for more than 2500 positions of scientists (Burchard, 2014). They further argue, that the external research funding increased by more than 50 percent under the HFG and the doubled demand challenge was tackled successfully (Burchard, 2014; Hild, 2014). Therefore, they do not see the necessity for the new law (Burchard, 2014). In regard to the rectors' fear of decreasing cooperation with industry and the resulting income losses, the ministry responded stating that the transparency provisions of the HZG cover only the research topic, the funding volume, and the investor instead of details relevant for patents (Burchard, 2014).

Anyhow, this provision found its way in the HZG, specifically in article 1 § 71a HZG NRW. In contrast to Kamerichs (2014), the federal conference of rectors (*Landesrektorenkonferenz*), the association of HEIs in NRW, additional HEI representatives, as well as the Chamber of Industry and Commerce of NRW claim that a reduced autonomy might lead to restrictions in the performance ability and capacity in research and teachings (Konegen-Grenier, 2013). Furthermore, the author argues that profiling competences would suffer in such a development, as well as the efficiency and decision-making ability.

7.6 Basic structure of the interview protocol

A. Allgemeine Deregulierung (5 Minuten)

I. Im Folgenden würde ich zunächst gerne kurz mit Ihnen über Deregulierung und Autonomie in Ihrer Universität im Allgemeinen sprechen.

- a) **Wie schätzen** Sie die Deregulierung und **Autonomie** Ihrer Hochschule ganz **allgemein** ein?
- b) **Wie bewerten** Sie **insgesamt** die **Autonomie** der **dezentralen Einheiten** innerhalb Ihrer Hochschule?

B. Deregulierung Themenfelder (40 Minuten)

II. Finanzmanagement (20 Minuten)(Allg.: Umfasst die Planung, Steuerung und Kontrolle aller Maßnahmen zur Mittelbeschaffung (Finanzierung) und Mittelverwendung (Investition))

Wie nehmen Sie im **Allgemeinen** die Autonomie im Bereich Finanzmanagement innerhalb Ihrer Hochschule wahr?

Inwiefern sehen Sie Ihre Fachbereiche von der zentralen Hochschulleitung bemächtigt Finanz Angelegenheit **autonom zu gestalten**?

A) Subkategorie: Globalhaushalt (=State of the Art, basierend auf Zielvereinbarungen und Pakten, gliedern sich in Grundbudget, Leistungsbudget und Investitionsbudget)

- **1.** Nehmen Sie die **Mittelbewirtschaftung** als autonome Aufgabe Ihrer Fachbereiche wahr? ->Begründung; Hindernisse/Freiheiten?
Würden Sie die Mittelbewirtschaftung als autonome Aufgabe der dezentralen Einheiten sehen? -->begründen
(Mittelbewirtschaftung (autonome finanzielle Entscheidungen über die Verausgabung von Geldern (zentral (Leitung) vs. dezentral (Fachbereich))
- **2. Inwieweit** haben Ihre Fachbereiche **Einfluss auf die Zielvereinbarungen** innerhalb der Hochschule?
dh. die Fachbereiche können unabhängig agieren?

B) Subkategorie: Vermögensbildung & wirtschaftliche Betätigung

Inwieweit sehen Sie Ihre Fachbereich von der Hochschulleitung bemächtigt **autonome Entscheidungen** über **Vermögens bildende und wirtschaftliche Maßnahmen** zutreffen? AM(hoch=welche Freiheiten; niedrig=welche einschränkende Faktoren)

- **1. (Nutzung von Rücklagen& Einkünften** (möglich) AM(Einschränkungen vs. Freiheiten)

Wie nehmen Sie die Freiräume in der **Nutzung von Rücklagen & Einkünften** innerhalb der Fachbereiche wahr?

Würden Sie sagen das Ihre Fachbereiche die Rücklagen und Einkünften autonom nutzen können?

