

Sustainable competitive strategies;
a case study of private acute hospitals
in Switzerland

By

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Abstract

This PhD thesis is a case study focused on 'Hirslanden', a very successful private hospital group which consists of thirteen acute hospitals in Switzerland. This case study analyses the current strategic position and evaluates sustainable strategies to remain highly competitive also in a more dynamic market.

Introduction

Swiss health care is confronted with fundamental changes. On the one hand, there are increasing costs in patient treatments caused by innovative technology with new high-capacity medical devices. On the other hand, hospitals will have decreasing revenues with the introduction of the new patient classification and tariff system DRG by 2012. Invariably, the implementation of DRGs exerts pressure on hospitals to increase their level of effectiveness and efficiency, to reduce their costs related to patient treatment, and to optimise their health care processes.

*Environmental
change*

Due to the higher rivalry in future, hospitals are forced to choose an effective strategic orientation and to develop an appropriate strategy to remain highly competitive. It is argued in this case study that Swiss hospitals will only achieve superior performance, with a position of sustainable competitive advantage, by knowing the crucial capabilities and bundles of these capabilities which are the basis for the strategy formulation.

Strategy

Thus the primary goal of this research is the development of a new integrated framework that reflects current strategic thinking, for the examination of the relationship between new trends, key customers' needs, and hospitals' core capabilities, and their impact on performance.

Goal

The main research question is: 'How should private acute hospitals develop an effective strategy in a dynamic market?'

*Research
question*

The case study used a combination of qualitative and quantitative methods to test the proposed model with its hypothesis and to answer the research questions. The data collection is mainly based on questionnaires for thirteen private hospitals with a thorough data analysis. All results are confirmed by interviews with a focus group which consists of eight health care specialists.

Methodology

This case study provides an approach to the general field of strategic management that is particularly relevant in dynamic markets - and in this sense it is relevant to managers in all sectors. In addition, it is an application of the proposed framework to the particular case of a Swiss health care group - and demonstration of how it can be used to identify the group's capabilities. Obviously, it is a contribution to the specific field of strategy in the health care sector, which helps investors and executives to improve the performance in their hospitals. The long-term result is a better reputation which enables to outperform competitors in a changing environment and thus to reach sustainable competitive advantage.

*Contribution to
knowledge*

Acknowledgement

At this stage I would like to thank everyone involved in this project that helped me to complete it within the time frame. A special thank goes to my lovely wife and my two daughters, who gave me the motivation through these tough years.

My former company Hirslanden, especially my boss, the CEO Dr. Robert Bider, supported me mainly through this PHD programme. In the final part, I received also an excellent support from all 13 hospitals in Switzerland. They answered all my questionnaires which were the basis for my work on this very interesting topic.

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1. Introduction

This PhD thesis is a case study focused on 'Hirslanden', a very successful private hospital group which consists of thirteen acute hospitals in Switzerland. Hirslanden is chosen for this research due to the fact that they is the biggest and most famous private hospital organisation, with the ambition to be the trend-setter in this sector. This PhD provides an approach to strategy that is particularly relevant to managers in all sectors in a dynamic market. In addition, it is an application of the proposed framework to the particular case of a Swiss health care group - and demonstration of how it can be used to identify the group's strategic capabilities and beyond this, even bundles of capabilities. "Because the nature of the strategy-performance linkage might vary by industry conditions" (Dess, Hrebiniak and Joyce, 1985-87), this research is focused on this single sector.

Area of study

The purpose of this thesis is to provide an approach to strategy that is particularly relevant in dynamic markets - and in this sense it is relevant to managers in all sectors. It is a contribution to the general field of strategic management. In addition, it is an application of the proposed framework to the particular case of a Swiss health care group - and demonstration of how it can be used to identify the group's strategic capabilities and beyond this, even its bundles of capabilities.

