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**The current state of research in State and
Higher Education System Relationship**

Master's thesis

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Declaration

1. I hereby declare that I have compiled this thesis using the listed literature and resources only.
2. I hereby declare that my thesis has not been used to gain any other academic title.
3. I fully agree to my work being used for study and scientific purposes.

In Prague on 3rd of August 2022

Arsh Arora

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Abstract

The purpose of the study is to fill the existing gap in the field of systemic higher education governance which is a lack of systematic and structured literature review of peer-reviewed articles. The objective is to analyze the relationship between the state and the higher education system. In other words, what are the different types of systemic governance models, and what are the instruments used by the government to control the higher education sector? The method of Systematic Literature Review is used to review over forty research articles on systemic higher education governance. PRISMA protocol was adopted to conduct a Systematic Literature Review. Findings show that higher education governance is moving towards marketization. However, the trend is neither universal nor straightforward. The role of the state in the higher education system is dominant and will remain so because even marketization in countries is steered tightly by the state. Second, no model of higher education governance is implemented in its entirety, resulting in hybrid models of higher education governance. Third, even though the state is steering higher education systems in the same direction, public policy instruments adopted by government in different countries varies. Mergers the are most used policy instruments in China and Australia. Quality Assurance is widely used as a policy as well as a political instrument to steer higher education institutions. This study is the first to systematically review systemic higher education governance. The findings of this study have important implications and directions for future research.

Keywords: governance, higher education, state, policy instruments, marketization

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Master Thesis Proposal

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Proposed Topic:

The current state of research in State and Higher Education System Relationship

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5 Keywords: governance, higher education system, state, systemic governance, government

Topic characteristics / Research Question(s):

The purpose of the study is to fill the existing gap in the field of higher education governance. There is a lack of systematic and structured literature review of the peer-reviewed articles in periodicals in the area of higher education governance. To be concise, the authors have narrowed it down to systemic governance. The rationale behind focusing on systemic governance is the following – the authors’ objective is to analyze the relationship between state and higher education system. In other words, what is the role of government in the higher education system, how the government intervenes, what are the instruments used by the government to control the higher education sector? Following are the two research questions;

1. What are the different types of systemic governance models/ state governance models/ state-steering models in higher education?
2. What are the public policy instruments applied by the government to steer higher education institutions?

Methodology:

Through scoping study, the authors found that there has been no systematic literature review conducted before, thus, highlighting the research gap. Therefore, the methodology corresponding to my research questions is Systematic Literature Review (SLR). To conduct a systematic literature review, the authors reviewed the guidelines by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was adopted. The purpose of the protocol is to create pre-defined criteria for literature selection so that there is no bias from the authors’ end.

Working hypotheses:

The methodology adopted for the thesis does not allow for a hypothesis to be included in the research. This is to minimize or avoid the outcome reporting bias which the protocol of systematic literature review does not allow. The authors have not assumed anything about the models of state steering of higher education, or about the instruments applied by the government in the higher education sector. Therefore, there will be no outcome reporting bias in the research. However, for the technical requirements I will list down the hypothesis below.

1. Hypothesis #1:

Null: There will be no different types of systemic governance models/ state governance models/ state-steering models in higher education across countries.

Alternative: There will be different types of systemic governance models/ state governance models/ state-steering models in higher education across countries.

2. Hypothesis #2:

Null: The public policy instruments applied by the government to steer higher education institutions will not differ across countries.

Alternative: The public policy instruments applied by the government to steer higher education institutions will differ across countries.

Outline:

The thesis will start with background about higher education governance, relationship between government and higher education sector - systemic governance. Consequently, the highlighting the research gap and ways to fill the research gap. Following that the authors will justify the adoption of SLR and process of implementing SLR in the field of higher education. It will lead towards creating knowledge about different types of systemic governance models/ state governance models/ state-steering models in higher education and different public policy instruments applied by the government to steer higher education institutions. In the end all the past literature reviewed will be acknowledged in the bibliography section.

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1. Introduction

1.1 Higher Education

Higher education includes post-secondary education, training, and research provided by educational institutions such as universities, colleges, and technical institutions that have been authorized by the government (*Higher_02.Pdf*, n.d.). In some countries, higher education also includes short-term education such as polytechnics, junior colleges, and other forms of technical schools that last between one and two years.

The statement that the higher education sector in the country plays a vital role needs no citation. Higher education makes a substantial contribution to the nation's long-term economic growth and sustainable lives (Ministry of Education, India, 2020). Higher education is frequently noted by societies and governments as a tool for boosting economic growth and elevating the standard of living in their communities. It is an important part of nations and the people living in them, and the government has always had a role in it.

The higher education system, most notably universities, plays a vital role. These include education, research, and contributing to society. The roles of research and education are two sides of the same coin; research enables greater levels of education, while education, in turn, produces the human resources needed to conduct research. Higher education institutions have recently been asked to make more societal contributions. Following globalization, the focus of higher education has shifted to the building of a **knowledge society** (*The Impacts of Globalization in Higher Education*, n.d.-a). (Välilmaa & Hoffman, 2008) says that understanding the role of higher education in post-industrial and post-modern cultures within diverse knowledge societies is essential to global development.

Following World War II, demand for higher education increased dramatically over the world, but to varying degrees (Lazerson, 1998). When looking at growth in enrolment rates, it becomes clear that higher education has outpaced basic and secondary education. Higher education enrolment grew **from 12 million students in 1960 to 88 million in 1997** (*Global Flow of Tertiary-Level Students* | *UNESCO UIS*, n.d.), an almost seven-fold increase. Universities in developed nations were limited in scope and primarily meant to teach privileged individuals, but higher education expanded rapidly (Schofer & Meyer, 2005).

One of the causes for this rapid increase was that the demand for human resources with a bachelor's degree or training developed in tandem with the increasingly complex society and economy. Furthermore, during the last fifty years, emerging nations that focused their efforts on increasing basic education have seen an increase in the demand for higher education as a result of the development in elementary and secondary education. In other words, when the average level of education among a country's population rises, society begins to require a greater degree of education to achieve greater social success.

As a result of this rising demand, higher education has shifted from an elite style to a mainstream style. Academicians refer to this change as the “*massification*” of higher education (C. Evans et al., 2021). In addition, there have been advancements in the tendencies toward more diversity among students and institutions, as well as lifelong education. This push for universal education was a global trend.

The challenges faced by the higher education system during this time frame were tremendous. The number of students enrolled in higher education increased from **12,000,000 in 1960 to 88,000,000 in 1997** (*Global Flow of Tertiary-Level Students* | UNESCO UIS, n.d.). The quantum leap in higher education puts a strain on existing resources to meet the requirements, resulting in a drop in higher education quality (Matovu, 2018). The higher education system has had to address the different backgrounds and demands of its students as a result of its development and the rising complexity of society and the economy. Furthermore, many talents and abilities are required, and the degrees of training required to master them have gotten increasingly diverse.

In a nutshell, higher education is under pressure to adapt across the world. It is rapidly expanding, and its contribution to economic prosperity is well recognized. Universities and other institutions are required to generate new research, enhance fairness, and respond more quickly to student needs (K. H. Mok & Jiang, 2018). They are increasingly competing with the commercial sector and globally for students, research money, and academic personnel. Direct government administration is no longer suitable in this increasingly complicated context (*Higher Education Policy* - OECD, n.d.). Thus, the role of the state in higher education was beginning to be questioned by society and challenged by policymakers. This was also due to the wave of **neoliberal** ideology. The ideology is the foundation of **globalization** as well.

Governments started relinquishing their duties towards universal education by bringing market-based reforms. This has forced governments to encourage the making of **quasi-markets in the**

higher education sector by opening to external (for-profit) players, privatizing universities, mergers, etc. In the upcoming section on systemic higher education governance and the results of the systematic review, the readers will see that the government has intended to create quasi-markets for the higher education system. It may seem the higher education system is marketized, but it is not true in its entirety because the state control over the higher education system still prevails. Some academicians also call it **state-steered marketization**.

The idea of the state steering the higher education system can be researched and analyzed from the economics, political, and public policy perspective. For this thesis, the authors will analyze through the lens of public policy and more narrowly stating – through **the lens of governance**. Since public policy is a pluralist discipline the economics and politics behind the area of research cannot be ignored and thus will be talked about where necessary. Every government across countries has different historical roots, a different relationship with supranational or regional authorities, and different political structures such as federalism, authoritative, or mix. With these differences in context, there are different ways of steering the higher education system. It is also researched and analyzed as changing relationship between government and universities, changing higher education governance as the agreements between the two parties change with changing context. To achieve something, the government adopts new public policy instruments at its disposal. Without policy instruments everything government does is abstract, therefore, this will form the second part of our research agenda.

In the next sections of the introduction, the paper will take readers through the streets of **governance, governance in higher education**, further narrowing down to **systemic higher education governance**, then briefly explaining the important role of **public policy instruments**. After understanding the street of higher education governance, the readers will know about the main objective of the paper in the section on **systematic literature review**. At the junction, **research gaps, and research questions** will be mentioned consequently followed by the **protocol, basic analysis, synthesis of results**, and **conclusion** at the end.

1.2 Governance

Governance is a complicated and contentious subject that is difficult to define in a single sentence. Various meanings of the term abound in the literature since it implies different things to different individuals in different fields. The term governance refers to the “*process through which components in society exercise power, authority, and influence and implement policies*”

and choices involving public life and social upliftment, according to another definition of governance.” (Mulinge et al., 2017)

(Potucek, 2018) helps in defining to understanding the term at best. *“Governance is a system of values, policies, and institutions by which a society manages its economic, political, and social affairs through interactions within and among the state, civil society, and private sector. It operates at every level of human enterprise.”*

Governance cannot be limited to the level of nation-states; it must be considered at both the supranational and regional levels. **Multi-level governance** is the term for this. The principle is found in Europe's higher education system. In the results section on this topic, the idea of multinational governance will be reiterated in the context of **institutional isomorphism** and the **Bologna process**, especially for the European countries. The **goal of governance** is to provide broad guidelines and particular procedures for collective activity. It can't function without governing mechanisms such as grants, contracts, and agreements (Cheema, Maguire 2001). These can also understand and researched as **policy instruments**. More explanation will be provided in a future section keeping the governance of the higher education system in mind.

As (Potucek, 2018) demonstrates, the government's regulatory function in the market is far from obvious in an ideal governance framework. The government depends on the private sector in numerous ways. The government is normally concerned with how private owners and entrepreneurs accomplish their goals since they frequently carry out public business tasks (employment, price, output, development, quality of life, and individual economic security). As a result, when it comes to interacting with the government, business owners in general and corporate management stand head and shoulders above all other groups.

1.2.1 Government and Governance: Is it the same or different?

(Capano, 2011) explains that the two terms are different from each other. The term governance as defined above refers to the many methods in which policy players collaborate to address common challenges, and hence how the policy-making process is guided. Government, on the other hand, is one of the potential players in governance, with a wide range of roles depending on the circumstances. Government is more of a variable than a constant. The government may or may not be visible in the system depending on the structure of governance. The scope of governance is way beyond the government as the former includes the market, civil society, and government as well.

Contrary to other sectors of the economy, the government is concerned about the objectives which higher education institutions including private universities, and how those objectives will be achieved. In the case of public universities government even control the day-to-day operations and not just the outcome. Unlike private enterprises, higher education institutions are more accountable to the government and have less autonomy both procedural and product. Therefore, we cannot compare governance in general with governance in the higher education sector.

The definitions show that governance is both a wide concept with meaning that extends beyond the concept of government and a highly contextual term with meaning that cannot be captured by a single monolithic definition. As a result, the method and procedures that will be used will differ greatly depending on the context. For example, in the public sector, legal and constitutional responsibility and duties must be considered, but in the non-governmental sector, reflecting stakeholder interests may take precedence over all other considerations in the governance to be implemented (*Higher Education in Developing Countries*, 2000). This tempts us to define governance in terms of higher education.

1.3 Governance in Higher Education aka Higher Education Governance

In the context of higher education, (Harman & Treadgold, 2007) accepts Neave's definition of governance as "*a conceptual shorthand for the way higher education systems and institutions are organized and governed.*" (Veiga & Amaral, 2009) Governance, according to (L. Goedegebuure & Hayden, 2007) is "*both as easy and as difficult as answering the question: who makes what decisions?*"

The word governance has been used in the context of higher education to refer to how universities and other higher education institutions are organized and governed (Mulinge et al., 2017). It is described as the formal and informal procedures that allow higher education institutions to make choices, develop, execute, and continually monitor the appropriate application of policies (Altbach et al., 2004). The challenge of who decides when and on what arises since governance is about articulating interests and attaining goals. In the context of higher education, this introduces readers to internal and external levels of governance, often known as institutional and systemic dimensions, respectively.

a) Institutional Governance

Internal or institutional governance refers to the organizational structures within institutions that assist in the smooth operation of these organizations and include authority lines, decision-making procedures and policies, personnel, and finance methods (*Higher Education Governance*, n.d.).

It can also be understood as a structure of rules and procedures through which management maintains responsibility, fairness, and openness in the institution's relationships with all stakeholders, including regulatory bodies, students, and faculty. This framework for institutional governance includes contracts between the university and its stakeholders for the distribution of responsibilities, rights, and rewards; procedures for resolving stakeholders' sometimes conflicting interests based on their duties, privileges, and roles; and procedures for proper supervision, control, and information flows to serve as a system of checks and balances.

Governance at the institution level ensures the deployment of competent, motivated, and accountable individuals (e.g., teachers/facilitators and leaders/managers). It guarantees that students have access to high-quality, relevant curricular materials, that they are actively engaged in their learning, and that they receive appropriate assistance from their teachers/facilitators. Distribution of power/autonomy within the university – rector vs. individual faculties, integration of different departments for the overall development of university – Micromanagement vs micromanagement situation are some of the topics researched at this level of governance.

b) Systemic Governance

In most situations, external governance refers to the macro system or governmental control of higher education institutions, which includes the laws, decrees, financial arrangements, and evaluations that higher education institutions are subjected to (*Higher Education Governance*, n.d.).

Governance at the system level determines what education policies and priorities will be implemented; how much funding will be available for education and how these resources will be distributed, used, managed, and accounted for; and how the powers and functions of governing education will be distributed across the various layers and actors within the system. This concerns the legislative framework by public authority for universities. There is not only government, but other institutions also called public agencies involved at the system level. It also talks about the relationship between government and universities, and the distribution of powers and autonomy to universities.

Since the authors have mentioned multi-level governance and the Bologna process earlier, it will be unfair not to mention the additional dimension of governance –international governance. There are other dimensions of governance as well such as strategic governance (*Strategic Governance and the Czech Republic - Karolinum*, n.d.). However, the paper will stick to three broad dimensions.

c) **International Governance**

Higher education has increasingly been impacted by reform efforts from the international level while being historically a function of the nation-state. The Bologna Process has served as a global platform with its distinctive governance mechanisms, prompting national governments and individual institutions to reassess the role, function, and efficiency of current policies and structures, particularly in Europe (*Higher Education Governance*, n.d.).

Since **Burton Clark's** seminal study on the higher education system in 1983, the governance of higher education has been a hot issue for research. More about the famous triangulation of higher education governance will be discussed in the findings section.

Conjugating the above-mentioned levels of governance and the fact that higher education is under pressure to reinvent itself throughout the world in response to changing societal requirements and its rising role in economic and social growth. Universities, which are required to develop knowledge, enhance fairness, and react to students' needs effectively, are undergoing certain changes, including substantial increases in student enrolment and diversity in student composition, as well as financing diversification. In this phase of dynamic changes in the higher education sector, the state has been and continues to steer it into a distinct pattern, primarily the formation of quasi-markets. This implies that the state plays an important role in higher education governance and **therefore the research focus will now narrow down to the dimension of systemic higher education governance**. In the next section, a more elaborate and in-depth explanation will be provided on choosing the dimension of systemic higher education governance as the research focus.

