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Mergers in higher education

The process of a merger - A case study of the
new NTNU

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Problem Description

Mergers in higher education institutions have been on the rise in recent years both as forced and voluntary instances. They can be highly complex and involve different kinds of institutions with diverse goals, containing strong and often unique cultures, in various geographical locations, and with miscellaneous drivers. Consequently, there are many structural, instrumental, and cultural conditions and challenges that can influence a merger and its process which has led to the following problem statement: How merger conditions affect the merger process of mergers in higher education. In order to investigate the problem, the thesis will use a literature study and the merger of NTNU as a case study where information will be collected through a stakeholder analysis of the main institutions involved.

Preface

This thesis was prepared for the International M.Sc. in Project Management under the department of Industrial Economics and Technology Management at the Norwegian University of Science and Technology.

Firstly, I would like to thank the interviewees for taking their time to participate and supply me with information about the case. I also thank Tim Torvatn for his supervision and I send gratitude to my fellow classmates for all the shared moments, both the good and the bad. I would additionally like to thank Jan Hovden for his guiding words and reflection. Much appreciated.

Abstract

The purpose of this research was to investigate how merger conditions affect the process of mergers in the higher education sector. The previous research on this often related to cases where there are two institutions involved that have a similar or different academic fields and products. This case study of the new NTNU however, engaged a large and complex merger with four institutions, geographically separated, offering the entire range of study programs and degrees. This was done by studying the general merger conditions relevant to higher education mergers and the challenges they and the dynamics between them can give. Consequently, a case study of a comprehensive merger was used to analyze how the different conditions affect the planning phase and what was specific to the new NTNU merger.

Using semi-structured interview guides, data was collected from two members of the supreme body of the merger who also had central positions in their own institutions, and from representatives from The Ministry of Education and Research. In addition, both the project organization and the ministry offered rich documentation of the process.By using this information, a comparison with existing theory through a literature study allowed an analysis that showed that certain merger conditions held more importance for the comprehensive merger. These conditions had both positive and negative effects on the planning, but some conditions were also found to be not influential at all.

Summary

The thesis is a study of the new NTNU merger where the purpose was to investigate the effect different merger conditions had on the planning of a comprehensive merger. A literature study gave three categories of merger conditions. These were origins and drivers, institutional characteristics, and individual characteristics. By comparing the research with the recent merger of the new NTNU, certain conditions were found to be important than others, and especially leadership, leadership, economies of scope, and the number, size, and geographical location of partaking institutions.

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1. INTRODUCTION

The introduction chapter seeks to introduce the overall topic of the thesis and its background. It will work towards presenting organizational change in the higher education sector, focusing on mergers and discussing the significance it holds. This gives the foundation for the problem statement and the research questions.

1.1. PROBLEM BACKGROUND

Organizational change in the higher educational sector has become an inevitable occurrence. The change is about seeing opportunities and adapting as the innovations of today are making the innovations of yesterday obsolete. And this at an unprecedented rate. Markets are increasingly evolving and globalizing, and the competition for funding, students, and researchers among institutions are toughening by the day. Projects involving organizational change is becoming the standard, the benchmark, a symbol of success and development. It involves the altering of the mindset, attitude, and behavior of all individuals, their very way of doing things, and the manner in which an institution operates. It can happen at all levels, affecting both top management and staff, both within and between institutions, small and large, and in all locations.

For organizational change, one of the most complex and comprehensive organizational change projects a higher education institution can undergo, is a merger. This means that two or more institutions in higher education joins forces as equal partners, or as a takeover where one or more institutions to some degree seeks to exist (Goedebuure, 1992; Kyvik & Stensaker, 2013; Skodvin, 1999; Pinheiro et al., 2016; Eastman & Lang, 2001). Such a merger will most often involve the entire organization and structures, procedures, strategies, and routines can be affected (Skodvin, 1999; Harman & Harman, 2003; Norgård & Skodvin, 2002). In recent years, many mergers have been attempted and completed both in Norway and abroad (Pinheiro et al., 2016; Hay & Fourie; Eastman & Lang, 2001; Harman & Meek, 2002), and the approaches are many (Pinheiro et al., 2016; Harman & Harman, 2003). Several of these mergers concerns only two institutions, either geographically spread or located in each other's vicinity (Skodvin, 1999), where they in education or for research purposes are either similar or different (Goedeburre, 1992; Kyvik & Stensaker, 2013).

However, from Skodvin (1999) it is obvious that there is no right way to merge, and that a thorough and well performed process can lead to a successful merger independent of the conditions affecting it. This merger process, consisting of a pre-merger phase (or the planning phase), implementation, and outcome (consolidation) (Harman, 2002; Norgård & Skodvin, 2002), can be extremely intricate and a wide range of factors can influence before, during, and after (Skodvin, 1999). From a researcher's basis, the outcome of a merger can be hard to assess and they may not become apparent for many years to come (Kyvik & Stensaker, 2013; Skodvin, 1999). In the other end, according to Wan and Peterson (2007), the reasons as to why mergers occur are plentiful and well researched, but the process in-between is less studied.

An important aspect of higher education mergers is the type of institutions that are merging. Goedegebuure (1992) proposed a classification of these mergers dependent on two factors. The first is the type of academic programs offered by the institutions, which is referred to as *the academic field* – i.e. for instance nursing, economics, technology, or education. The second is based on their focus in terms of education or research and is called *the product.* The writer thus created an overview of four different merger types as seen in the table below.

Table 1 Classification of merger types (Goedegebuure, 1992)

		Product	
		Similar	**Different**
Academic field	**Similar**	Horizontal	Vertical
	Different	Diversification	Conglomerate

Starting from the top left, a horizontal merger occurs between institutions with similar product and academic field. These mergers can often be the result of budget restrains where some programs are closed down and only offered by one of the partners. On the other hand, a vertical merger has institutions with similar program offerings but with a different product focus. This can for instance be a merger between a research focused university and an education focused university college. Thirdly, in the bottom left, the diversification merger is where the merging partners are centered on the same product but offers non-complementing program types. Here, the partners could be research targeted institutions with a different product, merging with the intent of creating inter-disciplinary research. Moving on to the last type of the classification, a conglomerate merger entails both a different academic field and product. An example would be a university focused on research and a university college concerned with profession education.

This classification works as a superimposed guide to higher education mergers and explains its main lines. However, Eastman and Lang (2001) for instance proposes a different classification for the product. They add the level of programs into the product category, i.e. Bachelor's, Master's and PhD's, and that a vertical merger could thus involve a university offering graduate studies (Master's and PhD's) and a university college offering undergraduate studies (Bachelor's). However, what happens when a merger contains factors from all of the categories in the classification?

1.2. Problem statement

From this question, a problem statement become apparent. It is not to focus on why mergers succeed or fail, nor the reason why mergers happen or their outcomes. From my investigations, few studies involve a merger concerning multiple institutions, especially where campuses are both geographically spread and within the same city. Furthermore, few mergers have both similar and different academic fields and products across its partners, together offering the full range of degrees and programs. Although all mergers are different and involve distinct characteristics and people, some conditions tend to be commonplace where rather the degree of influence varies for each. With so many conditions being involved, it becomes of interest and significance to understand how they will affect the merger process, and especially the planning and implementation phases, of large and complex mergers. Therefore, the purpose of this thesis will be to investigate a merger and its merger conditions, following the problem statement of:

> *How merger conditions affect the merger process of mergers in higher education.*

1.3. Research questions

To answer this problem, two research questions were created:

> *1) What are the relevant merger conditions, and their specific challenges, for these type of mergers? and 2) What are the specific conditions that seem to have affected the process for the case chosen in this thesis?*

The first regards the obvious multitude of merger conditions and a mapping of these. This question gives a foundation for the rest of the research and insight to the specific challenges of mergers in higher education. The second will further build on this by pursuing the merger conditions that seem to have affected the particular case selected for this thesis. Thus using the found knowledge about merger conditions to analyze their effect on the process of a large and complex merger.

2. THEORY

The first part will be literature study of the existing research to map the relevant merger conditions and describe relevant concepts and theory surrounding them. The second part will seek to divulge and further illuminate the found conditions by giving supportive theory concerning organizational change and leadership perspectives.

2.1. LITERATURE STUDY

In order to build this thesis, the relevant merger conditions must be mapped. This is accomplished by a literature review of existing literature, frameworks and concepts for mergers in higher education. By going through the relevant literature, a wide range of merger conditions have been found to be affecting mergers (Figure 1). These conditions were then further categorized into relevant categories to improve readability. These categories are origins and drivers, institutional characteristics, and human characteristics. A merger condition, or condition, is for the sake of this thesis understood as factors/characteristics, both internal and external, that in some way or another influences and impacts the merger and its process.

2.1.1. ORIGINS AND DRIVERS

Behind every merger is a reason. No institution will partake in something as complex and exhaustive as a merger without an assumed reward at the end of the process. A reward that without joining forces with one or more distinct institutions would be unachievable. From the higher education institution's perspective, this reward can either be seen in form of internal factors such as improving effectiveness and efficiency through economies of scale (Skodvin, 1999; Pinheiro et al., 2016; Harman & Meek, 2002; Kyvik, 2002; Hay & Fourie, 2002; Harman & Harman, 2003; Green & Johnes, 2009), economies of scope – i.e. academic fields and products (Skodvin, 1999; Pinheiro et al., 2016; Harman & Meek, 2002; Hay & Fourie, 2002), and quality (Skodvin, 1999; Pinheiro et al., 2016; Harman & Meek, 2002; Norgård & Skodvin, 2002; Hay & Fourie, 2002). On the other side, an example of an external force can be governmental reforms (Skodvin, 1999; Pinheiro et al., 2016; Harman & Meek, 2002; Norgård & Skodvin, 2002; Hay & Fourie, 2002; Harman & Harman, 2003; Eastman & Lang, 2001).

By looking at the internal forces first, the desire to achieve economies of scale through enhancing effectiveness and efficiency is evident in both economic and administrative terms as well as in academia. With the merger, the hope is to use the administrative resources in a better way. This can for instance be to increase the professionality and quality of the staff (Pinheiro et al., 2016), and to better handle future challenges like higher enrolment rates and a larger student body (Harman & Meek, 2003). However, there seems to be a unified understanding that although mergers might originate from wanting to save money, it is often not the case and especially not for the short term (Kyvik, 2002; Hay & Fourie, 2002; Skodvin, 1999; Harman & Harman, 2003; Pinheiro, 2016). Here, Harman and Harman (2003) particularly mentions detail planning, restructuring departments, integrating systems, and improving infrastructure as costs related to the merger process. Furthermore, Green and Johnes (2009) argues whether the same results could be reached exclusive of a merger. Implying that higher education institutions should thoroughly assess their options and perform excessive due diligences before determining whether or not they should merge. It is also important to note that the number of administrative staff seldom decreases but are rather repositioned. This is especially apparent in some Nordic countries where there are many difficulties in letting go of employees with permanent positions (Skodvin, 1999).

For academia, Skodvin (1999) describes three origins and drivers that can relate to economies of scope (academic field and product) based on the wishes to *"i) eliminate duplicative programs, ii) increase academic integration and collaboration, and iii) diversifying academic profiles*" (Skodvin, 1999, p69). With the first incentive, higher education institutions seek to gain advantages by reducing the total number of programs offered. This can be accomplished by either merging two or more similar ones or by eliminating all but one. The second incentive is much less straight forward and not necessarily something that happens overnight. It demands the cooperation of different cultures, with departments and units possibly working in various geographical locations, conflicts surrounding available resources (Pinheiro et al., 2016; Kyvik, 2002), and difficulties associated with questions such as academia versus professional education and research versus teaching (Norgård & Skodvin, 2002). Nonetheless, although it is not proved that mergers generate more research, integration and collaboration can create synergies. This can make way for new interdisciplinary and multidisciplinary fields that improves the general quality of the new institute (Skodvin, 1999).

