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How has the educational background of the civil servants belonging to the Dutch Top Management Group (TMG) changed between 2000 and 2022, and how can we explain these changes?

Berg, Sebastiaan van den

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Master Thesis

How has the educational background of the civil servants belonging to the Dutch Top Management Group (TMG) changed between 2000 and 2022, and how can we explain these changes?

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**Universiteit
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Abstract

Objectives: In the Netherlands, top civil servants have an important role, as they influence the policies that affect the daily life of the Dutch population. Among top civil servants, there is an elite group called the Top Management Group (TMG) which were established in 2000 and now consist of the 94 highest civil servants in the Netherlands. The TMG members are selected based on certain competences: political craft, managerial competencies, and subject-matter expertise. Each of these competences are influenced by the TMG member's education. Post-educational institutes have also become more common for top civil servants to attend. Which could change the education background of the top civil servants. The aim of this research is therefore to evaluate the TMG members' educational backgrounds and determine whether there is a difference between the educational background for the TMG members between 2000 and 2022. The following question is central to this research: 'How and why has the educational background of the civil servants in the Dutch Top Management Group (TMG) changed between 2000 and 2022?'

Methods: This research uses a quantitative method. The percentile differences are first shown in a descriptive section. In the explanatory section, the research assesses whether there are significant differences between the two groups via a statistical t-test.

Results: Few differences exist between the TMG groups. There has been an increase in the study of public administration and in post-educational institute participants. However, there is neither growth in the education level, nor a change in generalist or specialist studies.

Keywords: Managerial competencies, political craft, subject-matter expertise, education, post-education, top civil servants, Top Management Group, t-test, generalist versus specialist studies

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Chapter 1: Introduction

In recent years, there was a scandal in the Dutch government known as the Dutch childcare benefits scandal. In 2013, the Dutch government wanted to crack down on fraud. To do so, they focused on the fraud related to childcare benefits. Thousands of people were labelled as fraudulent and had to return their benefits to the government, which led to problems for the so-called frauds. Although they claimed that they were not guilty and would suffer long-lasting financial and personal problems from this fraud policy, the Dutch government did not pay attention. This changed in 2018 when Radio television Luxembourg (RTL) News and the newspaper Trouw investigated the 'fraud' and concluded that the Dutch government was in the wrong. The result was that the cabinet resigned and the so-called frauds had to be paid back. However, the damage had already been done (Van der Zalm, 2018).

The Dutch childcare benefits scandal raised many questions and discussions in the Netherlands. How was it possible that the Dutch government could make a mistake of such magnitude? Were the Dutch government not able to perform certain tasks? The Dutch childcare benefits scandal could serve as a benchmark to create certain changes (Hamilton, Van Lieshout & Van Pijkeren, 2022). Civil servants must alter their knowledge, as they do not possess the necessary specific knowledge to perform their job. Their knowledge was based on general knowledge, such as managerial skills and organising, but they have a lack of specific subject knowledge (Hamilton, Van Lieshout & Van Pijkeren, 2022). The former minister of economic affairs and climate, Eric Wiebes, has complained that the civil servants lacked the necessary technical expertise (Baazil, 2021).

The discussion about specific versus general knowledge is not new, and the Dutch government have seen a great deal of changes regarding how to use and implement knowledge. After the Second World War, the expertise laid with the civil servants (Van der Meer & Kerkhoff, 2015). Since the 1980s, the expertise has shifted towards 'special' civil servants who operated within special expert units of the civil service (Van Wart, Hondeghem & Schwella, 2015, p. 200). This shift coexisted with a growth of hiring outside expertise. The Dutch government began to rely more on advisory bodies and consulting firms (Van der Meer & Raadschelders, 2007). In recent years, a reverse shift has occurred. The expertise resides once again with the civil servants due to cost-cutting policies in which the Dutch government could no longer afford outside expertise (Van der Meer & Van den Berg, 2011). Since the Dutch childcare benefits scandal, new policies have been established which make subject knowledge more important for future top civil servants (ABDf, 2022). Minister Ollongren from the Ministry of the Interior and Kingdom Relations states in her letter to the parliament that the (top) civil servants should not only possess managerial skills, but also the necessary subject matter knowledge (Ollongren, 2021).

This conveys that the discussion on general versus specialist knowledge within the Dutch government is not new; due to the Dutch childcare benefits scandal, it has increased in popularity. New policies to increase subject matter knowledge exist, such as keeping top civil servants in a position longer, granting them more time to become familiar with and develop expertise in a subject, beginning the search for a function earlier on and giving them more time to find a suitable replacement (ABDf, 2022). However, something which is not mentioned is the required education for (top) civil servants. Could a possible solution to increase and

search for civil servants with subject expertise be to find one with the required education? To find a policy advisor on agriculture, should it be one with an educational background in that field? These solutions are neither visible in the Dutch government, nor clearly mentioned in mainstream news media, which is noticeable since the education level of Dutch civil servants is high and has grown in recent decades (Peters, 2018, p. 90; Van Wart, Hondeghem & Schwella, 2015, p. 205; Van der Meer & Kerkhoff, 2015). There has also been growth in post-educational institutes which focus on education that people who work can achieve. This education is focused on specific managerial and leadership skills, in which top civil servants often participate (Van der Meer & Kerkhoff, 2015; Raadschelders, 2016). In sum, to understand the expertise of civil servants, their education and post-education must be given more attention.

The academic literature has paid attention to specialist versus general education. Public administrations often choose people with general knowledge when there is the need for a civil servant with managerial skills who can rotate within the government. Having a general skill set gives them the ability to work at different levels (Page & Wright, 1999; Christensen, 2015). Public administration recruit civil servants with specialist knowledge to accomplish specific tasks (Page & Wright, 1999; Christensen, 2015). The educational background of civil servants has also been widely studied. For instance, Montgomery van Wart, Annie Hondeghem and Erwin Schwella mapped the educational level and field of civil servants worldwide (2015). Works by B. Guy Peters (2018) and Edward Page and Vincent Wright (1999) which focus on civil servants and – in the case of Van Wart, Hondeghem and Schwella (2015) on top civil servants – have led to similar findings. However, there has been a lack of research on the Top Management Group (TMG). This is noticeable because it is a well-defined group of the highest civil servants in the Netherlands. This should make it a very interesting and well bordered topic. Even Dutch academics such as Frits van der Meer and Toon Kerkhoff, who are specialists on Dutch bureaucracy, have not done a study solely on this elite group.

1.1 Research aim

This research focusses on the knowledge gaps in society and in the academic literature. The focus is on the educational background of the highest civil service group in the Netherlands, the TMG. This elite top civil servant group lack study, whilst it is a very well border concept of the top civil servant. It seeks to determine if there has been growth or change in the education level, the education field and post-educational institute attendance. By looking at the differences in the TMG from two time points (i.e., 2000 and 2022), these changes become visible. The paper first gives a descriptive information overview of the educational background of the TMG. Secondly, the paper attempts to explain how education may have changed according to theoretical arguments by testing four theories.

1.2 Research question

Based upon the research goals, the following research question has been formulated: ‘How and why has the educational background of the civil servants in the Dutch Top Management Group (TMG) changed between 2000 and 2022?’. This research uses online information on the educational background of two groups: the TMG in 2000 and the TMG in 2022. Four

hypotheses are formulated to determine whether the theory of educational change is correct. The information is described and the change is tested using quantitative analysis.

1.3 Scientific relevance

This research has three scientific reasons for relevance. Firstly, it combines the existing literature on (top) civil servants' education to create a broad view of the changing role of education for top civil servants. Secondly, it studies the TMG, which has been neglected in academic research. Thirdly, it provides a benchmark for further research.

Several studies on (top) civil servants' education have been conducted in the past decade (Van der Meer & Kerkhoff, 2015; Van den Berg, 2011; Raadschelders, 2016) which state that education is a criteria on which civil servants are selected. Other research has found that education enhances certain competencies, such as managerial competency (Bach & Veit, 2018). There is a consensus in the academic world that education is important for the recruitment of civil servants. Research on post-education institutes (Van der Meer & Kerkhoff, 2015; Raadschelders, 2016) has argued that there is a growth in these institutes which offer education for working civil servants. However, the topic of post-educational institutes is fairly new and not well-developed. Although there is existing literature, a great deal of information is missing about the changing role of education for top civil servants. By combining the literature about education and post-education, this research attempts to better understand the role of education for top civil servants.

The second scientific reason for this research is the lack of top civil servant research in the Netherlands. There have been several studies on the Office for the Senior Civil Service (Algemene Bestuursdienst) (ABD), which is a group of top civil servants yet a noteworthy lack of research on the elite TMG. This research focusses solely on this group. Moreover, the relevant studies are somewhat outdated. The research from Van der Meer and Kerkhoff is from 2015, Casper van den Berg's research is more than a decade old (2011), and Page and Wright their research (1999) is from before the TMG. This research is thus an updated version.

Lastly, this research provides a new benchmark for further research by creating a new dataset. Other scholars may try to explain other possible correlations in the TMG from 2000 to 2022. This study's dataset with multiple variables could be used in that case.

1.4 Societal relevance

This research is relevant to society for three reasons. Firstly, although the top civil servants have an influence on Dutch society, they are generally not known to the people. By conducting a study, the top civil servants and their roles become clearer. Secondly, selecting top civil servants based on their education may have implications in how the government operates. Thirdly, this research is relevant to individuals who are interested in becoming a top civil servant.

The top civil servants play an important role in society. They might be not as well-known as politicians, but they have a great deal influence (e.g. as an advisor, a manager or a policymaker). However, as mentioned, they are not known to the public and their role is to be neutral (Veit & Scholtz, 2016). Because these top civil servants have so much influence, it is

important to conduct systematic research to try to understand who they are and why they are in the position in which they are. Whereas politicians are elected and thus responsive to the population, top civil servants are not. By conducting research on their educational backgrounds, it is possible to get a clearer picture of the actors who have much influence on the country's government.

In addition, this research is necessary to determine the direction in which the Dutch bureaucracy is heading. By discovering patterns, it is possible to determine whether certain aspects are important. If there is a higher educational level in the government, does that signify that the government is transforming (more) into a technocratic bureaucracy? Do the top civil servants have an educational background that focusses on specialised knowledge, or do they have a general education? This research sheds light on how the government is constructed and may be changed. These changes could have an effect which could be interesting to research.

Lastly, individuals who wish to become a top civil servant, they can see what kind of education could benefit them. If there is a majority of top civil servants with a Ph.D., it could be wise to complete a Ph.D. before applying. Or if there is an increase in post-educational degrees with the focus on leadership, this might be something the TMG be interesting in. This research could thus provide people with an understanding of the education they need to join the top civil servants.

1.5 Thesis structure

The research paper divides into five chapters. Chapter 1 introduces the research's aim and question, as well as its scientific and societal relevance. Chapter 2 on the study's theoretical framework explains the existing literature on top civil servants and their education. It provides an overview of certain concepts and a theoretical description about the education of top civil servants in the Netherlands. Chapter 3 explains and justifies the research design and methodology and operationalises the independent, dependent and demographic variables. It also discusses the validity and reliability of the research. Chapter 4 presents the empirical results and analysis. It first describes the ABD and the TMG (i.e., who they are, how they operate and how the solicitation process works). It then presents a descriptive and an explanatory analysis of the statistics and links the results to the theory. Chapter 5, the conclusion, answers the research question, explains the limitations of the research and discusses possible further research.

Chapter 2: Theoretical framework

This chapter provides the necessary theoretical background for the research. It explores and analyses various views on theories and concepts and highlights the differences between them. It first focusses on the top civil servants and the differences between them and 'regular' civil servants, followed by two main strategies which have influenced the determinants of recruitment for top civil servants, namely politicisation and meritocracy. The determinants are party affiliation, political craft and managerial competencies, and these competencies are influenced by civil servants' educational background. Therefore there is the need to explain the concept of education. The chapter subsequently describes how education is divided into specialised and generalist forms which are bound to open and closed recruitment systems. After the theoretical concepts are explained, the Dutch system is briefly outlined, including how it has developed. Finally, four hypotheses are presented.

2.1 Top civil servants

The employees of the civil service are called bureaucrats or civil servants (Pardo, 2011). This research refers to them as civil servants. The concept of civil servant is clear yet broad. They are government employees, outside of the military and political branches (Pardo, 2011). They can work at any level of government (i.e. local, provincial or federal). Civil servants work at the ministries, and some civil servants must make autonomous decisions each day (i.e. street-level bureaucrats; Lipsky, 1980). Civil servants can work at autonomous government institutions or civil service ministries. In addition, their functions differ widely. They may have an advisory role, a policy formulating role or a function based on day-to-day decisions (Pardo, 2011; Raadschelders, 2016). A high-level civil servant may be an advisor to politicians, but it is also possible that a civil servant formulates the policy that follows the political current. In addition, some civil servants (i.e. street-level bureaucrats) work in close contact with citizens. They must judge situations and make decisions on short notice with a special form of discretion (e.g. police officers; Lipsky, 1980).

It is important to conceptualise and map what a civil servant is. Civil servants have different laws, regulations and statuses because they work for the government. They have some level of protection and are separate from people who do not work in the government (Pardo, 2011; Dahlström & Lapuente, 2017). A civil servant is thus an employee in the civil service, who may work at a different function at different organizational levels, but with some special rules and regulations which protect them and separate them from people outside the civil service.