2. Investitionen, Kreditaufnahme, & Erwirtschaftung, (Rahmenvorgaben §5 IX) AM(wenig, eher wenig, eher viel, viel)

Inwieweit können Ihre Fachbereiche **autonome Entscheidungen** im Bezug auf Investitionen, Kreditaufnahme und wirtschaftlicher Aktivitäten treffen?

Was sind einschränkende bzw. fördernde Faktoren?

Heißt das, dass die Fachbereiche autonom in diesen Bereichen entscheiden können?

3. Unternehmensbeteiligung, (Das neue Gesetz schreibt keine Genehmigung durch das Ministerium vor, setzt allerdings gewisse Kriterien)

Würden Sie die Entscheidungsmöglichkeiten Ihrer Fachbereiche bezüglich Unternehmensbeteiligungen als autonom bezeichnen?

-->Begründung

Inwieweit werden diese Freiheiten wahrgenommen?

Wie schätzen Sie **insgesamt die Effekte** von Deregulierung und Autonomie im Bereich des **Finanzmanagements** ein?

Welche positiven oder negativen **Effekte** hatte dies für Ihren Fachbereich, insbesondere auf die Kernaufgaben Forschung und Lehre?

In welchen Bereichen des Finanzmanagements würden Sie sich **zusätzliche Freiheiten** wünschen?

III. Personalmanagement (20 Minuten) (=Definition von Zielen und Standards in Bereichen Personalgewinnung, -erhaltung, -beurteilung, & -entwicklung)

Durch das HFG wurden Hochschulen in NRW zu **Anstalten öffentlichen Rechts** umgewandelt und erhielten **somit Personalautonomie**.

- **Wie** nehmen Sie im **Allgemeinen** die Autonomie im Bezug auf Personal Angelegenheiten in Ihrer Hochschule wahr?
- **Inwiefern** sehen Sie Ihre Fachbereiche von der zentralen Hochschulleitung **bemächtigt Personal Angelegenheit autonom zu gestalten?**
(Berufungsrecht; Stellenplan; Vergütungen; (§27HG (Dekan)Stellen- & Mittelverteilung, Einsatzverteilung von Mitarbeitern;)
- **1. Dienstherreneigenschaft** (erhöhte Flexibilität Beamtenstellen schaffen und streichen zu können)

Mit der Dienstherreneigenschaft haben Hochschulen in NRW deutlich **mehr Freiraum** als in anderen Bundesländern.

Wie nehmen Sie diese **Freiräume** wahr?

Welche positiven oder negativen **Effekte** sind dadurch entstanden?

Würden Sie insgesamt die Befugnisse in dem Aspekt Dienstherreneigenschaft als autonom bezeichnen?

- **2. Berufsrecht, & Personalrekrutierung**
Während die Fachbereiche nur den Berufungsvorschlag machen können, hat der Rektor die endgültige Entscheidungsmacht laut Gesetz, damit entfällt die Autorisierung/Bewilligung durch das Ministerium).
Inwiefern schätzen Sie Ihre Fachbereiche als **autonom in Berufsentscheidungen** gegenüber dem Rektor ein? AM
(Einschränkungen vs. Freiheiten)

Welche Faktoren **begrenzen** Ihre Freiheiten?

Würden Sie Ihre Fachbereiche bezüglich des Berufsrechts & der Personalrekrutierung als autonom bewerten?

erklären

- **3. Vergütungen**
NRWs HEIs haben eigene Leistungsbezüge Verordnungen in denen die Verfahren zur Vergabe von Leistungsbezügen stehen.

Mit der Übertragung des Entscheidungsrechts ist auch die Besoldungsfestsetzung verbunden.

Wie nehmen Sie die Autonomie in der **Vergütungsstruktur** wahr?

Heißt das, dass Entscheidungen über Vergütungen autonom getroffen werden?