Research purpose

Private hospitals are different due to their intangible resources; however, the relational resources are often comparable due to the same relationship to the local government, to suppliers, and physicians. Similarly, because of the know-how transfer between hospitals in an area of specialisation such as cardiology or orthopaedics, the level of knowledge is similar. Attending chief physicians use to perform surgeries in several hospitals with the same attitude towards patients and reputation. Therefore, the key differences are capabilities; therefore, it will be the emphasis of this research.

Emphasis

The primary goal of this research is the development of a new integrated framework that reflects current strategic thinking, for the examination of the relationship between new trends, key customers' needs, and hospitals' core capabilities, and performance.

Goal

The main research question is: 'How should private acute hospitals develop an effective strategy in a dynamic market?'

Research question

This study is, to author's knowledge, the first to evaluate empirically the associations between new trends, key customers' needs, capabilities, and performance in private for-profit hospitals. It enables managers from health care organisations to reduce costs with a development of strategies which are both effective and efficient. Effective means 'to do the right thing' and not just 'do things right' (efficiency). Therefore, a great deal of emphasis has been placed in this research on effectiveness to reach sustainable competitive advantage.

Sustainable competitive advantage

This case study is divided mainly into four parts:

Structuring

- This first part (chapter 1) describes what the problem is, for whom it is a problem, and why. It highlights the research purpose, goals, and the research approach with the proposed research model. In addition, it describes the health care environment in Switzerland, and the key stakeholders.
- The second part (chapter 2) is a description of the theory in the field of strategy. The emphasis is on the resource-based view with a tension on the 'dynamic capability' approach.
- The third part (chapters 3-6) is the practical research, based on the research methodology, with the purpose to answer the research questions and the hypotheses and to analyse all results.
- The last part (chapters 7-9) is the discussion and conclusion of this thesis. It highlights the limitation of this research and suggests relevant future research.

1.1 Statement of the problem

Health care systems world-wide are currently in a state of disarray. Costs are notoriously high while serious quality issues abound. “Compelling evidence shows that the care offered generally falls short of acceptable quality levels while in many systems occurrences of medical error persist at disturbingly high frequencies” (Porter and Teisberg, 2006). Health care is high on list of political agendas in numerous countries around the world, yet the gap between patient needs and economic reality in most health care systems around the world is increasing rather than creasing.

Health care world-wide

Health care in Switzerland traditionally has been a regulated market in a relatively simple and static market environment. On the one hand, there are the state-subsidised University and ‘Cantonal’ hospitals; on the other, the private ‘for profit’ hospitals that have emerged in response to the demand for enhanced health care services. This market environment is now changing towards a more dynamic market with: an aging population with more older and multi-morbid patients, new and converging technologies, changing regulatory environments, and evolving health care markets. These facts can be illustrated with the figure 1.1

Health care in Switzerland



Figure 1.1:
Changing environment

Contemporary managers have no answers which are the effective strategic orientation and the crucial capabilities in their hospitals to reach superior performance. As a result, “Swiss health care is embarking on a precarious path peppered with an imbalance in high costs, irregularities in the delivery of quality health care, frequent errors, and limited access to care” (Porter and Teisberg, 2006). Therefore, the costs for the Swiss health care are one of the highest in the world. In 2010 these costs are about CHF 62 Billion as illustrated in figure 1.2 (first dark line with triangles = Total costs; second blue line with rhombuses = Costs in hospitals):