2.1.1 The top tier of civil servants

Within the civil service there is an 'elite' group, which is the top tier of the civil servants. In the literature, they are called senior civil servants or top civil servants. This research paper uses the latter term. Whilst there is some consensus on the term 'top civil servants' in the literature, there is no single definition. Although some research (Bourgault & Van Dorpe, 2013; Veit & Scholz, 2016; Bach & Veit, 2017) has focused on top civil service, a concrete definition does not exist. The researchers used high placed civil servants, such as director generals (DGs). Jacques Bourgault and Karolien van Dorpe specify that these civil servants are primary policy advisors to ministers who have a tendency to be older. Beside this the bureaucrats achieved the top through a career path (2013), which entails that the bureaucrats gained their position

due to seniority within the governmental organisation. Research by Jorgen Christensen, Robert Klemmensen and Niels Opstrup elaborates the definition of top civil servant in greater depth. It states that a top civil servant forms the organisational link between elected political executives and the administrative hierarchy which forms the backbone of the public service (2014) and that they are advisers and managers to the minister. Lastly, Van Wart, Hondeghem and Schwella state that 'members of the SCS (top civil servants) are the senior-most civil servants in the administrative system who generally interface with the political system and are responsible for the execution of policy' (2015, p. 2). A top civil servant is thus a civil servant, who may be in close contact with political leaders. They are the actor who bridges the administrative organisations and the political electives.

2.2 Politicisation, meritocracy and their influence

Top civil servants have an important position in the government. However, why are these top civil servants selected? What are their requirements? To be selected for such a high position in the government, certain competencies or expertise in certain subjects must be required. The research focusses on the educational level of top civil servants. It is therefore necessary to examine the recruiting methods to determine the role education plays in recruitment.

2.2.1 Politicisation

In recent decades, two main strategies have influenced the environment of recruitment for (top) civil servants: politicisation and meritocracy of the bureaucracy. Guy Peters and John Pierre define politicisation as 'the substitution of political criteria for merit-based criteria in the selection, retention, promotion, rewards, and disciplining of members of the public service' (2004a, p. 2). The recruitment of top civil servants is based on political alignments rather than merit-based competencies. If a top civil servant has the same political goals and could be a politician's ally, they have a higher chance of recruitment. Page and Wright mention that politicisation is also the degree in which an executive politician is involved in selecting the top civil servant (1999, p. 8). It could be argued that politicisation means the degree in which an executive politician is able to select a top civil servant with the same ideological and political goals. An example is the ally principle, in which executive politicians prefer to work with bureaucrats with similar ideological preferences because they are able to delegate more discretion to them (Dahlström & Holmgren, 2017). According to Laurenz Ennser-Jedanstik, the ally principle is confirmed in the Dutch ministries, as the ideological agreement between the politician and the bureaucrat is an important factor for the selection of top civil servants (2016).

Partisan loyalty

Tobias Bach and Sylvia Veit have operationalised politicisation by examining the determinant of partisan loyalty (2017), which measures whether the executive politician, most often a minister, is in the same political party as the top civil servant. They can be selected by the aforementioned ally principle. This shows that there is party-affiliation between the two actors. According to the ally principle, there is a positive effect between partisan loyalty and career success. Ministers prefer candidates who have proven their loyalty over other participants. Party affiliation is thus a possible reason for selection of top civil servants (Bach & Veit, 2017; Peters, 2010. p.83; Page & Wright, 1999, p. 212).

2.2.2 Meritocracy

Where politicisation is based on political appointments, the second strategy is a merit-based selection of recruits. Meritocracy is selecting the candidates with the ideal criteria for the job. It should increase the efficiency of the recruits and thereby of the government (Peters, 2018, p. 80). It is believed that recruiting civil servants on the basis of merit improves the quality of governance by increasing the bureaucrats' expertise (Cooper, 2018). Meritocracy is based on one of the defining characteristics of Max Weber's model of bureaucracy, namely the neutral competence of a civil servant (Kaufman, 1956). A civil servant should not be selected on ascriptive criteria such as class, language, race or caste, but rather on the basis of achieved criteria and merit. However, ascriptive criteria could be seen as a merit in the selecting for government employees. It could help for achieving purposes for a public organisation. A government must provide services to members of minority communities, and this can be achieved more efficiently when these minorities are represented in the governmental body (Peters, 2018, p. 81). This shows the complexity of the term 'merit' when applied with a public organisation. This complexity led to an adapted version of the term meritocracy, in which the bureaucrats' background could be seen as a merit to accomplish certain goals. However, most of all, it is the desire to remove the appointment of administrative positions from political patronage and to require merit qualifications (Peters & Pierre, 2004b). A possible negative aspect of (the old) meritocracy is that the term implies a mechanic conception of the bureaucrat as one who is value-free and will not act on their own desires (Peters, 2018, p. 81). This image does not conform with reality. In multiple instances, a bureaucrat who is selected purely based on its merits and should act neutral does not comply and instead acts on their own desires (Peters, 2018, p. 81). It is difficult to separate a bureaucrat from their political affiliation. A person's merit comprises numerous factors, such as cognitive, psychological and social skills, reputation, self-assurance, job performance and educational achievements (Bellows, 2009).

Competencies

Meritocracy creates two selection criteria for top civil servants according to Bach and Veit, political craft and managerial competencies (2018). This research uses a third criteria, namely subject-matter expertise. These selection criteria are based on competencies of a top civil servant. The concept of competency has long been used in public administration (Hood & Lodge, 2004). The field has seen a great deal of conceptual changes over the past decades. In 1950. the term 'competency' was exclusively understood as technical competency, which referred to an individual's subject expertise and technical skills (Hood & Lodge, 2004). However, the term has evolved and expanded to include more personal skills which are not directly in contact with the individual's job. This paper uses the term by Peter Kuyen and Marieke van Genugten: 'work-related skills, abilities, and attitudes that civil servants must apply to perform their job effectively' (2020. p. 120).

Political Craft

According to Bach and Veit, ministers promote bureaucrats to top civil servants if they have a high degree of political craft (2018). Because top civil servants operate in a political context, they must know how to function. The ministers expect that the top civil servants consider the ramifications of policy proposals and problems in parliament and the media with a special

focus on the avoidance of problems for the minister ('t Hart & Wille, 2006). They should be able to assess the situation from a political viewpoint (Bach & Veit, 2018). These skills of political craft are learnt during the career of the civil servant by a socialisation process. They will learn distinct values, norms and skills associated with the positions of their career. This socialisation process provides the civil servant with the qualities of a 'statesperson in disguise' (Goetz, 1997; Hood & Lodge, 2006).

Managerial competencies

The second selection criteria by Bach and Veit are managerial competencies. In addition to a possible party affiliation and political system know-how, it is important to have management and leadership skills (2018). Ministers want a top civil servant who has the professional qualifications to lead a team. This will ensure that the department of the top civil servant and thus the minister runs smoothly and will not lead to negative media attention (John & Poguntke, 2012, p.138). The competencies are skills which are crucial for interactions between actors. The top civil servants must be able to guide, interact and find compromises between the autonomous ministerial departments and levels of government (Bach & Veit, 2018). These skills are formed by gathering experience in the work field. By working at different organisations in the government, the top civil servant creates a more general field of expertise, which in turn creates more management and leadership skills (Bach & Veit, 2018).

Subject-matter expertise

The third and final selection criterion is subject-matter expertise. Within the government, there is a need for expert knowledge. This need has grown with the increasing complexity and specialisation of society. The government needs bureaucrats with specialised knowledge who can confront society's problems (Haas, 1992). There is an increasing need for specialised knowledge to enhance legitimacy. Experts create a higher level of legitimacy (Weiss, 1979; Fourcade, 2006). However, subject-matter expertise refers to one who is considered an authority on a particular topic. This authority therefore has specialised knowledge on a certain topic. For example, one can study law, and in the domain of law, this person can specialise in the topic of labour law. Within the government, there is the need for a multitude of persons with specialised knowledge. Multiple departments need their own special knowledge to achieve certain objectives in policy fields (Christensen, 2020). In the ministry of agriculture, for instance, it could be useful to have a top civil servant with specialised knowledge on nitrogen who knows how to diminish the level of nitrogen via farming policy.

2.3 Education

Thus far, this theoretical chapter has noted what top civil servants are and how they are selected (i.e. via the politicisation or the meritocracy strategy). Within these strategies, certain criteria are based on competencies (i.e. political affiliation, political craft, managerial competencies and subject-matter expertise). It could be argued that these criteria are influenced by the education of a top civil servant. A specialised education can influence their specialised knowledge (i.e. subject-matter expertise). If the top civil servant has a specialised education, learning a great deal about a certain topic, this creates specialised knowledge, which the top civil servant can use in their position. Alternatively, if a top civil servant has a more general education which emphasises broad knowledge, this could have an influence on their political craft and managerial competencies. The following sections describe education

and general and specialised knowledge. This research argues that education influences the competencies which lead to the selection of top civil servants.

Need for higher education

Research shows that education is an important factor in the selection of civil servants, especially top civil servants (Peters, 2018, p. 87). Peters argues that there is a need for specific educational credentials because recruitment is generally based on types of knowledge and skills (2018, p. 89). Most often a specific educational degree is formally required. This shows a universally high educational standard regarding higher-level administrators. These educational standards are most often the equivalent of a Bachelor's degree; the majority of the higher-level administrators thus have this degree (Peters, 2018, p. 111). This is also visible in continental Europe, which has a history of highly educated top civil servants. Although the level is consistently high, it has a tendency to grow (Page & Wright, 1999, p. 220). Van der Meer and Kerkhoff argue that today it is rare to encounter a top civil servant without academic qualifications (2015).

This high educational level is a result of a modernisation trend focussing on training the top civil servants. There is a higher standard for civil servants in terms of education and training which derived from an universally high level of fiscal stress in the 1990s. To cope with this level of fiscal stress, there was a need to train and educate civil servants. This education would lead to an increase in expertise to handle the fiscal stress (Van Wart, Hondeghem & Schwella, 2015, p.11). This was in line with the governmental shift to New Public Management in the 1990s. The government needed to be more efficient and consumer responsive. If the civil servants had a higher education level and better training, they would be more efficient (Hood, 1991).

Post-educational institutes

The growth of the educational level is also an effect of the growing importance of post-educational institutes, especially in Europe (Page & Wright, 1999, p. 9). These institutes offer further education and give certain degrees (e.g. Master's degrees). Although they are not universities, they may be connected to universities (Van der Meer & Kerkhoff, 2015). The focus of the post-educational institutes is to offer education to people who are employed but want to further educate themselves. Employees are able to specialise in a certain area (Van der Meer & Kerkhoff, 2015). The growth of these post-educational degrees are most often found in administrative jobs (Van der Meer & Kerkhoff, 2015). Civil servants may apply (often via their employer) for a post-education, which allows them to gain (another) specialised Master's degree. It is common that this Master's degree is a specialisation in the public administration domain (Van der Meer & Kerkhoff, 2015).

Models of Education

There are two models of education: elitist and egalitarian (Van Wart, Hondeghem & Schwella, 2015, p.16). The elitist model is based on the idea that top civil servants are selected based upon specific educational credentials. They must have a special form of training at elite universities. In the elitist model, the upper-class in society have a great advantage and retain their vast majority position within the top civil servant selection (Van Wart, Hondeghem & Schwella, 2015, p.16). Although the upper-class still has an advantage, meritocracy has

provided greater access to talented middle- and lower-class students, which has created the egalitarian educational model. Here, the background of the student has no special position and does not grant any privileges (Van Wart, Hondeghem & Schwella, 2015, p. 16).

Van Wart, Hondeghem and Schwella classify six educational backgrounds across the elitist and egalitarian models (2015, p. 16). Firstly, there is the elitist legal education which is typical in most continental European countries. Secondly, the egalitarian legal model also focusses on law recruitment but not exclusively with an elitist group. In the United Kingdom and France, this third variant is visible, the elitist management education. The focus of recruitment lies on people with an administrative education, such as public administration. However, these employees come from elitist universities and institutes. The fourth educational background is egalitarian management education. The focus is on administrative education; however, there is no need to have attended an elite university. This educational background is common in countries such as the Netherlands, Romania, and Belgium. The fifth background is the elitist specialist; no countries specialise in this background. Here, people specialise in a domain, such as medicine, which requires a lengthy educational process. The last background is the egalitarian generalist, in which people are selected to start at a junior position and must compete to advance in public administration. There is no special requirement for a specific education in this case (Van Wart, Hondeghem & Schwella, 2015, p. 16).

2.4 Specialist versus generalist

The theoretical framework shows that education is important in the recruitment of top civil servants. However, selecting top civil servants due to their education affects what types of top civil servants comprise this group of high-level administrators. The literature distinguishes between specialised and generalist education.