The last incentive involves diversification and complementarity of higher education institutions. In this case, this means broadening the scope of what a university offers in term of number of programs and fields in addition to the levels of degrees (read Bachelor's, Master's, PhD's). As a result, a university can improve its brand (Pinheiro et al., 2016) and its position in both the domestic and international market (Skodvin, 1999). Additionally, both of the last initiatives can help strengthen and solidify weak or vulnerable departments (Harman & Meek, 2002).

External factors

On the other hand, external factors are closely tied to governmental policies and reforms. Through the last decades, new policies and reforms have been introduced to comply with issues like the relationship between students and professors, an augmenting number of students, a trend of change towards academia from professional education (academic drift), and more autonomy to universities (Kogan & Bauer, 2006). Kogan and Bauer (2006) and Wan and Peterson (2007) also discuss the influence of changing social demands and the politically enforced reorganization of public organizations. This is also examined by Kyvik and Stensaker (2013) which uses stronger institutions and departments, improved environments for students, compliance with European mergers (for European countries), and more governmental control (Harman & Meek, 2002) as reasons for governmental immersion in higher education institutions.

The involvement of the government for influencing or demanding change is often referred to as forced mergers (Eastman & Lang, 2001; Harman & Harman, 2003; Hay & Fourie, 2002; Skodvin, 1999; Kogan & Bauer, 2006; Pinheiro et al., 2016; Kyvik & Stensaker, 2013). These are the most widespread mergers and it entails a top-down strategy where higher education institutions must meet the terms of government (Skodvin, 1999). Conversely, tension and negative forms of pressure are highly associated with its involuntary nature (Kyvik & Stensaker, 2013, Pinheiro et al., 2016). Therefore, many researchers emphasize the importance of voluntary mergers with bottom-up strategies that allows for more staff involvement and ownership (Skodvin, 1999; Harman and Harman, 2003). Hay and Fourie (2002) make a case for the voluntary election of partners to merge with as well.

Although desired by many researchers, voluntary more often implies leadership created mergers and not something that automatically originates from the bottom levels of the institutions (Pinheiro et al., 2016). Skodvin (1999) gives bureaucratic implications the blame for this and describes year-long processes for achieving even minor progress. Harman and Harman (2003) adds to the "voluntariness" of bottom-up strategies that they are often the result of incentives, regulations, or a wanted direction. Such ramifications given by the government avoids directly forcing the higher education institutions to merge, but gives few other options in order to receive the same level of support and recognition (Eastman & Lang, 2001; Kogan and Bauer, 2006).

2.1.2. INSTITUTIONAL CHARACTERISTICS

Another important factor about mergers in higher education is the institutions involved in the merger and their characteristics. A merger can be between two or more institutions and their size, geographical location, and networks and systems are all conditions that are described as influential. This section will additionally mention merger characteristics like planning, the time perspective, and vison and goals.

Beginning with the size and number of the merging institution, there appears to be a correlation between the number of institutions involved and their size variations and the success of a merger. Pinheiro et al. (2016) reports that more than two institutions exceedingly complicates the process and the success rate diminishes. Whereas Skodvin (1999, p73) writes that "*mergers are not marriages between equal partners*", implying that the more the size of the merging institutions, and their academic field, differ, the higher the success rate. He argues that this could derive from a skew power balance, suggesting that the larger and more leading institution will be the most dominant and therefore give rise to less decision-making and time extending complications and inconveniences. He continues that an alternative for the success rate, but also a complementing reason, could be more variation of the programs offered to students. Pinheiro et al. (2016) similarly shares this opinion regarding having a dominant party in the merger. They state more maneuverability for the dominating institution and that it consequently becomes more of a voluntary merger with strategic opportunities to exploit. In contrast, it can lead to the destruction of the previous characteristics and qualities of the less significant institution(s) (Pinheiro et al., 2016) and thus complicate and harden the merger process.

A second important condition is the actual location of the institutions and that the geographical differences can offer both benefits and difficulties that impact the success of a merger. Having long distances separating campuses gives a more intricate design of the university organization. Thus more resources must be used for maintaining and building its network, integrate cultures (will be elaborated in a later section), building academic relations, and administrative tasks are burdened (Pinheiro et al., 2016; Norgård & Skodvin, 2002; Skodvin, 1999). And while Norgård and Skodvin (2002) states the magnitude of the geographical spread and accessibility, Pinheiro et al. (2016) discusses that this depends on the degree of integration and autonomy of campuses, departments and faculties. This derives from that both academic and administrative workers and academic activities needs to have an operational and functioning system connecting their network. The researchers argue that less resources and activities during the merger process are needed if it is business as usual for the institutions after the merger. In opposite, a high level of integration demands both monetary and human capital. As an ending note, in one way or another, if an institute has an appealing location, the new university can look to exploit the opportunity to attract both new staff and students (Pinheiro et al., 2016).

Merger characteristics

The next sections will try to portray organizational factors that not only describe the normal characteristics of institutions but also more (or less) specific ones towards the merger. One of these is having a clear vison and that a weak or unfulfilling one hinders the process (Harman & Harman, 2003; Koontz, 2009). Koontz (2009) adds to this that it alleviates stress from workers as well. Another aspect is having reachable goals that are visible and shared by the staff (Pinheiro et al., 2016), of which Skodvin (1999) further elaborates on as it makes it feel more voluntary. The time dimension, i.e. the total time, both from the decision to merge was taken to the actual merger and the time used during implementation, plays a part in the merger process. Pinheiro et al. (2016) argues both for spending time and being fast. By this they separate between planning and implementation. The planning should be thorough, detailed, and methodical. On the other hand, implementation should not drag out as it could create uncertainty around the process, and the same with decision making processes. In opposite of Pinheiro et al.'s (2016) argumentation, Harman and Harman (2003) wants the merging institutions to move as quickly as possible to implementation for the same justifications and that resistance can increase if not.

Nevertheless, as Harman and Harman (2003) seek to arrive at the implementation phase quickly, they also emphasize the consequence of not planning well for implementation. Priorities should be made obvious and be connected to the vision and goal. The same applies to time schedules and responsibilities for who does what, and when, as to not delay the process and create ambiguities. However, they also discuss how too much detailed planning, especially about academic courses and departmental restructuring, should be avoided and rather be guided during implementation by ground floor staff involved in day-to-day activities in the affected subjects.

2.1.3. INDIVIDUAL CHARACTERISTICS

Similarly to the institutional characteristics, the human side of the merging institutions will highly influence on the different phases as individuals, groups, and cultures interact and experience change. Thus, the last section of the literature study will involve the individual characteristics that affect the merger in terms of culture, resistance and leadership without going to deep into its profound psychological side, which lies beyond the scope of this thesis.

A natural aspect of change occurs when mixing different cultures that are used to work in certain ways and under certain conditions. While the organizational structure might change, it is not to expect that its individuals will follow in the same manner (Kyvik, 2002). Consequently, it is essential to consider the human factors of staff and students as well as the tensions and insecurities that follow with a merger (Hay & Fourie, 2002). If not, it can build and give nurture to resistance within the institutions which can obstruct the integration of cultures and the merger process itself (Skodvin, 1999; Norgård & Skodvin, 2013; Kyvik, 2002; Hay & Fourie, 2002; Harman & Harman, 2003; Harman, 2002; Koontz, 2009). This can be resistance in terms of the previous described factors like, but not restricted to, change in general, merging of cultures, academic collaboration, cancelation of programs, and skepticism regarding rationale, vison, and goals. This can accordingly affect both the planning and implementation phase. And as discussed, the forced/voluntary nature of a merger is also seen to impact, although the difference in level of resistance is hard to separate as they both can entail a forced nature for staff (Pinheiro et al., 2016; Skodvin, 1999; Harman & Harman, 2003).

Continuing, Harman (2002) discusses the level of cultural integration and change wanted as an essential factor for the contemplations and precautionary measures needed. Understandingly, a merger where all units continue their previous activities, procedures, and traditions will demand limited considerations, whereas full integration and new ways of doing things will be more complex and challenging. He follows by suggesting staff and leadership must work together to create a common goal. This way, the difficulties of each side can be understood and possible conflicts managed pre-implementation. But even if they come to terms on the level of integration, Harman and Meek (2002) states that it often takes as much as ten years before results can be seen and the merged institutions and departments work as an interrelated and united unit. In addition, Pinheiro et al. (2016) marks that cross-sectoral mergers, with a university and university college for instance, makes for a more complicated affair.

Following from the previous section, a factor that can further influence the cultural aspect of mergers in higher education is their geographical location. There is shared understanding among researchers that geographical spread negatively affects and complicates the cultural integration and change (Pinheiro et al., 2016; Harman & Harman, 2003; Norgård & Skodvin, 2013; Kyvik, 2002; Skodvin, 1999). The network organization a university becomes by having multiple campuses demands a well-constructed system or platform for interaction and the sharing of knowledge and expertise, as examples (Harman & Harman, 2003). However, large cultural differences can hinder the process and development even if the technology needed already is in place or acquired before implementation (Norgård & Skodvin, 2013).

Lastly, leadership stands as an essential part for the success of any merger (Hatton, 2002; Harman, 2002; Pinheiro et al., 2016; Harman & Harman, 2003; Skodvin, 1999; Eastman & Lang, 2012). Hatton (2002) and Pinheiro et al. (2016) describe the importance of active leadership throughout the process of their case studies and that it cannot be avoided to have leaders that are heavily embroiled in the merger if success is wanted. Consequently, top management must be visible for staff and the vision they seek to fulfill must be systematically evident in every action and activity performed (Harman, 2002). Even more, Pinheiro et al. (2016) discusse this not just for top management, but every individual that has responsibilities for and authority over others or activities in the process. Without sturdy leadership, the process halts, resistance builds, uncertainties grow, and the process can spiral out of control (Harman & Harman, 2003).

2.1.4. SUMMARY

In the table below, the merger conditions are mapped according to what is found in the literature and within the three categories. The three categories will continue to influence the structure of the thesis and this classification will be used extensively.

		Merger conditions	Skodvin, 1999	Pinheiro et al., 2016	Harman and Meek, 2002	Norgård and Skodvin, 2002	Kyvik, 2002	Hay and Fourie, 2002	Harman and Harman, 2003	Green and Johnes, 2009	Eastman and lang, 2001	Harman, 2002	Hatton, 2002	Kogan and Bauer, 2006	Koontz, 2009	Wan and Peterson, 2007	Kyvik and Stensaker, 2013
Internal	Origins & Drivers	Efficiency/effectiveness	x	x	x												
		Econmies of scale	x	x			x	x	x	x							
		Economies of scope, program breadth, quality	x	x	x	x		x									
External		Reform, policy change, etc.	x											x		x	x
		Forced/voluntary/top-down/bottom up	x	x				x	x		x			x			x
		Government involvement and control			x				x					x			x
	Institutional Characteristics	Organizational size and merger participants	x	x													
		Geographical location/accesibility	x	x		x	x										
		Planning	x	x		x			x								
		Vison and Goals	x					x	x						x		
		Time perspective	x	x					x								
	Individual Characteristics	Cultere of units	x	x	x	x	x	x	x			x			x		
		Resistance	x			x	x	x	x			x			x		
		Leadrship		x					x		x	x	x				

Figure 1 Overview of merger conditions

2.2. SUPPORTIVE THEORY

This section aims to support the previous literature study with new theory to help strengthen the depth of understanding. It will consist of both higher education merger specific theory and more general organizational change concepts as change agents and change readiness.