Swiss healthcare costs

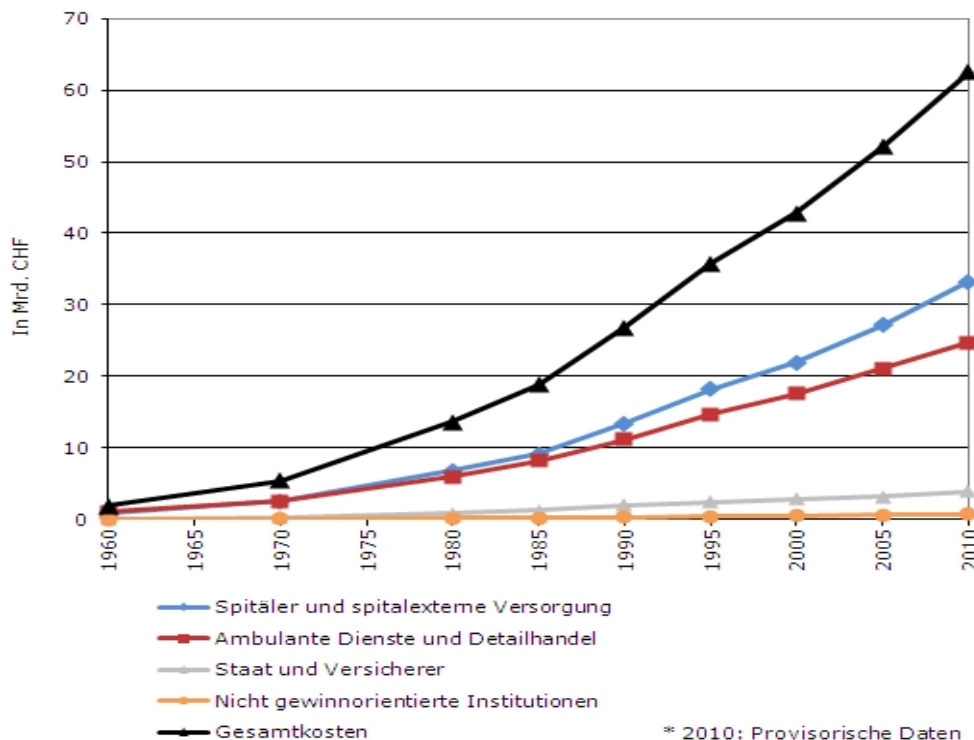


Figure 1.2:
Costs in Swiss
health care
between 1960
and 2010 (in
Billion CHF)

These unsettling developments have not escaped the attention of the Swiss government. They introduced a new health care finance system of Diagnosis Related Groups (DRGs) by 2012. DRG, a patient classification system which originated in the USA and Australia, foresees that hospitals receive a fixed compensation for health services delivered regardless of the actual patient treatment costs. Invariably, the implementation of DRGs exerts pressure on hospitals to increase their level of effectiveness and efficiency, to reduce their costs related to patient treatment, and to optimise their health care processes.

DRG

1.2 Research purpose; goals

The impending imperative to improve effectiveness and efficiency significantly has caught most Swiss hospital managers off guard. Most have little understanding of their hospital's intangible resources, especially capabilities and bundles of capabilities. Therefore, this case study provides in general insights to investors, executives and managers how to compete successfully in a more dynamic environment.

Purpose

The primary goal of this research is the development of a new integrated framework that reflects current strategic thinking, for the examination of the relationship between new trends, key customers' needs, and hospitals' core capabilities, and performance.

Goal

- On the first level it provides an approach to strategy that is particularly relevant in a more dynamic market - and in this sense is relevant to managers in all sectors. It is a contribution to the general field of strategic management.
- On the second level it is an application of the proposed framework to the particular case of a Swiss health care group - and demonstration of how it can be used to identify the group's capabilities and bundles of capabilities.

Theoretical importance

Practical importance

The objectives are a more precise statement of the goal above:

Objectives

- Evaluation of the strategic orientation of the 13 hospitals.
- Analysis of the external environment for the evaluation of the key success factors in the Swiss health care sector.
- Analysis of new trends and key customers' needs with questionnaires for patients, attending physicians, and hospital managers.
- Evaluating and analysing hospital's key capabilities with a questionnaire for managers and attending physicians.
- Evaluation of financial Key Performance Indicators (KPI's) for an effective performance measurement.
- Evaluation of the capabilities, especially bundles of capabilities, which might be labelled as core capabilities.
- Hypotheses testing.