1.4 Systemic Higher Education Governance

Before going forward it is important to mention that the dimension of systemic higher education can also be studied as state steering, government-university relationship, and state governance of higher education. Moreover, **this section can serve as the theoretical background of the paper and the subject of the systematic review**. When studying the role of the state in the

higher education sector, the question authors asked introspectively is that, **why is the state so invested in the higher education system?**

Higher education, according to (Ball et al., 2002), provides a considerable contribution to the economic and social well-being of people and the nation. Notably, because education is a fundamental human right, it must be made available to all people, regardless of their socioeconomic status (Reay, 2016). The government's role in the higher education sector can also be witnessed in terms of public spending on tertiary education (*Education Resources - Spending on Tertiary Education - OECD Data*, n.d.). On average public spending in tertiary education is 66.2 percent as compared to private spending which is 30 percent.

Another explanation for government intervention is in terms of the externalities of education. Education has positive externalities in the sense that it benefits others in both financial and non-financial ways as individuals gain more education. States across the globe commonly point to education as a means of fostering economic growth and raising the standard of living in their regions. Intuitively, government intervention in the higher education sector is justified in case it produces positive externalities (Toutkoushian & Paulsen, 2016). As a result, governments adopt a variety of steps to make higher education more accessible and consequently universal.

However, education is not considered a pure public good which government should provide. According to (Musgrave, 1975) the expanding number of private actors in the education sector has caused it to shift from being a pure public good to an impure public good, owing to fierce competition within the field. Higher education is not a non-rival and non-excludable good, thus, it is not a pure public good in the books of economists as has been mentioned before. Only private costs and benefits are considered if the higher education industry is left to market forces, commonly known as invisible hands. When students are deciding whether to pursue post-secondary education, they may merely assess their future income and expenses and not any additional benefit to society.

In Walter McMahon's book *The Private and Social Benefits of Higher Education: Higher Learning (Higher Learning, Greater Good: The Private and Social Benefits of Higher ... - Walter W. McMahon - Knihy Google*, n.d.) the conclusion was that the public and private benefits of higher education are essentially equivalent. However, the question arises as to whether the government or policymakers consider positive or even negative externalities. When economic models and society fail to account for externalities, resource allocation becomes

inefficient. One of the causes of **market failures** is this. When market forces fail to produce sufficient resources in a sector, the situation is opportune for government intervention.

The government has several alternatives for intervening in the higher education industry. The government can use **demand-side** intervention to give subsidies to students to increase demand. **Supply-side** intervention, on the other hand, will include granting subsidies to institutions to increase supply. The government gives monetary subsidies to persons or providers to encourage students in the market to make new choices. **Marginal benefit** and **marginal cost analyses** can also be used to justify government action. Higher education is a public good that generates positive externalities, which may be quantified in terms of benefits and costs. If the benefits outweigh the costs, the government's intervention is justified, else not.

The second introspective question which comes to mind is **why studying systemic higher education governance and why not some other dimension of governance. What is so tempting about the systemic dimension of higher education governance?** A few liners answer to this question before the readers will go through the detailed explanation is that every government across countries has different historical roots, a different relationship with supranational or regional authorities, and different political structures: federalism, authoritative, or mix. With these differences in context, there are different ways of steering the higher education system. **This makes the area of systemic higher education governance challenging and interesting.**

As mentioned before, in the case of the higher education sector, the state has played a dominant role. Adam Smith once mentioned in his book that it is the state's responsibility to provide education to its citizens. Before that time the formal state responsibilities concerning higher education were rather limited. Regulating the universities was a responsibility of either religious or local authorities, while the funding of higher education was to a large extent dependent on payments made by individual clients of the universities, the students. After the state started consolidating power from the religious authorities, it started to play the dominant role in the public sector including the higher education system. However, during the last quarter of the twentieth century, the central steering role of the nation-state concerning higher education has become a serious issue of debate (Gornitzka, 1999).

1.4.1 From collegial to managerial universities

From the **1960s to the early 1980s**, the government's role in higher education policy was bolstered in many countries, for example, in terms of access and admission to higher education,

diversification of institutions and study programs, as well as the preparation of more detailed legislation to shape the functions and operations of higher education, and involvement in incentive funding.

In addition to Professor Clark, Australian scholar (Baldrige, 1971) typology became well-known. As a result, higher education governance in most countries is based on one or a combination of the following models: the **collegial model**, which emphasizes non-hierarchical cooperative decision-making and a significant degree of institutional self-determination by academic staff, the **bureaucratic model**, which emphasizes legal-rational authority and formal hierarchies, and the **political model**, which emphasizes expert authority and the importance of professional knowledge.

In the **United States**, university administration dominates higher education, while the authors define **Britain** as a balance of powerful university management and academia. According to researchers, the situation in many continental **European nations** is characterized by a polarization of strong government and powerful academics, as well as a weak university leadership.

European countries began to see changes in the direction of higher education systems in the 1980s and 1990s (Hénard & Mitterle, n.d.). The Dutch government was the driving force behind a steering system overhaul in the Netherlands. The model established in the mid-1980s, which had a considerable impact on later changes in other European nations, described the government's function as "**steering from the distance**". Three main elements of this model of steering are

- a) reduced ex-ante control,
- b) increased ex-post control, and
- c) increased managerial power of the university and the faculty.

The move from **collegial to managerial** higher education in the **United Kingdom** – particularly in England and Wales – began in 1986, when the government dramatically slashed overall funding for higher education and established a research evaluation exercise. As a result, allocating financial resources based on the achievement of faculties and universities in research has become a very powerful part of governmental steering. In addition, many intermediary public entities such as University Grants Commission were formed between the government and higher education institutions, all of which were immensely important in the overall direction of the higher education system.

Steering in higher education altered in most economically advanced countries in the **1990s**, with the single most convergent element being the increase of managerial authority at the centre of each particular institution of higher education. Some proponents of the shift saw the United States' strong university management as a successful role model. Others saw a growing role for **New Public Management** in all societal sectors, with strong government involvement as the driving force, while others saw various flaws in higher education in the past as being caused by academic conservatism or an indecisive collegial environment, and thus called for an interventionist managerial style.

1.4.2 Globalisation

Challenges came with the wave of **neoliberal ideology** and globalization when academicians and especially economists started wondering if education is a public good because it does not check off with the characteristics of a public good (non-rival and non-excludable). For a long time, education has been seen as a public benefit and a human right but with globalization, it was started to be seen as a commodity. The education landscape has altered dramatically in recent years as a result of the presence of various players, including for-profit and non-state actors. It is crucial to note, however, that despite the wave of neoliberal ideology, globalization, and the new upcoming industrial revolution the state has remained a dominant player in the higher education sector.

Another effect of globalisation was the **management of public agencies**. Even though higher education is not the same as other public agencies controlled by the state, but it is one of them. Scholars and states started adopting the idea of New Public Management for steering the higher education system. Over the last twenty five years, the relationship between the state and higher education has changed dramatically, while further, in some cases even more far-reaching changes have been announced or are already being introduced in some countries (Gornitzka, 1999).

Previous research has demonstrated that, in response to calls for universities to “do more with less”, national education policymakers are inventing and accepting new governance models, frequently altering particular higher education institutions, the state's participation, and the socio-economic purpose and function of higher education (Dobbins et al., 2011). (De Boer et al., 2007) also found that the type of state involvement has shifted from ex-ante to ex-post control, with the latter putting a greater emphasis on institutional output and comparative performance metrics.

1.4.3 Consequent challenges

The pressure on higher education institutions to demonstrate their societal relevance has been rising (Perry, 2012). Increased demand for higher education, along with governments' limited ability to tax, forces governments throughout the world to look for new methods to support higher education. Higher education expenditures have shifted dramatically, albeit unevenly, from the government or taxpayers to parents and students in recent years.

The pressure on the higher education sector take many forms, including changes in the economy and the nature of the labour market, demographic trends, and interest group demands and expectations, and are closely linked to the idea of higher education as a tool for achieving certain societal agendas (Olsen, 2007), such as democratization, social mobility, economic development, and innovation. As a result of these external pressures, governments around the world have enacted a slew of bold reforms aimed at modernizing higher education to better respond to the pressures while also improving efficiency, quality, and accountability.

1.4.4 The impact

This has forced governments to encourage the making of **quasi-markets** in the higher education sector by opening to external (for-profit) players, privatising universities, mergers, etc. It may seem that the direction of steering models within higher education institutions is less diversified which is the creation of quasi-markets/marketization, but how such models are executed varies greatly from country to country. The following two observations will explain this remark - even though the steering pattern may look simplified, (Teichler, 2019) note that there is a great variety of variation in how different countries have implemented the state steering from the distance model. In a nutshell, each country has its own higher education governance model, each country has different ways of state steering the higher education system and the role of the state is not constant, it is contextual and contingent (Yokoyama & Meek, 2010).

- a) The role of the government, its modes of action, and specific ways of steering higher education vary. In several nations, governments are increasingly focused on indicator-based funding allocation. Other times, the government establishes specific goals, such as efficiency, selecting societally important research topics, and ensuring access fairness. Higher education legislation has a significant impact on the higher education system in several countries, even though the government is rarely involved. In some countries, the government allows private and foreign universities to enter the sector and create a parallel higher education system. In some countries, the government

relinquishes its responsibility to external agencies which may or may not be publicly funded.

- b) In interactions between the government and higher education institutions, as well as between different levels of government and universities, several policy instruments of exerting influence are used. Some governments plan resource allocation based on market rules. A **contractual relationship** is an intriguing model that is popular in Germany: multi-annual contracts are negotiated and ultimately decided between governments and institutions of higher education, as well as between university leadership and departments and institutional leadership and individual professors. Some governments go for lump-sum funding.

Observations by (Teichler, 2019) are in sync with the findings of other researchers as well. (Capano, 2011) notes that the variability of the role of government leads to different forms of systemic governance. In the higher education system, governance is a broader phenomenon than government. There are a lot of decision-makers other than the government in the higher education system, however, it is the most important player in the governance of the higher education system. It is only government that can alter its role by using its policy-making powers thus playing a decisive role in which type of systemic governance model of higher education will exist in the country.

The government may choose to govern from the distance or govern with strict control. The decision of which form of systemic governance will depend on the political agenda, political and economic costs, expectations from the voters, and various other factors. Moreover, the governments are continuously trying new public policy instruments to steer the higher education system, therefore, nothing is constant. Therefore, reiterating what has been mentioned before - the objective of this paper will be to understand the various **state steering models** of higher education and **public policy instruments** used by the state to do so.

1.4.5 State steering

As mentioned before, the dimension of systemic higher education can also be studied as state steering. As the two words have been mentioned innumerable times it is required to shed some light on how academicians view and define the expression state steering. (Gornitzka, 1999) define state steering as "*approaches governments utilize to regulate and influence certain public sectors, such as higher education.*" State steering models connect to state duties and functions on the one hand, and university autonomy and functioning on the other. These models

represent "government efforts to direct the decisions and activities of certain society actors in accordance with the government's aims and utilizing the instruments at its disposal." (Van Vught & Westerheijden, 1994) State steering is broad phenomenon because different countries tend to use heterogenous ways of regulating their higher education system. Based on different approaches scholars observe, understand, analyse they have produced their own classification on types of state steering in form of framework. In the findings section readers will see Olsen's classification, (Vught, 1995)'s binary classification of the higher education governance model, Principal-Agent framework, to list a few. Steering without policy instruments is abstract, therefore, following the queue of **public policy instruments**, the next section will give a brief to readers about public policy instruments in the context of higher education governance and their importance in state steering of higher education as has been mentioned in earlier sections very briefly.

1.5 Public Policy Instruments

To steer any public institution government requires tools. These tools are called public policy instruments and policy mixes in the broader sense. The government employs policy mixes which consist of policy instruments to steer higher education systems in their respective countries (Yokoyama & Meek, 2010). Every government, in theory, has a variety of tools at its disposal. When the government wishes to create specific outcomes, it uses specific means. Government programs would be little more than abstract goals or illusions without such tools (Vught, 1994).

For this reason, policy instruments play an important role in public policy analysis. Employment of policy instruments varies according to the shape of the steering structure which the government wants to implement in the higher education system. The authority of the government can be defined in terms of policy instruments it adopts to steer the behavior of the higher education system to achieve certain goals and objectives.

If policy instruments are restrictive, then the authority of the government is higher or vice versa (Capano & Pritoni, 2020a). It is feasible to have a more fine-grained view of the content of governance changes in higher education system by concentrating on policy instruments. By concentrating on the fundamental components of policy instruments, it is possible to articulate the changes in the substance of governance reforms tangibly and realistically, shedding light on the contentious argument about the nature of these reforms (Capano & Pritoni, 2020a). It is possible to comprehend the true substance of policies via thorough and precise

operationalization of policy instruments, and therefore to understand if and how those instruments that are prominent in the three categories of general evaluation have been adopted. (Goedegebuure et al., 1994) (Hood, 1983), (Vught, 1994) provides different types of policy instruments under different policy shapes. (Veld, Fussel, & Neave, 1996) highlights the most usual instruments: regulation, money, and persuasion (Yokoyama & Meek, 2010). (Evert, 1998) provides four typologies of policy mixes, namely, regulation, expenditure, taxation, and information along with the instruments within each type which totals 24. (Kivistö et al., 2017) uses three policy instruments, information, regulation, and funding to analyze doctoral education in Finland as a policy field. There are a variety of classifications by which policy instruments can be arranged based on various analytical distinctions, ranging from coercion to the sort of government source used. All of these typologies point to various instrument families.

1.6 Systematic Literature Review in education, higher education, higher education governance

(J. Evans & Benefield, 2001) advocated for the use of systematic reviews in educational practice and policy, citing their systematic review on treatments for primary pupils with emotional and behavioral challenges to illustrate the dispute. Another paper authored by (Bearman et al., 2012) found five systematic reviews in higher education. The topics covered in these papers include.

- a) interventions to increase academic publication rates
- b) interdisciplinary higher education administration and student outcomes
- c) professional identity development
- d) work-based learning and personal development planning

Given the paucity of systematic reviews in the higher education governance literature, it's worth considering the advantages and disadvantages of following such a stringent and time-consuming literature review technique. Of course, blind acceptance of any approach is not acceptable in academic practice, and it is necessary to critically examine systematic review methodologies and comprehend the reasoning behind the synthesis of conflicting findings. Therefore, there is a need to weigh the pros and cons and make an educated decision before moving on.

1.6.1 Criticisms

- a) There is a fear that research that is largely qualitative and descriptive would not mesh with the basic concepts of the systematic review.
- b) Practicality in terms of policy and practice. In the higher education industry, researchers outline the limited usage of systematic review conclusions.
- c) Several problems must be examined when evaluating the possible application of systematic review in higher education research, including sectoral preparedness, variety of research traditions, the practicality of adoption of the procedures involved, and the expected advantages of uptake.
- d) Because the techniques to study that are best linked with systematic review epistemologies are present in medical research, a systematic review may be easily accepted within medical education but not in social sciences.

1.6.2 Benefits

- a) In a systematic review, the search's breadth permits all research to be examined, not just the most accessible or well-known. An educator or educational researcher can rapidly examine what is known about a topic, how reliable the study results are, and what the research's overall implications are in this fashion. A strong systematic review saves time and effort by directing readers to high-quality literature and providing a formal summary of the study findings.
- b) The systematic review techniques themselves do not pose any barriers to their use in higher education, even though they are time-consuming. The entire procedure will go relatively well if the criteria and their application are clear to the researchers and the audience. For this reason, the authors will dedicate appropriate time to developing the protocol of systematic review.
- c) The researchers believe the higher education sector will benefit from increased understanding and use of systematic reviews.
- d) Systematic reviews can help educational scholars expand on their existing work by highlighting strengths and flaws in the literature. A systematic review can also help researchers and practitioners understand and influence the broader practice and status of higher education research at the same time.

In addition to evaluating and writing the pros and cons of conducting the systematic review in this area of research, the authors also conducted an examination of the literature on systemic review in the field of higher education. The authors used the SCOPUS search engine while

inputting the search terms ‘systematic review’ or ‘systematic literature review’ in conjunction with ‘higher education governance’. The authors found over thirty results out of which not all the papers were systematic reviews. The authors reviewed all the eligible papers and summarised a few of those below.