2.2.1. ORGANIZATIONAL CHANGE

There are many definitions of organizational change and organizational change projects (Mintzberg & Westley, 1992; Todnem By, 2005; Pardo del Val & Martinez Fuentes, 2003;

Smith, 2005). However, in some way, they all describe a transforming organization going from a known state to an unknown one. It can involve the altering of beliefs, attitudes, and behaviors, along with for instance organizational structures, systems, strategy, goals, and routines. These changes are a result of both internal and external influences as an organization will seek to adapt to its environment and improve its performance (Pardo del Val & Martinez Fuentes, 2003). Furthermore, as organizational change depends on its context (Cummings & Worley, 2014; Dunphy & Stace, 1993; Todnem By, 2005) every change is different and will consequently vary in regards to the specifics of an organization. This is implied for both the outcome and the process followed to achieve it.

2.2.1.1. The change agents

In organizational change, as seen in the literature study, the ones responsible for the upcoming change are essential for the process and its outcome. In the literature, these are referred to as change agents. These are the people who create and drive the change for the organization, and the agent can be both internal and external representatives in form of either an individual or multiple persons. This change agent needs to express support from top management to their targets (Walker et al., 2007; Rafferty et al., 2013), demonstrate the expected advantages of the change (Walker et al., 2007), and have a central position in both the formal and informal structures of the organization (Battiliana & Casciero, 2013; Walker et al., 2007; Armenakis et al., 1993; Piderit, 2000),

2.2.1.2. Readiness to change

Readiness to change deals with the attitudes of the change targets and their motivation for change (Armenakis et al., 1993). The readiness is closely connected to how the targets feel there is a need for change and that the required competences are present in the organization to accomplish it. According to Armenakis and Harris (2002), readiness additionally entails that the selected change alternative is felt to be the correct option, that change agents have the support of both top management as well as the regular employees, and the believed benefit/cost of the change. It is also important to consider the readiness of the organization and its sub-groups, and not just of the individual. This, per Rafferty et al. (2013), is the same as described above, while Armenakis et al. (1993) adds that the readiness of the organization has strong implications on the readiness of the individual.

Another important factor for readiness is the actual size and impact of the change. Here, both Rafferty et al. (2013) and Armenakis et al. (1993) make a case for this negative relationship, in that readiness decreases as the size of the change increases. Armenakis et al. (1993) further states a connection between readiness and urgency, where urgency is how much the change is felt to be needed and how fast it must be implemented. By this, the writers signify that low readiness and urgency necessitate stronger actions to make sure the importance of the change is felt. On the other hand, if they are high, actions must be taken quickly and thoroughly to maintain those feelings.

2.2.2. Leadership perspectives

The leaders of an organization often have different perspectives than the staff, and this can also be said to be true for leaders in mergers and mergers in higher education. How they view their experiences and the organization can often be tied to the way they lead and their style of management. However, Bolman and Deal (1991), developed perspectives that questioned this view and rather looked at how leaders think and how this is related to the effectiveness of their leadership. These perspectives are divided into four separate categories. These are structural, human resource, political, and symbolic, where each represent a *tradition*, or a frame, defined as "*a set of ideas and assumptions*" that "…/*involves matching mental maps to circumstances"* (Bolman & Deal, 2017, p11-12). These mental maps then illustrate what is happening and what actions that should be taken. However, the more complex the situation is, the writers suggest that more frames must be involved as every frame has its strengths, weaknesses, and limitations.

The structural frame defines an organization as a factory with clear goals and objectives, where the staff has clear roles and division of labor, and all actions and activities are connected to and guided by strict, predetermined rules and policies. These structural leaders utilize quantitative data as a foundation for analysis and decision-making and sees the organization as a structural hierarchy, looking past its individuals. They will seek to adjust the organization and its difficulties by coordinating and controlling the implementation of new policies, procedures, budgets, strategies, and departments and units. On the other hand, the human resource frame highlights the needs of the individuals of an organization and the importance of fulfilling these. The human resource leader will therefore focus on relations and feelings and try to facilitate for broad involvement in decision-making, seeking win-win situations. They will utilize training of the staff, meetings, etc., as tools for empowerment. This leader will therefore see the organization for its individuals and that if individuals thrive, the organization will follow.

The political frame, as opposed the structural, does not view the organization as fully structured and governed by a legitimate source of power. Rather, the view is that organizations consists of different actors, individuals and groups, of different beliefs and interests, fighting for limited resources. The political leader will consequently try to “infiltrate” these to reduce tensions and build networks while bridging actors and creating compromises. Thus working as a negotiator. Lastly, the symbolic frame focuses on ambiguity and that organizations will create cultural symbols that help unite its staff and form how they behave and interact. The symbolic leader will exploit these kinds of rituals and myths to strengthen the culture of the organization and, consequently, establish an identity of “how we do things”.

3. METHODOLOGY

The method chapter works as a recipe for how the research was performed. It introduces the background of the literature study and the utilized research approach before describing how data was collected and later analyzed. Lastly, the chapter will clarify topics concerning generalization, validity, and reliability.

3.1. RESEARCH METHOD

The study originated from the complexity and distinctiveness surrounding mergers in higher education and the importance it holds to secure a sustainable and prosperous society. Thus, seeking to answer how merger conditions affect mergers in the higher education sector can give important perceptions and reflections for future mergers and the involved persons. Nevertheless, mergers involve humans and human interactions and every merger will therefore be, and should be, treated differently. This makes conceptualizing difficult as merger conditions consequently will not always have the same effects, implications, and degree of influence. However, some conditions seem to be repetitive, although to dissimilar degrees.

Thus, a literature study was carried out to map relevant merger conditions of higher education mergers. The study consists of 15 selected articles and books from the last 20 years. Here, keywords like higher education mergers, merger conditions/characteristics, and challenges were used as guides through the study to narrow down the research and to avoid irrelevant sources. Furthermore, the study comprised of supportive theory regarding organizational change and leader perspectives to strengthen my ability to answer questions situated beyond the topics directly covered by higher education mergers and merger conditions.

Continuing from the theoretical foundation, the thesis followed the qualitative research approach with the intention of bridging the gap between theory and research. According to Bryman (2012), this implies contributing to the existing theory by assessing theoretical concepts and/or models in relation to collected and analyzed data from an applicable source in order to answer the created research questions. This was also very much the format of my research. Having an inductive approach, forming research questions relative to the problem, and using empirical data comparative to theory before an analysis and discussion led to a conclusion.

Consequently, to facilitate my approach, a case study research design was chosen to allow the gathering of data and to allow the specific investigation and comprehensive analysis of a real-life occurrence (Yin, 2006). Thus, with my university, the Norwegian University of science and Technology, at the ending phase of a merger with three university colleges, the University College of Gjøvik, the University College of Sør-Trøndelag, and the University College of Ålesund, this would be a natural case to pursue my problem statement and research questions. With such a complex case, containing several institutions and geographically spread locations, I could provide a tangible storyline with complementary experiences to enrich and enliven the foundation given in the theoretical chapter.

With the design, I initially wanted to involve all levels of the merger in my research. However, as seen from the literature study, most of these mergers derive from government, and even if it follows a bottom-up/voluntary strategy it implies stemming from leadership rather than from staff in lower levels. This was also the case for my case and I therefore decided to focus on top management, the ones handling the process. Another initial focus for me was emphasizing the importance and wholeness of such a process, ranging from planning to implementation and through to the outcome. Yet from the theory, some outcomes are not seen immediately but rather many years after, and they are not necessarily measurable or equal to stakeholders. Accordingly, the outcome of the merger was outside the scope of my research. On the other hand, the planning and implementation phase were possible to study but the share vastness of the process limited thoroughness and achievability. This resulted in the choice of fully focusing on one of the two instead of a shallower investigation of both. The choice eventually fell on the planning phase due to the well documented nature of it.

As I also intended to use an overview of other mergers, a case could have been made for the use of a comparative case study research design. However, the analysis of the other mergers played a relatively small part of the total research and was at such a superficial level that it could not be defendable to pursue it, and it was therefore excluded from the thesis.

3.2. THE COLLECTING OF DATA

As described, focusing on top management, I wanted to capture what each institution felt, needed, wanted, and required form the merger. To ensure this, I utilized a stakeholder analysis by using interviews of central representatives and documentation of the process. The stakeholder analysis performed considered the four institutions involved in the merger of the new NTNU, one university and three university colleges, as well as the Ministry of Education and Research in Norway.

3.2.1. THE INTERVIEWS

The interviews followed the semi-structured interview guide, where the interview was constructed in order to give freedom to the interviewee but within certain confined topics (Bryman, 2012). As a result, answers stayed more relevant to my problem. Yet still, the interviewees could give their answers more freely and perspectives, facts, and opinions otherwise not covered by my "limited" insight, or by a fully structured interview, could emerge.

For the interviewees, the sample population were selected due to their centrality in their institution and in the merger process. From the higher education institutions, the old rectors from the university colleges were targeted while the organization director of the university was chosen after recommendations from my supervisor. All these were additionally represented in the leadership of the project organization of the merger which worked as the supreme body. From the Ministry of Education and Research, a senior advisor and the department manager from the Department for Governance of Higher Education and Research Institutions were interviewed. This was to represent the reform and policy makers which stood as central stakeholders. However, two of the university college rectors were not available and the study thus had to rely on the three other interviews. This meant that some changes to the structure occurred and the stakeholder analysis had to be adapted as to not give a skewed picture. This was done by not giving a full comprehensive analysis of every stakeholder individually in the empirical chapter but rather focusing more on a synergetic approach. Thus, the entire empirical chapter will work as the stakeholder analysis. Although this was limiting and negative in light of the comprehensiveness and characteristics of a case study research design (Bryman, 2016), the documentation of the process was very detailed and the consequences was consequently reduced to some degree.

Nevertheless, although the lack of two institutions, the remaining three were found to be very interested and approachable, and they all described the problem as important to answer. In addition, because of the different affiliation of the ministry towards the merger compared to the institutions, the interview guide had to be adapted to attain the wanted knowledge and opinions. This resulted in the creation of two guides based on the literature study where the one toward the ministry was mostly focused on the rationale and its involvement in the process, while the other was more general and customized towards the planning of the merger. The interviews were carried out in Norwegian as it was the main language of both the respondents and the interviewer. This implied a more open and free interview where the interviewees could reply in a less restricted manner. The guides can be found in the appendix. Below are the specifics of the interviews.

Table 2 Interview specifics

Organization	**Position**	**Date**	**Manner**	**Length**
The Ministry of Education and Research	Department Manager – Rolf Larsen Senior Advisor – Erling H. Dietrichson	15th of May, 2018	Skype	42 min
The Norwegian University of Science and Technology	Organization Director – Ida Munkeby	24th of May, 2018	Phone call	28 min

The University College of Gjøvik	Rector – Jørn Wroldsen	31st of May, 2018	Skype	45 min

3.2.2. Documentation

The process of the merger, from initiation through planning and implementation to certain outcomes, has been heavily documented. The Ministry of Education and Research has documented their attempt of restructuring the higher education sector quite well. All official documents were published on a website they called "The road to a new structure" (Veien mot ny struktur) which contained an overview and information regarding all mergers in the sector (The Ministry of Education and Research (0)). In addition, the merger process itself had an own website where they published information and documents specific to the merger of the new NTNU (The merger platform (0)). Lastly, I used a website that was created to inform about important events and cases before the actual merger was sanctioned (SAKS (0)).

As a result, I could use a range of documents to build my knowledge, using minutes from board meetings, mandates, official reports, reviews, and general info to strengthen and supplement the analysis of the case. These documents were also used to complement the literature study in creating the interview guide and to further accompany the data given by the interviewees. All in all, I utilized 39 documents or information records from these sources.

From Bryman (2012), it is important to mention the objectiveness and biasedness, and to some degree the inter-connectedness, of the documents. Documents as minutes of meeting can often contain the partiality of the writer (the actual writer, the organization, etc.), showcasing what an organization wants to present and in a positive way (Bryman, 2012). As I was not given access to any further documentation than the already published documents, this would be hard to assess, but caution was taken as described in the next sub-section regarding the analysis of the data.