1.3 Research model

The following figure 1.3 is based on the research models of Thomas and Ramaswamy (1996), and Tin (2003):

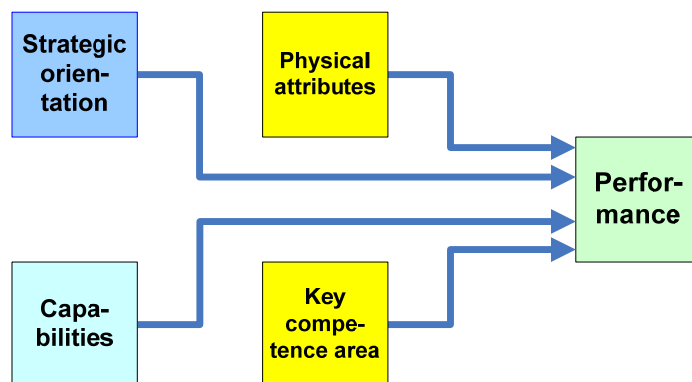


*Figure 1.3:
Research model*

Therefore, this research starts with the examination of the impact of strategic orientation, capabilities, physical attributes, and key competence areas as well as performance. This model is described in section (3.1). Based on this model it is possible to state more precisely the research question.

*Case study;
survey*

1.4 Research questions

The main research question is: 'How should private acute hospitals develop an effective strategy in a dynamic market?'

*Research
question*

- This research question can be devolved into the following sub-questions:
- What is an effective strategic orientation to remain highly competitive?
- What are the key determinants of the new competitive market?
- How can key determinants be integrated in an effective strategic framework?
- How can performance be described in private hospitals?
- What is the relationship between environment, internal context, and performance?

Sub-questions

1.5 Hypotheses

Based on the research model in section (1.3) above, the main hypotheses are illustrated in figure 1.4:

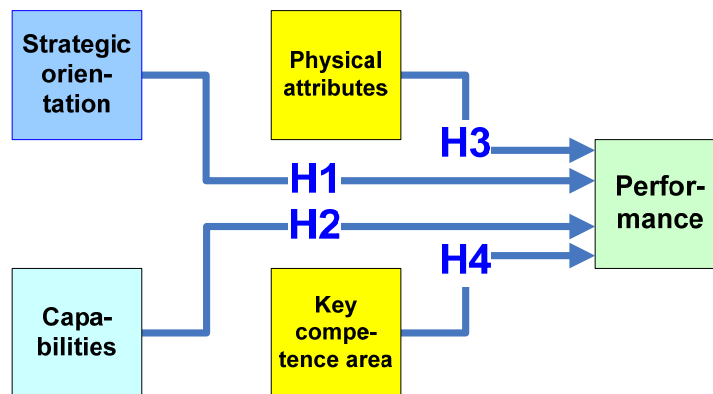


*Figure 1.4:
Hypotheses*

- H1: Strategic orientation will have an impact on performance.
- H2: Bundles of capabilities will have a positive impact on financial performance.
- H3: Physical attributes - Hospital's size will have an impact on financial performance: The higher the occupancy rate, multiplied with the number of beds, the higher the performance.
- H4: Key competence area - Hospital's specialisation will have an impact on financial performance.
- These hypotheses are described in section (3.2). This is the result from a qualitative workshop with Hirslanden's top management.

Hypotheses

1.6 Environment in Switzerland

This PhD thesis is focused on the health care business in Switzerland and gives an overview how this market is structured. *“Because the nature of the strategy- performance linkage might vary by industry conditions”* (Dess, 1987; Hrebiniak and Joyce, 1985), this research is focused on this single health care sector.

*Empirical
research in
health care*

In Switzerland the spending in health care are - after the USA - the highest in the world. It is an attractive setting for addressing the research questions due to the impending fundamental changes in the environment. Swiss health care was a regulated market with static and simple environment conditions. Even this system is currently being challenged by fundamental change such as new technology, aging population, and more competition. There is now a dilemma: on the one hand, a hospital have to pursuit a low-cost strategy, on the other hand it must invest more in the acquisition process of new physicians and patients.