2.4.1. Specialised education

Specialised education is linked to the US system, in which civil servants are selected for their technical expertise and specialised studies (Van Wart, Hondeghem & Schwella, 2015, p. 15). These civil servants must have a specialised set of knowledge to perform their task. As Johan Christensen mentions 'These officials are selected on the basis of specialist qualifications and skills, that is, on specific educational credentials and professional experience' (2015, p. 655). When there are more tasks, public administration becomes more complex and requires a more specialised background (Christensen, 2015). Specialised knowledge can add to the legitimacy of a public organisation, as when the employees have the recognised expertise, it creates a basis for authority and power (Radaelli, 1999). Most often, specialised education is acquired through a form of open recruitment, a recruitment method which focusses on available employees from the public and the private sector. People who work within the government, or people who work in the private sector are thus recruited for a specific position (Dahlström & Lapuente, 2017). Here, it is possible to select an employee due to their merit (Pardo, 2011). If a recruit has the specialised knowledge for a certain position, they are more likely to be selected. According to research by Christensen, if a certain job position requires the employee to have a specific degree, there is a need for specialised education. For example, if a job listing seeks one with a natural science degree, the organisation has need for a specialised education. Additionally, when the listing mentions the specific education level

which the employee needs to have, there is need for a specialised education in the organisation (2015). For example, if there is a requirement for a Ph.D. education level, there is need for specialised education in the organisation.

2.4.2. General education

General education is based upon competencies such as leadership and management (Peters, 2018, p.89). This is visible in the top civil servants of continental Europe (e.g. in law), whose education is typically general. However, there has been growth in new studies, such as public administration (Van der Meer & Kerkhoff, 2015; Van Wart, Hondeghem & Schwella, 2015, p.15). Generalist experience is not based on specific expertise, but rather on well-rounded competencies (Jann & Veit, 2015). Top civil servants are often required to switch jobs every couple years. Research has shown that when there is job rotation, there is a majority of general education in public administration (Page & Wright, 1999, p. 211; Wille, 2013; Christensen, 2015; Bach & Veit, 2018). General education facilitates interdepartmental mobility within the civil services (Steen, Van den Berg & Leisink, 2015, p. 207). General education is often related to British, career or closed recruitment, which this paper refers to as closed recruitment (Pardo, 2011; Dahlström & Lapuente, 2017). In this recruitment method, the employee is selected from a young age, has a high educational level and is likely to work in public administration for their entire career (Pardo, 2011; Dahlström & Lapuente, 2017). During this career, they will learn managerial and leadership competencies which primes them to be selected as a top civil servant (Bach & Veit, 2017). To be selected for public administration, the employee has a greater chance when they have a general education (e.g., law or public administration; Page & Wright, 1999, p. 1).

2.4.3. Specialism in generalism

In addition to specialised and the general knowledge, there is a third option. Jos Raadschelders has argued that there is a new trend of specialists within generalism. Current and aspiring top civil servants often take part in post-education and specialise in general studies. There is a specialisation within understanding the government and educating their management and leadership competencies (2016). After one has completed their degree, they may work at a governmental body. When working at a governmental body, they will enrol in a school, which specialises in certain tracks or courses to hone managerial and public administration skills (Van der Meer & Kerkhoff, 2015). They thereby develop a better understanding of the government and are more likely to be promoted to a top civil servant (Raadschelders, 2016). By completing post-educational study with a focus on managerial skills in public administration, there is a link between the general education and the policy field in which they work. Their general education thus becomes a specialisation.

2.5 Education in the Netherlands

This chapter has offered a general discussion of top civil servants and how they are selected via recruitment methods and criteria. It subsequently made a theoretical link between education and competencies and explained the models of education. This section explores the literature on the top civil servants from the Netherlands.

Classifying Dutch civil service

The Dutch educational model has a history which is influenced by the participation of the middle class (Peters, 2018, p. 86). It is thus not an elitist, but rather an egalitarian model (Van Wart, Hondeghem & Schwella, 2015, p. 16). The educational system in the Netherlands are open to all and has undergone major reforms to make education accessible (e.g. student grants and loans; DUO, n.d.). Educational background was first characterised as a *Rechtsstaat* (Van der Meer & Kerkhoff, 2015; Van Wart, Hondeghem & Schwella, 2015, p.200). Thus civil servants' education was a general education, with a focus on law. However, over time, it has shifted towards an egalitarian management education. The focus is still on generalist studies, but it has shifted from legal studies towards management skills, such as public administration (Van Wart, Hondeghem & Schwella, 2015, p. 16). In the Netherlands, the educational level of civil servants, and especially top civil servants, has consistently been on a high level. For civil servants, this level has increased over the last two decades (Peters, 2018, p. 90; Van Wart, Hondeghem & Schwella, 2015, p. 205; Van der Meer & Kerkhoff, 2015). It is difficult to find one in the top civil service without an academic degree (Peters, 2018, p. 90; Van der Meer & Kerkhoff, 2015). Lastly, the Netherlands have seen growth in post-educational institutes in the past four decades (Van der Meer & Kerkhoff, 2015); that is, an increased number of institutes and applications (Van der Meer & Kerkhoff, 2015; Raadschelders, 2016).

Algemene Bestuursdienst & Top Management Group

According to Page and Wright, the ABD was created to stimulate intradepartmental and interdepartmental coordination in the Dutch government (1999, p. 210). Due to the general nature of top civil servants, they could be easily deployed to another section. With the addition of job rotation, this enlarged the general view of top civil servants in the Netherlands. However, in the top civil service there is a clear distinction between DGs and secretary generals (SGs). The latter are selected for their managerial skills, which means that they have a more general education, whilst the former have completed specialised studies in their policy field (Van Wart, Hondeghem & Schwella, 2015, p. 207). There has been an increase in DGs in the TMG in the past two decades (ABDg, n.d.).

However, little information exists on certain aspects of the top civil servants' education. The literature has seldom discussed the TMG, although they are the highest civil servants in the Netherlands. Their educational background is unknown, and it is thus not certain whether there is a specialised or a generalised education within this group. The literature has addressed post-educational institutes, and they have grown in popularity (Van der Meer & Kerkhoff, 2015; Raadschelders, 2016). However, the participation of top civil servants in these post-educational institutes is still uncharted territory.

2.6 Hypotheses

To conclude this chapter, four assumptions are made according to the literature. These assumptions, also called hypotheses, help to answer the main question: *'How and why has the educational background of the civil servants in the Dutch Top Management Group (TMG) changed between 2000 and 2022?'* These hypotheses aim to identify differences in the TMG in 2000 versus 2022.

As has been the tendency in public administration, the educational level has grown over time. During recruitment, education is an important criteria on which the candidates are selected. Especially in continental Europe, a high education level is required for civil servants (Page & Wright, 1999, p. 220). The higher education level is a result of the modernisation of the bureaucracy, in which efficiency is central and which is partly accomplished by selecting civil servants with a high educational level (Van Wart, Hondeghem & Schwella, 2015, p. 11). Moreover, post-educational institutes continue to grow (Van der Meer & Kerkhoff, 2015). These institutes show a possible sign that education is still growing. H1 is therefore as follows:

H1: The education level in the TMG is higher in 2022 than it was in 2000.

When a public administration organisation takes on more complex tasks, there is a need for experts with a specific study who can fill vacant positions (Christensen, 2015, p. 655). This creates a growth in specific studies. The TMG have increased in tasks and positions (ABDD, n.d.). When there are more DGs, this creates a demand for specific studies because the function of DG often requires a more specialised education (Van Wart, Hondeghem & Schwella, 2015, p. 207) . This leads to the second hypothesis:

H2: The share of specialised studies in the TMG was higher in 2022 than in 2000.

There is an alternative to H2. There is the possibility of more general studies rather than specialised studies because continental Europe tends to have a high representation of general education within their public administration (Peters, 2018, p.89). This general education is stimulated due to job rotation, as there is a need for people with general knowledge who are not fixed to a position by their specialisation (Page & Wright, 1999, p. 211; Steen, Van den Berg & Leisink, 2015, p. 207). However, within the general educations there is a reverse relationship between the studies of law and public administration (Van Wart, Hondeghem & Schwella, 2015, p. 207). This is also visible in the TMG because there has been a shift from the *Rechtsstaat* to an egalitarian management education. H3 is as follows:

H3: The share of general studies, with an increase in public administration and a decrease in law, in the TMG was higher in 2022 than in 2000.

Finally, there has been growth in post-educational institutes in Europe and in the Netherlands. There are more institutes and more students at these institutes (Van der Meer & Kerkhoff, 2015). These post-educational institutes have focussed on public administration and managerial and leadership competencies. This is the shift to specialism in generalism (Raadschelders, 2016). Because top civil servants are interested in these studies (Raadschelders, 2016), it is assumed that they will pursue them. With the increase in popularity of post-educational institutes, there has been an increase in top civil servants attending these post-educational institutes, which leads to the fourth and final hypothesis:

H4: The attendance of post-educational institutes in the TMG is higher in 2022 than it was In 2000.

Chapter 3: Research design and methodology

This chapter elaborates how the research is designed. Firstly, it describes the chosen case (i.e. the TMG, which is part of the ABD). Secondly, it explains the research design, operationalisation of the concepts and the case selection. Lastly, it presents the possible flaws in validity and reliability.

3.1 Research design

This research uses a deductive, quantitative approach. A quantitative method is best suited to test the theories about the educational level and educational specialisation for the TMG. In this case, the needed information is objective. There is no need for personal questions or deep document studies to find the results. Moreover, the quantitative method suits this research because there is a need to compare numbers. To discover if the educational level or educational specialisation has changed over time, there is the need for a large sample of cases. Otherwise, the test results would not be reliable. This is elaborated in depth at the end of the chapter. Previous studies of the educational level and educational specialisation of Dutch civil servants have been of a quantitative nature. Studies by Van der Meer and Raadschelders (1999) and Casper van den Berg (2011) focussed on this topic and used the quantitative method. The qualitative method would be too time consuming and too information loaded for this observation.

The population of this study consists of the top civil servants in the TMG, the highest national bureaucrat organisation in the Netherlands. The data are collected from two groups of the TMG (i.e. in 2000 and 2022). The focus is on the members' educational level and specialisation. Additionally, the study assesses whether they have attended post-educational institutes with a focus on managerial skills or public administration. The research tests the theoretical relationship between the X and Y variables. The X variable is the year of appointment of the TMG member, and the Y variable is the educational level, specialisation and post-educational degree. The research divides into two parts. First, a descriptive part elaborates what the results entail (e.g. how the percentages are divided between the independent and the dependent variables). The second part is explanatory and discusses the results by testing the four hypotheses. The testing is facilitated by observing both datasets (i.e. TMG 2000 and TMG 2022). These are compared and tested with a t-test, which seeks to determine whether there is a difference by change of that there is in fact a significant difference.

3.2 Case selection

This section first explains why the Netherlands were chosen for this research and subsequently describes why the TMG are the main focus of this research. The Netherlands are often seen as a meritocracy (De Beer & Van Zijl, 2016, p. 235). Therefore it could be argued that it entails the competencies which are connected to education. Education can have an influence on, for example, subject-matter influence, which is tied to meritocracy. In the Netherlands there is thus a strong possibility that education is of importance in recruitment selection. This idea is reaffirmed because the recruitment of the civil servants in the Netherlands are often selected from the middle class, but both the lower and upper classes also have a presence (Van der Meer & Roborgh, 1993, p. 334). Research shows that public administration with a greater share of middle-class employees use education as a recruitment

criteria (Peters, 2018, p. 85). It could therefore be assumed that the Netherlands use education as an important recruitment criteria. The selection of the Dutch civil servants is thus based upon educational credentials, which makes it a suitable candidate to investigate how and why the educational level and specialisation might have changed. Moreover, the Netherlands offer a wide scale of universities and schools of applied sciences. These institutions rank relatively high on the world scale of universities (Bol, 2021) and offer both general and specialist educations (bachelors, n.d.). As Peters stated, 'The bureaucracies are at the mercy of the educational system' (2018, p. 110). This means that the bureaucracies can only select employees with an specific university-level education. Because Dutch universities and schools offer general and specialist educations, the Dutch recruitment has a broad range from which to select. To summarise, the Netherlands are a suitable case because they place an emphasis on educational credentials and future civil servant may have a general or specialist educational background.

Now that the selection of the Netherlands has been justified, the selection of the TMG is discussed. Firstly, the TMG consists of the highest-level civil servants in the Netherlands. When researching the educational background of top civil servants, the TMG are thus a clear candidate. Furthermore, the TMG have a large pool of candidates. When there is no information available about one person, it will not have a strong impact on the research. The ABD would also be a good fit, however, they have too many candidates. The research does not have the resources or time to collect data from the ABD. Thirdly, although there has been research on the top civil servants in the Netherlands, it has been restricted to the ABD. By selecting the TMG, there is the option to cover new ground and find new information about the educational background by the highest tier of civil servants. The final reason the TMG are justified is that it can be compared. It has existed for 22 years, therefore it is possible to compare the TMG in 2000 and in 2022. The next section discusses the population and time frame.

In addition to education from universities and schools, there is a newer educational option called post-education. As mentioned, the post-educational institutes are becoming more popular (Peters, 2018, p. 110; Van der Meer & Kerkhoff, 2015; Page & Wright, 1999, p. 9). Completing a degree at a post-educational institute often gives an individual a boost to be selected for a function as a top civil servant. It is therefore likely that the TMG have multiple top civil servants who have a degree from a post-educational institute. This justifies the TMG's selection as a case to research the growth in post-educational institutes.