It should be added that, even though it was well documented and information was plentiful, the website of the merger was very bewildering and information was at times very hard to find.

3.3. THE ANALYSIS OF DATA

For analyzing the interviews, the content was transcribed directly after they were carried out. The data was then firstly analyzed and categorized individually before a cross-examination to find similarities and differences. The categorization stemmed from the literature study and allowed for the processed data to be divided into the three categories of origin and drivers, institutional characteristics, and human characteristics. It could be due to my interview guides, but the answers fitted well within the three categories and, except for information about certain outcomes, no information was given that fell outside of my theoretical scope. It was also a surprise to me, in regard to the takeover characteristics of the merger, how positive and optimistic to the process the top management of the university colleges were found to be. The interviewees were also open to answer further questions by mail which I used to correct uncertainties and address new issues.

Additionally, for the documents, I followed the ethnographic content analysis (ECA). This was performed as the ECA allows for constant revision and comparison of documents as opposed to the qualitative content analysis (Bryman, 2012). This was extremely helpful due to the complexity of the case and the, sometimes, very unstructured presentation of documents. The ECA thus permitted me to analyze the documents with respect to my research questions (especially regarding the second), the context of the selected case, of mergers in higher education, and in light of the categories from the literature study. Furthermore, the ECA gives room for adapting the categories or creating new ones.

In the document analysis, there were no need to create any new categories, but certain aspects were slightly modified, as implied by the method. The documents were then sorted based on their content before being placed in origins and drivers, organizational characteristics, or individual characteristics. Some documents, however, fell into multiple categories and were consequently analyzed accordingly.

3.4. GENERALIZABILITY

As the findings of this thesis stems from one source, defending a generalization becomes difficult. However, an analytical generalization can be defended as it gives descriptions and explanations of an occurrence related to higher education mergers concerning multiple institutions, products, academic fields, and on separate locations (Yin, 2006). However, a case can also be made for having no generalizability due to the relatively small sample size (Bryman, 2012).

3.5. VALIDITY

As is the case with qualitative studies, the validity of the research is important. Here, we can divide between internal and external validity where the former concerns a "*causal relationship between two or more variables*" and the latter entails generalizing findings beyond the case at hand (Bryman, 2012, p712). For this research, the internal validity is thus sound as the empirical data is in agreement with the employed theory, whereas the external validity is generalizable to the degree explained in section 3.5.

3.6. RELIABILITY

Similarly to validity, reliability is essential for a qualitative study and it can be separated into internal and external features. Here, internal reliability concerns the objectiveness off the researcher by remaining unbiased, and the external reliability deals with the reproduction of the research, i.e. if it would be possible to replicate (Bryman, 2012). Being a qualitative study, these are difficult parameters to achieve. My objectiveness can only be trusted to be present and the social setting of the case study is hard to imitate. However, as safeguarding measure, I have thoroughly described how the data was sampled, collected, and analyzed, included the interview guides in the appendix, and exhaustively portrayed the research process while vigorously stated my sources.

4. EMPIRICAL RESULTS

This chapter will start by giving a case description of the new NTNU from its initiation and throughout the planning. This entails the origin of the chosen case, a portrayal of the institutions involved, and the mapping of the process before a summary with defining moments in time. The last section concerns the most import aspects found in the interviews to supplement the description.

For simplicity, the University college of Sør-Trøndelag, the University college of Ålesund, and the University College of Gjøvik will be known as HiST (Høyskolen i Sør-Trøndelag), HiÅ (Høyskolen i Ålesund), and HiG (Høyskolen i Gjøvik) respectively, while the Norwegian University of Science and Technology will be referred to as NTNU (Norges Teknisk-Naturvitenskapelige Universitet).

4.1. CASE DESCRIPTION

The figure below gives a general introduction to the case and its timeline. The timeline consist of the most important events throughout the process of the merger and the selected research phases.

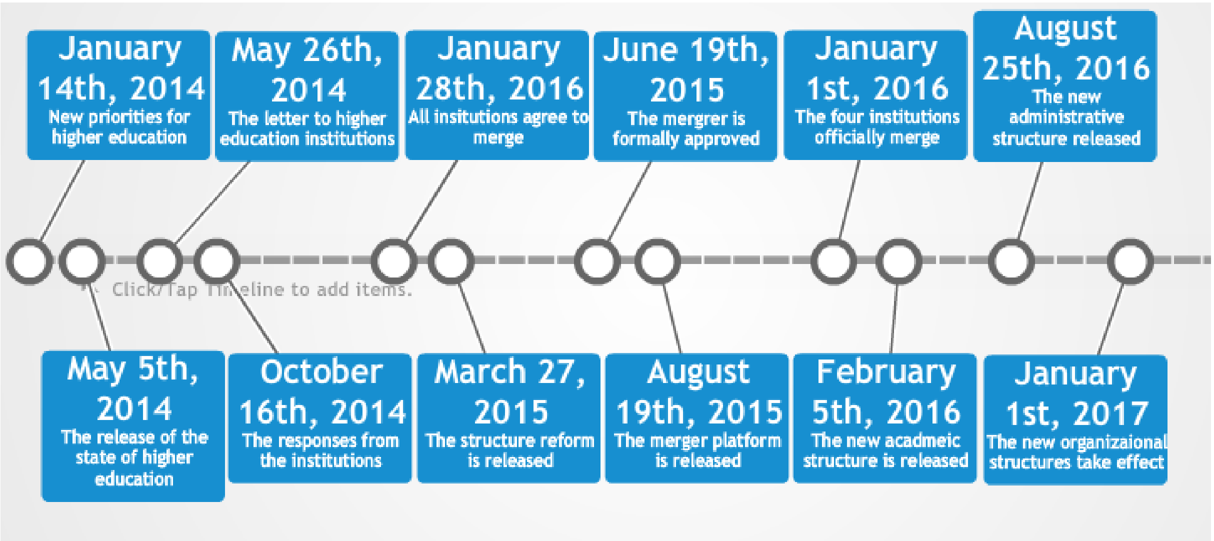

Figure 2 Merger overview

4.1.1. The origin of the new NTNU

In January 2014, the minister of education presented seven topics that were to lead and guide the development of higher education institutions in the years to come (Ministry of Education and Research (1)). The seven topics addressed subjects as financing, research, long-term goals, strategies for EU funding, and strengthening the education of teachers. Another important topic was the structure of higher education institutions and the aspiration of improving the quality of the existing 33 higher education institutions. This was further made visible in a report on the state of higher education (May 5th, 2014) in Norway by the Ministry of Education and Research later the same year (Ministry of Education and Research (2)). Consequently, the structure reform (Strukturreformen) was created and announced on the 27th of March, 2015, of which was rooted on improving small and weak research environments, minor and widespread educational offers, and an inadequate international partaking (Ministry of Education and Research (3)).

The goals of this reform were i) education and research of high quality, ii) Strong academic communities, iii) nation-wide access to education and competence, iv) world-class academic communities, and v) an effective use of resources. It also mentions an increase in the requirement to become a university as well as for creating Master’s and Doctoral programs, and a continuation of the main policies regarding financing. (Ministry of Education and Research (3)). This included the base component of the funding but also an increasing focus on result based funding. These were mostly incentives to help reach the five goals and they measured ECTS, number of students in Bachelor’s, Master’s, and Doctoral programs, number of international students and internal students abroad, funding from the EU and the Research Council of Norway (Norges Forskningsråd), research publishing (publiseringspoeng), and income from external and governmental entities (Ministry of Education and Research (3)).

Previous to the reform, the government sent a letter to the institutions of higher education asking for comments and opinions on the future structure of the sector. This was done shortly after the report on the state of higher education (Ministry of Education and Research (4)). In addition to asking for opinions on structure, informing about ambitions, presenting the state of higher education, and the plan for a structure reform, the letter gave an assignment to the institutions.

The assignment asked the institutions to describe their strategic profile for 2020 (academic priorities, ambitions for education, research, and knowledge sharing, and the most important target markets/audience and partners), give a critical judgement of their strategy and the action they will take to achieve their goals, explain measures to promote collaboration, plans for division of labor, address necessary changes of framework conditions, and to state possible institutions to merge with.

Taking NTNU as starting point, HiST and the University College of Nord-Trøndelag (HiNT) would seem natural merging partners in terms of their geographic proximity and it was something both university colleges wanted (Ministry of Education and Research (7); (8)). However, where NTNU and HiST were positive towards each other, both looked negatively towards merging with HiNT due to for instance non-complementary educational offers. And thus, it was out of the conclusion (Ministry of Education and Research (6); (7)). Continuing, HiST did not mention any other institutions in its response, but NTNU additionally considered HiG and HiÅ (the University college of Narvik was also considered but ended up merging with other institutions) as they all were academically strong in technology and could further complement its program portfolio (Ministry of Education and Research (6)). This option was based on the wish to become an internationally known multi-campus institution of technological excellence with an additional wide-reaching academic field ranging from humanities, social sciences, medicine, and health sciences to educational science, architecture, and arts (Ministry of Education and Research (11). Furthermore, the university colleges had strong ties to the industry which could be an advantage for a very academic and research focused university as NTNU (Ministry of Education and Research (6); (7); (9); (10)). It also saw a wider recruitment area, valuable infrastructure, more and unified resources, and economies of scale as advantages (Ministry of Education and Research (6)). However, it maintained that the quality the NTNU brand must not suffer from a possible merger.

Regarding the university colleges, HiÅ had too few students to continue as an independent institution, in terms of future governmental demands, ensuing that a merger was necessary to stay alive (Ministry of Education and Research (9)). According to the response sent to the Ministry of Education and Research (9), HiÅ saw a merger as a natural occurrence that could hold benefits for both institutions, and especially bearing in mind its highly considered maritime sector. Albeit, the institution wanted an organizational structure that would allow the profession education environment and the closeness to the industry to persist (Ministry of Education and Research (9). Other important factors were increasing the quality of education and research, improve the recruitment of both students and staff, and possible synergies between the Bachelor's and Master's degrees offered at HiÅ and the Master's degrees and PhD's offered at NTNU (Ministry of Education and Research (9)). The institution also saw this as an opportunity to further collaborate with the other university colleges as well.

HiG regarded the merger similarly. The university college is reminiscent of HiÅ in that it is relatively small and has few, but highly specialized academic communities, especially in informatics (Ministry of Education and Research (10)). While it had some small and weak fractions to strengthen, the main desires laid in building interdisciplinary fields and an improved and more sustainable use of resources (Ministry of Education and Research (10)). Considering the interdisciplinarity, HiG did not just want synergies in technology but argued for collaboration to reinforce their other programs as well. This is also the same for HiST which has a very complementary academic field to NTNU where synergies in education and research is sought for, in addition to more interdisciplinary advantages (Ministry of Education and Research (6); (7)).

4.1.2. THE MERGING INSTITUTIONS

To start with, Trondheim, Ålesund, Gjøvik are all geographically widespread cities in Norway, all containing their own University College in addition to a university in the former. In figure 3, their locations are mapped. The numbers and facts from this section is mostly based on a presentation from March, 2014, regarding the four institutions if not stated otherwise (Merger Platform (1)).