(Khouja et al., 2018)

The authors of the paper mentioned the research questions, the literature search process, inclusion and exclusion criteria, the data items and collection, and the results of literature extraction. These basic details are required for systematic review for it to be valid, reliable, and replicable.

The writers used a variety of scientific and non-conventional data to conduct a Systematic Literature Review on IT Governance in Higher Education Institutions (grey literature). The purpose of this article is to present a map of the current condition of IT governance in higher education in various nations. The findings reveal a varied picture of IT governance in higher education institutions. The author mentions that the SLR serves as a foundation for the development, design, and implementation of a Tunisian university-wide IT governance system.

(Zhang et al., 2016)

This article contributes to the field of higher education resource allocation in general and higher education financing by being the first to use the systematic literature review approach to the subject.

The authors did not provide a detailed protocol for a systematic literature review in their paper. Inclusion criteria, time frame, search strings, and list of journals were briefly mentioned. The topic of the thesis is closely related to higher education governance – funding. Funding is a key policy instrument used by the state to steer the higher education system. A systematic review of 178 articles led to the three main findings; In the last few decades, this comprehensive literature assessment has uncovered major patterns, ideas, and difficulties in higher education funding.

- a) Financing cuts and tuition hikes, privatization and corporatization of higher education institutions, performance-based funding, and funding for internationalization are among the important trends.
- b) New institutional economics, resource dependency theory, and political economy are some of the ideas that have an impact on higher education funding.

- c) Higher education as a public good or a private good, academic capitalism, educational fairness, and the role of econometrics are all topics that will be discussed further.

(Tocto-Cano et al., 2020)

The authors focused on the implementation of the maturity model in higher education. A maturity model is a widely used tool in software engineering and has mostly been extended to domains such as education, health, energy, finance, government, and general use. The authors carried out a systematic literature review on 27,289 articles retrieved concerning maturity models and published in peer-reviewed journals between 2007 and 2020. They found 23 articles that find maturity models applied in universities, through exclusion and inclusion criteria. Protocols were explained in detail including search strings, search process, inclusion criteria, and information sources. The author utilised systematic review for analysis, providing suggestions for future research and possible policy implications.

(Benavides et al., 2020)

The goal of this research is to outline the unique features of the digital transformation (DT) implementation process in higher education institutions. The Kitchenham methodology was used by the authors to answer the research questions and to determine which publications were eligible. Nineteen studies from 1980 to 2019 were recognized as significant in the literature and studied. The key findings indicate that it is still a developing field since none of the DT in HEI projects examined have been created holistically. This circumstance necessitates more study into how higher education institutions can comprehend DT and meet the present demands imposed by the fourth industrial revolution.

The last paper in the queue is the one authored by (L. Goedegebuure & Hayden, 2007). The author reviews papers from the area of higher education governance. However, it was from the Special Issue of Higher Education: Research & Development published in the journal Higher Education Research and Development. The author reviewed papers published in the special edition and wrote findings that are in sync with what this paper has been trying to convey to readers. The papers look at issues in specific national systems, such as Australia, Canada, Netherlands, and Vietnam. The topics discussed were academic autonomy, and quality assurance, to list a few.

The **evolving connection between higher education and the state** was a common issue in several of the articles. However, it was worth noting that these adjustments were not all going

in the same way. The **Australian government** has lost faith in the self-governance models that universities have always supported. The issue appears to be that university decision-making procedures are not sufficiently 'business-like' in the perspective of the state. In **Canada**, while there are disparities among provinces, there has been a trend toward more system-wide higher education coordination, as well as an increase in the state's accountability requirements for public-sector higher education.

Articles point to a similar tendency in the **United States**, where accountability legislation has proliferated in recent years, though he believes the overall impact will be symbolic rather than burdensome. According to one of the authors, there has been a significant centralization of higher education governance in the **United Kingdom**, yet there appears to be some reciprocal awareness by the state of the importance of universities' role. However, another article observes a tendency in the other direction in the **Netherlands**: a bill is currently before the Dutch Parliament that proposes a surprisingly high level of self-regulation for higher education institutions. If passed, state accountability will be based on compliance with codes of conduct for performance in key areas of defined responsibility, with all other regulatory restrictions being removed.

Even after explaining about systematic review in the area of higher education governance the question which readers will be wondering is, **why is the paper conducting a systematic literature review?**

Since research is undertaken under a variety of related, yet separate, ideas, the literature on this topic is fragmented it is difficult to expand on earlier discoveries and identify research gaps for future study because of the breadth and complexity of these competing ideas. For say, there are different forms of systemic higher education governance within which there are different models of governance. There is a variety of governance models, and no model of governance is implemented in its entirety resulting in hybrid models of governance. The tools adopted by governance also differ depending on the nature of the state and model of governance. Systemic higher education governance is a dynamic concept, there is no fixed variable in this sphere which further complicates the field of research.

Therefore, the **purpose of the paper** which will be reiterated in the protocol section is to **understand, synthesise and analyse different systemic governance models and secondly, the policy instruments adopted by the government to implement the governance model.**

Successful systematic literature review in the field of systemic higher education governance will have major implications.

- a) lay foundation for future research in the field
- b) guide researchers to conduct a systematic literature review on another dimension of higher education
- c) create synthesized and structured knowledge on state steering models and public policy instruments

Using a systematic review, we can also understand how different researchers have tried to analyze this dynamic concept of systemic higher education governance. The agenda is to answer the following two **research questions** for which method of a systematic review of literature is deemed most appropriate by the authors.

- a) **What are the different types of systemic governance models/ state governance models/ state-steering models in higher education?**
- b) **What are the public policy instruments applied by the government to steer higher education institutions?**

Implementing a systematic literature review in the field of higher education governance is not common. There are risks to implementing it as mentioned in the criticisms. One cannot know whether she will win the race or pass an exam without participating in the race or appearing for exams. Therefore, without attempting to implement a systematic review in the field of higher education governance one cannot be cent percent sure whether it is possible or not. After evaluating the pros and cons and the previous attempts to implement the method in closely related areas of research, the authors decided to go ahead in adopting a **systematic review as the methodology to analyse the field of systemic higher education governance**. Most importantly the authors of this paper are filling the **research gap** which is the absence of a systematic review of systemic higher education governance.

In the next sections of the paper, the readers will go through new streets of methodology for exploring **systematic literature review** and the most important part of systematic review i.e., the **protocol** section. Exploring systematic reviews will make readers understand that the quality of stand-alone literature evaluations can have very real-world ramifications for higher education governance searching for evidence to inform their decisions. The protocol section

will lay the foundation for literature search, extraction, and review, data management and synthesis, the results and discussions of the literature extracted.

2. Methodology - Systematic Literature Review

The review of literature is an important part of academic study. It is considered the foundation of academic inquiries (Xiao & Watson, 2019). Literature reviews, as (Böckel et al., 2021) point out, are critical "*to map and analyse the current intellectual area, and to identify a research issue to further advance the existing body of knowledge.*" The process of enumerating, describing, summarizing, and objectively evaluating is called Literature Review (Coffta, n.d.). The advancement of research is based on the existing research to create new knowledge. To create new knowledge, we must know the current knowledge, especially the gaps in it. Therefore, understanding, summarising and critically analysing the existing research is necessary.

It is crucial to note that there are several types of reviews. There are **fourteen distinct types of reviews** depending on the diverse approaches used for finding, evaluating, synthesizing, and analysing the things that make up the body of knowledge (Pahlevan-Sharif et al., 2019) and (Grant & Booth, 2009). (Xiao & Watson, 2019) provides two broad types of literature review;

- a. Review of papers as a background of empirical research; and**
- b. Review papers as the main and sole of the objective of the research**

The former is commonly used to justify research design decisions, provide theoretical context, or identify a gap in the literature that the study aims to fill, whereas the latter attempt to make sense of a body of existing literature through the aggregation, interpretation, explanation, or integration of existing research. The first type of literature review can be called the general literature review.

The second type of literature review is called a Systematic Literature Review or systematic review. **Scientifically the literature review which is valid and reliable is called a Systematic Literature Review.** A systematic Literature review is also called a stand-alone literature review. Standalone reviews help to increase the quality of background reviews. One may also use a systematic literature review to assess the validity and quality of previous work, revealing flaws, inconsistencies, and contradictions. The emphasis on clear, methodical, and complete techniques for searching the literature, as well as the demand for formal synthesis of study

findings, distinguishes systematic review methodology from narrative reviews of the literature (Bearman et al., 2012).

To address any research issue, a systematic review aims to collect all relevant evidence that meets pre-specified qualifying criteria. In the identification, selection, synthesis, and summary of research, it employs explicit, systematic approaches to reduce bias. When done correctly, this yields dependable results from which inferences and judgments may be taken. **A systematic review has the following characteristics;**

- a. a clearly stated set of objectives with an explicit, repeatable methodology
- b. a systematic search that tries to find all studies that meet the eligibility criteria
- c. an assessment of the validity of the findings of the included studies (such as the risk of bias) and
- d. systematic presentation and synthesis of the characteristics and findings of the included studies (Shamseer et al., 2015).

(Bearman et al., 2012) notes that a **protocol-driven** and **quality-focused** approach to summarizing evidence is known as the systematic review methodology. This paradigm, which is over two decades old, has revolutionized healthcare delivery, funding, and research, and is closely linked to the now ubiquitous phrase evidence-based practice.

Methods of systematic study review are gaining popularity to build a robust evidence basis to guide policymakers. A systematic review's initial goal was to synthesize all the available, high-quality information on the impacts of an intervention to establish a solid evidence foundation to guide policy and practice. The strategy gained popularity with the emergence of the evidence-based medicine movement in the 1980s and 1990s (Victor, 2008). While academics working across disciplinary boundaries, such as information technology, management (Voorberg et al., 2015a) (Maier et al., 2016), tourism (Pahlevan-Sharif et al., 2019) governance (Garkisch et al., 2017), and social sciences in general (Xiao & Watson, 2019) (Littell, 2006), have also acknowledged the value of systematic literature reviews, they have garnered special attention in the medical area.

Systematic reviews have been viewed as particularly valuable among the different choices available because of their proclivity for reducing biases, increasing dependability, and perhaps improving the communication of findings (Pahlevan Sharif et al., 2019). Systematic literature reviews help to limit systematic error (bias), primarily by attempting to identify, appraise, and

synthesize all relevant studies (of any design) to answer research questions. (Shamseer et al., 2015) highlights the importance of systematic literature review as well;

- a. It enables systematic reviewers to plan carefully and anticipate potential problems
- b. it enables reviewers to explicitly document what is planned before they begin their review, allowing others to compare the protocol and the completed review (that is, to identify selective reporting), replicate review methods if desired, and judge the validity of planned methods
- c. it enables systematic reviewers to avoid arbitrary decision-making concerning inclusion criteria and extraction and
- d. it is most important in reducing the bias which arises in form of the selection of information based on authors' discretion.

According to (Victor, 2008) there are **two extreme methods for systematic literature review**; the **evidence-based approach** and the **theory-driven approach**. While there are conceptual and methodological issues with both evidence-based medicine and theory-driven approaches, the debate so far has indicated that each tries to provide something unique of valuable. Several reviewers have taken steps in this direction by combining methodologies in a single review. The blend of two extremes to produce mixed methods has encouraged researchers to apply for systematic literature review in social sciences.

An essential element of a systematic review or one can say the heart of the systematic review is the **protocol**. Without a pre-defined protocol, the systematic review cannot be valid and reliable. A protocol is a document that gives a clear scientific road map of a planned, conducted a systematic review in the context of systematic reviews. The protocol outlines the review's sensible and well-thought-out methodological and analytical approach (Shamseer et al., 2015). Therefore, the authors spent an unconstrained amount of time developing a protocol before conducting a literature search and extraction.

In the past, academicians have designed various protocols. Prospective register for systematic protocols (PROSPERO) was started in 2011 in which over 5000 protocols are registered in 2014 (Shamseer et al., 2015). The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was created to make systematic review reporting more transparent and thorough, and it has now been modified (to PRISMA 2020) to incorporate contemporary advancements in systematic review technique and vocabulary (Page et al., 2021).

PRISMA protocol is primarily designed for the field of medical science, however, has been widely adopted in the field of social sciences as well (Garkisch et al., 2017) (Maier et al., 2016) (Voorberg et al., 2015b). **The final PRISMA-P checklist has 17 numbered elements (26 sub-items) that should be described in systematic review and meta-analysis protocols at a minimum. Administrative information, introduction, and techniques are the three primary elements of the checklist** (Shamseer et al., 2015).

However, the protocol has not been implemented in the sub-field of higher education governance. Therefore, the task at the end of this research is to understand the PRISMA protocol and adapt it to the field of higher education governance. If successfully implemented, it will guide future researchers to adapt PRISMA-P in this area of research.

3. Protocol for Systematic Literature Review – Framework for thesis

3.1 Purpose

The purpose of the study is to fill the existing gap in the field of higher education governance. There is a lack of systematic and structured literature review of the peer-reviewed articles in periodicals in the area of systemic higher education governance. The rationale behind focusing on systemic governance is the following – the authors’ objective is to analyze the relationship between the state and the higher education system. In other words, what is the role of government in the higher education system, how the government intervenes, and what are the instruments used by the government to control the higher education sector?

3.2 Research Questions

What are the different types of systemic governance models/ state governance models/ state-steering models in higher education?

What are the public policy instruments applied by the government to steer higher education institutions?

3.3 Keywords

state steering models in higher education, state steering of higher education, state governance models in higher education, government-university relationship, systemic governance models in higher education

3.4 Sources

Scopus, and Web of Science

3.5 Search Strings

The authors searched the above-mentioned keywords in Title, Abstract, and Keywords mentioned in the articles.

- a) state steering models in higher education
- b) state steering of higher education
- c) state governance models in higher education
- d) government-university relationship
- e) systemic governance models in higher education

3.6 Inclusion and Exclusion Criteria

S.No.	Parameter	Inclusion	Exclusion
1.	Language	English	Other than English
2.	Publication Stage	Final	
3.	Subject Areas	Social Sciences, Arts and Humanities, Business and Management, Economics	Other fields such as Science, Psychology
4.	Source Type	Journal	Conference Proceeding, Book, Trade Journal, Report
5.	Document Type	Articles	Conference Paper, Book Chapter, Conference Review

Table 1 Inclusion and Exclusion Criteria

3.7 Possible Biases

1	Content Bias	Since research focuses on the higher education sector and its relationship with the state also known as the government. I will be focusing on the research papers which have content related to the topic. The research papers have been selected from the subject areas of social sciences, business, and management, arts and humanities, and economics.
2	Location Bias	There is no Location Bias as the authors have not limited research based on geographical region.
3	Citation Bias	The selection of literature has not been done based on how many times the paper has been cited but on its relevance to the research questions.
4	Language Bias	The author can read only English language papers; therefore, other languages have been excluded.
5	Outcome Reporting Bias	The authors have not assumed anything about the models of state steering of higher education, or about the instruments applied by the government in the higher education sector. Therefore, there will be no reporting bias in the research.

Table 2 Possible Biases

3.8 Credibility

To ensure the credibility and validity of the protocol adopted throughout the systematic literature review there are two authors constantly reviewing the steps of each other, thus, ensuring, inter-rate reliability.

3.9 Methods

To conduct a systematic literature review, the authors reviewed the guidelines by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) was adopted (PRISMA, 2020). Since the PRISMA protocol is adopted as a protocol in the field of medicine, the authors referred to some articles which adopted the PRISMA protocol in the social sciences field (Pahlevan-Sharif, Mura, & Wijesinghe, 2019) (Pahlevan-Sharif, Mura, & Wijesinghe, 2019) (Maier, Meyer, & Steinbereithner, 2016). Such articles provided a good reference on how to implement the protocol in the field of social sciences such as tourism, and third-sector organizations. Initially, a **scoping study** was conducted to understand the research in the area of state and higher education system relationship, systemic governance in higher education, government-university relationship, and state-steering of higher education. Through scoping study, the authors found that there has been no systematic literature review conducted before, thus, highlighting the research gap. It helped the authors in selecting initial search terms for the literature selection in the future. Following the scoping study, a protocol was developed in advance. The purpose of the protocol is to create pre-defined criteria for literature selection so that there is no bias from the authors' end. The protocol includes the purpose of the study, focused research question, keywords, sources, search strings, and inclusion and exclusion criteria. In a systematic review done by more than one reviewer, a protocol may increase the reliability of the reviews by improving uniformity amongst the reviewers (Pahlevan-Sharif, Mura, & Wijesinghe, Introducing the "PRISMA" Protocol to Tourism and Hospitality Scholars, 2019).