4. Verteilung von Stellen & Mitteln (Kanzler bewirtschaftet Haushalt, kann Aufgaben übertragen §19; Dekan verteilt Mittel und Stellen innerhalb der Fakultät §27)

Wie ist die **Verteilung der Stellen und Mittel** innerhalb Ihrer Fachbereiche **gestaltet**?

Wie nehmen Sie deren **Freiräume** in diesem Bereich wahr?

Würden Ihre Fachbereiche in der Verteilung von Stellen und Mitteln als autonom bewerten?

Erläutern

Wie schätzen Sie **insgesamt** die **Effekte** von Deregulierung und Autonomie im Bereich von Personal- und Berufungswesen ein?

Welche positiven oder negativen **Effekte** hatte dies für Ihre Hochschule, insbesondere auf die Kernaufgaben Forschung und Lehre?

Gibt es **weitere Befugnisse** im Bezug auf Personal- und Berufungswesen, die Sie sich **wünschen** würden?

Abschluss (5Min)

- (1. Würden Sie **insgesamt** die Veränderungen in dem Bereich Finanzmanagement als positiv oder negativ **bewerten**? Bei Widerspruch bitte begründen lassen!! nach Begründung fragen
- 2. Würden Sie **insgesamt** die Veränderungen in dem Bereich Personalmanagement als positiv oder negativ **bewerten**? Begründen
- sie haben jetzt sehr viel im Bereich x kritisiert geben trotzdem eine positive Einschätzung, es scheint widersprüchlich zu den Aussagen die sie vorher getroffen haben//nur für mein Verständnis: Sie **kritisieren** mehrere Aspekte **aber** bewerten es **insgesamt als positiv**, (habe ich das richtig verstanden) können sie das **näher explizieren** oder begründen?)

Fallen Ihnen **darüber hinaus noch Aspekte** im Hinblick auf Deregulierung und Autonomie in den Bereichen Finanz- & Personalmanagement ein, die noch nicht oder nur am Rande angesprochen wurden?

An dieser Stelle ist das Interview beendet. Ich hätte nur noch 2 bis 3 demografische Fragen zu Ihrer Person:

Demografische Daten:

- Angaben zum interviewten (demografische Daten:
Alter,
Geschlecht,
Berufserfahrung:
Position,
seit wann diese Position inne,

seit wann an dieser uni,
Leitungserfahrung in anderen Unis bzw. anderen Bundesländern

- Feedback zum Interview

mögliche Antworten/Bewertung von Kriterien und Kategorien anhand der Aspekte

7.7 Second reduction of interview transcripts

Second Reduction

Remark: reasons are included if available

0. Category: General Perception

0.1. Extern

The level of decentralization varies depending on size and structure of HEIs.

Positive Perception:

- HEIs' autonomy is very high in NRW.
- HEIs' management autonomy (finance, human resources) is extensive
- HEIs establish their own risk and finance management with global budgets, reserves, and together decided to abolish tuition fees
- Personnel autonomy and employer ability

Negative Perception:

- Two biggest autonomy restrictions are the abolishment of tuition fees and the lack of real estate autonomy
- Real estate autonomy is granted to only 2 HEIs in NRW in a pilot model. remaining HEIs have no real estate autonomy

0.2. Chancellors

Positive Perception://

Negative Perception:

- Joint liability (Liquiditätsverbund) and monthly payments reduce finance autonomy (U2K)
- State grant is based on employment plans which does not fit in global budget system. (U1K)
- Low autonomy in real estate autonomy (U1K)

0.3. Deans

Positive Perception:

- HEI has high level of autonomy (research focus, appointment procedure, (U1D1)
- Faculty has some autonomy through decentralization process, especially organization autonomy to establish faculty manager with competences and responsibilities (U3D1)

Negative Perception:

- Autonomy depends on financial resources, no changes from HFG to HZG (U4D1)
- HEI autonomy restricted by (U3D2: legislative framework); (U1D1: ministry influence on study programs, framework regulations, and civil servant right; and by central administration in IT/EDP matters)
- Faculty has some autonomy within legislative framework (U2D1)
- Very low levels of real estate autonomy (U3D2)