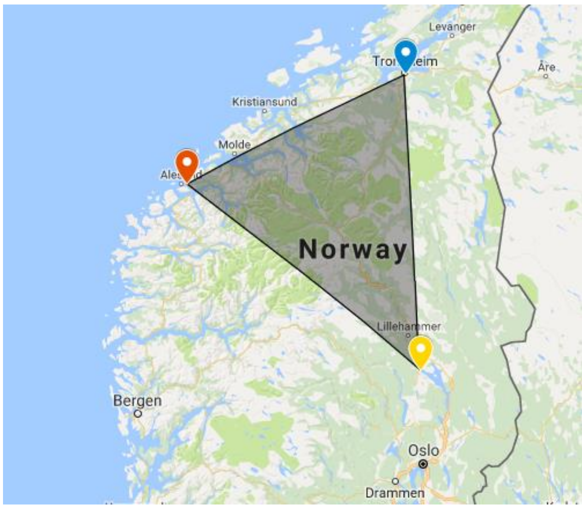

Figure 3 Map of merging institutions

The University College of Gjøvik

In the period before the merger, HiG had in increasing student body and was well known as a solid research institution, especially in cyber and information security (Ministry of Education and Research (10)). The institution had 3391 students and 308 full-time equivalent staff (FTEs) with a campus located in Gjøvik. It was organized in three faculties, or departments, offering mainly Bachelor's degrees but also Master's and PhD's. These were the faculties of Health, care, and nursing, Computer science and media technology, and Technology, economy, and management.

Table 3 Numbers and facts for HiG

Campus Location	Faculty	Number of Students	Number of FTEs
Gjøvik	Faculty of Health, Care, and Nursing	1102	89
	Faculty of IT and Media	911	74

	Faculty of Technology and Economics	1378	75
Sum	3	3391	308

The University College of Sør-Trøndelag

HiST was the second largest higher education institution in Trondheim and one of the largest university colleges in Norway. While all the faculties were located in Trondheim, all were partly spread around the city at 6 different campuses. The in total 6 faculties contained 8853 students and 830 FTEs divided into Bachelor's and some Master's degrees.

Table 4 Numbers and facts for HiST

Campus Location	**Faculty**	**Number of Students**	**Number of FTEs**
Trondheim	Faculty of Health and Social Work	1675	114
	Faculty of Nursing	1194	89
	Faculty of Informatics and e-Learning	882	37
	Faculty of Teacher Education and Deaf Studies	1651	152
	Faculty of Technology	2182	171
	Trondheim Business School	1270	54
Sum	6	8853	830

The University College of Ålesund

The smallest institution of the merger was HiÅ with its 2250 students and 224 FTEs. It is located in the western part of Norway and consisted of five faculties in the city of Ålesund. These five were faculties in health sciences, international marketing, life sciences, engineering and natural sciences, and maritime technology and operations. The institution offered both Bachelor's and Master's degrees albeit where the majority of students belonged to the former.

Table 5Numbers and facts for HiÅ

Campus Location	**Faculty**	**Number of Students**	**Number of FTEs**
Ålesund	Faculty of Health Science	651	42
	Faculty of International Business	566	25
	Faculty of Life Sciences	174	20
	Faculty of Engineering and Natural Sciences	453	38
	Faculty of Maritime Technology and Operations	487	50
Sum	3	2250	224

The Norwegian University of Science and Technology

Being by far the biggest partner of the merger, NTNU had, and still has, a national role as center for excellence in higher education. It was almost three times the size of HiST in terms of students with its 23442 and holds a staff of 5085 FTEs. It is also dissimilar towards the others in that the majority of students are taking a Master's degree (most Master's degrees are integrated five-year programs). The University was organized into 8 faculties, of which included a university museum. These faculties were, like HiST, not congregated in the same campus but rather spread around the city of Trondheim. NTNU offered the full range of degrees.

Table 6 Numbers and facts for NTNU. The number of students and FTEs were not given.

Campus Location	**Faculty**	**Number of Students**	**Number of FTEs**
Trondheim	Faculty of Architecture and Fine Arts Faculty of Medicine Faculty of Humanities Faculty of Information Technology, Mathematics and Electrical Engineering Faculty of Engineering Science and Technology Faculty of Social Sciences and Technology Management University Museum		
Sum	3	23442	5085

Below is a summary of the faculties from the four merging partners. From the overview, clusters can be seen in health sciences and nursing, economics and technology management, technology, IT and education (although not visible in the overview).

Table 7 Comparison of faculties

HiG	**HiST**	**HiÅ**	**NTNU**
Health, care, and nursing	Health and social work Nursing	Health science	Medicine
			Humanities
		Life sciences	
			Architecture and fine arts
	Teacher education and deaf studies		
			Social sciences and technology management
Technology and economics	Trondheim Business School	International Business	
IT and media	Technology informatics and e-Learning	Engineering and natural sciences Maritime technology and operations	Information technology, mathematics and electrical engineering Engineering science and technology
			University Museum

4.1.3. From merging to organizing

It is important to note that the merger was more similar to a takeover than a merger of equal institutions (Merger Platform (8)). NTNU stood as the main leader, and it was implied that the new university was to preserve its name and many of the systems, routines, etc. from before the merger. The period up until the merger was a fact on January 1st, 2016, was called the Merger Project. This project dealt with arranging systems and other procedures like the faculty and administrative structure. The next part of the merger focused more on the staff and had four major sub-projects where staffing and work environment, ICT, the budget, and localization of the joint administration were the matters in hand. This was called the Organization Project. And although the establishment of the administrative structure to some degree takes part in both, it will be described in the later as the majority of the work was carried out there.

4.1.3.1. The Merger Project

Continuing from the responses from the institutions, the boards of all institutions had by January 28th approved the merger (SAKS (1); (2); (3); (4)), and a project management group called the Administrative Committee (Styringsgruppa) was appointed by February 18th (Merger platform (2)). The Administrative Committee consisted of the rectors of the four institutions, the organization directors of NTNU and HiST, along with a representative from the staff and the students respectively. In addition, a project leader was added to the committee and functioned as the secretary (Merger platform (3)). This Administrative Committee was at the top of the project organization for the merger which can be seen in Figure 4 and worked as the supreme body. In the following months, the Platform Committee (Gruppe Fusjonsplattform), the Project Committee (Prosjektgruppa), a group working on the academic organizational structure (Gruppe Faglig Organisering), and a group for the administrative organization (Gruppe administrativ organisering/Børresen-utvalget) was appointed (Merger platform (4)).

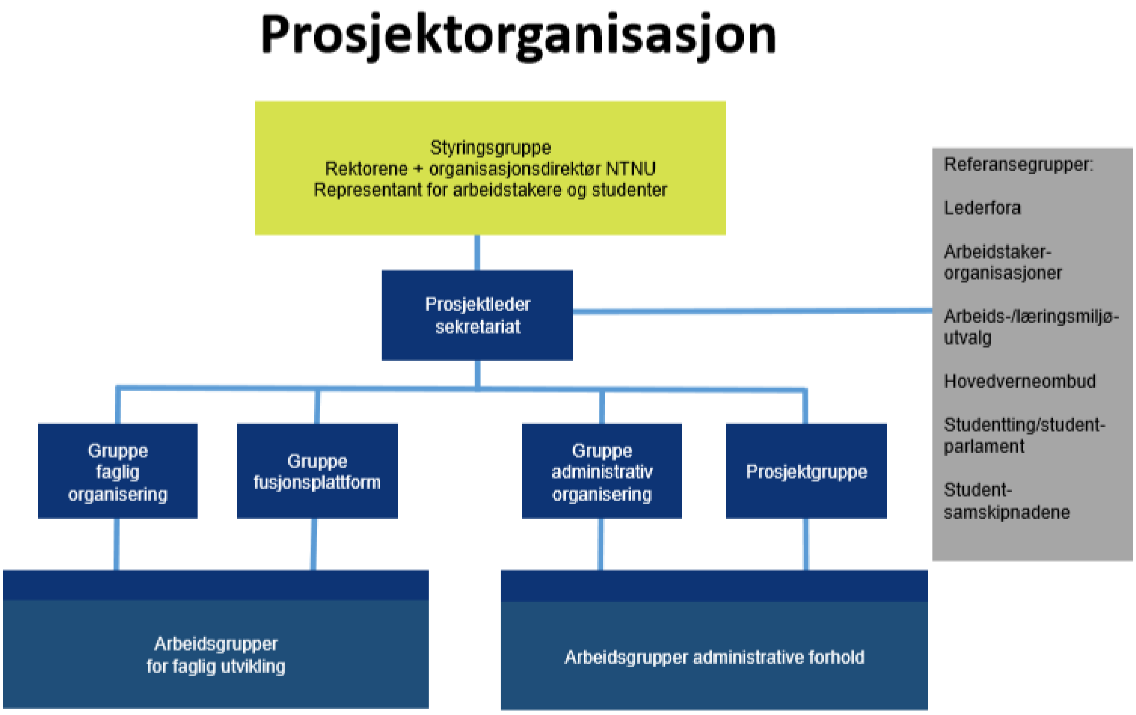

Figure 4 Project organization (Merger Platform (4))

4.1.3.2. The academic structure and the merger platform

The Platform Committee was responsible for the drawing of a new academic merger platform based on the vision, strategic profile, ambitions, and social responsibilities of the four institutions (Merger platform (5)). Whereas the group for academic organizational structure worked on the academic organization of the new university. For the former, the new academic platform was to work as a foundation and be a part of the decision-making process for the organization of the academic structure (Merger Platform (9); (10)). This involved the clarification of the strategic profile, the platform itself, and concretization of ambitions and possibilities for development and synergies in academia in a document called the Merger Platform (Merger Platform (10)). A draft for the platform was presented in June, 2015. However, the final document was not presented until feedback from the academic work groups and other entities of the project organization was included. The Administrative Committee gave its approval on the 19th of August, 2015 (Ministry of Education and Research (11)).

For the group for academic organizational structure, tasks primarily entailed the proposal of a draft of relevant academic structures and their possible outcomes based on models and principals applicable to the merger. This was carried out to create a discussion that would later evolve into detailed alternatives on the structure by November 4th, 2015 (Merger Platform (8); (9)). Here, NIFU (The Nordic Institute for Studies in Innovation, Research and Education) partook as well, adding further information from previous merger in the sector (Merger Platform (9)). The final structure was a decided at a board meeting on the 15th of February, 2016 (Merger Platform (11)).

Underneath these two entities were seven academic work groups that worked as a consultative body regarding the organization (Merger platform (8)). These seven groups consisted of as many as 30-50 members which could further appoint sub-groups to help in the process of the final academic structure (Merger platform (8)). A challenge for the task of creating this new structure was staff involvement. Ten months were given to ensure their involvement in the final plans by the planners. However, there was a focus on not excessively extending the planning to avoid ambiguities as it was seen to have a negative effect on staff.

The final academic structure concluded with eight faculties, and the University Museum as an independent unit (Merger Platform (11)). The faculties include institutes from across the campuses, and the former HiG, HiST, and HiÅ will not function as faculties on their own. This was done to fully integrate the academic environments, create synergies and collaboration, and to fully embrace the NTNU brand (Ministry of Education and Research (11)). However, the former university colleges in Gjøvik and Ålesund were given the responsibilities of organizing their own institutes and departments, and had some administrative functions under the names of NTNU in Gjøvik and NTNU in Ålesund. The faculties can be seen in Figure 5.

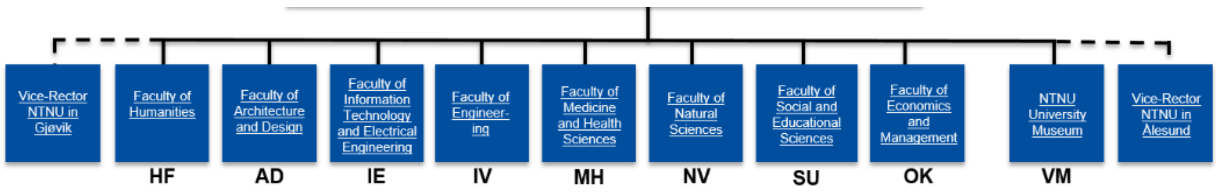

Figure 5 Faculty structure of the new NTNU

4.1.3.3. *The Organization Project and the administrative structure*

The Project Committee was appointed at the same time as the Administrative and Platform Committee early 2015, and was led by the project leader from the Administrative Committee. It also consisted of members from the administration of each institutions in addition of four staff representatives (Merger Platform (12)). Its mandate (Merger Platform (13)) consisted of the leading and coordinating the practical side of the Merger Project, i.e. creating schedules, milestones, mandates for the administrative work groups and aiding their actions as well as forming the foundation for the administrative organization. The matters at hand were then prepared and presented to the Administrative Committee who had the formal authority to act.