3.10 Eligibility Criteria are pre-defined criteria based on which research papers for systematic literature review were selected. The first criteria authors selected is the language where papers had to be published in English. There is no particular time frame within which the authors have limited the literature search. The authors have considered only articles which have been published in a journal. Other publications such as books and reviews were excluded. The final criteria of article selection are that the articles were selected from the area of Social Sciences, Arts and Humanities, Business and Management, and Economics.

3.11 Information Sources

The databases used by the authors are SCOPUS and Web of Science. A search was conducted for the literature in mentioned search engines on 10th and 17th August'2021 for Scopus and on 25th September'2021 for Web of Science.

3.12 Search Strategy

This section will include the strategy adopted by authors for literature selection at SCOPUS. The literature selection was done between 10th and 17th August'2021. Following search terms were used for literature selection – state steering models in higher education, state steering of higher education, state governance models in higher education, government-university relationship, systemic governance models in higher education, and systemic governance of higher education. Subject areas Social Sciences, Arts and Humanities, Business and Management, Economics were included, the rest were excluded. The language was English, only journal articles were searched for with the publication stage as final. 300 research articles were extracted in total from SCOPUS.

3.13 Study Records –

3.13.1 Data Management – The authors used Microsoft Excel to manage the records related to articles. The information of all research papers was first downloaded in Excel. The authors then started reviewing the papers. As the authors started reviewing papers color-coding method was adopted in the following way –

S.No.	Color Scheme	Indicator
1.	Blue	Repeated Record
2.	Green	Approved Record
3.	Red	Rejected Record
4.	Grey	Record not available

Table 3 Data Management - Color Scheme

3.13.2 Data Items –

The main columns in the excel sheet were the research article name, author's name, year of publication, and name of the journal. Additionally, the abstract, page numbers, and publication stage of research articles were also managed in the excel sheet.

3.14 Study Selection –

After the first selection of literature, in total 381 articles were collected from SCOPUS and Web of Science. Before even started screening duplicate articles were identified (blue) and deleted.

60 articles were replicating. Moreover, the author did not have institutional access to 59 articles due to some reasons. Due to time constraints, the matter is not resolved until now. Using the eligibility criteria defined earlier which included inclusion and exclusion criteria the articles were screened by reading abstracts and skimming the articles. Initially, articles were screened based on titles and abstracts. In some cases, reading of conclusion became necessary when the title and abstract were not indicative of the content of the research paper. While screening the objective was to see how the given research article assist in answering the given research questions.

Articles that were not relevant to the research questions were excluded. These articles were either not related to the field, topic, or dimension of governance in concern. Such dimensions of governance are institutional/internal governance, sustainability governance, international governance, academic governance, and issues such as freedom, electronic governance, governance of schools, and organizational decision making in universities. Articles focusing on university-industry-government synergy for research and development, and other development issues were excluded as the research did not focus on systemic governance and state control of the higher education sector.

The result of this process was that 73 research articles were approved as eligible for full screening. 189 research articles were excluded. 73 articles were identified as green. The same information is summarized in form of a flow chart provided by PRISMA. The full texts of 73 articles were downloaded. It took another two to three months to read the full texts of research articles due to coursework commitment. After a thorough reading, 45 articles are included for final analysis. Again, the primary agenda behind including a research article for final review is the intention to answer the given research questions.

4. Results

Entering the search strings as mentioned above in search engines; Scopus and Web of Science resulted in 381 full-length articles published between the 1980s and 2022. Out of these, 60 articles were duplicated and another 59 were inaccessible. Therefore, after the first step of “identification” 262 articles were included in the “screening” process which is the second step. Records were screened with a focus on the abstract, introduction, and conclusion and skimming through the rest of the paper. This step concluded that 189 articles were excluded. This led to 73 articles to be read fully. After 73 articles were read thoroughly 28 articles were further excluded. In the end, the number of articles included in the systematic literature review is 45.

The flow chart for this is available below. The reasons for the exclusion of papers in the second step are as follows;

Not in scope of field – life expectancy and educational investment, internationalization of higher education, demographic changes and human capital, the impact of bilingual education, role of higher education sector in sustainable development goals, school performance

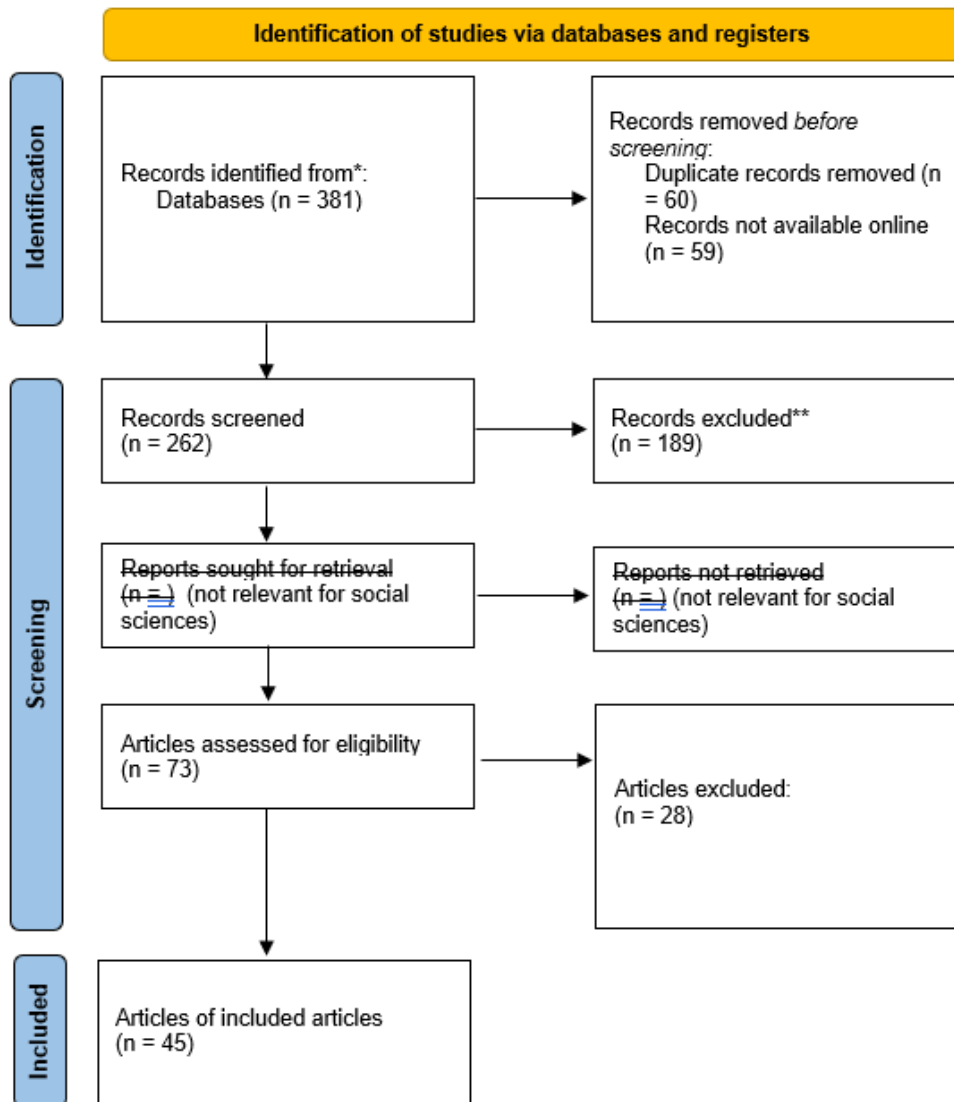
Not in scope of the topic – students' role in governance, school governance, culture, and higher education, sustainable universities, the role of civil societies and corruption in universities, university-industry relationship and collaboration, academic freedom, curriculum design, students protest and governance,

Not in scope of the dimension of governance – sustainability governance, big data governance, institutional governance, international governance, local governance, corporate governance, electronic governance

4.1 Descriptive Analysis

4.1.1 Distribution of publications over time

The bar chart shows the research articles published in systemic governance of higher education from the two databases: Scopus and Web of Science. The publication numbers picked up from the late 1980s. The frequency of articles published after the 2000s was reduced. Until 2007 the count of published work was stable. However, since 2007 the number of publications spiked by approximately 25 percent. The upward trend can be noticed until 2012 and there was a sudden fall in 2013. This could be due to global financial crises of 2008 and pressure on governments' treasury around the world. Therefore, the discourse for market oriented policies in higher



From: Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ* 2021;372:n71. doi: 10.1136/bmj.n71
 For more information, visit: <http://www.prisma-statement.org/>

Table 4 Identification and selection of articles for review

education sector picked up. Again, the number of published articles increased dramatically until 2017 followed by a drastic fall in 2018. Overall, the number of articles published across time frames can be explained through constant ups and downs.

4.1.2 Distribution across journals

The clustered bar chart illustrates the number of publications associated with the journals. Most of the articles are from distinct journals. In other words, there are not very few journals with a high frequency of publications as most journals are associated with only one to two articles. However, there are two journals with which the number of articles associated is high, namely,

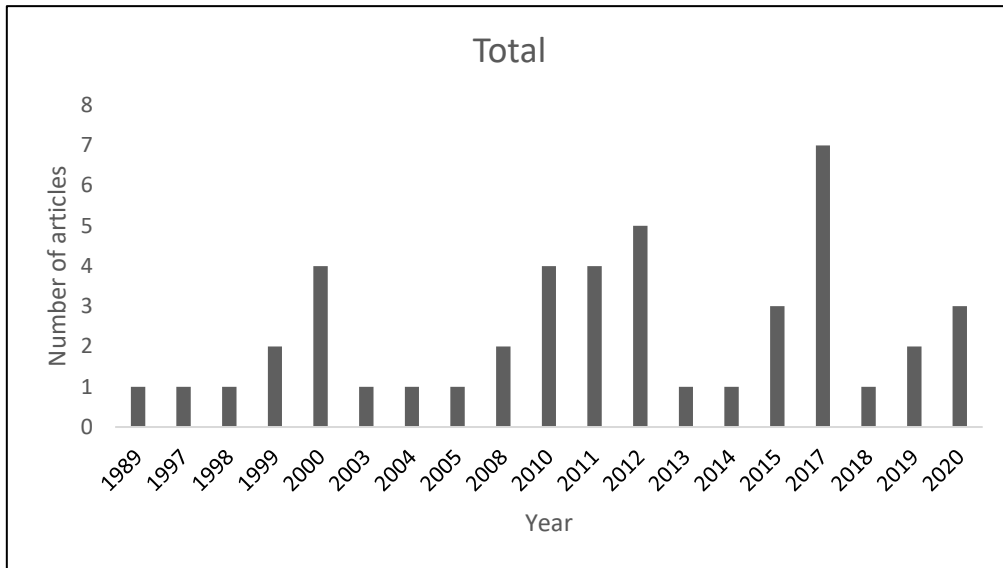


Figure 1 Distribution of publications over time

Higher Education with 9 publications and Higher Education Policy with 7 articles. Higher Education had the highest total citation of around nine thousand. The impact factor for Policy and Society was the highest at 10.104 and the journal with the lowest impact factor was Chinese Education and Society with an impact factor of 0.131 (*Journal Citation Reports*, n.d.). At the end of the analysis, any concrete reason behind the distribution could not be found.

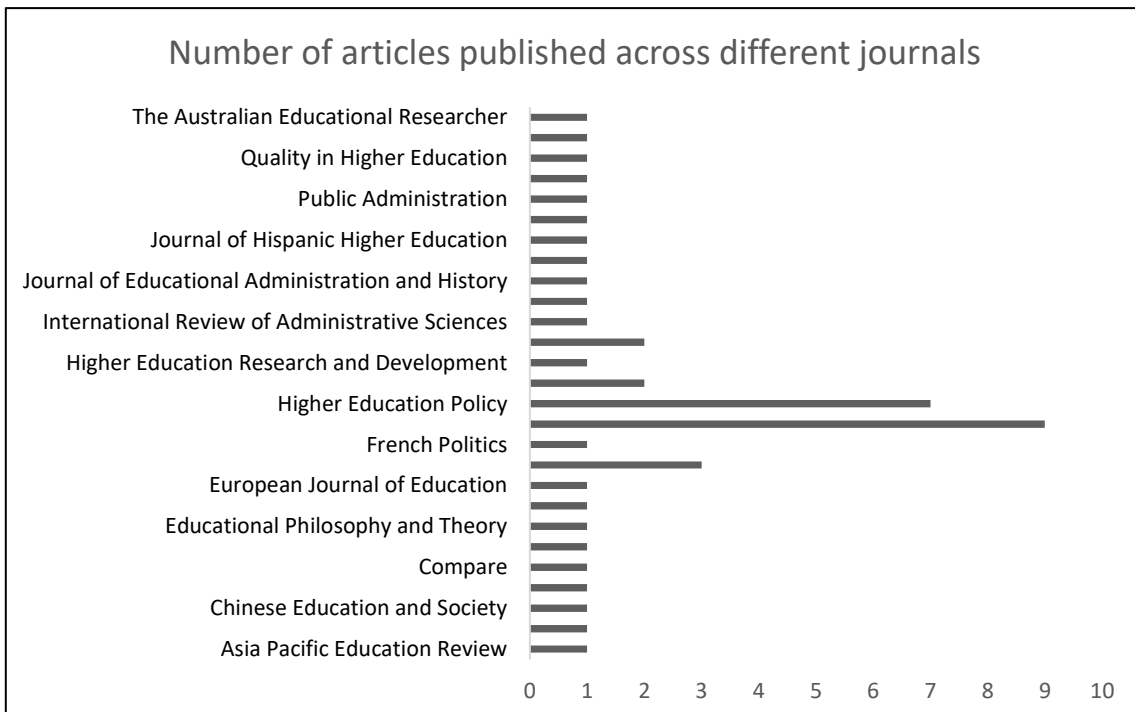


Figure 2 Distribution across Journals

4.1.3 Distribution across the country focus

The spatial analysis will provide insights into the geographical focus of past literature in the field of systemic higher education governance. Even though the authors do not have location bias while extracting articles, the purpose of doing spatial analysis is to find countries where research related to systemic governance or the relationship between state and higher education system is missing.

The figure illustrates that the geographical region which is focused on the most in included articles is in Europe, the United Kingdom, and Australia followed by Malaysia, and China. Among European countries such as Italy, France, Germany was the most focused. Countries in central and eastern Europe such as the Czech Republic, Austria, Georgia, and Armenia even though the number of articles was less. In the future, more research articles are needed to focus on studying systemic governance in less focused geographical regions such as South America, and Africa.