1. Category: Financial Management

1.1.1. Extern

1.1.1.a. Positive Perception:

- Financial autonomy of HEIs is high in NRW
- High level of flexibility in creation of reserves, employment plan, and salary brackets is crucial for strategic positioning
- Autonomy process removed classical cameralistics/fiscal accounting

1.1.1.b. Negative Perception:

- Potential danger of financial framework conditions to restrict financial autonomy

1.1.2. Chancellor

1.1.2.a. Positive Perception:

- Sufficient level of financial autonomy (HEI) (U2K) (U1K: increases efficiency and effectiveness through self-reliance)

1.1.2.b. Negative Perception:

- Resources and regulations, including employment plan are the limiting factors (U2K); (U1K)

1.1.3. Deans

1.1.3.a. Positive Perception:

- Positive effects of financial autonomy (U4D1); (U3D1: mid- to long-term planning security); (U1D1: diverse special programs increase flexibility by bigger budget)
- Financial autonomy of faculty increased but still too centralized (U2D1)

1.1.3.b. Negative Perception:

- Laws and specifications (U4D1: employment plan), (U4D1, U3D2, U2D1: specifications of resource allocation, (U4D1, U3D2, U3D1) demand participation) are limiting financial autonomy of faculty (U4D1); (U3D1, U2D1, U1D1: demands less special programs); (U3D2: financial restrictions)

- Underfunding limits autonomy and restrict planning security (U4D1, U3D1, U2D1, U1D1: because of temporary special programs); (U3D2: need for financial cuts/savings somewhere); (U1D1: central steering through strategy budget) (U4D1 : increase of temporary contracts according to duration of special programs)
- U2D1 demands global budget and more autonomy in economic activities
- Faculty is lacking experience and expertise for financial autonomy (U3D2)
- Reporting and controlling system increased enormously and is very time consuming (U2D1)

1.2. Subcategory: Global Budget

1.2.1. Extern

Positive Perception:

- Running non-personnel costs for research and teaching are very decentralized in mainly all HEIs
- Trend to decentralized global budgets (faculty)

Negative Perception:

- Resource allocation mechanisms are decided at central level but the level of faculty participation varies
- Central influence on faculty's personnel costs varies

1.2.2. Chancellor

A) HEI budget

Positive Perception:

- HEI has global budget (U1K)

Negative Perception:

- Employment plan is incompatible with the autonomy process especially in financial regards (U1K)

B) Faculty Budget

Positive Perception:

- High level of faculty autonomy in financial matters (U1K)

Negative Perception:

- Faculties do not have global budgets and are centrally organised but trend towards empowerment parallel to report and control system (U2K)

- Faculties can budget autonomously but have a leaning not to do so (Competence, culture, upbringing) (U2K)

1.2.3. Deans

Positive Perception:

- Global budget (U3D2, U3D1: for personnel costs) (U1D1: = 70% of budget but bound by personnel costs)
- Faculty manage their budget autonomous (U3D1)
- Extra positions from third party funding are managed by faculty (U2D1)

Negative Perception:

- No global budget (U2D1: employment plan, personnel costs are centrally financed, central allocation formula); (U3D1: resource allocation from the top)
- Autonomy (& planning security) is restricted (U3D2, U1D1: by annual budget fluctuations and QVM restrictions)
- Faculty budget needs to cover underfunding (U4D1: 7.5%; U3D2: 15%)

1.3. Subcategory: Target-bonded

1.3.1 Extern

- Budget and level of its management autonomy depends on HEI development plan and target agreements

1.3.2. Chancellor

Target bound:

- Appropriation of resources (U2K1: applies to HEI but not individual faculties which are steered through controlling system)

Not Target bound:

- Faculty budgets are not yet bond to targets (U2K1, U1K1)
- Faculties do not manage their finances (U2K1)

1.3.3. Deans

Target bound:

- Faculty budget is partly target-bonded (U3D2, U3D1, U1D1)
- Faculty budget is bound to prescribed target agreements (U2D1)
- In case of non-compliance the budget can be cut/reduced (U2D1)

Not Target bound:

- No target agreements (U3D1)

1.4. Subcategory: Resource Management

1.4.1. Extern

Positive Perception:

- Running non-personnel costs are managed mostly by faculty, but there are differences in the personnel costs and the central influence on these.

Negative Perception://

1.4.2. Chancellor

Positive Perception:

- Faculties have autonomous resource management (U1K: more effective and efficient decisions); (U2K: but need to report and are centrally supervised)

Negative Perception://

1.4.3. Deans

Positive Perception:

- Faculty resource management is (U3D2, U3D1: autonomous); (U1D1: autonomous but with specifications); (U2D1: partly autonomous (non-personnel costs = autonomous, new appointments are co-financed by central administration))

Negative Perception://

1.5. Subcategory: Asset Accumulation & Economic Activities

1.5.1. Extern

Positive Perception://

Negative Perception:

- Asset accumulation & economic activities is a task executed centrally

1.5.2. Chancellor

Positive Perception://

Negative Perception:

- Asset accumulation & economic activities is a task executed centrally (U1K)

1.5.3. Deans

Positive Perception://

Negative Perception:

- Asset accumulation & economic activities is not a faculty's task/no autonomy (U4D1, U3D2)

1.6. Participation in Companies

1.6.1. Extern

Positive Perception://

Negative Perception:

- Faculties have no autonomy, participation in companies are managed centrally

1.6.2. Chancellor

Positive Perception:

- Faculties can participate in foundations but need central approval (U2K)

Negative Perception:

- Participation in companies are managed centrally and need to be approved by the board of trustees (U2K, U1K: impulse for participation can come from faculty)
- Faculties have no autonomy (U1K)

1.6.3. Deans

Positive Perception://

Negative Perception:

- Faculties have no autonomy in company participation (U3D2, U3D1, U2D1)
- Participation in companies are managed centrally, the impulse can come from faculty (U2D1)

1.7. Investments, Credits, Economic Activities

1.7.1. Extern

Positive Perception://

Negative Perception:

- HEIs are not allowed to raise credits

1.7.2. Chancellor

Positive Perception:

- HEI can erect and buy Buildings from their resources (U2K)

- HEI can make investments (U2K)
- Faculties can make small investments (i.e. media equipment, books) (U2K)

Negative Perception:

- Faculties do not do asset accumulation, the HEI does (U1K)
- HEI is only limited economically active (U1K)
- Raising credits by HEIs is highly restrictive (U1K)
- Faculties are not allowed to (U2K: accumulate assets and raise credits); (U1K: raise credits)

1.7.3. Deans

Positive Perception:

- Faculties have autonomy in smaller investments (i.e. books, media equipment) (U3D1, U2D1, U1D1)
- Faculties can apply for investments (U1D1)

Negative Perception:

- Faculties are not allowed to be economically active (U4D1, U3D2, U3D1, U2D1)
- Faculties are not allowed to raise credits (U4D1, U3D2, U3D1, U2D1)
- Faculties are not allowed to make investments from their budget but can apply for DFG funding (U4D1, U3D2, U3D1, U2D1)

1.8. Subcategory: Use of Reserves & Income

1.8.1. Extern

Positive Perception:

- HEIs use their autonomy to manage their finances
- HEIs are allowed to build up and use reserves
- Faculties have the autonomy to build up and use reserves

Negative Perception:

- Part of faculty reserves is transferred to central administration. There are various sharing models

1.8.2. Chancellor

Positive Perception:

- Faculties are allowed to build up reserves (U2K: to a certain amount); (U1K)