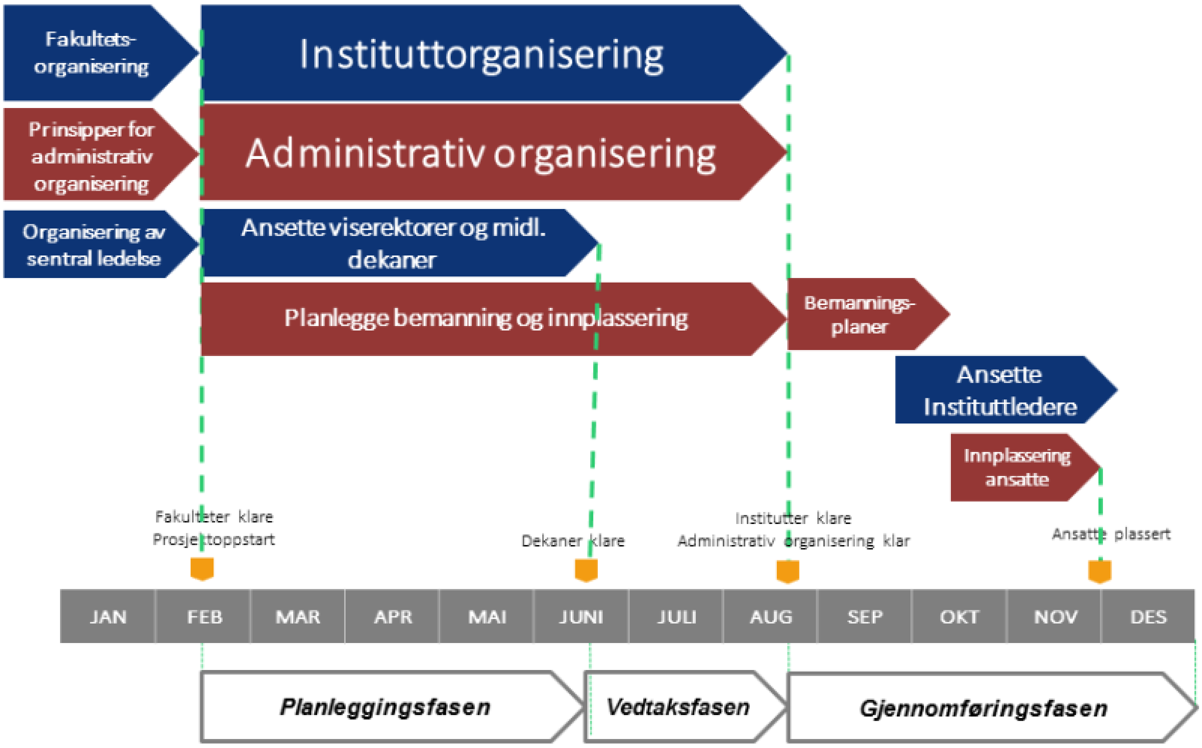

Figure 6 Schedule for academic and administrative structure planning (Merger Platform (15))

The group for administrative organization was to present a proposal for the future administrative organizational structure that was based on the merger platform and the academic organizational structure (Merger Platform (14)). The proposal was to include demands for administrative services, supportive services, and the workload and the division of work for and between the different levels of the new university. The group was first to give a proposal of principals to guide the process on October 1st, 2015. Then alternatives for academic organizational structures were given on the 5th of February before multiple feedback sessions and contributions led to the final recommendation for the structure on June 2nd, 2016 (Merger Platform (15)).

Beneath the Project Committee and the group for administrative organizational structure was a set of various administration work groups working amongst other for preparing the safe operation of the new NTNU during the merger (Merger Platform (6)). These administrative work groups were created by the Project Committee in order to secure the administrative functions and support services to secure daily operations during the merger, and develop the future systems, routines and the organization of the merged institutions (Merger Platform (7)).

A very important task for the question of a new administrative structure was to decide on the leadership of the merged university. As the merger was acknowledged as a takeover, the former NTNU board which was originally elected to sit until the 1st of August, 2017, had an option to continue (Merger Platform (16)). However, this was not the case and a new board was elected, after demands from the ministry (Merger Platform (18)), containing at least one representative from the previous institutions of HiG or HiÅ (17)). This was decided in the end of April, 2015. The new board was thus elected to sit from the official start of the merger, the 1st of January, until the 1st of August, 2018. It was also decided that the HiG and HiÅ was to continue their academic and administrative organization until the start of 2017, whereas HiST was to be implemented under NTNU from the start of 2016.

4.2. SUMMARY OF IMPORTANT DATES

Table 8 Summary of important dates

Date	**Occurrence**
January 14, 2014	Publishing of seven topics to lead the development of the higher education sector.

May 5th, 2014	Rapport on the state of higher education released.
May 26th, 2014	Letter to higher education institutions regarding comments on future structure.
October 16th, 2014	The responses from the higher education institutions are presented.
October 27th, 2014	The board of HiG choses NTNU as its preferred merging partner, and thus joining the multi-campus option.
January, 16th, 2015	The board of HiST choses NTNU as its preferred merging partner, and thus joining the multi-campus option.
January 19th, 2015	The board of HiÅ choses NTNU as its preferred merging partner, and thus joining the multi-campus option.
January 28th, 2015	The board of NTNU choses the multi-campus option with HiG, HiST, and HiÅ as partners. The merger process begins without the formal approval of the government
February 18th, 2015	The Administrative Committee was set. The student and staff representatives was not yet appointed but were added shortly after.
March 18th, 2015	Mandate and appointment of Platform Committee and Project Committee. All representatives included in the Administrative Committee.
March 27th, 2015	The structure reform is released.

April 27th, 2015	The new board composition was elected.
June 19th, 2015	The merger of NTNU, HiST, HiG, and HiÅ is officially approved and they will officially operate under the name NTNU from January 1st, 2016.
August 19th, 2015	The Administrative Committee approved the academic merger platform. The Platform Committee seized to exist.
September 14th, 2015	Mandate and appointment of the group for administrative organization.
October 1st, 2015	Principals to guide the administrative organizational structure
November 4th, 2015	Proposal for alternatives regarding the academic organizational structure to be delivered.
January 1st, 2016	The four institutions are officially merger under the name NTNU. The Merger Project was then ended and the Organization project began.
February 5th, 2016	The new academic structure was approved.
May 2nd, 2016	Final report on the administrative structure presented by the Project Committee.
August 25th, 2016	Final administrative structure approved.
January 1st, 2017	The new academic and administrative organizational structures takes effect.

4.3. INTERVIEWS

The subsequent sub-sections will give insight to the most central aspects given by the respondents of the interviews. These will work as summaries for their answers. The section will start with the information from the ministry before NTNU and finally HiG.

4.3.1. COMMENTS FROM THE MINISTRY OF EDUCATION AND RESEARCH

The respondents from the Ministry of Education and research spoke about the merger as a necessity and something being a part of a bigger picture. With the new reform, the ministry sought a stronger higher education sector. This was also communicated previous to the reform as there was certain obvious indications that the sector was not reaching its potential. As a rationale, and in line with the goals of the structure reform, the objectives where to improve the quality of education and research, strengthen academic communities, make education and competences more accessible, build internationally recognized academic communities, and make more use of the given resources. To improve education and research, one point was to eliminate small and weak academic environments, commenting that it was too many of them that lacked sustainability – especially in terms of number of students and for several communities in the university colleges. The respondents mentioned that study programs containing less than 20 students should be revised if no other specific reasons said otherwise. By merging institutions, these academic environments could then either be removed for good, although that was not the goal, or made stronger as a result of more interdisciplinary activities and larger environments. The ministry saw this as a first step to build more competent academic communities that could compete on the international stage. The second step would be to further strengthen and solidify the already strong environments.

Another important factor was regional development as they saw the institutions of higher education as important actors to create prosperity, jobs, sustainability, cooperation and collaboration, etc. This was also in line with the goal of making education and competences more accessible. They commented that it was particularly relevant for the more rural places, having seen positive outcomes in some previous mergers. The respondents commented that smaller university colleges could attain benefits from more established institutions, like a well-known brand and reputation would almost automatically draw more students, recognition, and more possibilities to create new bonds with industry that were previously unachievable. The respondents stated that too many university colleges and their academic communities were to small and weak for the industry to consider them for cooperation.

From these reasons, the ministry and the institutions of the higher education sector knew they had to act, but they were not certain in what was the right answers and the actions to implement. The respondents therefore said the ministry wanted an open dialogue with universities and university colleges to reach the goals and create readiness for the mergers. This was a part of the letter to the institutions and their responses as described in section 4.1. Here, the open dialogue and the decision of letting the institutions chose their partners themselves were strategical tools to increase the voluntariness of the process. They did not want the process to be perceived as forced. The respondents stated that they reckoned most institutions would elect partners from their vicinity and were surprised, in a positive manner, when NTNU considered HiG and HiÅ in addition to their “neighbors”, HiST, in Trondheim. This they commented, was due to the institutions seeing clear academic benefits with a merger even though they were geographically spread, and that these benefits would outweigh the costs.

An additional question regarded the benefit/cost balance, and whether the university colleges would see most of the benefits as the competence and human resources at the university would be negatively affected. While the respondents agreed to this initially, they further commented that this was an expected short term outcome but that both would positively benefit in the long run.

After the merger was a fact, the respondents stated that the ministry was to a very small degree directly involved with the planning. They had no direct demands for how the merger was to be carried out nor towards the day-to-day activities. Conversely, the ministry acted, according to the respondents, as a facilitator. This signified working as a guide, giving instruction on what was possible and advising in legal matters. The respondents had almost daily communication both before and after the merger was officially approved, but had no active involvement. They also stated that the institutions went into the merger knowing that the new university would function very differently in the first year before the new structures were decided. In their contact with the institutions, the respondents noticed little negativity and resistance. However, they were quick to comment that most communication was with the leadership of the former institutions and the leadership of the project organization of the merger.

4.3.2. Comments from NTNU

The respondent from NTNU focused on the different outsets and starting points for the four institutions. Where NTNU already was a university and could continue their life without a merger, the university colleges had to take radical steps in order to improve or to attain a university status on their own. However, the goals of NTNU were nonetheless explained as similar to the other three institutions and in line with the structure reform. The process of how these were to be achieved were on the other hand not decided and described as ad-hoc. This was agreed upon by the partners. Here, the respondent also added that this was a matter for leadership, and not something decided by lower levels. Further comments were made about the broadness and the lack of concrete objectives.

According to the respondent, the integration of the academics were important to NTNU but it still wanted some autonomy for the university colleges. The integration was seen as important for the future academic benefits and strengthening of the new institute. In relation to previous collaboration, the respondent was quick to say that there had been both academic and administrative collaboration in recent years. This was though not felt to be of any help, or work as a disadvantage, for the merger. What was noted to be affecting was the different IT systems used among the institutions. The respondent added that the systems used by the university colleges were more advanced and superior to the ones of NTNU. The systems of the university colleges could in spite of this not be implemented as it would be too demanding and take too much resources. The new NTNU was therefore to use the outdated system of the previous NTNU which has to be updated after the merger has finished.

The respondent was clear on the perspective of NTNU as the leading institution of the merger. NTNU having the role of leader was unquestioned, and the merger was commented to be similar to a takeover. It was not a merger between equal partners and there were no discussions on the new name of the merged partners nor where the leadership was to be located. The respondent also added that there were very few heated discussion and problems in the rest of the process as well. However, some resistance was felt from lower levels in the beginning but these were described as diminishing once the merger was approved, commenting that the rest of the institution was considered acting professional.