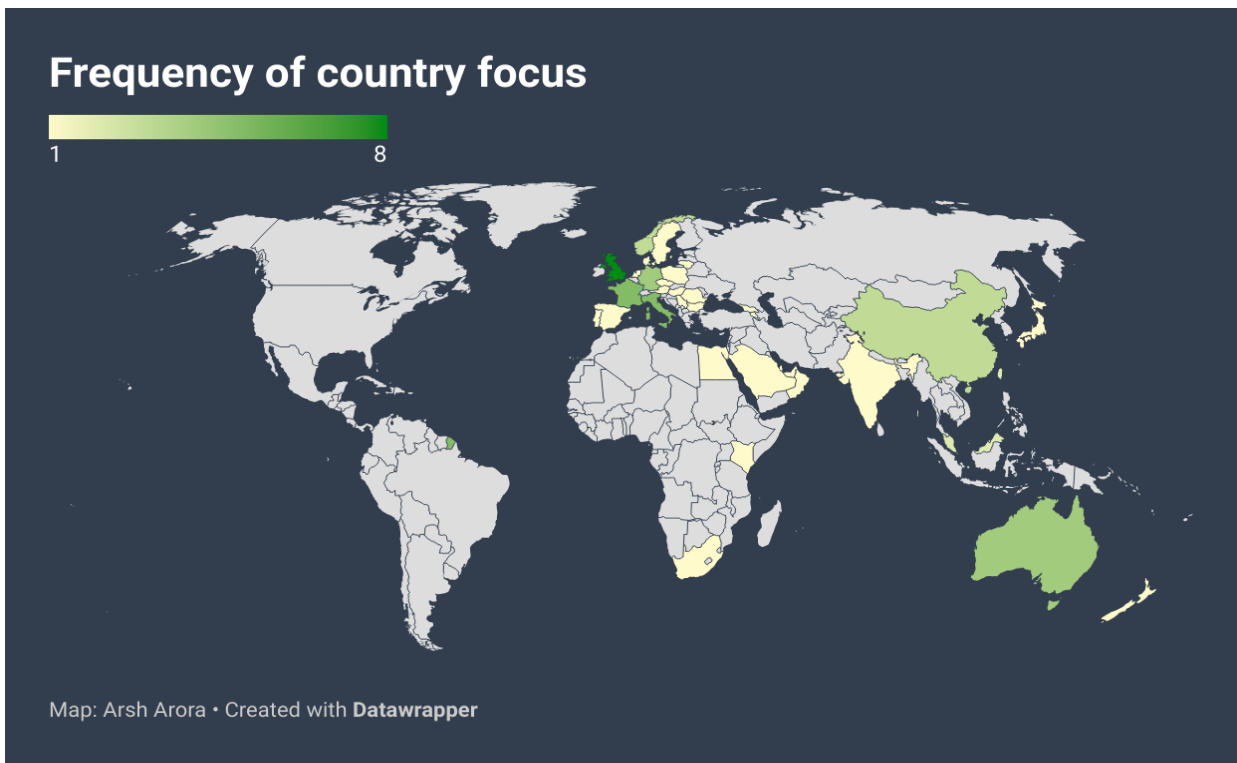


Figure 3 Distribution across Country focus

4.1.4 Text Analysis

In any research article, the title and abstract reflect the major aspects of the literature. Therefore, a lot can be found about the literature by analyzing the title and abstract of scholarly works.

There are various ways to perform text analysis also known as text mining. The authors used VOSviewer.

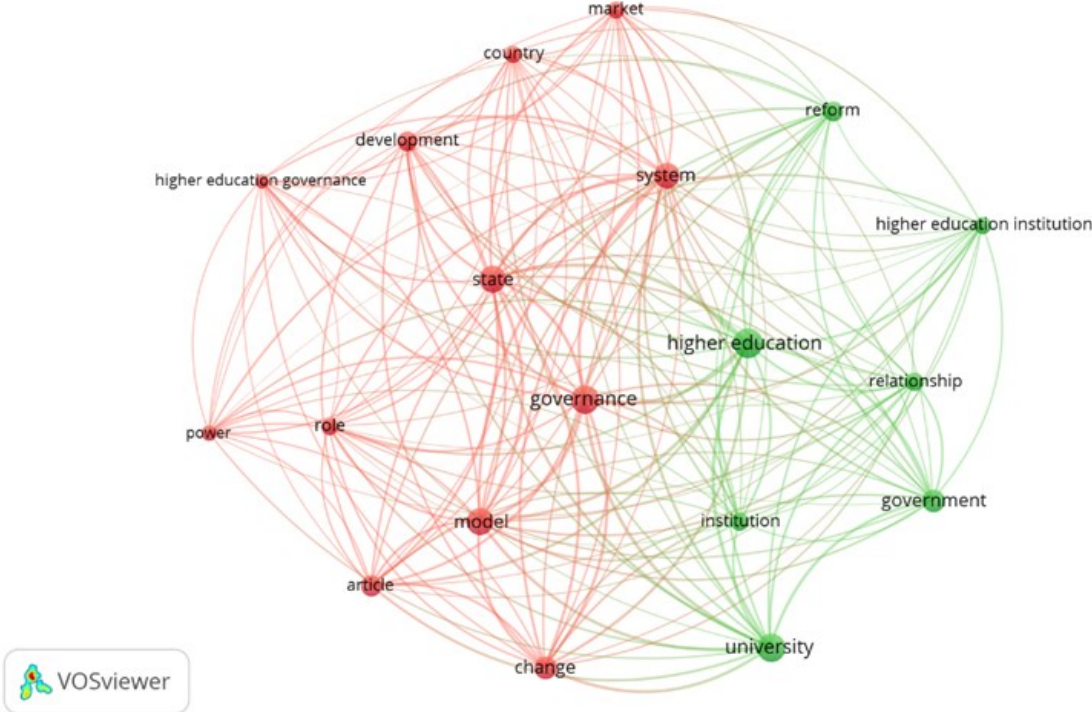


Figure 4 Text Analysis

In this figure is a term map. The size of the text and circle varies according to the weight of the text. The color represents the cluster in which the text belongs. The colorisation of text is by default. The lines represent the linkages between the text. The distance between the text represents the relatedness to each other. The closer the distance between two texts, the more related they are and vice versa.

A total of 1853 terms were identified, and 23 terms occur atleast 10 times. A relevance score is calculated and arranged from highest to lowest. In the end there were 19 terms included.

This network visualisation can provide interesting analysis. There are two clusters, green with government and red with the market side. Both government and market are poles apart but have an almost similar size. This indicated that both are not related to each other but are of similar importance. Governance is at the center of the map linking with every other term on the map. It has largest size along with terms higher education, state and system. The four terms are also closely distance implying close association with each. In a nutshell, it can be inferred the research articles in review are collected within the scope of field.

5 Synthesis of results

In the systemic review, the authors reviewed 381 articles and selected 45 articles that contained information about systemic governance models/state-steering models of higher education governance and public policy instruments adopted by the government to steer the higher education system. Very few of the articles were based on quantitative and empirical methods. Those based on quantitative methods used the content analysis or developed their empirical framework based on theoretical research for future researchers. The authors included only studies that were based on the systemic governance model. Other dimensions of governance models such as institutional governance and international governance were excluded. Moving on, more articles excluded if not contributing to answering the two main research questions mentioned above.

The authors segregated this section into three sub-sections, namely, **key concepts**, **key systemic governance models/frameworks**, and **key public policy instruments**. The rationale behind categorizing the above three sub-sections is because of the convenience of understanding and conveying a message that all the three sub-sections are interrelated with each other. Subsequently, **general trend of state steering**, case studies of some **European countries**, and some introspective questions will be presented. This will be the most the enriching part of the thesis.

5.1 Key concepts

The important concepts explained below help in understanding the nature of higher education governance at present. The following terms assist in understanding the bigger picture and provide a sense of government-university relations. These concepts are borrowed from the reviewed articles and understanding these terms is critical to pursuing further research in the systemic higher education governance field.

5.1.1 Institutional Isomorphism

Institutional Isomorphism can be seen in situations where there is a sense of uncertainty. When institutions are facing unknown problems, in place of creating their own solutions institutions tend to **mimic** the solutions implemented by other countries. This phenomenon is called an institutional isomorphism. This may not be an efficient practice but it provides legitimacy to the actions of the institutions. The **Bologna Process** mentioned before in the thesis is a real-life example of institutional isomorphism. Bologna Process is a deliberation at European Union,

supra-national level to reform higher system towards marketization. As a result, the government in European countries or countries wishing to join the union emulate the policies to steer the higher education system toward a market-oriented model.

5.1.2 Transnational Soft Governance

Transnational governance refers to a group of nations coming together to share knowledge and work toward a single form of governing. It is closely linked to institutional isomorphism. Through the Bologna Process, a system of **global soft governance** was established, principally based on voluntary contract and information-sharing channels. It is a mechanism for exchanging knowledge, advancing practical concepts, and promoting political tactics. As a result, higher education institutions were quickly challenged to establish its validity within the framework of a developing international governance platform. The actual impact of multinational reform demands on these deeply ingrained institutional structures is still poorly understood. As supra-national policymakers voluntarily establish shared criteria as benchmarks for national changes, the Bologna Process can be claimed to be built on **soft governance** processes. Recent studies have demonstrated that even in the absence of formal penalty mechanisms, strong global communication may result in considerable national policy change.

5.1.3 Historical Institutionalism

An **opposite** force to institutional isomorphism is Historical Institutionalism. The idea of institutional isomorphism is criticized for frequently ignoring historically ingrained institutions. A path-dependent repetition of previous decision-making patterns in current circumstances is illustrated by historical institutionalism. For instance, historical institutions in central and eastern European countries may have roots in both the pre- and post-communist eras.

5.1.4 New Public Management

New public management is founded on the basis of public choice theory and principal-agent theory and is a result of neoliberal ideology. The New Public Management refers to a well-known wave of public sector reform that began in the late 1970s as a backlash against traditional bureaucracy and big government in Anglo-Saxon countries during their economic slump (Davide Donina et al., n.d.). These reforms were justified by the idea that because **governments were overburdened**, Western welfare states were now costly, ineffectual, and excessively restrictive of workers and citizens. The higher education sector has recently undergone reforms, similar to other important public services. As a result, recent studies analyzed reforms to the

higher education sector within the larger narratives of public service reform, and changes to higher education systems over the past few decades have frequently been linked to the New Public Management narrative.

The main goals of the New Public Management reforms were to lower public sector spending and increase the effectiveness of public organizations by replacing the outdated public administration with a new one that was based on the values of the private sector and market laws. New Public Management changed the governance model from state control to state steering from distance. In other words, changing the relationship between state and universities. The role of external players such as industries increased. The role of the state shifted from controlling and making sure there is a competitive spirit in the higher education system.

In the case of **Norway**, although the modifications have brought several aspects congruent with New Public Management policies, the players participating in higher education steering are still present inside the state structure, albeit in greater numbers. In the case of **Germany**, under the New Public Management monitor, there is the creation of hybrid university governance structures in German higher education, merging aspects of the old public agency regime with parts of the new corporate business ideals. Such hybrid arrangements can be encountered in attempts to allocate resources based on performance. This should make university competitiveness more intense.

A special case in **Korea** is where the government failed to implement policies in line with New Public Management. The main cause behind the failure is historical roots, and also a lack of autonomy given. However, the state did its best to pivot but the strange part was resistance from universities. (Kiyong Byun, 2008) notes the resistance from the academic community which was still rooted in cultural beliefs. They did not relate themselves to market orientation, commercialization, or industry.

5.1.5 Network Governance

On the other hand of New Public Management, network governance employs horizontal pathways and decentralized power. In network governance, the state outsources the responsibilities for providing public services and instead controls the system through partnerships, agreements, alliance-building, and persuasion. The idea of multilevel governance fits in to make sense of the current circumstances where the word governance took the place of government to signify the inclusion of a wider variety of actors in the governing processes. The state shifts to the role of relationship facilitator, taking on a more guiding and less controlling

role while handing over control, authority, and power to other players. That is why we see that the state instead of controlling the higher education system delegates the responsibilities to the private players, quasi-state agencies, etc.

5.1.6 Decentralization and desectoralisation

Usually, the trend has been that the state is relinquishing its responsibilities of maintaining higher education institutions to other stakeholders such as mainly private entities. However, in **China**, before marketizing the higher education system the government decentralized the governance of the higher education system by giving more authority to the provincial government. This does not change the extent to which the state controls the higher education system. In China, one unique feature was that universities were established by different ministries focusing on their respective field, for example, the medical university established by the Ministry of Health, textile universities, technical universities, etc. The government decided to **unify** the command center of all these universities under one ministry – the Ministry of Education. This process is referred to as desectoralisation.

5.1.7 Institutional Theory

Institutional theory has historically explained why organizations within a certain organizational sector gradually become homogeneous or heterogeneous. According to Weber's theory, businesses seek and adopt the most effective and logical organizational structure due to market forces and the desire for profits. Institutional logic which is part of the theory is socially shared, strongly held ideas and ideals that create a framework for reasoning, offer standards for validity, and aid in the organization of time and space. They influence the cognitions and behaviors of actors. In any given institutional environment, there are frequently opposing institutional logics, and institutional change happens when influential stakeholders within that setting gain or lose support.

In the context of systemic higher education governance, **potential clashes** between and within state and universities in perspective of institutional theory and logics are; first, between the state and higher education institutions; second, within the state to accommodate different policy objectives; and third, within the higher education sector, depending on the different types of institutions.

(Jungblut & Vukasovic, 2013) says that there is a clear link between institutional theory and hybrid steering models. According to them, the emergence of a new logic that contradicts

conventional wisdom is one of the opportunities for institutional reform. Therefore, the outcome of the interplay between the old and new logic and how various players deal with its inconsistencies determines the potential for change.

5.1.8 Regulatory Capture

Universities aim to preserve their status without significant governmental pressures, whereas state prefer to utilize quality assurance and other policy instruments as a powerful incentive to improve higher education. However, **Laffont and Tirole's** so-called "*regulatory capture*" (Laffont & Tirole, 1991) is one unintended result of state engagement in higher education governance through the quality assurance process. In Asia, commissioned **agencies** with a national mandate frequently oversee national quality assurance programs. Asian organizations were seen as extensions of the government since they were under direct or indirect government control (Hou et al., 2020).

5.1.9 Globalization

We must **split** the period into two eras—the **pre-and post-globalization eras**—to comprehend the connection between the state and higher education institutions.

In pre-globalization era, the state and higher education institutions were very dependent on one another until globalization took hold. The government's participation was mostly dependent on financial support and legal protection in the form of legislation and regulations. However, the globe was no longer stagnant following globalization.

The dynamics began to shift as the government's role began to wane and the influence of markets began to grow. The government began concentrating on businesses that produced capital, which caused money to be diverted. Contrary to common belief, state spending on higher education system is still far larger than private spending in most nations. This shows that the role of government has not diminished completely.

5.1.10 Power and governance

(Bótas & Huisman, 2012) used the state-university interaction as the backdrop for applying the **Foucauldian theory of power**. It is a particularly complex instrument for studying, analyzing, and comprehending governance in higher education. Unlike other public policy approaches, it provides insights into the power relations involved in the internal operations of universities, mechanisms, compositions, and practices of the Council, Senate, and Executive as well as the

power relations involved in their **external** relationship with the legal requirements of their nations and governments.

These rights are partially exercised by the government through dictating the selection and representation of members on the governing boards of various institutions. It is easy to see how representative democracy's overarching ideals (**shared governance**), the empowerment of numerous stakeholders, the quest of agreement, etc. serve as motivations for the exercise of governmental authority.

On the other hand, higher education institutions do not have control over their external environment (economic, social, political, and legal): the power of the government is largely unidirectional. At the same time, higher education institutions must be responsive to their environments to survive. However, the alternative interpretation would be that exercising that authority negatively affects the university's agility, leads to prolonged and ineffective even subversive discussions in multi-layered structures, exacerbates looming conflicts between parties with different interests, and gives too much influence to overrepresented members.

5.2 Key systemic governance models/frameworks; in response to our first research question

The key models described and discussed below will aid in conceptualizing the overarching governance structure that governs interactions between higher education institutions and the government. The nature of these interactions determines the range and latitude, not only for policymakers to select goals and methods of policy but also for the potential repertory of institutional responses and government/institutional interactions that may be used in play within certain policy domains.

5.2.1 Clark's Triangle

For mystery writers, and scientists, the triangle in mind is the Bermuda triangle but for researchers in higher education governance, it is the Clark's Triangle. Burton Clark's "*triangle of coordination*" (1983) is a model that attempts to demonstrate how order may emerge from complex higher education institutions with a diverse set of goals, beliefs, and systems of power. Because it is a dynamic model that may depict ongoing changes within a system, the triangle provides a flexible framework through which to assess expanding relationships between the actors in a higher education system.

Clark's triangle arose from his dissatisfaction with past attempts to comprehend how power contributes to order in higher education. To begin with, governance and coordination studies have focused on academic, political, or bureaucratic sorts of authority. Clark stated that disorganized market-like interactions, rather than bureaucrats, politicians, or intellectual leaders proposing planned solutions, created the majority of the order visible inside institutions.