- Faculties are allowed to manage their reserves (U2K1)
- No measure to limit the amount of reserve (U1K1)

Negative Perception:

- One measure to limit the amount is subtraction (U2K1)

1.8.3. Deans

Positive Perception:

- Faculty is allowed to build up and use reserves (U4D1, U3D1, U2D1, U1D1)

Negative Perception:

- Faculty has no income (U3D1, U2D1)
- Faculty cannot build up reserves (U3D2)
- Too high reserves can have consequences (U4D1: budget cuts); (U1D1)

2. Category: Human Resource Management

2.1.1 Extern

Positive Perception:

- High level of personnel autonomy

Negative Perception:

- Personnel autonomy is restricted by framework code for good work
- Personnel autonomy depends on the level of decentralized personnel responsibility/competences

2.1.2. Chancellors

Positive Perception:

- Rector appoints professors not the ministry (U2K)
- Autonomy and decentralization tend to lead to more efficient and effective decisions but must be legitimized by quality assurance system (U1K)

Negative Perception:

- HEI does not have enough personnel autonomy in regard to civil servants (U1K)
- HZG reduces personnel autonomy (U2K)

- Framework codes (personnel, finance) restrict the autonomy (U2K, U1K)
- Professors need to improve their management competences (U2K)

2.1.3. Deans

Positive Perception:

- Sufficient level of autonomy in human resource management (U3D1)
- High level of autonomy in (U4D1: professor and staff appointments without external influence); (U3D2: staff appointments)
- IP demands a strengthening of the dean's position (U3D2)
- Faculty can apply for a non-temporary position at the human resource department, this option is limited (U1D1)

Negative Perception:

- Duty of public job announcement for positions of third party funding/research restricts autonomy and flexibility of faculties (U1D1)
- Faculties do not have personnel autonomy, the rectorate has it (U3D2)
- Autonomy is restricted by (U2D1: DFG- and quality criteria in appointment process); (U4D1: duration of temporary programs)

2.2 Subcategory: Allocation of Human Resource

2.2.1. Extern

Positive Perception:

- Senate participates in the making of guidelines for resource allocation

Negative Perception:

- Resource allocation model is decided on central level, level of participation of bodies varies
- Rules and incentive systems represent the framework of resource and position allocation system
- Faculty autonomy in this regard depends on whether personnel costs are budgeted decentralized

2.2.2. Chancellors

Positive Perception:

- Faculty is autonomous in allocation of positions and resources (U2K: supported by central administration); (U1K)

- Faculties' global budget includes the personnel area/human resources (U1K)

Negative Perception:

- Traditional employment plans still determine the allocation of positions (U2K)

2.2.3. Deans

Positive Perception:

- Faculty is partly autonomous in setting human resource structure (U1D1); (U4D1: within certain range); (U3D2: study programs must be covered, number of positions is decided by rectorate); (U3D1: faculty's autonomous decision to leave a position vacant, & to allocate positions)
- Faculty is autonomous in non-personnel costs (U3D2)
- Autonomy in personnel budget allows to flexibly react to any changes in the human resource structure and safeguard its continuity (U3D1)
- Central administration has no influence on the faculty's allocation formula (U1D1)

Negative Perception:

- Faculty is not autonomous in the allocation of positions, (U3D2: employment plan sets the limits); (U3D1: allocation is predefined, everything else must be extra financed by the faculty)
- Positions must be left vacant to balance the underfunding (U3D2)
- Autonomy in allocation of positions and resources is limited (U3D1: by underfunding); (U1D1, U2D1: by financial resources and regulations)
- Allocation of positions and resources is defined (U2D1: by the workload of institutes within faculty); (U1D1: by performance and workload)

2.3. Subcategory: Financial Remuneration

2.3.1. Extern

N/A

Positive Perception://

Negative Perception://

2.3.2. Chancellors

Positive Perception://

Negative Perception:

- Financial remuneration is decided by rectorate (U2K, U1K)

2.3.3. Deans

Positive Perception:

- Faculty has influence on equipment of professor positions (facilities, staff, and resources) (U2D1)
- Autonomy to negotiate salaries within financial range (U4D1)

Negative Perception:

- Rector negotiates with professors on their financial remuneration, faculty has no influence (U3D2, U3D1, U2D1, U1D1)
- IP demands more faculty influence on remuneration (U2D1)

2.4. Subcategory: Right of Appeal & Recruitment

2.4.1. Extern

Positive Perception://

Negative Perception:

- Faculty autonomy in appellate decisions decreased in favor of central administration and strategy orientation (professor recruitment is key strategic decision of HEIs)
- Opportunities to influence were strengthened by strategy orientation and by becoming the employer

2.4.2. Chancellors

Positive Perception:

- Faculties were strengthened in appointment procedure (U2K: consent oriented decision) and staff recruitment (U2K) (U1K: faculties have right of self-recruitment)

Negative Perception:

- Rector takes appointment decision (U2K, U1K)
- Rectorate steers through allocation of positions, and appointment decisions (U1K)

2.4.3. Deans

Positive Perception:

- Faculty has limited autonomy within the appointment framework/procedure (U4D1, U3D1, U1D1)
- Low level of influence on appointments by central administration (U4D1)
- Appointment commission chooses external evaluator (U4D1)

Negative Perception:

- Appointment procedure is highly regulated process (U4D1)
- Central administration can influence the procedure (i.e. candidate list) (U4D1, U3D2, U1D1); (U2D1: each procedure is supervised by a rectorate representative); (U1D1: rectorate sets strategy budget and other requirements to influence appointment policy); : rectorate sets rules of appointment procedure)

2.5. Subcategory: Employer Feature

2.5.1. Extern

N/A

Positive://

Negative://

2.5.2. Chancellors

Positive Perception:

- Rectorate autonomously appoints professors (U2K, U1K)
- HEI has autonomy in human resource management, but is restricted by employment plan (U1K)

Negative Perception://

2.5.3. Deans

Positive Perception:

- More informal influences of faculty on the rector than on ministry (U1D1)
- Employer feature speeds up appointment procedure (U2D1, U1D1)
- No influence of central administration on faculty through employer feature (U4D1)
- No changes for faculty through new employer feature of HEI (U2D1)

Negative Perception:

- Rector has employer feature, not the faculty (U3D2, U1D1)
- Rector negotiates with ministry of finance in cases of civil servant appointment which limits autonomy (U1D1)

7.8 Interview report

Name	Interview Availability	Spatial and Temporal Features	Interview Conduct	Duration of the Interview/ in total in min	Post-interview
E	Willing Participation	Telefon Interview	Friendly Atmosphere	31/40	5 minutes closing table
U2K1	Willing Participation	IP's office	relaxed and friendly atmosphere. Very extensive reply as well on technical processes. Interviewer was not enough target oriented	115/120	no closing table because time limit was exceeded. Interested in the research and its results
U1K1	Willing Participation	in IP's office	relaxed and friendly atmosphere	30/40	no closing table
U4D1	Willing Participation	in IP's office	Friendly Atmosphere	26/40	10 min closing table
U3D2	Willing Participation but with the request for an telefon interview. Change of interview date but anxious to find an alternative on the next day	Telefon Interview	time limit due to other appointments	30/38	no closing table due to subsequent appointment
U3D1	Willing Participation but with the request for an telefon interview	Telefon Interview	IP partly insecure in answering the questions	30/40	relaxed conversation on faculty managers
U2D1	Willing Participation	in room of the faculty	friendly atmosphere	30/40	10 min closing table
U1D1	Willing Participation	in IP's office	IP's answers are with reservations because IP's short time in office	46/50	no closing table

Tab. 34: Interview report