When asked about the governmental involvement, the respondent said that some pressure was felt in form of the incentives to be presented in the structure reform and desires of larger and stronger institutions. It was although not felt as a demand or as a forceful process. The respondent considered the ministry as a guiding function that was open to questions and problem solving. Their dialogue was in addition described as good.

4.3.3. Comments from HiG

The respondent said the rationale lay in the structure reform promoted by the ministry. The goals of HiG were comparable to these and a merger would therefore be natural. According to the respondent, HiG had been in extensive discussions regarding a merger with another university college in its vicinity but that NTNU was the preferred option. Thus, when NTNU opened up for a multi-campus solution, HiG was very positive. This, the respondent credited to the wish of becoming more specialized through collaborations and inter-disciplinary fields rather than just broadening the academic field.

In respect to questions about goals and the strategy for achieving them, the respondent answered that the biggest problems were resolved before the process fully began. The less vital problems were solved at later stages. For the process, the respondent found that NTNU worked as the leading institution without it being a problem. HiG was prepared for this, but said that they were coherent in decisions anyways. The only action found to be greatly discussed were about whether the previous NTNU board was to continue working as the board for the new NTNU. HiG, and the other university colleges, wanted to add representatives external to the old NTNU as well. This was however averted as the ministry intervened and said a new board with additional representatives was to be elected. The respondent stated that the involvement from the ministry was far less direct in other aspects, and that it worked more as basis for support. The respondent did not feel that the ministry was demanding in the process or towards the outcome. All in all, the process was viewed as positive and time was not felt as a pressing condition. Contrary, some actions were found to have been allotted too much time and had to be shortened.

When asked about resistance, the respondent stated that there was resistance to some degree. There were certain staff that rather would see a merger with a neighboring university college but this resistance was not imperative to the process. This was also noted to be the same for previous collaborations. There had been a few collaborations previously, and especially within technological subjects, but these were not found to have particularly effects on the merger process.

5. ANALYSIS AND DISCUSSION

This chapter will analyze the empirical results in light of the theory and the structure will follow the categories that were presented in the literature study. Consequently, it will begin with the origins and drivers, before moving on to institutional characteristics, and ending with the individual characteristics. Here, the subjects presented in the supportive theory section will be implemented to strengthen the analysis of relevant aspects in the different categories. Additionally, the chapter seeks to analyze the dynamics between the merger conditions. At the end, the chapter will discuss the analysis in regards to the two research questions. The discussion will accordingly use the information given in the thesis, along with my own reflections on the matter, to take on the problem statement.

5.1. ANALYSIS

5.1.1. ORIGINS AND DRIVERS

The origin of the new NTNU arose from the guidelines developed by The Ministry of Education and Research and ultimately from the reform regarding the restructuring of the higher education sector in Norway. The drivers represented the ministry's desire to eliminate too many small and weak institutions, study programs, and academic communities. And, consequently, increasing the overall quality of the involved parties in the merger. The way the ministry went about the problem can in terms of forced and voluntary mergers be related to both. Forced being as the ministry wanted a restructuring of the sector and the theory thus implies a top-down strategy of "forced voluntariness". On the other hand, the merger can be regarded as voluntary considering that the institutions could operate very freely by choosing partners, handling the merger processes on their own, and having the ministry as a supportive entity. Additionally, as seen with the working groups beneath the committees and the groups for academic and administrative organization, the lower level of the institutions were heavily involved with shaping the academic and administrative structure. Although it is important to note that the supreme body, the Administrative Committee, was greatly dominated by members in top

Table 9 Comparison of faculties 2

HiG	**HiST**	**HiÅ**	**NTNU**	**New NTNU**
Health, care, and nursing	Health and social work	Health science	Medicine	Medicine and health science
	Nursing			
			Humanities	Humanities
		Life sciences		Natural sciences
			Architecture and fine arts	Architecture and design
	Teacher education and deaf studies			Social and educational sciences
			Social sciences and technology management	
Technology and economics	Trondheim Business School	International Business		Economics and management
IT and media	Technology	Engineering and natural sciences	Information technology, mathematics and electrical engineering	Information technology and electrical engineering
	informatics and e-Learning			
		Maritime technology and operations	Engineering science and technology	Engineering
			University Museum	University Museum

management positions. It is accordingly difficult to consider the lower level's influence on decision making.

Resuming with the drivers, the quality improvement in academics was further south after by strengthening the already strong elements of the institutions, building on both similar and different academic fields and products through economies of scope. Adding the new faculties into the overview of the previous faculties (Table 9), and it gives a picture of the academic fields both pre and post-merger. This shows similar fields as in health and nursing, economics, and a wide range of technological subjects, but also some differences. For the product, the university was known to be research-heavy and the university colleges were education and profession focused. By having an academic field and a product this broad, the new NTNU pursued higher quality in education and research, in contacts with industry, and reputation on the international stage.

In addition, all the institutions had programs of both undergraduate as well as graduate studies, as argued by Eastman and Lang (2001). Consequently, the comprehensiveness of this merger in term of academic fields and products correlates with the two last initiatives from Skodvin (1999) regarding origins and drivers. These two incentives concerns integration and collaboration and diversification. Integration and collaboration was to be secured by academic integration projects, with the academic structure, and integrating cultures (Merger Platform (19)). Here, an example can be within economics and the establishment of the new economics and management faculty. The previous faculties where too small to make a national or international impact, but merged together they can become a giant. Diversification on the other hand, sought diversification, as in increasing the amount of study programs and the access to them. The faculty of medicine for instance, now offers graduate studies in medicine but also profession educations as in nursing. Both of these examples now indicate a possibility of synergies if the planned integration succeeds. As it follows, the different programs and their product can create benefits for education and research alike.

Skodvin's (1992) first incentive concerning eliminating duplicate programs was on the other hand not an origin or driver here. This can also be seen in light of economies of scale. While a factor for many mergers is to save money this was not of relevance for the planning of the new merger. For the case merger, and the reform, the resource aspect concerned more efficient and effective use rather than making cuts to the budget. Streamlining the administration in terms of joint systems and enrollment of students thus becomes a way to release funds for academic activities. Consequently, despite its importance in the literature, economies of scale was not considered a decisive condition for the merger process nor was the costs related to the actual merger. A reason for this might stem from cutbacks in administrative costs previous to the merger as stated from the respondent from NTNU.

5.1.2. INSTITUTIONAL CHARACTERISTICS

As stated in the interviews, the merger never intended to be between equal partners. NTNU was many times the size of the university colleges and had a prestige far exceeding them as well. Consequently, the role of leader naturally fell to the university during the planning phase, as in line with the theory from Pinheiro et al. (2016) and Skodvin (1999). This meant that there were few questions about topics like name, computer systems, the location of the new administration and leadership, and many of the decision-making process were said to be shortened. However, both of the interviewed institutions stated that the process was still associated with tranquility and understanding, being united by shared purpose and goals. To combat NTNU being too dominant in the multi-campus solution, some authority and identity was still planned to remain at the university colleges. The project organization also involved representatives from all parts of the four institutions to avoid favoring and full dominance to the controlling partner. This was additionally evident in the making of the Merger Platform and the proposals for the academic and administrative organization.

Although, where HiG and HiÅ were to continue as departments with some academic and administrative responsibilities, practically all functions previous under HiST were joined and implemented within NTNU. A contributing factor to this was the locations of those two university colleges. HiST, being located not only in the same city but within walking distance of NTNU, was always the natural merging partner for NTNU. While the core competences within ICT and maritime technologies in Gjøvik and Ålesund, respectively, gave sense in an academic perspective, their geographical locations compared to HiST and NTNU did not. This is associated with negative outcomes and difficulties according to research. Thus, planners had to make great strides to ensure, and maintain, that the systems, relations, and structures facilitate and permit the wanted amount of integration. In line with Norgård and Skodvin (2002) and Pinheiro et al. (2016), the project organization planned for the monetary and human capital needed in the early phases, but there are uncertainties whether this was accounted for in the years to come.

A condition that can counter the geographical spread, and many other negativities, is having a clear and strong vison and goals. Harman and Harman (2003), Pinheiro et al. (2016) and Koontz (2009) all argue for the importance of it, but this is something previous evaluation reports says the merger has failed with. Both the report from Deloitte and NIFU (Merger Platform (20); (21)) states this to be a worrying fact. From the documentation and interviews, this did not appear to have been a priority for the leadership of the organization. These two reports also mentioned that responsibilities and the division of work was ambiguous during the merger. Questions like authority structures and hiring new employment were riddled with uncertainties, which, in relation to theory, can have detrimental effects on the process. However, it is also important to mention that the vison, goals, and overall planning of the merger was to some degree meant to be somewhat ad-hoc. This is in line with the theory from Harman and Harman (2003) as too much detail planning should be avoided and rather be guided by lower level staff. However, if it was intended in the case or a sign of inability is not known.

On the contrary, a condition that was well considered for was time. The project organization planned and utilized a functioning schedule, and milestones, like the academic and administrative organization, were given considerable time to be completed. This was also the case for the period before the merger was decided. The interviewee from HiG stated that some activities needed to be shortened as too much time was allocated. This was although not deemed negatively in that the time could be transferred to other more pressing occurrences. The interviewees felt that the time spent on planning did not give nurture to resistance but rather encouraged involvement.

Something that could have similar positive benefits is previous collaboration. The theory states it as something that can help the planning of a merger and integration as there will already be ties and points of contact established. From the interviews, the respondent were asked if there had been any previous collaboration between the institutions before the merger. While the respondents stated they were unsure to what degree, there had been collaboration between both academia and the administrations. They, however, saw few benefits from it. Possibilities for the mismatch between theory and the case could be due to the level of collaboration or that the insights of respondents were too low. It could also be that there were no benefits.

5.1.3. INDIVIDUAL CHARACTERISTICS

The individual characteristics found in the literature study involved culture, resistance, and leadership as main conditions for mergers in the higher education sector. The cultures recognized for the new NTNU were associated with strong identities. This was especially evident for NTNU with its extensive background and long traditions. From Kyvik (2002) and Hay and Fourie (2002) we know that organizational structure is easier to change than the individuals within the structure, and that tensions and uncertainties can arise as a result if not accounted for. Three factors that further implicates this is the wanted level of integration, the geographical locations of involved parties, and the type of institutions merging.

One of the goals of the merger was to build synergies and take advantage of the created interdisciplinary academic fields by fully integrating academics and their culture. In line with theory, as in Harman (2002), staff and leadership simplify this integration by creating common goals during planning as a way to secure everyone pulling in the same direction. Although the interviews gave a positive picture of the merger process for the staff, questionnaires performed by Tekna (Universitetsavisa, 2015; Universitetsavisa 2018) and NIFU (Khrono, 2018) gives supplementing information. They show that the cultures in both HiST and NTNU still stand strong, and that the new university still does not function as an interrelated and united institution.

This can further understood from their geographical locations and the differences between universities and university colleges. The geographical locations of the institutions implied the need of a system that allows for integration. From the theory we have the sharing of knowledge and expertise as examples that are made more difficult over far distances. For the merger, this was tried to be handled with the academic integration projects. These projects also worked to integrate the different academic communities from the four institutions. By engaging members from all the partners, the project organization at least secured involvement but little information is given regarding how to solve the differences between profession and research based education. It is however important to note that the academic integration projects were meant to target the improvement of education and not research.

Continuing with leadership, the questionnaires showed that the university's FTEs in academia had much negativity before the merger but that the university colleges were positive (Universitetsavisa 2015, 2108; Khrono, 2018). For the university this stayed the same while the university colleges became less positive when asked over two years later. This can be seen as a failure from the change agents by not creating enough readiness throughout the merged institutions. If this is solely tied to the Administrative Committee, and the rest of the project organization, or if it also included the lower level leadership is hard to know. Nonetheless, the negativity before the merger cannot be blamed on top management, but it becomes evident that they have not work well to ensure readiness and lower the negativity in the planning phase. Other than some workshops and the previous mentioned involvement in work groups, little appears to have been done. Knowing how radical the change was going to be for many, the importance of readiness found from theory, of both individuals and the organizations, does not seem to have been shared by leadership.