3.3 Research population and time frame

This study focusses on two population groups within a specific time frame: TMG 2000 and TMG 2022. This time frame is chosen because the TMG was founded In 2000, The TMG 2000 group were thus the first TMG members. The TMG 2022 group are the current TMG staff. The time frame is therefore from 2000–2022.

Although the TMG groups are comparable, they have certain differences. The TMG 2000 had 54 functions, of which there were five vacant spots, thus there were 49 TMG members. However, there was no information system within the Bureau of the ABD (BABD) at that time, thus it is difficult to identify every TMG member. There are 31 known members, of which it

was possible to find the necessary data for 27 members. The population of the TMG 2000 group is thus $N = 27$. The TMG 2022 has 95 members, for which it was possible to find the necessary information for 88 members. The population of the TMG 2022 group is therefore $N = 88$. Within the TMG, it is not unusual for one to rotate from their position and occupy a new position. However, there is no overlap between the TMG 2000 and TMG 2022 groups. In addition to job rotation, multiple increases of the TMG in the past two decades have led to a larger group (ABDg, n.d.).

3.4 Data and data collection

This section provides an explicit overview of the data collection method and data sources. Providing this increases the transparency of the research. It is therefore useful for the reliability and replicability of the research.

3.4.1 Data collection methods

The data were collected via desk research. Information was found through online sources about top civil servants. This information was systematically collected and archived in an online dataset. Via this research, relevant data were collected about the ABD and especially the TMG. The data are necessary to describe the population of the TMG. The data focus on educational level, educational specialisation and post-education.

3.4.2 Data sources

The data on the TMG members were found via online public sources and with help from the Ministry of the Interior and Kingdom Relations. However, there are certain differences in data collection for the TMG 2000 and TMG 2022 groups. The members of the 2022 TMG are all publicly known and listed on the organisation's website. This generated 95 names, and their educational background was available via other online sources such as LinkedIn and the ABD website. For the members of the 2022 TMG who could not be found, there was an available email address. These members were thus contacted; certain members gave their information, whereas others did not reply. This resulted in a list of 89 members with sufficient information to start the research.

It was more challenging to collect data for the TMG 2000 group. Their names were not available on the internet, and the group consisted of different people and functions at that time. The researcher therefore made contact with the Ministry of the Interior and Kingdom Relations, who confirmed that there was no information service in 2000 for the TMG. The Ministry of the Interior and Kingdom Relations therefore had to search manually. Eventually this led to a list of 31 of the 49 persons. From these 31 persons, it was possible to find the necessary information for 27 persons to conduct the research. Neither the Ministry of the Interior and Kingdom Relations nor online sources were successful in collecting more TMG members 2000 group. A source which contributed with a relatively high amount of information was parlement.com, an online source which requires payment to collect and use their data.

3.5 Operationalisation and measurement of concepts

To attain a correct measurement of the concepts, they must be operationalised. Below the dependent, independent and demographic variables are operationalised, which increases the reliability and validity of this thesis.

3.5.1 Independent variable

The independent variable is necessary to explain what happens when this variable is held constant (Toshkov, 2016, p. 115). This research tests how several factors (dependent variables) react to the independent variable. The independent variable is the year in which a top civil servant is a TMG member. This is a dichotomous variable, meaning that there are only two options, namely 2000 or 2022 (Toshkov, 2016, p. 115). By examining how several dependent variables react to the difference in years, it is possible to determine whether there is a significant difference. It could therefore be possible to conclude that significant changes have occurred between these years.

3.5.2 Dependent variable

The dependent variable is the variable which this paper expects to change and be influenced by the independent variable. This research expects a change according to the year and the function of a TMG member.

The first dependent variable is the education level. These variables are Ph.D. = 1, Masters = 2, Bachelors = 3, School of Applied Science = 4. These variables are separated and configured into dummy variables. There are two options per education level (Toshkov, 2016, p. 114): 0 = no and 1 = yes. It is thus possible to statistically rate the educational level of a TMG member. This dependent variable is necessary to explain H1, which seeks to determine whether there is a difference in the educational level between the independent variable of years. Casper van den Berg (Van Wart, Hondeghem & Schwella, 2015, p. 206) used this categorisation.

The second dependent variable is the field of the educational background. This variable is necessary to test H2 and discover if there has been a change in educational specialisation in TMG members between 2000 and 2022. The education fields are 1 = law, 2 = public administration, 3 = political sciences, 4 = economics/business, 5 = technical studies, 6 = social sciences, 7 = natural sciences, 8 = medicine, 9 = defence/police and 10 = other studies. This operationalisation resembles existing research from Van der Meer and Kerkhoff (Van Wart, Hondeghem & Schwella, 2015, p. 206) and Van den Berg (2011). The variables are separated and configured into dichotomous variables, comparable to the educational level variable.

The third dependent variable is a dummy variable regarding if the educational study is generalist or specialist (i.e. 0 = generalist and 1 = specialist). Law and public administration studies are classified as generalist because Dutch public administration is by its nature a *Rechtsstaat*, which is characterised by a vast amount of law studies within public administration (Page & Wright, 1999, p. 1; Van Wart, Hondeghem & Schwella, 2015, p. 200). In recent times, public administration has grown, and it features general courses, such as management and leadership courses (Van der Meer & Kerkhoff, 2015). Notable exceptions for the generalist studies are economics and political sciences; these are not included because the literature this research uses does not mention them as generalist studies. These studies

do not share the history as law (being a Rechtsstaat) and the broad managerial courses such which can be found in public administration. Other studies therefore comprise a specialist education, including training that is not broad in their courses and thus not immediately implacable for the government. They are educated in a specialist subject, which could directly be of use for the government, or their job may have no relation to their studies. However they are still educational trained as a specialist. This variable is useful to test H3.

The fourth dependent variable is also dichotomous by nature. It addresses whether a TMG member has attended a post-education institute (i.e. after their study and in their working life). This institute should improve their managerial capacities and leadership roles or give a better understanding of public administration. The statistics are as follows: 1 = yes, 0 = no. This dependent variable helps to answer H4.

3.5.3 Demographic variables

In addition to the independent and dependent variables, there are also demographic variables. These variables are not included in the explanatory part of the research. They provide more information about the members, which creates a more solid database. These variables might not explain the relationships between the independent and dependent variables, but they describe the background and characteristics of the TMG members.

The first demographic variable is the gender of the TMG member. This is a dichotomous variable in which 1 = male and 0 = female.

The function of the top civil servant is the second demographic variable. There are six functions one can fulfill in the TMG. First, the SG is the highest civil servant in the ministry. They manage the ministry and are a personal advisor to the minister (Parlement.com1, n.d.). The second position is the DG, a managerial position below the SG. They lead a department in the ministry (ABDd, n.d.). A third function is the treasurer general (TG), a position that gives advice on financial policy. There are four TG positions in the TMG (Rijksoverheid1, n.d.). The fourth position is inspector general (IG), which is responsible for the executive tasks of the ministry (Rijksoverheid2, n.d.). The fifth position is managers (M) of advising committees. And the sixth position is the ABDTOPConsultants (C), a small group of expert top civil servants who give ad hoc advice on urgent and complex policies (ADB9, n.d.). These are measured as nominal variables: SG = 1, DG = 2, TG = 3, IG = 4, M = 5, and C = 6. This operationalisation is similar to the operationalisation by Uri Rosenthal (1983), only it is expanded to include more functions.

The third variable is a nominal numeric variable. This refers to the ministry or agency where the TMG members are employed. The variables are 1 = Ministry of General Affairs (GA); 2 = Ministry of the Interior and Kingdom Relations (IRA); 3 = Ministry of Foreign Affairs (FA); 4 = Ministry of Defence (D); 5 = Ministry of Economic Affairs and Climate Policy (EACP); 6 = Ministry of Finance (F); 7 = Ministry of Infrastructure and Water (IW); 8 = Ministry of Justice and Security (JS); 9 = Ministry of Agriculture, Nature and Food Quality (ANFQ); 10 = Ministry of Education, Culture and Science (ECS); 11 = Ministry of Social Affairs and Employment (SAE); 12 = Ministry of Health, Welfare and Sport (HWS); and 13 = Advice Agencies (AA). This research model is based on Berenschot's model (2018).

The fourth demographic variable is the university or school of applied sciences the TMG members attended. This is measured in a nominal numeric variable, namely, 1 = Erasmus University Rotterdam, 2 = Radboud University, 3 = University of Groningen, 4 = University of Leiden, 5 = University of Tilburg, 6 = University of Twente, 7 = University of Utrecht, 8 = University of Amsterdam, 9 = Free University of Amsterdam, 10 = University of Wageningen, 11 = Catholic University of Brabant, 12 = Dutch Police Academy, 13 = School of Applied Sciences and 14 = Other. This research model is based upon the model of Berenschot (2018).

The fifth demographic variable is the post-educational institute the TMG member attended, namely, 1 = NSOB, 2 = domestic institute or 3 = foreign institute. This provides a descriptive overview how much the participation is divided between domestic and foreign institutes. A special variable is the NSOB; according to previous research, the NSOB and the Dutch top civil servants have a strong connection (Van der Meer & Kerkhoff, 2015).

The sixth and final demographic variable is the subject of the post-education. As mentioned in regard to the fourth dependent variable, the subjects on which the post-educational institutes can be specialised are 1 = managerial, 2 = leadership, 3 = public administration and 4 = other. This demographic variable shows a potential growth in subjects in which TMG members get a degree. The measurement of this dependent variable is comparable with the measurement of the educational subject from Van der Meer and Kerkhoff (Van Wart, Hondeghem & Schwella, 2015, p. 2016) and Van den Berg 2011.

Table 1. Operationalising measurement of the variables

Variable operationalisation, measurement and sources			
Independent variable	Operationalisation	Variable source	Measurement/range
TMG member year	Which year the member was part of the TMG	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	0 = 2000. 1 = 2001
Dependent variable	Operationalisation	Variable source	Measurement/range
Education level	The highest educational level the TMG member achieved	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	Split into four dummy variables: Ph.D., Master's, Bachelor's, School for Applied Sciences. 0 = no, 1 = yes
Education field	The subject in which the TMG member achieved their degree	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	Split into 10 dummy variables: law, public administration, political sciences, economic/business, technical studies, social sciences, natural sciences, medicine, defence/police, others. 0 = no, 1 = yes
Generalist/specialist	If the field of study is related to generalist or specialist education	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	0 = generalist, 1 = specialist

Post-education	If the TMG member has participated and achieved a degree from a post-educational institute	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	0 = no, 1 = yes
Demographic variable	Operationalisation	Variable source	Measurement/range
Gender	Gender of the TMG member	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	0 = female, 1 = male
Function	Function the TMG member fulfills	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	Nominal variable. 1 = SG, 2 = DG, 3 = Treasure general, 4 = IG, 5 = Manager, 6 = Consultant
Ministry/agency	Ministry/agency the TMG member works in	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	Nominal variable. Ministry of 1 = General Affairs; 2 = Interior and Kingdom Relations; 3 = Foreign Affairs; 4 = Defence; 5 = Economic Affairs and Climate Policy; 6 = Finance; 7 = Infrastructure and Water; 8 = Justice and Security; 9 = ANFQ; 10 = ECS; 11 = SAE; 12 = HWS; 13 = AA
University/school	University/school the TMG member attended for their highest educational degree	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	Nominal variable. 1 = Erasmus University Rotterdam, 2 = Radboud University, 3 = University of Groningen, 4 = University of Leiden, 5 = University of Tilburg, 6 = University of Twente, 7 = University of Utrecht, 8 = University of Amsterdam, 9 = Free University of Amsterdam, 10 = University of Wageningen, 11 = Catholic University of Brabant, 12 = Dutch Policy Academy, 13 = School of Applied Sciences, 14 = other
Post-educational institute	Post-educational institute the TMG member attended	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	Nominal variable. 1 = NSOB, 2 = domestic institute, 3 = foreign institute
Field of post-educational	Subject in which the TMG member achieved their post-educational degree	LinkedIn, Parlement.com, Algemenebestuursdienst.nl	Nominal variable. 1 = managerial, 2 = leadership, 3 = public administration, 4 = other

3.6 Methods of analysis

The methods of analysis are descriptive and explanatory. The descriptive part gives an overview of the TMG members and shows the descriptive differences between the TMG 2000 and 2022 groups. For example, it describes the demographic variables (e.g. the percentages of males and females). Additionally, it examines certain statistics, such as how many people have studied a certain subject.

In the explanatory section, these descriptive statistics are tested in a certain order. First, the percentages of the statistics are measured. This provides an overview to obtain a global view on the difference between the dependent variables (i.e. the TMG 2000 and 2022 groups). Secondly, these percentages are compared with one another. With a comparison, it is possible to see whether there has been a growth or a decline in a certain dependent variable. Lastly, to determine whether there is a significant difference between the TMG 2000 and 2022 groups, this research uses Levene's test and the t-test. Levene's test determines whether the variable will be tested according to equal or unequal variances. According to the outcome of Levene's test, it is possible to look at the t-test. This test assesses whether there is a significant difference between a variable's means and the TMG groups. It therefore explains whether this difference is significant. The significance is measured by the $P > 0.05$ measurement. Thus if there is a P-score lower than 0.05, there is a significant difference and the hypothesis will be statistically accepted. However, if the P score is higher than 0.05, the difference is not significant and this difference could exist by other factors than the variable, the hypothesis will be rejected (Agresti & Finaly, 2009, p. 150).