Clark's triangle is based on his finding of three different sorts of systems: government, market, and academic professions. Clark refers to each of these three systems as an "*ideal*" kind. These systems are the triangle's three vertices because they represent the key "*interested groups*" from which academic system coordination originates through interaction and rivalry. It has proved to be a reliable analytical tool, and it is widely considered one of the most important models for studying higher education governance and power relations. However, the times have changed, and the stakeholder relationships in higher education have altered as well.

When a system evolves away from a state-dominated model of coordination, the market or academic oligarchy will ultimately gain more power. Combinations in which a system is heavily oriented toward two forces at the same time, such as academic oligarchy and market, are forbidden by the triangle. Because the triangle cannot track movement from one area to another, a system can only exist in one place at a time. Another consequence is that the model is unable to account for circumstances in which one force is particularly dominating at one point in time while allowing another force to play a major role on an irregular basis (or even routinely).

Despite its flaws, Clark's triangle is a reliable analytical tool, and it is widely considered to be one of the most important models for understanding governance and power relations in higher education. Many researchers have sought to investigate the higher education industry from various perspectives after Clark's triangle coordination model.

The triangle is employed by the researcher to analyze how marketization strategies are implemented in Dutch higher education, according to (Jongbloed, 2003). Clark's strategy overlooks the Dutch government's twin role as an innovator and long-term facilitator of a new knowledge-based market economy. Jongbloed suggests that Clark's triangle must adjust to fit a new dynamic in which the state simultaneously regulates and supports competition and knowledge growth, exerting regulatory control while working closely with academia.

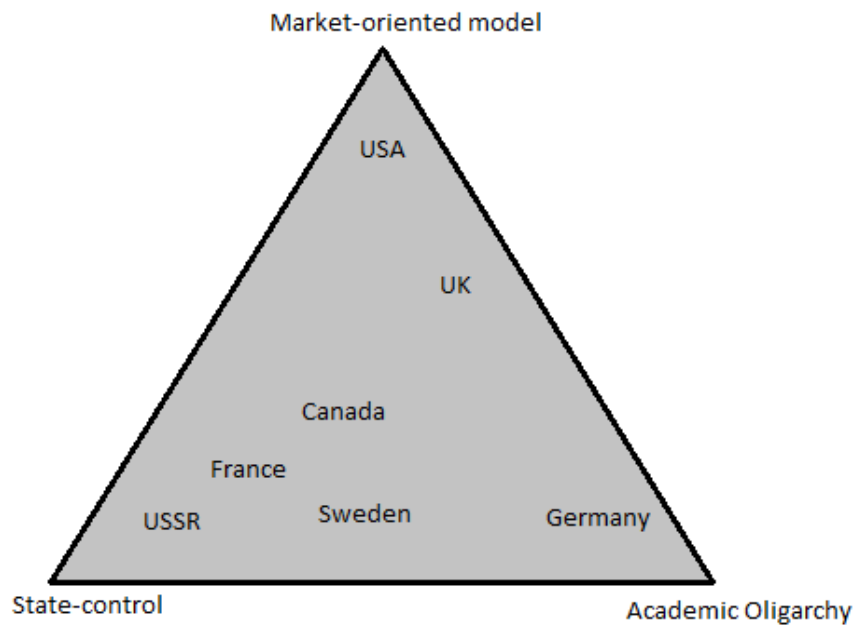


Figure 5 Clark's coordination triangle - models of higher education governance

5.2.2 Michael Dobbins' Analytical Framework

Michael Dobbins developed an analytical framework based on a broad definition of higher education governance with parameters; control, coordination, and the allocation of autonomy between the state, academic community, and the management of the university. Michael Dobbins' idea of analytical framework is based on Clark (1983), (Olsen, 2007), (Neave, 1998) (Nokkala & Bacevic, 2014).

The analytical framework is integrated with three main pillars; **first**, Personnel and Funding issues; reflecting personnel autonomy and financial governance. Personnel autonomy refers to an organization's freedom to decide how staff members are hired, paid, and how long they work. The topic of "financial governance" is the acquisition, distribution, and administration of funds. **Second**, the regulations by state. This is usually called state control and determines the autonomy of the university, and the **third** is the relationship between the university and external stakeholders, especially society.

Given this context, he proposed three models: first, the State-centered model, second, the Academic self-governance model, and third, the Market-oriented model.

The idea of Michael Dobbins was not only to propose an analytical framework based on previous analyses of higher education but to provide empirically observable indicators for future research as well. The empirical indicators provided in his paper can be used to understand in which direction the state is steering the higher education system. Individual indicators may

be adjusted, added to, or rearranged to account for more contemporary ideas like corporate governance, flexible governance, and participative governance.

The framework provided by Dobbins can help researchers in cross-country comparison or even comparison within the countries. In some countries, there may be two distinct types of models of governance. Michael Dobbins applied his framework in analyzing higher education governance of different countries, namely, France, the Czech Republic, and Georgia, to list a few.

5.2.3 Olsen's classification

Olsen's classification offers four different types of state steering models, namely, **the sovereign, rationality-bounded steering model, the institutional steering model, the corporate-pluralist steering model, and the supermarket steering model** (Gornitzka & Maassen, 2000). In each case, the role of government and the role of the higher education system differs. Moreover, different type of classifications applies to different countries. For say, the supermarket steering model could be witnessed in the United States of America, whereas the institutional steering model could witness in countries such as Finland and Austria.

The **interventionist state or model of state management**, in which higher education is viewed as a tool for achieving economic or social goals, is closely related to the sovereign, rationality-bounded state model. Tight oversight of universities and colleges and a focus on their political accountability are the best ways to uphold that position. The following are some traits of this kind of model: The government's policy objective is to be implemented through higher education. Top-down, centralized decision-making is the norm. All conceivable topics are, in theory, within the scope of government inference.

In an **institutional model**, higher education institutions have a specific duty to defend academic traditions and principles against the whims of changing political regimes, coalition movements, and interest groups' short-term goals. The relationship between the state and the old, elitist universities, where there is a shared understanding and unwritten convention of state non-interference between state civil service and universities as elite institutions, probably serves as the best example of this model in the context of higher education. The following traits are among them: Among other things, higher education's responsibility is to protect its traditions, defend academic independence, and foster knowledge transmission. Institutional leaders, whose power derives from the history and traditions of their institutions, dominate the policy

sphere. Mutual standards of non-interference between the government and the higher education institution serve as the foundation for autonomy.

The idea that the state is a single actor with a monopoly on authority and control is challenged by the **corporate-pluralist state**, which proposes that there are numerous competing and legitimate sources of power and authority. The purpose of higher education is to serve as a mirror for the constellation of interests expressed by various organized interest groups in the field, such as student groups, staff unions, professional associations, business, or regional authorities. One of the many stakeholders in higher education is the ministry of education. Regarding the function and path of higher education, all parties have a stake. A corporate network of public boards, councils, and commissions makes up the arena of policymaking. The coordination between policy sub-systems is not very strong. The allocation of interests and power leads to the negotiation of higher education institutions' autonomy.

The state plays a very small part in the **supermarket steering model**. In its most basic form, it assumes that almost all governmental acts and activities carried out by public agencies will be less efficient, just, or effective than those of private persons interacting with the market. Higher education institutions' main responsibility is to provide services like instruction. Among other things, the state's role is to act as the great necessities' bookkeeper to ensure that market forces in higher education function properly. The improvement of higher education's ability to self-regulate is under the purview of government intervention.

5.2.4 Van Vaught and Neave

The **rational planning and control model** and the **self-regulation model** are two different sorts of state governance techniques or models that may be distinguished, according to (Vught, 1989).

The **rational planning and control model** is characterized by a high level of trust in the ability of governmental actors and agencies to gather complete and accurate information and to make optimal decisions. Governmental agents attempt to direct an item by enforcing strict regulations and imposing elaborate control measures. It views itself as an omniscient and omnipotent force capable of guiding a section of society toward its objectives in a legal way. Such a model is a normative ideal that, while nice to strive for, is practically unattainable.

On the other side, the **self-regulation paradigm** is less restrained. The focus is on feedback and monitoring in this situation. The assumption that a decision-maker should focus solely on

a limited number of crucial factors and keep them within acceptable ranges is essential. In this model, the government functions primarily as an observer of the rules of the game being played by relatively autonomous participants and as an actor who modifies the rules when the game can no longer produce acceptable results. The foundation of the model arises from the fact that acquiring knowledge about everything in the domain is impossible. It puts importance on monitoring feedback variables and other critical variables which should remain in the tolerable range.

State control and state supervisory steering models are not absolutes. Rather, they should be viewed as "*ideal kinds*" that are never fully fulfilled in actuality (Meek & Wood, 1997). Market and nonmarket factors coexist in all higher education institutions. Furthermore, while the state supervisory model is built on competition and commercialization principles in the context of deregulation in higher education, it is also a planned or controlled kind of market competition.

5.2.5 Four typologies of governance by (Capano, 2011)

(Capano, 2011) decodes the way government steers the higher education system using public policy instruments. According to him, Governments combine strategic goals and means to create the systemic modes for higher education governance, and they then decide on the types of policy instruments that will be used to achieve those goals. The authors' classification of systemic governance modalities in higher education was made possible by the dichotomization of the role of the government in determining the objectives to be pursued and the strategies to be used.

Hierarchical governance and **procedural governance** are the two classic systems of government in which the State exercises decisive command and control. In the case of hierarchical government, the command-and-control approach covers both goals and means through the explicit directives that indicate precisely which objectives are to be pursued and the methods to do so. Since it is a hegemonic actor, the government directly organizes all aspects of policy-making. Examples of the hierarchical control of higher education include situations where the State coerces colleges into adopting its goals and practices.

The stakeholders in the **procedural governance** mode, the second of the four governance modes, are free to choose their own goals as long as they follow the procedural norms that have been created, monitored, and enforced by state bodies. The dominant force in these circumstances is central bureaucracy, which typically leads to preferential relationships with the most important sectoral interest groups. Higher education is subject to procedural

governance when the State imposes stringent procedural rules while granting universities a sizable degree of autonomy. In simple words, universities can set their own goals but the way to achieve them will be fixated by the state.

The **steering-at-a-distance and self-governance models** are the two in which governmental influence is indirect. In the steering-at-the-distance approach, the government is steadfastly committed to achieving common objectives while still allowing policy players some leeway in how to accomplish so. In this process, the government employs certain particular policy techniques to persuade stakeholders in policy to support governmental aims. A complex collection of regulations and, frequently, the presence of public agencies acting as a middleman guarantee that policies are coordinated under this type of systemic governance, in which the government has no direct involvement. Instead of issuing clear directives, the government tries to influence institutional behavior by enforcing soft rules, providing financial incentives, and monitoring performance.

On the other side, the government chooses to largely liberate the policy realm under the self-governance option. It is believed that the fundamental requirement for sectoral coordination is the institutionalization of participant connections. However, it is clear that the government still has the power to intervene when it deems it essential, altering the tools of policy and the mode of governance. The self-governance model in higher education, to put it simply, describes the situation where institutions are free to choose what they want to achieve and how they want to do it.

5.2.6 Principal-Agent Framework

(Kivistö, 2008) is a scholar who has worked extensively on the application of the principal-agent framework in higher education governance. His studies examine the government–university interaction using agency theory as the theoretical framework and analyze the theory's primary strengths and flaws in this setting. The goal of his research is to evaluate the key strengths and shortcomings of agency theory when applied to the government–university interaction as an analytical framework. Agency theory depicts the role of the **state as a principal**. Principal in agency theory has the authority to give direction to agents, they expect agents to fulfill the list of responsibilities in exchange for something such as funding, and autonomy. **Universities in this case are seen as agents**. The role of universities is to fulfill the accountability needs of the government and at the same time to make sure that the institutional

autonomy is not compromised. Agency theory can play an important role in straitening the role of universities if they demonstrate their accountability.

This kind of theory applies to all the forms of state steering of higher education. This is because in all forms there is a need for a contract between the state and higher education system. Agency theory can be the foundation of that contract. All the insights that agency theory may provide are tied to the topic of universities' conformity with government aims in exchange for resources. In the findings, we saw or we will see that performance-based contracts in Australia and 4-year contracts in France make sense given the Agency theory.

5.2.7 Quadrant of Higher Education Systems

Using the "Quadrant of Higher Education Systems" as a conceptual framework, which is based on the two opposing qualities of control and autonomy, this study by (Song, 2020) builds on those prior contributions. The framework consists of four dimensions: institutional supervision and university administration at the institutional level, government regulation, and financial assistance at the system level. Government regulation and financial assistance are two aspects of system-level governance that show how much the government is influencing higher education institutions. They enable the classification of states as strong or weak, respectively. The aforementioned would be reflected in the first and second quadrant before globalization.

The internal administration of academic communities at universities is one of the components of institutional-level governance. In particular, institutional monitoring describes how governments control institutions of higher learning through specific educational regulations. The regulations that allow for the autonomy of universities over academic issues are the subject of the university administration.

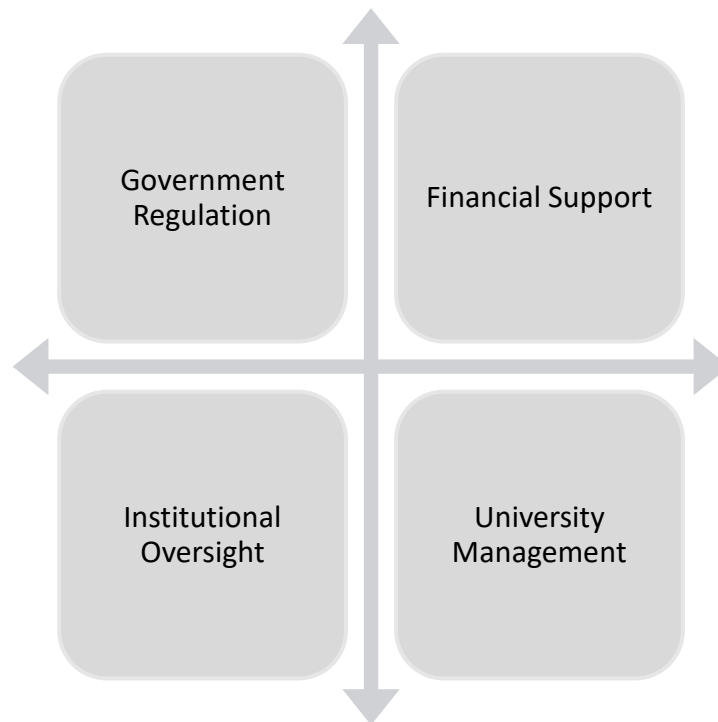


Figure 6 Quadrant of higher education systems

5.2.8 Leisyte (2014)

Scholars in this field have used a framework proposed by as the foundation for their research. Leisyte in her work provides the rationale for quasi-market in the higher education system in form of a **five-point governance mechanism**, namely, **competition**, **state regulation**, **managerial self-governance**, **academic self-governance**, and **stakeholder guidance**. Competition is an essential part and soul of markets. In the case of the higher education system, competition implies the tussle for resources among higher education institutions such as for funding, and student enrollment. State regulations tell the level at which the state controls the universities' functioning. The second and third governance mechanisms are inspired by the Humboldtian model of governance which sees collegial actors as important players in governing the higher education system. The last point – stakeholder guidance reflects how the higher education system inculcates civil society, students, and parents in governance.

Leisyte goes on to put a five-point governance mechanism across three different governance models, namely, **state-control**, **academic self-governance model**, and **market model**. The product is a table adapted from one of her works;

Governance Mechanism	State-control model	Academic self-governance model	Market-oriented model
Competition for resources	Low	Low	High
State regulation	High	Low to Medium	Low
Managerial Self-governance	Medium	Low to Medium	High
Academic Self-governance	Low	High	Low
Stakeholder guidance	Medium	Medium	High

Table 5 Five governance mechanisms; adapted from Leisyte (2014)

5.2.9 Hybrid systemic governance models

Heterogenous governmental reforms have generated **hybrid forms of governance**—where new policy instruments have been added to those already in use or where the tools offered by the common policy template have been assembled in different ways. Since it is customized to national characteristics, the dominant governance style is never employed in its purest form; rather, it is always set up and formed in a hybrid manner.