In addition, similar to the lack of creating readiness, the questionnaires demonstrate the lack of maintaining it as well. Here, HiG can be used as an example. The questionnaires showed that HiG was the most positive towards the merger. This also corresponds with theory as their respondent commented the high readiness of the institution due to previous merger initiatives. However, the positivity, has decreased similarly to the other institutions. The negativity could also be tied to urgency and its absence, especially for the staff of NTNU. Because where the three smaller institutions had many benefits from a merger, many from NTNU saw it as a damaging to the reputation of their brand, access to less resources, and alterations to their way of working. Accordingly, it can be understood from the experiences with the planning of the merger that the leadership had a structural perspective when leading the merger, consequently minimizing the use of the three other frames from Bolman and Deal (1991, 2017). The planning focused heavily on creating the correct structures to coordinate and control. Thus, the individual needs were partly neglected, or overlooked, and not enough was done towards the political differences and for creating cultural symbols. As a consequence, as seen from the theory, resistance can develop.

However, from the interviews, none of the respondents implied much resistance towards the process. Furthermore, the little mentioned was said to diminish quickly when the merger was definitive and the planning begun. Moreover, resistance was not mentioned in the documentation either. If this was due to the actual lack of resistance or the negligence of it is not known, but it renders the analysis of it obsolete.

5.2. DISCUSSION

The origin of the merger for this case was obvious with the structure reform. Although the ministry sought to make it seem as voluntary as possible, there is no doubt that the merger was indirectly forced. I understand that this affected the merger process positively as it gave freedom during the planning phase to the people who knew the institutions best. With the structure reform and the merger platform as superimposing governances, the Administrative Committee, and the rest of the project organization, could to the best of their abilities meet the incentives they gave. Here, I see the external factors positively in light of the involvement of the entire higher education sector in the development of the two documents and the open dialogue surrounding them. The question concerning whether the planning process had too much freedom and involvement can from the analysis be answered. There, the dominant position of NTNU gave the impression of having controlled the open process while also allowing sufficient involvement.

Regarding the internal factors, the analysis makes it evident that the merger classification of Goedebuure (1992) cannot represent the merger in question. The economies of scope for the new NTNU involve factors from all four classifications when considering the academic fields and products of the concerned institutions. I therefore propose to include a fifth category. This category will thus represent mergers containing aspects of the vertical, horizontal, diversification, and conglomerate merger. I propose this category to be called comprehensive mergers due to the complexity and the many natures related to the merger. The new classification is remastered below (Table 10). This type of merger also covers the quality aspect of the rationale by strengthening the small and weak institutions and academic communities through the excessive academic field and product. Furthermore economies of scale cannot be a leading factor unless considered over a very long time perspective due to the short-term expenditure.

Table 10 New classification of merger types

		Product	
		Similar	**Different**
Academic field	**Similar**	Horizontal	Vertical
	Different	Diversification	Conglomerate

Comprehensive

The features of the comprehensive merger consequently demands more from merger conditions as culture, leadership, and the geographic locations to be well planned for. For the new NTNU, integration of cultures, and especially the academic culture, was regarded as important for increasing quality. Many activities were planned in an effort to enhance the academic integration but different locations, a dominating institution in NTNU, multiple merging partners, weak vison and goals, and not good enough leadership are all examples were faulty planning has had detrimental effects. The geographical spread demands sufficient systems to allow for integration and administrative benefits. From the empirical results I see this negatively as the new university continued to use many of the outdated systems from NTNU. Here, the more advanced systems from the university colleges could have been implemented but this was decided against. I understand that system changes were seen as too demanding in terms of resources, but I believe this to be a wrong choice from the planners. This could have been a tool for integration and administrative functionality if done right. Now the new university must continue with outdated systems and additionally expect more extensive organizational changes after the merger has ended.

For the leadership condition, the focus on the structural perspective can have drawn emphasis away from readiness and urgency. The questionnaires could not for certain show that these two were not planned for, but it revealed that it was not done well enough. I understand that such a massive undertaking requires clear structures, procedures, and guidelines, but one must remember to see the forest for its threes. The readiness and urgency at the top of the institutions seem to have been in place but not for the individuals of the lower levels. This can both entail the weak and unclear vison and goals and failing to create a shared identity. These are from theory correlated in that they become more and more important with the increasing number of merging institutions and their sizes. Thus, the project organization should have done a better job at ensuring their position in the planning. Subsequently, the lack of a strong vision and goals, common for all, appear to have had a detrimental effect rather than being encouraging. Clearly, the message of why they are merging has not gone through and been accepted. This has additionally led to lower trust in top management as seen in the newest questionnaires. This is worrying as the merger is still not done. Perhaps the ad-hoc nature of some of the planning went amiss?

As mentioned, I understand the dominant position of NTNU to have had a negative impact on academic integration and collaboration from the questionnaires. Some of the staff at NTNU seem to not have seen the possibilities the merger brings and rather focuses on potential negative outcomes. This was a matter the leadership should have focused on during the planning, and I believe this was due to the structural leadership. It seems the needs of the individuals were somewhat forgotten in the complexity of the institutional matters. The involvement of some staff in the planning cannot be expected to influence the readiness of the rest. In line with the theory, the change agents should aim to improve the readiness of staff to the level where individual readiness become organizational readiness. I therefore consider the lack of human resource, political, and symbolic leadership a missed opportunity. The project organization could consequently have covered the feelings of staff, infiltrated and brokered between different interest and tensions of actors, and created an identity for the new NTNU instead of just a continuation of the old.

In terms of the number of involved institutions however, the dominance of NTNU must be viewed positive. I believe this laid many clear guidelines for the merger that otherwise could have created several and decisive problems and time extending occurrences for the planning. Having equal authority in a process regarding multiple institutions, in several geographical locations, I understand would further complicate an already complex merger.

5.2.1. SUMMARY

To summarize, there are merger conditions in all three of the categories I understand as having affected the merger process of the new NTNU, and that are similarly relevant for other comprehensive mergers. However, this is not to say merger conditions like resistance, economies of scale, and previous collaborations are irrelevant for other large and complex mergers. In Figure 7, I have created a model that shows both the merger conditions and where they influenced and impacted in the new NTNU merger. The merger conditions in the category of origins and drivers obviously impacts the initiation of a merger but further influence the planning phase as seen in this case. They both influence directly as seen with how the structure reform and economies of scope, and indirectly through for instance low governmental involvement. The planning phase was similarly impacted by the merger conditions from institutional and individual characteristics. Here, the number and size of the institutions, the geographical locations. Vison and goals, the time, culture, and leadership were found especially important for the merger of the new NTNU.

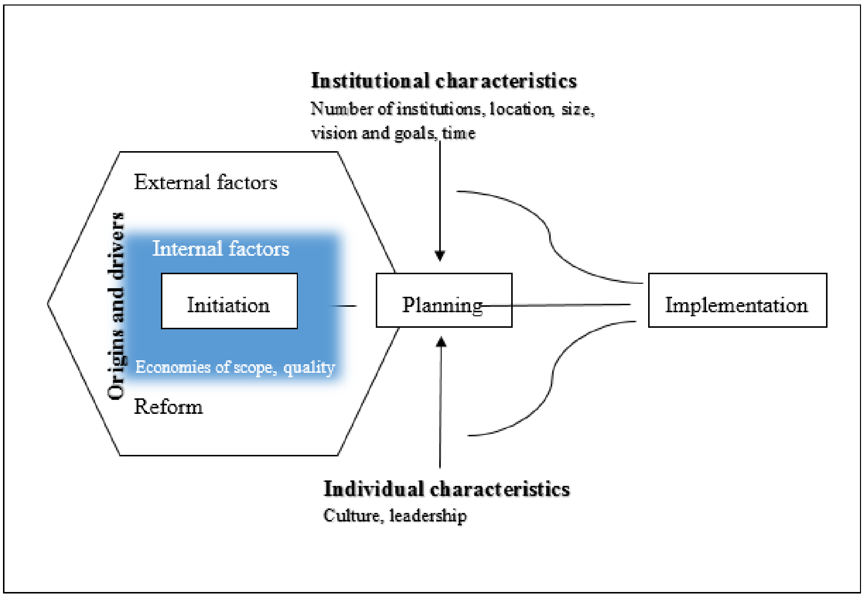

Figure 7 Relevant merger conditions in the process of planning the new NTNU.

6. CONCLUSION, IMPLICATIONS, AND FUTURE RESEARCH

What is evident from investigating the problem statement is that comprehensive mergers offer more challenges than the ordinary merger of two institutions. Merger conditions as leadership, economies of scope, and the number, size, and geographical location of partaking institutions are seen to become more intricate and can heavily effect the merger process. Change agents must therefore take caution during the planning of a merger and assess the merger conditions, the challenges they give, and their dynamics in a way that secures the success of the organizational change. As experienced with the merger of the new NTNU, having that knowledge is essential for the planning and subsequently providing a strong foundation for the implementation and consolidation of a merger.

6.1. IMPLICATIONS

From my study, I contribute with research about a rare kind of mergers in higher education. Mergers with multiple institutions, of which some are spread and some are located in the same city, with both similar and different academic fields, where educational and research focused study programs are offered, and having both undergraduate and graduate educations, are seldom investigated and the research thus provides hands-on information regarding the subject. Accordingly, Goedebuure's classification has been proposed to expand to also cover mergers with both similar and different academic fields and products. This *comprehensive* merger allows for the classification of large and complex mergers where the process demands even more from the change agents in the process.

6.2. LIMITATIONS

A clear limitation for this thesis is time. Both in terms of the scope of the thesis being a semester and the lengthy time period of the case merger in comparison, and the fact that certain outcomes will not become apparent for years to come. Another limitation, although leadership was the wanted component, lower levels of the project organization as well as normal staff could have given additional information about the merger. This could for instance have provided more insight to possible resistance. And as mentioned in the methodology, a study of multiple mergers could have given a more all-round perspective to comprehensive mergers. Lastly, having had the access to documentation past what was provided by the merger platform website could have given a more extensive comprehension of the merger and, thus, allowed for an even deeper investigation.

6.3. Future Research

It is not known whether the merger conditions found to have the most influence on the new NTNU merger are representative for all comprehensive mergers. This can only be determined through additional research of mergers with similar attributes. And while this thesis focuses on the planning phase of the merger process, it would also be of interest to investigate the other phases to find correlations and to create new theory. A longitudinal study could likewise be contributing for the study of the effect merger conditions have on both the planning and the entirety of the process. I believe there is also interesting research in the comparative study of a comprehensive merger where the partners have a more equal power situation in terms of the very dominant position of NTNU.

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APPENDIX

Interview guide – The ministry of Education and Research

1. What was the rational of the merger?

    Wishes, demands, requirements. Concrete goals and strategies.

2. How involved was the ministry in the different phases of the merger?

    Initiation, planning, implementation. Strict guidelines or support.

3. What was the strategy for the planning of the merger?

    Agreement or conflict.

Interview guide – The merging partners

1. What was the rational of the merger?

Wishes, demands, requirements. Concrete goals and strategies. Similarities and differences between institutions.

2. What conditions affected the merger?

Institutional vs individual characteristics

3. What was the strategy for the planning of the merger?

Agreement or conflict.

4. How was the attitude within the organization for the merger?

Positive or negative. Resistance.

5. Was there any collaboration between the institutions previous to the merger?

Academic, Administrative. Implication on the merger

6. How would you describe the involvement of the ministry?

Supportive or demanding.