3.7 Validity and reliability

Validity and reliability are important for any research to guarantee that it is conducted properly. If the reliability is correct, it is possible to replicate the research. The validity encompasses internal validity, which means that the variables are measured correctly, and external validity, which signifies that the research findings can be generalised to a larger population. This section elaborates on the strengths and weaknesses of the paper.

This research has a high level of reliability. The research is quantitative and the dataset is transparent. Other researchers would therefore be able to replicate this research. Working with online databases creates both positive and negative effects. The databases are collected from online sources, such as LinkedIn. It is possible that a TMG member is not entirely honest about their experience and education. The can be altered to favour the TMG member. In addition to the possibility of falsification, their information may not be completely updated. That creates a gap in information. Both these factors decline the reliability (Dietz, Chompalov, Bozeman, Lane & Park, 2000. p. 421). A positive effect of these online sources is that they are publicly available. If other researchers try to find information, there is a high likelihood that they will get the same information, which increases the reliability (Toshkov, 2016, p. 117).

The internal validity is high because the data are measured the same way (or has a high resemblance) as certain previous studies. These studies are from Van den Berg (2011) and Van der Meer and Kerkhoff (Van Wart, Hondeghem & Schwella, 2015, p.206). These studies have proven and adapted their study on even earlier studies. Moreover, the variables are generally straightforward. They collect and measure data which is not difficult to measure. An

educational degree is easy to operationalise and to measure. A top civil servant either does or does not have an academic master.

The external validity in this research does raise certain concerns. The dataset of the TMG 2022 is almost complete and has such a high number that the difference would probably not be significant. However, the dataset from TMG 2000 covers 55% of the original group. A great amount of data is therefore not accounted for, which can create problems. However, this is a problem which can be improved in the future. With more time (and interest), the Ministry of the Interior and Kingdom Relations can find the missing TMG members from the 2000 group.

Chapter 4: Empirical results and analysis

This chapter begins by giving a description of how the ABD and TMG are constructed and operate. Secondly, it presents a descriptive analysis of the statistics. Thirdly, it explains the statistics and links these explanations to the existing literature.

4.1 Description of the ABD/TMG

This section describes the ABD and the TMG, including who participates in these organisations and how they select recruits.

4.1.1 The Office for the Senior Civil Service (ABD)

The ABD is a collection of the 1,500 highest civil servants in the public administration system of the Netherlands. These civil servants have managerial functions and are community partners, managers and political advisors (ABDj, n.d.). The ABD gives advice, offer a discussion and execute the policies with political officials. When there is ministerial responsibility, the political officials are responsible for the actions of the ABD (ABDj, n.d.).

The ABD was founded in 1995 to strengthen the steering of the ministries and make the civil servants more professional and mobile to develop a stronger government and leadership (ABDe, n.d.). Prior to the ABD, the top civil servants were employed at a specific department for a long time. This created a silo effect in which they would think for their ministry but not for the government as a collective. By creating the ABD, the top civil servants would have more contact and be aware of what happens at different ministries. They created the creed, 'We from the (central) government, for the Netherlands' (ABDe). The focus has shifted from separate ministries to a collaboration across ministries. Combining the expertise of the top civil servants creates new perspectives to find solutions to complex problems (ABDe, n.d.).

A key component to create more expertise and knowledge is mobility, which is guided by the BABD (ABDc, n.d.). The BABD selects top civil servants and places them in new places where they can transfer their experience, which creates a cross-pollination of expertise and knowledge (ABDe, n.d.). In addition to the placement of ABD civil servants, the BABD functions to learn, develop and create a self-reflection for ABD civil servants (ABDe, n.d.; ABDc, n.d.). The BABD achieves this by having feedback and performance reviews and giving the ABD civil servants the option to attain development programs (ABDe, n.d.; ABDc, n.d.).

4.1.2 Top Management Group (TMG)

Within the ABD there is a select group of approximately 90 persons. These are the highest civil servants operating in the Netherlands. The group consists of the following functions: SG, DG, TG, Director of the Netherlands Bureau for Economic Policy Analysis, Director of the Netherlands Institute for Social Research, Director of the Netherlands Environmental Assessment Agency, National Coordinator Counter-Terrorism and Security, and ABDTOPconsultants (ABDg, n.d.). The TMG was founded in 2000, five years after the ABD. The goals and purpose of the TMG are the same as the ABD; however, selecting a higher level with fewer members facilitates communications and knowledge sharing (Blok, 2018).

4.1.3 Selection procedure

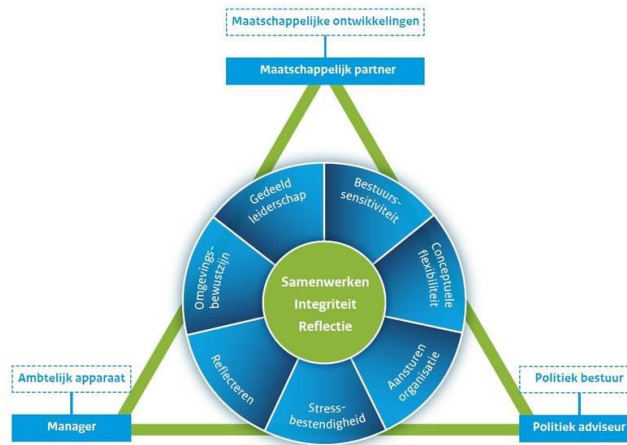
There is an open procedure for vacant spots within the ABD (ABDj, n.d.). Anyone is thus able to apply to a position: people from within public administration, people who work in the private sector, and people who are searching for a job. One is expected to work in the position for five to seven years (ABDj, n.d.). The procedure is led by the principal and the BADB (ABDh, n.d.); these two actors work together to create a profile. Afterwards they will make a list of candidates, and a special support commission must approve the final candidate.

The ABD and TMG procedures are comparable. The DG of the ABD selects a list of suitable candidates, and the SG of the specific department has a large influence. The job vacancy is meant to last no more than seven years (ABDi, n.d.). A common point in the ABD and the TMG is the rotation policy which was incorporated when these organisations were created. After five to seven years, an employee of the ABD or TMG must rotate and have a new function, often within the ABD or TMG (ABDg, n.d.; ABDj, n.d.). As mentioned previously, this mobility enables different departments to create and share expertise.

4.1.4 ABD/TMG profile

The BADB makes a certain profile for a function for the ABD or the TMG. These profiles are often based upon a general profile. This profile has a certain vision for public leadership (ABDa, n.d.). With public leadership, it is possible to acknowledge the difficult and complex time in which these leaders must operate. There are three roles in which civil servants must operate: manager, political advisor, and community partner. If a public leader wants to operate within these complex situations, they must have three core qualities: the ability to cooperate, have integrity, and reflect (ABDa, n.d.). The BADB have operationalised seven competencies related to the roles and the qualities of the ABD civil servant (see Figure 1): board sensitivity, ambient awareness, conceptual flexibility, shared leadership, managing the organisation, reflection, and stress resistance (ABDa, n.d.). All are based upon general qualities which can be learned from leadership and management. However, there is no mention of specific knowledge on certain topics.

Figure 1. ABD work profile



4.2 Descriptive statistics

In the descriptive statistics, the statistics of the variables are represented. Table 2 presents the binary variables which give an overview of the number of reported cases and how they were measured and represented. As these variables are binary, they are measured according to two options per variable; this is visible in the *mean* column. The variables are represented in three groups: (1) TMG 2000 group, (2) TMG 2022 group, and (3) the two groups combined. In addition to the statistical description, Table 2 gives a percentile representation of each variable. It is therefore possible to determine whether there are differences. However, these differences are not necessarily mean significant (see Chapter 4). Of the 27 cases of the 2000 TMG, it was not possible to find the educational level of one case. A difference exists between the observations from the 2000 TMG between educational level and the other binary variables.

Table 2. Descriptive Statistics Binary Variables

Descriptive Statistics Binary Variables														
Variables	2000				2022				Total				Min	Max
	Obs	Freq	St. D	Mean	Obs	Freq	St. D	Mean	Obs	Freq	St. D	Mean		
Dependent Variable														
Educational Level														
PhD	26	19%	0,4	0,19	88	10%	0,3	0,1	114	12%	0,33	0,12	0	1
Master	26	77%	0,43	0,77	88	82%	0,39	0,82	114	81%	0,4	0,81	0	1
Bachelor	26	0%	0	0	88	3%	0,18	0,03	114	3%	0,16	0,03	0	1
School of Applied Sciences	26	4%	0,2	0,04	88	4%	0,21	0,04	114	4%	0,21	0,04	0	1
Educational Specialization														
Law	27	30%	0,47	0,3	88	25%	0,44	0,25	115	26%	0,44	0,26	0	1
Public Administration	27	0%	0	0	88	18%	0,39	0,18	115	14%	0,35	0,14	0	1
Political Sciences	27	7%	0,27	0,07	88	3%	0,18	0,03	115	4%	0,2	0,04	0	1
Economics/Business	27	44%	0,51	0,44	88	25%	0,44	0,25	115	30%	0,46	0,3	0	1
Technical Studies	27	0%	0	0	88	1%	0,11	0,01	115	1%	0,09	0,01	0	1
Social Sciences	27	7%	0,27	0,07	88	8%	0,27	0,08	115	8%	0,27	0,08	0	1
Natural Sciences	27	0%	0	0	88	2%	0,27	0,02	115	2%	0,13	0,02	0	1
Medicine	27	4%	0,19	0,04	88	3%	0,18	0,03	115	3%	0,18	0,03	0	1
Defence/Police	27	4%	0,19	0,04	88	2%	0,15	0,02	115	3%	0,16	0,03	0	1
Others	27	4%	0,19	0,04	88	11%	0,32	0,11	115	10%	0,3	0,1	0	1
Generalist vs Specialist														
Generalist	27	30%	0,47	0,3	88	43%	0,5	0,43	115	40%	0,49	0,4	0	1
Specialist	27	70%	0,47	0,7	88	57%	0,5	0,57	115	60%	0,49	0,6	0	1
Post Education														
Yes Post Education	27	7%	0,27	0,07	88	28%	0,45	0,28	115	23%	0,43	0,23	0	1
No Post Education	27	93%	0,27	0,93	88	72%	0,45	0,72	115	77%	0,43	0,77	0	1
Demographical Variable														
Gender														
Female	27	7%	0,27	0,07	88	42%	0,5	0,42	115	34%	0,48	0,34	0	1
Male	27	93%	0,27	0,93	88	58%	0,5	0,58	115	66%	0,48	0,66	0	1

Table 3 provides an overview of the nominal descriptive variables (i.e. the observations and the frequencies of the nominal variables). All are demographic variables which explain the position of the TMG members. As in Table 2, the variables are divided into three groups.

Table 3. Descriptive Statistics Normative Variables

Descriptive Statistics Nominal Variables							
Variables	Category	2000		2022		Total	
		Obs	Freq	Obs	Freq	Obs	Freq
Function TMG (N=2000=26, 2022=88, Total=114)	Secretary General	13	50%	20	23%	33	29%
	Director General	7	27%	46	52%	53	46%
	Treasurer General	1	4%	1	1%	2	2%
	Inspector General	2	8%	7	8%	9	8%
	Manager	3	12%	7	8%	10	9%
	Consultant	0	0%	7	8%	7	6%
Ministry of (N=2000=26, 2022=88, Total=114)	General Affairs	1	4%	1	1%	2	2%
	the Interior and Kingdom Relations	1	4%	15	17%	16	14%
	Foreign Affairs	1	4%	5	6%	6	5%
	Defence	3	12%	3	3%	6	5%
	Economic Affairs and Climate Policy	1	4%	7	8%	8	7%
	Finance	5	19%	10	11%	15	13%
	Infrastructure and Water Management	2	8%	9	10%	11	10%
	Justice and Security	3	12%	12	14%	15	13%
	Agriculture, Nature and Food Quality	1	4%	6	7%	7	6%
	Education, Culture and Science	3	12%	4	5%	7	6%
	Social Affairs and Employment	3	12%	5	6%	8	7%
	Health, Welfare and Sport	2	8%	7	8%	9	8%
Advice Agency	0	0%	4	5%	4	4%	
University / School of Applied Sciences (N=2000=26, 2022=88, Total=114)	Erasmus University Rotterdam	2	8%	20	23%	22	19%
	Radbouw University	1	4%	2	2%	3	3%
	University of Groningen	7	27%	6	7%	13	11%
	University of Leiden	3	12%	13	15%	16	14%
	Tilburg University	0	0%	3	3%	3	3%
	University of Twente	0	0%	3	3%	3	3%
	University of Utrecht	1	4%	11	13%	12	11%
	University of Amsterdam	7	27%	11	13%	18	16%
	Free University Amsterdam	4	15%	6	7%	10	9%
	Wageningen University	0	0%	3	3%	3	3%
	Catholic University Brabant	0	0%	1	1%	1	1%
	Dutch Police Academy	1	1%	1	1%	2	2%
	School of Applied Sciences	0	0%	2	2%	2	2%
Others	0	0%	6	7%	6	5%	
Post Educational Schools (N=2000=2, 2022=25, Total=27)	NSOB	0	0%	7	28%	7	26%
	Domestic	1	50%	12	48%	13	48%
	Foreign	1	50%	6	24%	7	26%
Post Education Subject (N=2000=2, 2022=25, Total=27)	Managerial	1	50%	11	44%	12	44%
	Leadership	0	0%	4	16%	4	15%
	Public Administration	1	50%	6	24%	6	22%
	Others	0	0%	4	16%	5	19%

4.2.1 TMG members' backgrounds

This section describes the TMG members' backgrounds by explaining the variables separately. These variables explain the position of the TMG member and if there might be a change between the two years (i.e. 2000 and 2022). First, it explains the demographic variables. These gives a brief overview the group composition. Certain variables subsequently help to explain the dependent variables.