There are broadly three kinds of hybrid models identified by (Capano & Pritoni, 2019). The first one is the **systemic goal-oriented model**. Universities have been given greater opportunities in the Nordic countries and, to a lesser extent, the Netherlands, where governments have established certain goals to be attained in research and teaching. These are the countries where higher education is expressly included in the delivery of the welfare state (as testified by the high percentage of public funding). This strategy often referred to as the systemic goal-oriented paradigm, is distinguished by significant public support, the removal of tuition fees, the setting of defined systemic objectives, and an increase in institutional autonomy in several ways. In this method, governments tightly control higher education systems by imposing a lot of restrictions and setting systemic goals. They also provide universities with a lot of autonomy and a lot of resources. It might be difficult to categorize the Netherlands in this paradigm because of the existence of tuition fees and their relative highness.

The second hybrid model is – the **performance-based model**. It is quite obvious that public funding should be distributed where tuition fees are high based primarily on performance funding, with administrative regulations and the requirement for a high level of transparency, monitoring, and reporting serving as the main constraints. This is true when empirical evidence is analyzed and examined for the more market-oriented. This hybrid may be characterized as performance-oriented, and only England appears to fit this style.

Last but not least, there are some countries that, despite differences in the composition of their hybrids, have a lot in common when it comes to the consistent application of procedural

restrictions that prevent the effective implementation of opportunities that are offered; the proceduralization of quality and its interpretation as a compliance tool. This style is prevalent in Austria, France, Greece, Portugal, Ireland, and Italy (although the latter case is problematic, as argued above). This hybrid can be categorized as the **re-regulated mode**.

5.2.10 Corporate and Managerial model

Against the backdrop of increased enrollment rates and the marketization of the higher education system, corporate and management models have been found in Australia. Less government involvement, more university autonomy, high tuition costs, and the presence of quasi-state or outside entities to oversee university operations are the primary features of this approach. It and New Public Management go hand in hand. The argument in favor of the management model has been based on factors like cost-effectiveness, increased autonomy, and increased internationalization, to name a few. But there are some drawbacks as well. Academics are no longer engaged in their work because of the management culture. As a result, they are no longer in control of their abilities and are no longer connected to the educational goals of their job.

5.2.11 Schimank in 2002

Schimank (2002) determined five governance characteristics to be important, and based on these five dimensions, he created the "**Governance Equalizer Model**."

External regulation: The stringent procedures that academics and institutions are required to follow while organizing their activity. The state normally regulates the outside world using traditional top-down power. Through the issuance of authoritative, typically legal, norms, the government controls through issuing directives that specify specific **behaviors**.

External guidance: Relies on the formulation of broad development goals and objectives, giving universities some leeway. The parties involved may stipulate or agree upon these objectives. The state, intermediary institutions, or other social actors outside the science system (representatives of industry or non-profit groups), to whom a certain amount of guiding authority has been granted, thereby exert external guidance. The government remains a key player, but academics and institutions determine how and how goals are realized.

Competition is the term used to describe the competitive methods used to distribute limited resources (mainly public cash, but also students and academic staff) among and within universities. Either quantitative performance indicators are measured in terms of outputs

(performance-related funding) or the quality of proposals (tenders) concerning a given project (i.e., research project or overall planning objectives in the sector) for which money is available to determine whether a project is successful or unsuccessful. Peers or other experts may assess the latter category of "qualitative performance."

Academic self-governance is based on strong egalitarianism tempered by the authority of reputation, as well as on self-evaluation and the management of activity through peer review. It is composed of professional groups (i.e., by academic discipline) and their systems of consensus formation. Funding agency decisions are one example of how the academic community self-directs based on peer evaluation. Collegial decision-making bodies have been institutionalized as this process within colleges.

In universities, **managerial self-governance** is characterized by formal hierarchical leadership positions. It all comes down to the leadership of the university's internal goal-setting, rule-making, and decision-making processes. This entails redefining the roles of the executive head (top level of managerial self-governance) and middle management (intermediate level) by enhancing their capacity for decision-making through several clearly defined roles in the hierarchy. The power of the leadership is exercised as either intra-organizational control or intra-organizational counseling with a focus on achieving certain goals.

5.2.12 Humboldtian model from Germany

The fundamental tenets of the Humboldtian conception of the university included **Einheit von Forschung und Lehre**, which had repercussions on how the relationship between the state and universities was organized in general and how state-funded higher education in particular.

Humboldt was a fervent supporter of universities as independent organizations with the mission to advance *Bildung* via science, the truth, and the integration of teaching and research. Humboldt believed that the state's responsibility was to ensure the independence of universities. According to him, the state has a responsibility to promote education, wisdom, and progress in addition to the individual's duty to pursue education (education, wisdom, and virtue). He argued for **less government meddling** and emphasized the importance of **liberty** in the growth and aspiration of the individual. Humboldt proposed that the institution get yearly state funding in light of this.

Humboldt's perspective on the connection between the state and the institution was **tense**. In essence, Humboldt believed that the state posed the greatest threat to the university since

governmental regulation signified a loss of freedom. He said that the university ought to "from all Formen in States make Lose." The state was the only entity that could protect the university organization, though.

He believed that freedom was a prerequisite for Bildung. On a personal level, freedom was defined as Lehr- und Lernfreiheit, which safeguarded the academic interests of both students and professors. Academic freedom at the university level is equivalent to Lehr- und Lernfreiheit at the individual level. The university's commitment to academic freedom was considered a guiding concept that maintained the freedom to teach and learn while advancing education.

5.3 Key Policy Instruments; in response to our second research question

The scholars who have contributed tremendously and solely to building upon the idea of public policy instruments in systemic higher education governance are Giliberto Capano and (Yokoyama & Meek, 2010). Without policy instruments state steering means nothing. The rise of hybrid state steering models can be credited to varied public policy instruments used by the government to steer higher education in a similar direction but different ways. In general, only a small number of countries have policies that blatantly give universities more freedom to act autonomously (Denmark, the Netherlands, Portugal, and Sweden).

5.3.1 Mergers

Mergers as a policy instrument used in **China** are one of the most widely adopted by the government before funding. Chinese higher education system started with the Soviet model of governance where the Ministry of Education is at the top. The post-Mao period in China witnessed the policy of decentralization and devolution in powers concerning the governance of higher education (K. Mok, 2005). The state primarily encourages the merger of universities for three main reasons, first, joint development of universities, second, restructuring, and third, cooperation between different departments. The change was brought to reduce the burden on the state and enhance research and teaching performance. A similar policy instrument has been implemented in **Netherlands** and **Australia** as well (Goedegebuure, 1989). This has led to the trend of a shift away from higher education systems with many small, specialized, single-purpose institutions in favor of systems with fewer large, multi-purpose, multi-discipline institutions.

5.3.2 Funding

Competitive funding as a policy instrument is seen important tool to transform the higher education system. The funds for day-to-day operations were released based on the relative funding model. This made sure that there was competition between institutions, thus, reflecting typical market features in **Australia** since the 1990s (Marginson, 1997). Three advantages of competitive bidding in Australia were that first, it is optional for universities to apply for this funding, however, the system was built so competitively that universities cannot ignore it. Second, the funding was linked to performance, to receive funding universities have to meet the performance measures, and third, under this system, the government was able to exert maximum influence.

5.3.3 Formula Funding

Formula funding refers to the trend of having a basis, the formula based on which government can allocate resources to the university (Weiler, 2000). This is the result of moving away from itemized funding to lump-sum funding of universities. The formula is based on the input factors - such as teaching, research activities, and cost attached to it. Then there are also output factors such as performance measures. Their primary role in influencing higher education systems and institutions is that of a crucial communication tool.

Initially, lump-sum awards were preferred over a financing strategy usually used to support university operations; however, this strategy was later overturned with the introduction of performance and target funding.

5.3.4 Education profile

Education profile was another policy instrument that the government adopted to govern the higher education system in Australia. Under this ambit, the role of universities was pre-defined in terms of its goals, performance measurement criteria, student loads, research activities and funds to be allocated from the government. The researchers finds that competitive funding along with Education profiles helped state govern universities and build a culture of compliance. At the same time keeping competition alive in the system meant the marketization of the higher education system.

5.3.5 Contractualization in France

The Contractualization instrument, which mandated that 5–10% of university budgets be supported by four-year performance-based contracts with the government in France, is particularly important (Dobbins, 2017). By requiring institutions to create growth plans, this technique encouraged university presidents and administration to take a more active role in defining and carrying out agreed-upon goals. This helps the government make sure that the university is functioning in sync with national goals and policies. A similar policy instrument is implemented in Australia by the name “Education Profiles”.

According to the historical institutional view, the reform path has gone further through state interventionism and the tried-and-true, distinctly French tool of contractualization. The reforms should not be interpreted as a total overhaul of the HE system, but rather as the state-driven continuation and acceleration of a trend toward more autonomy and competition, the foundations of which were previously established in the 1980s and 1990s.

5.3.6 Auditing

In **Australia**, the **UK**, and **New Zealand**, academics are subject to market regulation because of an audit culture that has developed there. This auditing culture has significant influence because it can be used to measure administrative effectiveness, student satisfaction with teachers and courses, pass and attrition rates for students, and post-study employment outcomes, to the point where academic skills are completely under the management of the auditing managers both inside and outside the university.

5.3.7 NATO scheme

The four categories are used in (Hood, 1983) "NATO scheme" to classify instruments: Nodality (information), Treasure (money), Authority (legal official authority), and Organization. Nodality refers to the government's dominant role in social communications. Authority is the capacity of governments to legally impose restrictions on the behavior of the intended subjects through the issuance of enforceable laws. The term treasure describes how the government manages money and other resources. The ability of the government bureaucracy to implement policies and keep an eye on environmental conditions is referred to as an organization.

This classification may be used to determine the primary policy instrument associated with a certain policy as well as the mix of several policy instruments within each policy or program. Furthermore, given that the four categories of government instruments exhibit varying degrees

of constraint concerning the targeted behavior of social actors, we may utilize it to explain how restrictive each policy instrument is.

5.3.8 Agency theory and policy instruments

The **policy instruments** in the context of agency theory will focus on curbing two major **agency problems** - information asymmetries and goal conflicts. Background checks of universities before selection of universities for some funding and signing a contract for achieving certain goals are some ways of reducing the agency problems. performance measurement, funding models, or quality assessment are some policy instruments aiming at those problems. The state and higher education institutions have two sorts of contracts: **output-based and behavioral-based**. The fact that education and research outputs are mostly unquantifiable and unpredictable suggests that the government should employ behavior-based governance mechanisms. Sometimes conflicts between the government and universities can cause serious incentive issues, increasing the likelihood of institutions engaging in opportunistic behavior. As a result, the employment of more robust economic incentives and output-based governance would be suggested.

5.3.9 Quality Assurance Agency

The increase of quality assurance agencies as a result of worldwide trends in higher education, such as massification, digitization, internationalization, and marketization. This has been a typical and widely used governmental strategy for the regulation of higher education institutions since 2000. The researchers have outlined four concerns that quality assurance organizations should think about, including professionalism in the field, internationalization, responses to the emergence of new types of higher education providers, and alignment of quality standards with student outcomes, which poses a serious threat to the credibility and accountability of quality assurance organizations. Quality assurance was made into a policy instrument for changing higher education systems under neoliberalism, with the main objective of determining the accountability of higher education providers. The most interesting case of a quality assurance agency is from Portugal where Ph.D. education before 2007 was not under the ambit of quality assurance mechanisms. This led to many universities not following the basic and conventional rules of providing Ph.D. education. After the 2007 reforms, Ph.D. education came under the scanner of quality assurance agencies which led to the closure of many Ph.D. programs.

The studies show that four case agencies had structural changes, which resulted in governance models that were in transition. It was discovered that quality control organizations in Malaysia, Japan, and Taiwan previously used a centralized state-control strategy but have since begun to use a university-led strategy with a new emphasis on internal quality control mechanisms and the introduction of self-accreditation policies. However, the quality assurance agency in Australia (by the name TEQSA) is shifting away from an institutional-led and market-oriented mode towards a state-control model in order, to safeguard students' rights and assure learning results. TEQSA was once an academic self-governance organization.

5.3.10 Public Agencies/Quasi-state agencies

In all western nations, national agencies or committees have been established for the evaluation and assessment of the quality and performance of teaching and research in higher education institutions. Government intervention and regulation have increased in the English-speaking globe. Governments in the United Kingdom (UK), Australia, and New Zealand have significantly changed the national governance framework by establishing national agencies for the evaluation of research and teaching and by making a strong commitment to realigning university behavior with socioeconomic requirements. Public funds allocated to universities are based on output-oriented criteria and performance-based contracting systems which are established and monitored by these agencies.

5.4 Which way the state is steering the higher education system?

The review of articles suggests that the state is steering the higher education system in their respective countries towards either a market-oriented model or an academic governance model. It is very rare to see that the state is steering the higher education system to gain more control over it. This is the case in Hungary. In the figure below, the oval-shaped shaded region in between the triangle has a special meaning. Even though the state is steering the higher education system toward the other two corners of the triangle it does not imply that the higher education system has become market-oriented in purity. There is an element of state control in it through regulation, funding, etc. This gave rise to the term "**hybrid systemic governance model**". No higher education system in a country can claim to be entirely market-oriented or based on the Humboldtian model or even the state-control model. The articles reviewed to discuss the emergence of hybrid governance models in detail and some of them have been or will be explained in the thesis as well.

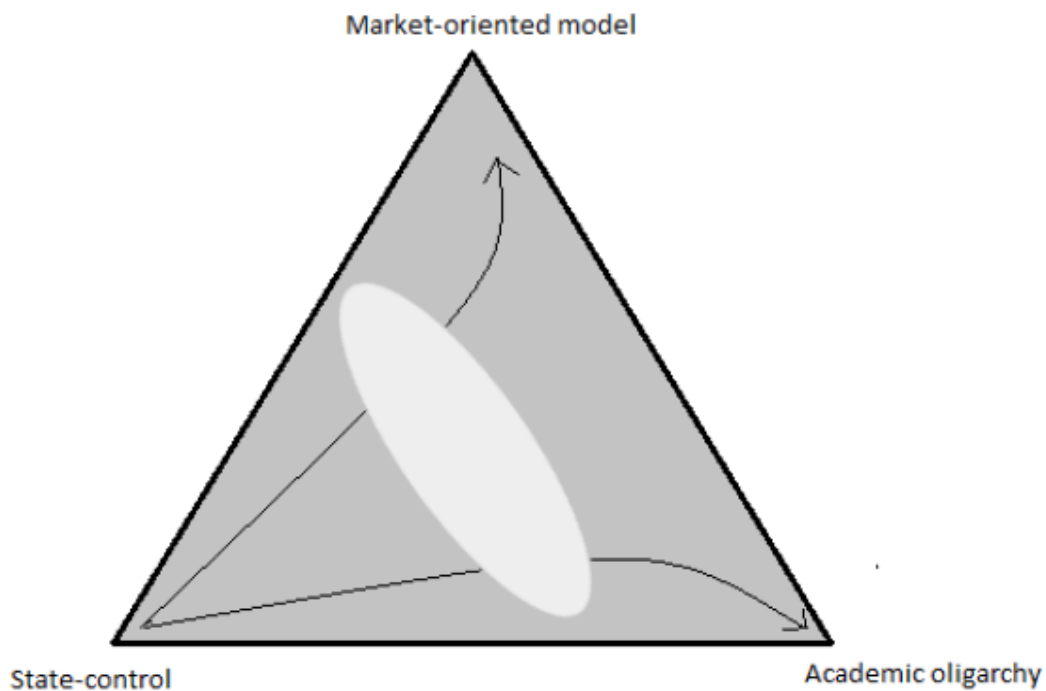


Figure 7 Which way the state is steering the higher education system?