4.2.2 Demographic variables

Gender

Regarding gender, 7% of the TMG were female in 2000, compared to 42% in 2022. There has been a major shift in female representation in the TMG over the past 22 years. This may be due to a policy which the Dutch government have implemented to promote higher female representation. Additionally, there is a tendency to have more female representation in the private sector (Jongen, Merens, Ebregt & Lanser, 2019). The shift towards more female representation could be a new trend.

TMG Function

There have been changes to the functions of the TMG. First, more functions exist in 2022 than in 2000 because they now include the ADBTOPConsultants, a function which was previously not included (ABDb, n.d.). In addition to this function, there has been a growth in the numbers of all functions. In the past two decades, the TMG were enlarged on several occasions (ABDg, n.d.). As the TMG have expanded, in 2022 more DGs are leading more specific departments (ABDg, n.d.). The SGs have seen a small growth because there are also deputy SGs who are now included in the TMG (i.e. a function which was not incorporated in the TMG in 2000; ABDd, n.d.). Furthermore there are no real specific changes, the TMG have increased in size and so did the functions.

Ministry and Agencies

There has been an absolute increase in all ministries between 2000 and 2022. This could be due to the increase in DGs and the increase of tasks and functions in the TMG (ABDd, n.d.). The Ministry of Infrastructure and Water Management is an example. In 2000 they had two functions in the TMG, whereas this ministry has nine functions in 2022. They have an increase in specific departments which gives an increase in DGs who gain a function in the TMG (ABDd, n.d.). In addition to this overall growth, there has been substantial growth in the Ministry of the Interior and Kingdom Relations. In 2000 they had one function, and in 2022 they have 15. Aside from a possible increase in DGs in this ministry, there could be another reason. New functions (e.g. consultants) are incorporated in the Ministry of the Interior and Kingdom Relations (ABDb, n.d.). The last notable change is the addition of AA. The heads of certain special agencies (e.g. the Netherlands Institute for Social Research, the Netherlands Environmental Assessment Agency and Counter-Terrorism and Security) are now included in the TMG (ABDg, n.d.). This specific group does not belong to a ministry but rather to separate AA. Therefore, there is a new category: advice agencies.

Universities and School of Applied Sciences

The universities and schools of the TMG members have seen changes. First, more universities are represented. Tilburg University, University of Twente, Wageningen University and the Catholic University Brabant were not represented in 2000, in 2022, these universities are represented, albeit with low numbers. Certain universities, such as the University of Leiden, University of Amsterdam and the Free University of Amsterdam were highly represented in 2000 and in 2022 they still have a high representation. Two universities have seen a remarkable growth between the TMG groups: Erasmus University Rotterdam and the University of Utrecht. Erasmus University Rotterdam has had an absolute growth from two to 20; with 20%, it is the university most attended by TMG members in 2022. The university of

Utrecht has seen a growth from one to 11, which makes it fourth most attended university of TMG members. Another remark is the shift in 'other', which had zero representation in 2000 and a 7% representation in 2022. These are mainly universities from outside the Netherlands. The final note is that there was no representation of the School for Applied Sciences In 2000, and in 2022, there is a representation of 2%. This might mean that there is a decline in the educational level, however this will be further discussed in the paragraph 'educational level' later in chapter four.

Post-educational schools and their subjects

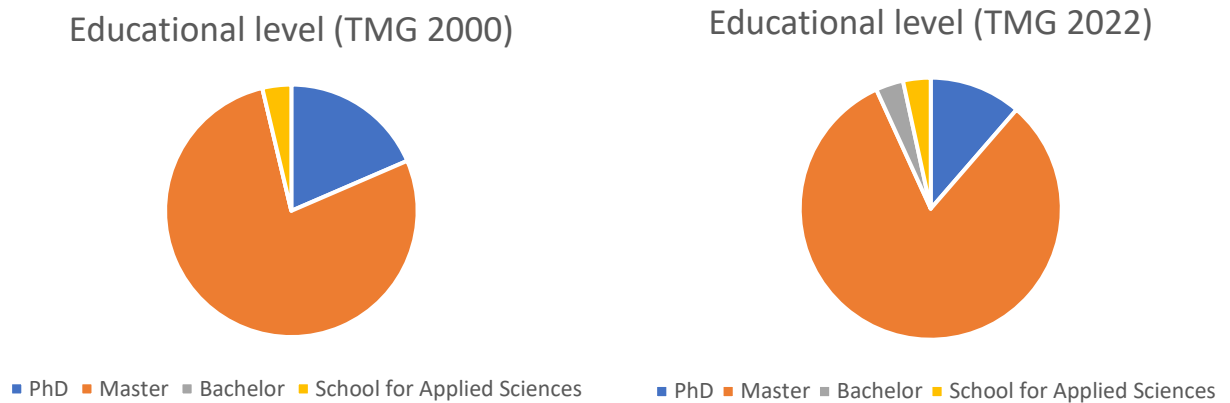
There has been growth in post-educational school attendance from 2000 to 2022. In 2000, two TMG members had attended a post-educational institute, one in the Netherlands and one outside the Netherlands. In 2022, 25 TMG members have attended a post-educational school (i.e. 19 in the Netherlands, of which seven attended the Dutch School for Public Administration and six attended a post-educational school outside the Netherlands). The subjects of these post-educational schools have mainly focused on the competency of managerial skills (i.e. 12 TMG members in 2022). However, the competency of leadership has also seen growth in absolute numbers from zero to four. Public administration has undergone absolute growth from one to six. Lastly, there has been an increase in other post-educational subjects. In 2022, five TMG members had studied subjects such as economics and political sciences.

4.2.3 Dependent variables

Educational level

In regard to educational level, four levels can be compared: Ph.D., Master's, Bachelor's, and school for applied sciences. Three levels have seen changes and one level has remained constant (i.e. the school of applied sciences). In both the 2000 and 2022 groups, there is a representation of 4%. Although this does not signify that there are the same number of members with a degree for a school of applied science, it does entail that there is the same representation. As the 2022 group has more members, there are more people with a school of applied sciences degree; however, they represent the same proportion as the 2000 group, namely 4%. For the Bachelor's degree, there has been a change. The TMG in 2000 had no members with a Bachelor's degree (as their highest educational degree). In 2022, the TMG had a representation of 3% for the Bachelor's degree. Additionally the Master's degree saw a rise from 77% to 82% between 2000 and 2022. Lastly, there was a decrease in the highest academic degree (i.e. Ph.D). In 2000, there was a representation of 19%, and in 2022, it had dropped to 10% (see Figure 2).

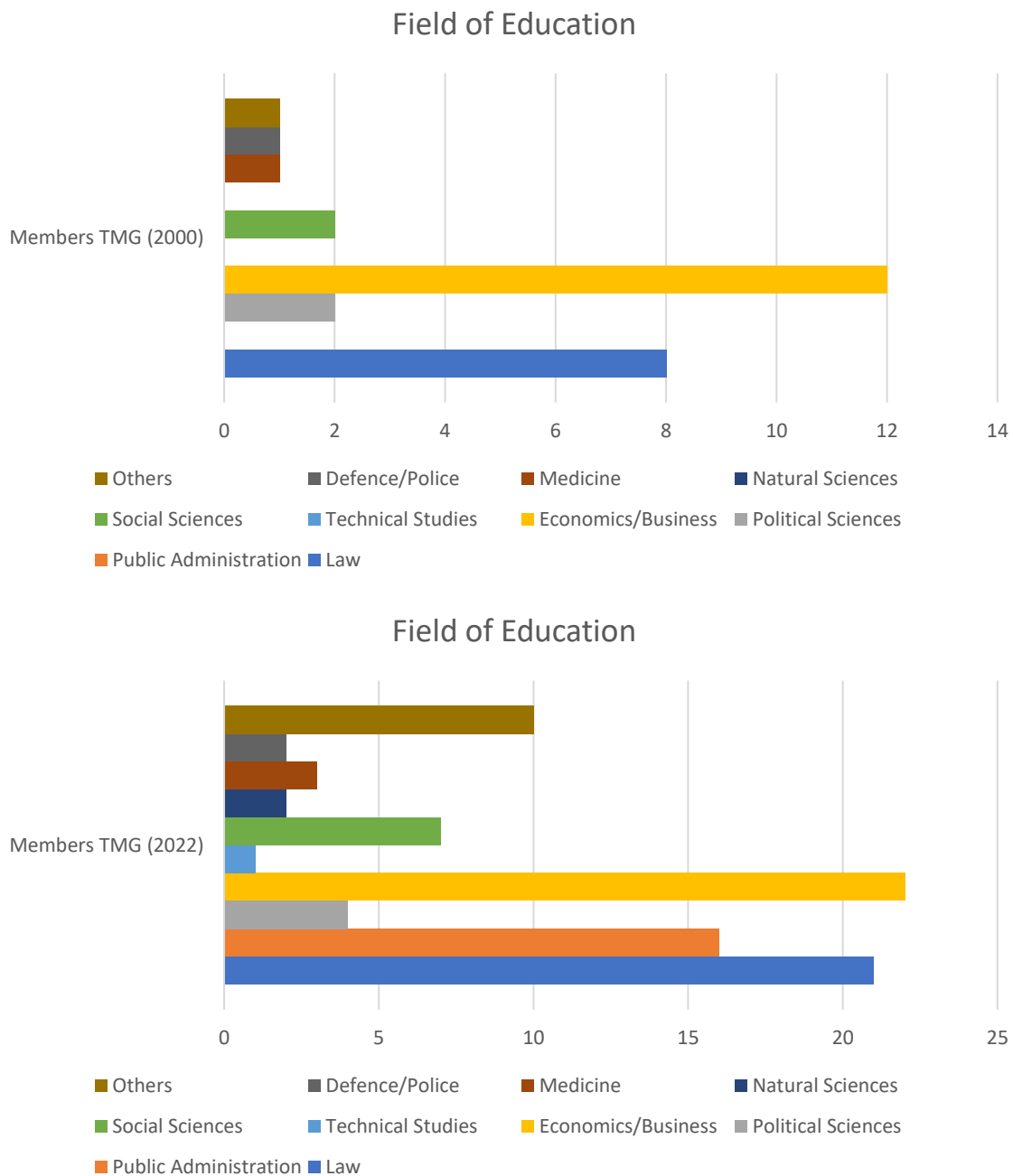
Figure 2. Education level graph



Educational specialisation

Educational specialisation encompasses 10 categories. Firstly, the two largest educational subjects from 2000 have seen a decline; law declined from 30% to 25% and economics/business from 44% to 25%. The Netherlands have a history as a *Rechtsstaat* which explains the large representation of the law subject (Van Wart, Hondeghem & Schwella, 2015, p. 200; Page & Wright, 1999, p. 1), and the decline of law could be explained by the increase in public administration. In 2000, no TMG members had studied public administration; however, in 2022 there is a representation of 18%. According to Van Wart, Hondeghem and Schwella, public administration is increasing in popularity and replacing law as general education (2015, p. 207). However, this does not explain the decrease of economics/business. This is remarkable, especially due to the large growth of Erasmus University Rotterdam, which is specialised in economics studies (EUR, n.d.). Secondly, the descriptions which have seen changes are political sciences (i.e. 7% to 3%) and an increase of 'other' from 4% to 11%. Thirdly, the technical studies and natural sciences categories made their entrée in the TMG. Where there was no representation of these subjects in 2000, in 2022 technical studies had a representation of 1% and natural science 2%. They were thus new in the representation; however, their representation is low in the 2022 group. Lastly, certain studies with a low representation remained nearly the same. The social sciences, medicines and defence/police had a low representation in 2000 and in 2022. The social sciences grew from 7% to 8%, medicines declined from 4% to 3% and defence/police declined from 4% to 3% (see Figure 3).

Figure 3. Field of Education graph

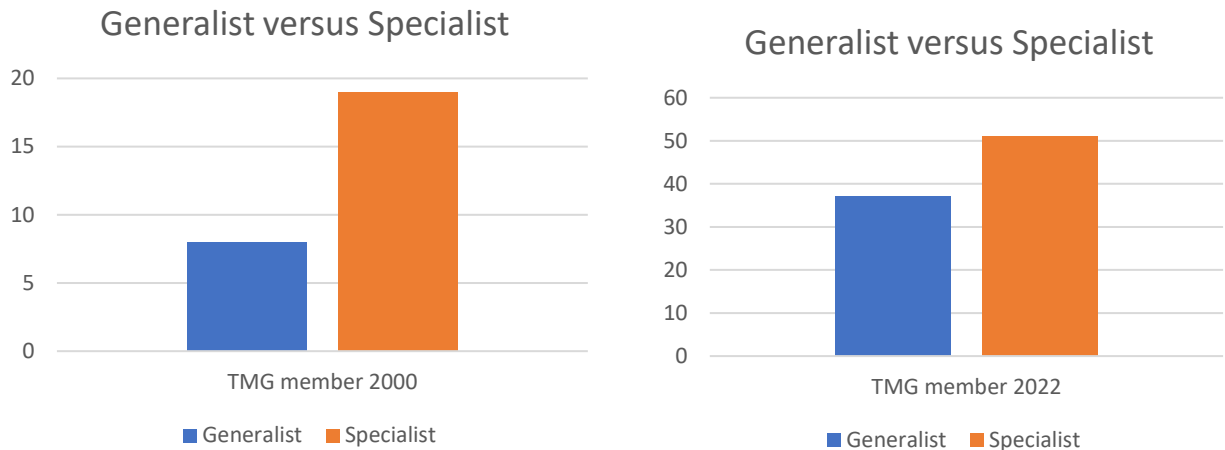


Generalist versus specialist

There has been an increase in general education studies and consequently a decrease in specialist education studies. General and specialist education have a reverse relationship. In 2000, the TMG had a representation of 30% general education and 70% specialist. In 2022, the members had a general education of 43% and a specialist education of 57%. This is noteworthy because the Netherlands have a history of the *Rechtsstaat* and are linked, according to some academics, to general education focused on public administration (Van Wart, Hondeghem & Schwella, 2015, p.16; Page & Wright, 1999, p. 211). The growth of the

general education could be explained by the growth of public administration as an educational subject (see Figure 4).

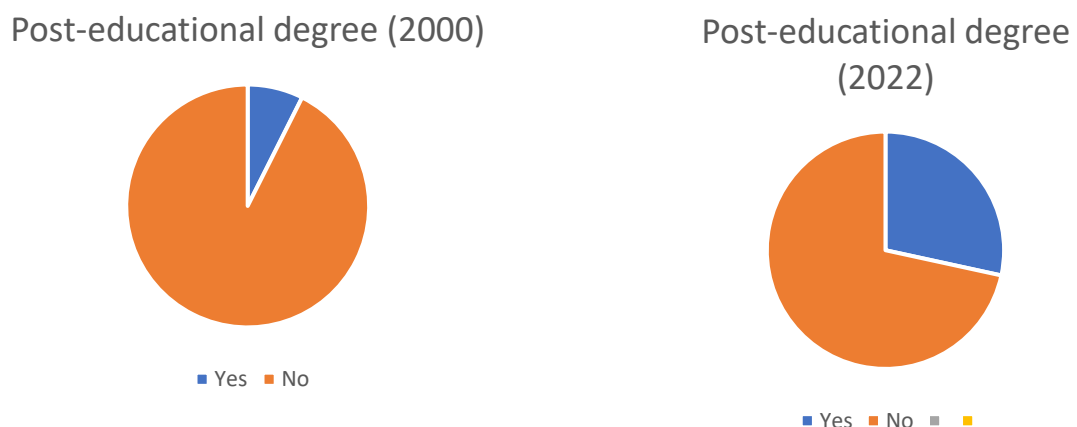
Figure 4. Generalist versus specialist graph



Post-education

The last dependent variable analysed is post-education. In 2000, 7% of TMG members participated in post-education; this increased to 28% in 2022, perhaps because post-educational institutes have gained popularity over the past two decades (Van der Meer & Kerkhoff, 2015; Raadschelders; 2016). These post-educational institutes were thus (less) popular 22 years ago, which could explain their low representation. Because the members of TMG become members when they are advanced in their career (Page & Wright, 1999, p. 218), they should have participated in a post-educational institute before 2000. when it was less popular (see Figure 5).

Figure 5. Post-educational graph



4.3 Statistical explanation of the hypotheses

In this section, the four hypotheses are tested. The hypotheses are first tested with Levene's test to determine if the variables must be tested or if equal variances are assumed (value higher than 0.05) or not (value lower than 0.05). The hypotheses are subsequently tested with a t-test, a method to determine whether the means are significantly different. If the P-value is below 0.05, there is a significant difference and the hypothesis is accepted, otherwise the hypothesis is rejected (Agresti & Finlay, 2009).

H1: The education level in the TMG was higher in 2022 than in 2000.

Table 4. T-test education level

		Levene's Test for Equality of Variances				t-test for Equality of Means			
		F	Sig.	t	df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference
<i>Ph.D.</i>	Equal variances assumed	5,461	0.021	1.226	112	0.111	0.223	0.09003	0.07342
	Equal variances not assumed			1.056	33,933	0.149	0.298	0.09003	0.08525
<i>Master</i>	Equal variances assumed	1.12	0.292	-0.552	112	0.291	0.582	-0.4895	0.08875
	Equal variances not assumed			-0.522	37,859	0.303	0.605	-0.4895	0.09386
<i>Bachelor</i>	Equal variances assumed	3,875	0.051	-0.949	112	0.172	0.344	-0.03409	0.0359
	Equal variances not assumed			-1.752	87	0.042	0.083	-0.03409	0.01945
<i>School of Applied Sciences</i>	Equal variances assumed	0.93	0.761	-0.152	112	0.44	0.88	-0.00699	0.04611
	Equal variances not assumed			-0.157	43,284	0.438	0.876	-0.00699	0.04447

From these results (see Table 4) the educational level Ph.D. should be tested by 'equal variances not assumed', because the significant value of $0.021 < 0.05$. The other educational levels can be tested by 'equal variances assumed' (i.e. Master's: $0.292 > 0.05$, Bachelor's: $0.051 > 0.05$ and School of Applied Sciences: $0.761 > 0.05$). The P-values are therefore Ph.D.: $0.298 > 0.05$, Master's: $0.582 > 0.05$, Bachelor's: $0.344 > 0.05$ and school of applied sciences: $0.880 > 0.05$. The P-value of all educational levels is higher than 0.05. It is thus not possible to determine whether there is a significant difference. Hence, H1 is rejected. It is not statistically proven that the educational level is higher than it was 22 years ago.

H2: The share of specialised studies in the TMG was higher in 2022 than in 2000.

H3: The share of general studies, with an increase in public administration and a decrease in law, in the TMG was higher in 2022 than in 2000.

Table 5. T-test generalist versus specialist

		Levene's Test for Equality of Variances				t-test for Equality of Means			
		F	Sig.	t	Df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference
Generalist	Equal variances assumed	9,491	0.003	-1.255	113	0.106	0.212	-1.3552	0.10798
	Equal variances not assumed			-1.302	45,909	0.100	0.200	-1.3552	0.10411
Specialist	Equal variances assumed	9,491	0.003	1.255	113	0.106	0.212	-1.3552	0.10798
	Equal variances not assumed			1.302	45,809	0.100	0.200	-1.3552	0.10411

Table 6. T-test field of education

		Levene's Test for Equality of Variances				t-test for Equality of Means			
		F	Sig.	t	Df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference
Law	Equal variances assumed	0.814	0.369	0.476	113	0.635	0.635	0.04630	0.09736
	Equal variances not assumed			0.459	40,968	0.649	0.649	0.04630	0.10087
Public Administration	Equal variances assumed	38,983	< 0.001	-2,428	113	0.017	0.017	-0.18182	0.07488
	Equal variances not assumed			-4,397	87,000	<0.001	<0.001	-0.18182	0.04135
Political Sciences	Equal variances assumed	3,076	0.082	0.886	113	0.189	0.377	0.03998	0.04510
	Equal variances not assumed			0.728	33,788	0.236	0.472	0.03998	0.05492
Economics/Business	Equal variances assumed	7,835	0.006	1.952	113	0.027	0.053	0.19444	0.09961
	Equal variances not assumed			1.801	38,547	0.040	0.079	0.19444	0.10794
Technical Studies	Equal variances assumed	1.248	0.266	-0.552	113	0.291	0.582	-0.01136	0.02058
	Equal variances not assumed			-1.000	87,000	0.160	0.320	-0.01136	0.01136
Social Sciences	Equal variances assumed	0.034	0.854	-0.092	113	0.464	0.927	-0.00547	0.05961
	Equal variances not assumed			-0.093	43,900	0.463	0.927	-0.00547	0.05899
Natural Sciences	Equal variances assumed	2,587	0.111	-0.785	113	0.217	0.434	-0.02273	0.02893
	Equal variances not assumed			-1.422	87,000	0.079	0.158	-0.02273	0.01598
Medicine	Equal variances assumed	0.21	0.885	0.072	113	0.471	0.942	0.00295	0.04066
	Equal variances not assumed			0.070	41,386	0.472	0.944	0.00295	0.04184
Defence/Police	Equal variances assumed	0.649	0.422	0.405	113	0.343	0.686	0.01431	0.03535
	Equal variances not assumed			0.355	36,204	0.362	0.725	0.01431	0.04034
Others	Equal variances assumed	6,461	0.012	-1.181	113	0.120	0.240	-0.07660	0.06488
	Equal variances not assumed			-1.523	72,891	0.066	0.132	-0.07660	0.05029

The second and the third variable can be tested via the same data and tests. These hypotheses are contradictory. Therefore the statistics are discussed together. First, Table 5 is discussed (i.e. a statistical change between the general and specialist studies). Secondly the research assesses whether there is a significant change between the field of education (see Table 6).

The generalist and specialist variables have a Levene's result lower than 0.05 (i.e. generalist: $0.003 < 0.05$ and specialist: $0.003 < 0.05$). Therefore they will be tested by 'equal variances not assumed'. The P-value is higher than the 0.05 with the t-test (i.e. generalist: $0.2 > 0.05$ and specialist $0.2 > 0.05$). This entails that there is no significant difference. For both generalist and specialist studies, it is not proven that there was a greater share in 2022 than in 2000.

The following variables have a Levene's result lower than 0.05 and should be tested by 'equal variances not assumed' – public administration: $0.001 < 0.05$, economics/business: $0.006 < 0.05$ and other: $0.012 < 0.05$. The other seven variables should be tested by 'equal variances assumed' because they have a Levene's result higher than 0.05 – law: $0.369 > 0.05$; political sciences: $0.082 > 0.05$; technical studies: $0.266 > 0.05$; social sciences: $0.854 > 0.05$; natural sciences: $0.111 > 0.05$; medicine: $0.885 > 0.05$ and defence/police: $0.422 > 0.05$. According to the t-test, one educational subject has a significant difference: public administration (i.e. $0.001 < 0.05$). The other general study is law, which has a t-test of $0.635 > 0.05$. There is no significant difference for law. The following studies are specialised – political sciences: $0.377 > 0.05$; economics/business: $0.079 > 0.05$; technical studies: $0.582 > 0.05$; social sciences: $0.927 > 0.05$; natural sciences: $0.434 > 0.05$; medicine: $0.942 > 0.05$; defence/police: $0.686 > 0.05$ and other: $0.066 > 0.05$. All P-values are higher than the 0.05 measurement. However, it is noteworthy that economics/business is fairly close to the 0.05 measurement. There is no significant difference, as it cannot be statistically proven that the specialised studies are more represented in 2022 than in 2000. Therefore, H2 is rejected.

Furthermore, H3 is partly rejected. There is no significant difference for a greater share of generalist studies nor for law between 2000 and 2022. However, there is a significant difference for public administration. Thus part of the hypothesis is accepted, namely that there has been growth in public administration.

H4: The attainment of post-educational Master's in the TMG is higher in 2022 than in 2000.

Table 7. T-test post-education

		Levene's Test for Equality of Variances				t-test for Equality of Means			
		F	Sig.	t	Df	Significance One-Sided p	Significance Two-Sided p	Mean Difference	Std. Error Difference
Post-Education	Equal variances assumed	36,249	< 0.001	-2,283	113	0.012	0.024	-0.21002	0.09197
	Equal variances not assumed			-2,977	74,918	0.002	0.004	-0.21002	0.07054

The post-education variable must be measured by 'equal variances not assumed'. Levene's test result is $0.001 < 0.05$. The t-test result is $0.004 < 0.05$. The P-value is therefore lower than the 0.05 measurement. This conveys a significant difference between post-education in 2000 versus 2022. This difference is statistically proven, and H4 is therefore accepted.

4.4 Discussion

Two hypothesis were rejected, one was partly been rejected and the final hypothesis was accepted. This section explains these hypothesis and connects them with the literature.

H1: The education level in the TMG was higher in 2022 than in 2000. (Rejected)

Hypothesis 1 is rejected, which means that the TMG does not have a higher education level than they did 22 years ago. One could even argue that the educational level has declined. A possible reason why the educational level has not grown is that the educational level was

already quite high (Peters, 2018, p. 113). It could be so high, that it is difficult and impractical to recruit employees with an even higher education. In 2000 TMG member with a Bachelor's degree and few who had attended a school of applied sciences. The only way to improve the educational level was to recruit more Ph.D. candidates. However, these are scarce and may not be a necessary criteria for a top civil servant. Although the hypothesis is rejected, the result of the education level is partly in line with the literature. The level is still high; however, there is no significant growth.