A question that may come to readers' minds is whether the higher education system is being marketized or getting under more state control? The answer is that the higher education system is steered towards market norms but under state control. A more scholarly response deserves thorough research, thus, direction for future research.

5.5 State steering trend in Europe

5.7.1 Georgia and Armenia

Time Frame – 1991 to 2011 onwards

Key systemic governance model types - State-controlled model from 1991 to 2011; towards a market-oriented model for 2011 but still rooted towards the former

Key public policy instrument - Manpower planning

Key findings –

Between 1991 and 2011, the state had a very significant role in Georgia and Armenia. The state, which served as the primary decision-making body, employed manpower planning as a key tool for implementing public policy. The government defined entrance requirements, academic

profiles, and strategic goals for the higher education system in the past. It is also used to develop the curriculum. Institutions of higher learning were reliant on itemized governmental financing. Government regulation oversaw university evaluations.

Since 2011, the state has gradually begun to reduce its obligations, but it appears that the government prefers a gradual process to a quick change. Armenia's pace of convergence has been far slower than Georgia's. The state still has a role to play in these areas even if many powers, such as the ability to define curriculum and admission standards, have been handed to the university administration. The funding process has undergone liberalization and increased competition. For the assessment of universities as well, a separate quality assurance organization has been established.

5.7.2 Hungary – A case of Pendulum Effect

Time frame – 1985 to 2015

Key systemic governance model types –

A pendulum-like reflection may be seen in the particular instance of the Hungarian higher education system. The state-controlled model was the starting point, and it evolved toward academic self-governance in line with Humboldtian ideas before returning to the state-controlled model with a modicum of academic self-governance. Only Hungary and no other Central European nations exhibit this pattern, making it exclusive to that region.

Key public policy instruments – Legal, Széll Kálmán Plans

Key findings –

The popular, more authoritarian leadership style and more centralized higher education governance models were restored when the pendulum swung back in that direction. Hungary's higher education system differs from that of other countries in that it is more state-controlled. The finance and protection of the Soviet system and the academic independence of the Humboldtian system are both desired by institutions in Hungary. As a result, Central and Eastern European higher education have a different attitude toward the Humboldtian paradigm than does Western higher education.

Even though the ministry of education's oversight of higher education was given sole authority in the 1980s, Humboldtian higher education in Hungary prevented the ministry from using any

direct intervention tools, such as appointing rectors. The ministry served as a merely passive legal watchdog.

Beginning in 1998, the government started acting more pro-actively and steadily expanded its attempts to rein in institutions and hold them more responsible. The state-enforced mergers in 2000 and the effort to establish governing boards in charge of strategy and general oversight in 2005 both served to emphasize this tendency. There were added several other indirect control methods. Nevertheless, some of these were successfully fought, like when the Constitutional Court disagreed with the creation of boards.

The state started to intervene more frequently starting in 2011, and institutional autonomy drastically deteriorated. The so-called Széll Kálmán Plans, created by the government in 2010, characterized higher education as a sector with a malformed structure. Regulations on funding necessitated mergers, and new supervisory boards and state-appointed roles at universities gave the government more possibilities to exert direct control over how institutions behaved. The decline of buffer organizations coincided with this tendency.

This trend can be attributed to the concept of historical institutionalism, but for those who closely monitor the politics of central European nations, Hungary is one of the nations that is presently experiencing a nationalist uprising, has a nationalist government, and frequently disagrees with the European Union.

5.7.3 The Czech Republic and Romania

Time Frame – Pre-communist phase to post-Bologna phase

Key systemic governance model types – market-oriented model and academic governance model

Key findings –

Romania has quickly transitioned in favor of the market-oriented paradigm from its previous pattern of state-centered government and control. The Czech Republic, on the other hand, has avoided marketization trends and remained true to its historically based approach. The Czech Republic has a long history of industrialization, and is recognized for its liberal, pro-market policies, although it has only gradually shifted toward this model and has virtually returned to its pre-communist historical framework. Romania, on the other hand, swiftly adopted the

market model and aggressively worked to adopt the Anglo-American practice, despite previously being known for its undeveloped economy and bleak economic past.

This situation is unique since it supports institutional isomorphism as well as historical institutionalism. Reforms toward marketization have made modest progress in the generally Humboldtian Czech system, which principally drew upon its strong historical foundations. The Czech findings show that isomorphism is not a typical reaction, especially in the presence of uncertainty and strong external forces that promote change. On the other hand, Romania may be viewed as a classic case of isomorphism that resulted in a substantial organizational shift in the system. Due to its higher centralist legacy and the smaller professoriate, the Romanian system has demonstrated effectiveness in creating a more thorough process for approving external organizations.

5.7.4 Bulgaria and Lithuania

Time frame - Pre-communist phase to post-Bologna phase

Key systemic governance model types – market-oriented model

Key policy instruments – Funding and Quality Assurance mechanism

Key findings –

The analysis of Bulgaria and Lithuania has shown that adopting western policies has been a critical reform catalyst, bringing both countries closer to the market-oriented paradigm. The developing policy similarity is quite significant about the tendency towards a more active role and power of stakeholder engagement and university administration in steering institutions.

Since Bologna, the funding base has expanded and institutional finance has evolved in both countries in favor of performance-based, lump-sum models. Ten years ago, tuition fees made up the bulk of income and the government paid the majority of university budgets. Today, financing comes from a wider range of sources, such as project income (particularly EU structural grants), increased tuition costs (in Lithuania), and donations from the commercial and industrial sectors. These changes have increased the discretionary resources available to university administrations for strategic expenditures.

After Bologna, Quality Assurance organizations' influence over and evaluation of the higher education system increased, and they were no longer shared with the government. There was a National Evaluation and Accreditation Agency in Bulgaria. The government still maintains

authority over it, but it has shifted from a state-serving focus to an output-oriented market orientation.

5.7.5 Italy

In contrast to other European nations' higher policies, which used a "steering at a distance" strategy, the new Italian legal framework strengthened regulation (Davide Donina et al., n.d.). While the managerial approach to institutional governance is not supported, competition at the institutional level is still moderate. On the other hand, it affirms scholarly self-government. The state still holds legal control over finance, curriculum, and turnover, and universities continue to be seen as uniform organizations with little autonomy. As a result, in Italy, the state's relationship with universities is still governed by a command-and-control political system. The state did not relinquish authority or responsibility for significant elements of the higher education system. The reform demonstrates a posture where the state prefers to control public action over that of the supervisor or facilitator. The fundamental goal of the reform appears to be to cut state spending, keeping the current governance system almost entirely intact. Italian universities will continue to be dominated by bureaucracy and the traditional Weberian system of values and rule observance.

Dobbins' paper in 2017 provides a similar yet different conclusion on Italy as he tries to provide a picture in more depth and of the theoretical aspect more realistically. The academic self-regulation concept was originally embraced by Italian higher education in various ways. The Italian government originally got caught up in a reform cycle that further solidified the status quo. The state gave up power over a variety of procedural issues while referring to the HE buzzword "autonomy." However, instead of creating entrepreneurial governance structures in the majority of Italian institutions, dominant academics frequently took advantage of the new rules to solidify their influence. The downsizing and strengthening of governance bodies, the expansion of the external stakeholder ship, and the decentralization of professorial appointments are just a few examples of how the Gelmini reform helped Italian HE move back toward both the market-based and state-centered paradigms after this initial divergence. Overall, state control over finance, academics, and personnel, and state dominance over university decision-making are all still in place.

5.7.6 France

France has historically had a very centralized higher education system. However, French universities still had relatively little autonomy compared to their counterparts in Northern

Europe and English-speaking nations. The "*loi de modernization Universitaire*" sought to promote university accountability and autonomy. By giving French universities lump-sum funds and the ability to define goals, the reforms, based on the concepts of administrative and teaching autonomy, would have moved France's universities closer to the market-oriented model. Even though the projected university self-management powers were significantly less than in most European countries, it was ultimately delayed due to vehement student union opposition. It was maintained that colleges must stay in the public sector because, without that, businesses would use them to train employees for the labor market.

These three interrelated factors—Europeanization, global rankings, and competitive pressures—led to a widespread consensus that closer adherence to the market-oriented form of governance was required. Significant changes to higher governance were heralded by the passage of the higher education law in 2007, which essentially represented a break with state-centrism.

For instance, in place of the old line-item budgeting, allotted money is now just split into three main categories: operating, personnel, and investment expenditures, allowing institutions to manage lump-sum budgets. While maintaining a variety of governmental interventionist tools, France mainly succeeded in changing its centralist governance style into one that is more market- and research-oriented. Overall, France underwent "state-imposed marketization" and initiatives led by the state to change the organizational environment.

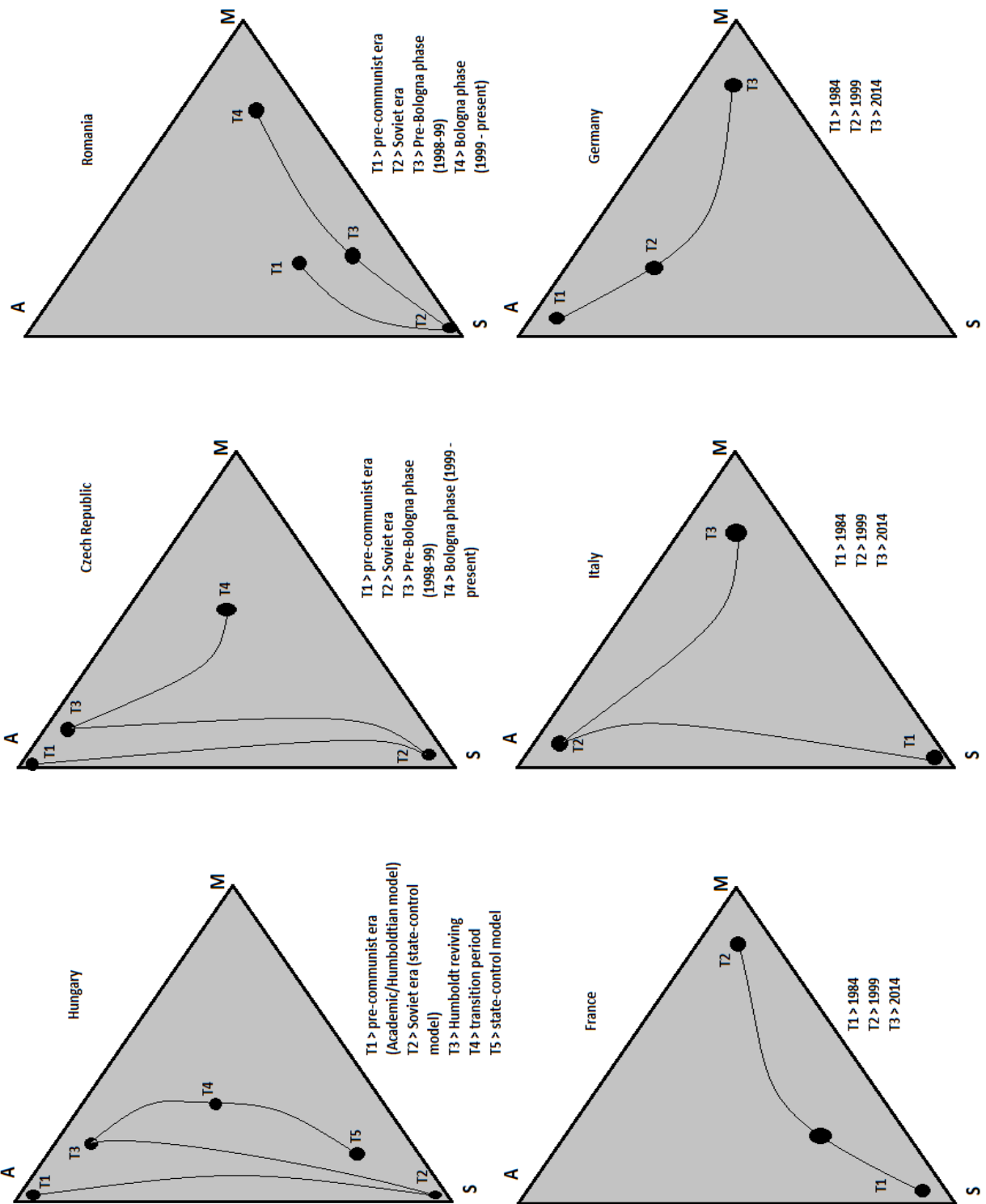


Figure 8 The transition of state steering of higher education system in Europe, Adapted from Michael Dobbins work

6. Conclusion

At this stage of the conclusion of the thesis, the authors have attempted to fulfill the much-needed research gap in the field of systemic higher education governance which is conducting a systematic literature review. It would be wrong to say that a standalone literature review has not been done in the field of systemic higher education governance. There has been an article that adopted a systematic review for systemic higher education governance, however, the focus of the review was constrained to one journal.

The purpose of conducting a systematic review was to understand the various hybrid state steering models of higher education and public policy instruments used by the state to do so. This was much needed because there has been plenty of research produced focusing on these questions but its synthesis was missing. Now any scholar who would like to start research in systemic higher education governance could initiate from the findings of this thesis. We hope that the explanatory review will become the foundation for future researchers in this field. This paper also encourages systematic literature review in other dimensions of governance such as international and institutional.

The findings of the review were categorized in three sub-sections for in-depth and clear understanding. These sub-sections were; key concepts, key systemic governance models, and key public policy instruments. Moreover, the review highlighted the works of Gornitzka and Massen, Michael Dobbins, and the general trend of state steering of the higher education system with a special focus on European countries. The findings suggest that the state is steering higher education system market-oriented model and academic governance model but not in its entirety. The state is not relinquishing its role in higher education, rather it is just restructuring it.

The thesis successfully answered the two research questions stated in the beginning. The first research question focused on identifying different systemic governance/ state-steering models. The authors found different types and classifications such as by Olsen, and Van Vught. Other models were the corporate and managerial model, a model proposed by Schimank in 2002, not for profit trust model in New Zealand, and the famous Humboldtian model from Germany. The key findings were the emergence of the hybrid state steering models of governance due to heterogenous governmental reforms approaching similar target.

The second research question focused on public policy instruments which makes sense because the models mentioned above cannot be applied without policy instruments. The scholars who

have contributed tremendously and solely to building upon the idea of public policy instruments in systemic higher education governance are Giliberto Capano and (Yokoyama & Meek, 2010). The major public policy instrument in governing the higher education system is funding. There are various types of funding as well such as performance-based, competitive, etc. Education profiles in Australia, Contractualization in France, auditing, mergers in China, and some of the mostly applied policy instruments. Quality Assurance agencies or establishing quasi-state agencies is also a well-applied norm in higher education governance.

The findings of this systematic review are not produced with cent percent sanity. There have been some limitations during the systematic review which have hindered its quality. First, some inaccessible articles were not considered for review. These articles were left out due to time constraints. Second, only research articles were included. Books and conference papers were not included. Third, grey literature was not looked for which could have brought value addition to the findings. Fourth and last, since the thesis was an individual work, a co-author ideal for systemic review was not present. Assistance from a colleague was used for replicating the article extraction process.

From the systematic review, we found three future directions for new research. First, need for research on measuring the efficiency of the marketization of the higher education system. Many scholars pointed out the fact that steering the higher education system towards marketization is more due to legitimacy than efficiency. We now know that the higher education system, in general, is being steered towards a market-oriented model but is it efficient? Is it improving the quality of higher education?

Second, the methods used by scholars for researching this field are mostly qualitative. There are very few articles that have adopted content analysis, and qualitative comparative analysis. Some scholars have also provided an empirical framework but have not conducted empirical research. The variables in higher education governance which can be put into a framework have been identified. However, the scholars have not operationalized those variables and used them for quantitative analysis. Especially in the case of public policy instruments, it is possible to analyze the problem through the operationalization of policy instruments and then determine whether and how such tools are important in affecting various aspects of doctorate education quality.

The third and the last direction which we can provide to the readers is the research questions which we could not focus on in detail due to paucity of time. These research questions are;

What are the most relevant theories in Higher Education governance? How has the literature on Higher Education governance evolved? and Which blind spots are not covered by the existing body of literature?

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