H2: The share of specialised studies in the TMG was higher in 2022 than in 2000. (Rejected)

There has been no growth in specialist education. The results show that there is no significant difference between the specialist educations between the TMG in 2000 and 2022. There was a slight difference in the fields of education, namely that there were more subjects of education. However, these differences were, once again, not significant enough. According to literature from Van Wart, Hondeghem and Schwella, there should have been an increase of specialist studies if there were more DGs (2015). This is noteworthy because there has been an absolute growth of DGs in 2022. However, this did not lead to a significant difference growth in specialist education. A possible reason could be that certain competences are more important for the recruitment of the TMG members than competences which are connected with specialist education. Competences such as managerial skills could have been more important than subject-matter expertise. It could also be argued that there is no growth for specialised studies because there is a strict job rotation system in the TMG (ABDc, n.d.). The managerial competencies are therefore important and these are most often linked to a general education (Van Wart, Hondeghem & Schwella, 2015; Page & Wright, 1999; Christensen, 2015; Wille, 2013).

H3: The share of general studies, but with an increase of public administration and a decrease of law, in the TMG was higher in 2022 than in 2000. (Partly rejected)

It was not possible to see a significant difference in general educational background between 2000 and 2022. This is remarkable, because according to the literature there is often a majority of general educations when there is a job rotation. This is certainly the case in the TMG, there is even a strict rotation system (ABDc, n.d.). It could be expected that when the TMG started in 2000, the positions were vacant and did not rotate. These rotated after the TMG began. An increase in general education would therefore seem likely. However, this did not occur. A possible reason could be that there has been an demand from the politics to have top civil servants with subject-matter expertise (Baazil, 2021). When there is a demand for subject-matter expertise, it is often connected with specialist studies (Haas, 1992), therefore diminishing the growth in general studies.

A significant difference in the public administration variable was evident between 2000 and 2022. Van Wart, Hondeghem and Schwella (2015) mentioned the growth in this field of study. This is possible because the study of public administration is fairly new. Therefore it was not possible or not popular to study public administration for the TMG In 2000. Besides the growth of public administration, it is not possible to see a significant decline in law. It is therefore partly possible to see the shift from a *Rechtsstaat* to an egalitarian management education,

as Van Wart, Hondeghem and Schwella (2015) mentioned. This hypothesis is partly rejected, as there is no significant difference between general studies and the specific study of law. However, there is a significant difference for public administration.

H4: The attendance of post-educational masters in the TMG will be higher in 2022 than in 2000. (Accepted)

Hypothesis 4 is accepted. There is a growth of TMG members who have a post-educational educational degree. This aligns with the literature which states that these post-educational institutes are becoming more relevant and popular (Raadschelders, 2016). The majority of these post-educational institutes are also fairly new (Van der Meer & Kerkhoff, 2015). Therefore it could not have been the trend for the TMG in 2000 to attend these post-educational institutes. However, with this growth it is possible to state that there is the specialism in generalism, as Raadschelders mentioned (2016). These post-educational institutes are focused on enhancing a person's managerial and leadership competency and understanding of the government (Van der Meer & Kerkhoff, 2015; Raadschelders, 2016). These competencies are seen as important factors for a top civil servant to possess (ABDa, n.d.).

Chapter 5: Conclusion

This chapter presents the conclusion of the research. It first gives a summary of the research which answers the research question and subsequently discusses other findings from the research. Next, it reflects upon the research, highlights the limitations and presents several suggestions for further research. Lastly, there is a normative judgement along with several policy recommendations.

Top civil servants play an important role in the Dutch government, often having a position in which they have a major impact on society. However, an ongoing debate persists as to whether the top civil servants possess the necessary knowledge. A popular opinion is that the top civil servant is selected for their managerial skills and that specialised knowledge is neglected. These competencies are (partly) influenced by their education. However, the popular media rarely mentions education. To shed light on this topic, this study has asked the following research question: *'How and why has the educational background of the civil servants in the Dutch Top Management Group (TMG) changed between 2000 and 2022?'*. By using descriptive statistics and a statistical t-test, this question was answered. This research question is possible to separate and answer in two parts. First, it addresses the descriptive part of the question: *'How has the educational background of the civil servants in the Dutch Top Management Group (TMG) changed between 2000 and 2022?'*.

To answer this question, the research reviewed literature which focused on how top civil servants are selected. The two main strategies are politicisation and meritocracy. These strategies are bound to competencies and these competencies are influenced by education. Politicisation is bound to partisan loyalty, which is not affected by education. Meritocracy is bound to managerial competencies, political craft and subject-matter expertise. Managerial competencies and political craft are influenced by general education. Subject-matter expertise is influenced by specialised education. According to previous research, the Dutch government have had a mixed history of specialised and general education. On the one hand, the Netherlands are a country linked to meritocracy and subject-matter expertise. On the other hand, the Netherlands practise a strict job rotation of their top civil servants, which leads to a general education selection. Within the history of the Dutch government, there has been a change of expertise, whether outsourcing the expertise or keeping it within their own departments. The Netherlands also have a history of having a high education level in their public administration. Lastly, there has been a growth of post-educational institutes, offering employees a chance to improve certain competencies (e.g. managerial and leadership skills and knowledge of public administration).

The research developed four hypotheses to help answer the research question, which studied and measured the education level, the education field, the general versus specialist discussion and the post-educational institutes. First, there was little difference in education level between the 2000 and 2022 groups and certainly no significant difference. The education level was and is high. Few TMG members have an applied sciences degree. The vast majority of both groups hold a Master's degree, with some exceptions who have earned a Ph.D. The field of education has seen major and minor changes. The most important one is the change in the field of public administration, as this difference was significant. The TMG in 2000 had no people with a degree in this educational field, and the 2022 group had a representation of

18%. Furthermore, the decrease in economics/business came close to a significant difference. Certain new educational fields have been introduced, albeit with scant representation. It could be concluded that the field of education has seen certain changes. The biggest change being the growth in public administration and the noteworthy decrease in economics/business. Neither general nor specialist education has seen a growth or a decline in the TMG. Specialist education has a larger representation in both groups. Lastly, there has been significant growth in post-educational degrees. In 2000, two TMG members had attended and achieved a post-educational degree; in 2022, this number had risen to 25. In sum, the most noteworthy change in the TMG was an increase of the public administration educational field. Additionally, there was growth in post-educational institutes. The other educational fields, education level and generalist versus specialist education remained nearly the same.

The second part of the question is explanatory (i.e. why did these changes occur?). The hypothesis focussing on the change in education level was rejected, signifying that there has been no change. This could be explained because the education level was already high, making it nearly impossible to enhance it, except for hiring more people with a Ph.D., which might not be necessary for the Dutch government. The hypothesis focussing on the field of education found a difference in the field of public administration. This may have undergone growth because it is a relative new field of study. In 2000, the TMG members could not have studied this field yet, or it was not popular. Because public administration is the study of how the government works, it seems logical that people who work in the government have this field of education as their background. Another reason could be that the demand for general competences has increased over the past 20 years. If the demand increases, studies who offer the education about these competences would therefore grow. Furthermore, other studies have seen little change. This could be partly explained by the general versus specialist education. The Dutch government is linked to law as their main educational background (as a *Rechtsstaat*), and this is a general education which gives people the opportunity to grow as a civil servant. History has shown that people who studied law are typically represented in the top civil servants. Therefore, this general education has remained popular. By contrast, there is demand for more specialist studies of politics. Therefore there are also people who access to the top civil servant positions with a specialist education. This political demand and the history of rising through the ranks with a general education could keep the fields of education in balance. This also answers the question as to why there has been no change between general or specialist education. Lastly, post-educational institutes have seen growth. Hypothesis 4, which measured and studied this aspect, was accepted. This growth could be explained because post-educational institutes are fairly new in the history of the Dutch government. It was therefore not possible or necessary for a top civil servant to have such a degree. However, in recent years, these post-educational institutes have become more popular. There was a rise in the number of post-educational institutes and the courses they offered. This aligns with the 2022 group, who have attended more post-educational institutes. However, it also could be explained because there is more need for the general competences.

5.1 Contribution to existing scholarship

This research has focussed on certain academic gaps. By conducting this research, these gaps have been addressed. This research therefore helps by contributing to the existing literature on education, post-education and top civil servants. This research also contributes to the

public administration scholarship on a broader scale. This information could be generalized and applied to other countries beyond the Netherlands.

First, this research helps by adding empirical data. The TMG had not been academically studied and therefore they lacked of a dataset with certain variables. This research has created a dataset of the TMG in 2000 and 2022 which includes variables on their educational background and demographics. Theoretically, this study has filled a gap of knowledge on top Dutch civil servants. Although research has been conducted on Dutch top civil servants (Van Wart, Hondeghem & Schwella, 2015; Page & Wright, 1999; Peters, 2018), the TMG have notably not been studied. This study has mapped and studied this group in depth, examining their description, recruitment procedure and educational background.

By investigating the educational background of TMG members and how it has changed, the research adds to educational scholarship. It tested certain expectations from the literature about the education level of (top) civil servants to confirm or debunk these expectations. The expectation that there would be more top civil servants with a general education was not confirmed. However, the growth of post-educational institutes was confirmed.

Lastly, the gap in knowledge of post-educational institutes was researched. Studies have been conducted on post-educational institutes (Van der Meer & Kerkhoff, 2015; Raadschelders, 2016). However, the literature had not been combined with research on academic education. This research explored post-educational institutes from the Netherlands and combined it with the existing literature on academic education. Furthermore, the competences of managerial and leadership skills seem more important than other competencies. These competences are often studied in the post-educational institutes.

5.2 Limitations

This research has certain limitations which must be addressed. It is possible that these limitations have influenced the outcome of the results.

The first limitation is the incomplete N number of the TMG 2000. The researcher was not able to collect all data from this group. Of the 49 participants, it was possible to find the complete information for 26 members. The Ministry of the Interior and Kingdom Relations did not have a complete database with the names of the participants. It is therefore difficult to compare the two groups. Although it is possible, this difference could contribute to a statistical insignificance of the outcomes.

The second limitation is the small N number of cases. The first group consists of 26 and the second group of 88. Within statistical research, the greater the N number, the more consequent and valid the results. Because the numbers are fairly small, it is difficult to have solid results from which it is possible to draw conclusions. However, the TMG are a small group, therefore it is not possible to create more N numbers. This problem is inherent when conducting quantitative research on the TMG.

A third limitation is the research design. This research uses a quantitative method, and it therefore has certain limitations bound to quantitative research. It is not possible to study

certain possible relations. In-depth knowledge is difficult to acquire. For example, it would not be possible to ask a TMG member if they attended a post-educational institute to rise through the ranks of the public administration.

The fourth and last limitation is that there is no direct evidence that certain factors caused the shifts that were observed. The research is based on theoretical arguments and assumptions, but there is no concrete evidence that certain trends transpired because of these factors.

5.3 Suggestions for further research

There are possibilities to conduct further research on the basis of this research. First, there is the possibility to complete the remaining empirical data on the TMG In 2000, With sufficient time and resources, it would be possible to retrieve the necessary data. While that was not possible for this research, there is the opportunity for further research to address the same question with complete information.

This research has answered the question as to how the educational background of the TMG members has changed between 2000 and 2022. However, other questions could be asked about the same group. Since the education level is high in the TMG, there is an important question to ask. Namely, is it desirable to have such a high education level within this group? Top civil servants represent the government and thus the people of the government. However, the high education level is not representative of the Dutch population. As Peters mentioned, there could be a bias to a certain group within civil servants (2018, p. 83). Thus is there the possibility that top civil servants who have a high education level have a bias towards people with a high education level? This could have major impact on how policies are formed and implemented within the population.

This research has found an increase of TMG members who attended a post-educational institute. However, there is still the 'why' question which is unanswered (i.e. why do TMG members attend post-educational institutes?). This research could only make assumptions on theoretical arguments that these post-educational institutes have become more popular. However, there could be several other reasons which further qualitative research could answer (e.g. by conducting interviews with TMG members who have attained a post-educational degree). It would thus be possible to ask and understand the reason why they participated.

5.4 Normative judgements, implications, and policy recommendations

The outcomes of the results are discussed via their normative implications. The fact that the education level is high in both the TMG groups seems a valuable characteristic for the Dutch government. Often people with a high education level have multiple competencies, which makes them strong applicants to fulfil certain important functions in the TMG. A top civil servant who can influence policies which affect people in their daily life should have a high education level, in which they are trained to handle the correct way. The growth of the post-educational institutes seems to be a positive change within the Dutch government which gives

people the ability to improve certain competencies which are deemed important to lead a ministry or department.

However, it seems that there is not enough change towards a bureaucracy which possesses the necessary specialised knowledge to act in difficult and complex situations. The demand for politics to improve the subject-matter expertise has not been widespread until recently. It seems to be necessary because there has been no growth in specialised knowledge in recent decades, although expertise should have increased due to a diminishing hiring of outside expertise in the government.

This research has a policy recommendation which could be viable for the Dutch government: combining the need for specialist education and managerial skills. The TMG should hire more people with a specialist education. If the people in the TMG have a high level of subject-matter expertise and political demand, democracy will thus be honoured. Which is established in the coalition agreement (Ollongren, 2021). However, to make certain that the TMG members possess the necessary managerial skills, people with a specialist education should attend a post-educational institute focused on managerial and leadership skills. This will form TMG members with a high subject-matter expertise and the necessary managerial skills. The general versus specialist education debate is not new, and it is ongoing. However, this policy recommendation conveys that it might not have to be one or the other; rather than an opposition, there could be a combination. The new top civil servant could have the best of both worlds.

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