*Health care in
Switzerland (CH)*

The health care sector in Switzerland consists of 345 hospitals with about 41'900 beds (BAG, 2010). About 127 (37%) are private hospitals with about 8'700 beds. This indicates that the Swiss state is the industrial leader in the health care business; therefore, the Swiss state has three main functions: to act as a hospital owner, to act as investor and guarantor to cover the deficits, and to define the tariffs such as the DRG's. Switzerland is a federal state composed of 26 cantons. Article 3 of the Swiss constitution grants a large autonomy to the cantons in the sectors such as health care, which are not directly regulated by the constitution. Instead of having one single health system, Switzerland can be seen as an ensemble of 26 sub-systems linked to each other by the Federal Health Insurance Act (FHIA) enacted in 1996. Therefore, the operation of Swiss hospitals is basically regulated at the canton level with the following three main aspects: First, hospitals' entry conditions to the market, through licensing requirements, are mainly based on the planning of the supply of hospital beds according to the population's needs.

Main aspects

Generally speaking, there is a surplus of hospital beds in most Swiss cantons. Therefore, in the past years, the cantonal regulators have concentrated their efforts in planning a reduction of the number of beds and hospitals. Second, a majority of Swiss general hospitals (about 75%) are subsidised. Hospitals' expenses are only partly provided by insurance system. The operating expenses due to excess capacity, investment costs, and research and education expenses are not calculated in insurance reimbursements. Even the expenses that are directly related to hospitalisations are not entirely reimbursed by the insurers. Hospital reimbursement system is thus a complex mechanism with the 'multi-payer' problem in which it is not perfectly clear who is paying for which part of the costs. According to FHIA, only a maximum of 50 percent of the subsidised hospitals' costs that are imputed to the hospitalisations in general wards are covered by the mandatory insurance plans. This implies that cantons are responsible for at least half of these costs.

Third, the Swiss health insurance system, including basic, semi-private, and private plans, is provided by the private sector with about a hundred competing insurance companies. The system, however, has some characteristics of a social insurance model. The insured participate in their health care costs with a fixed premium and ten percent of the costs beyond a deductible franchise. The insurance premiums are regulated by the State and can be a function of the fixed franchise, but are not related to health risks or income. The cantons allocate some of their public funds to help their low-income residents for the payment of health insurance premiums.

Swiss hospitals are also characterised by a variety of ownership types. The main three categories are: First, public hospitals which include hospitals owned by governments (federal, cantonal, and communal), State-recognised churches, and other public corporations. A majority of these hospitals are run directly by a cantonal or communal government, thus included in the public administration. Second, private non-profit (NP) hospitals are owned and operated by non-profit foundations, associations or cooperatives. These institutions function for public interest set by their mission, and cannot distribute any monetary profit to their members. Third, private for-profit (FP) hospitals are owned by individuals, partnerships or corporations, which in principle are the residual claimants of their profit and loss. Insurance companies are, however, the only source of reimbursement for such non-subsidised hospitals. The following figure 1.5 shows the structure of these hospitals in Switzerland:

*Swiss
ownership types*

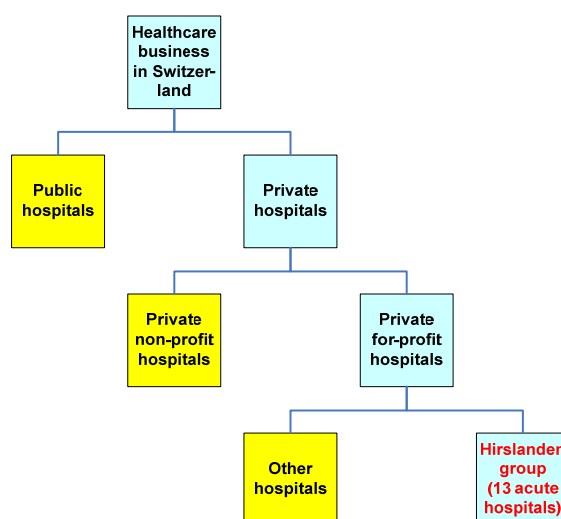


Figure 1.5:
**Market
segmentation:
Private
hospitals in
Switzerland**

Therefore, the focus of this case study is on Hirslanden's private (FP) acute hospitals. The author was employed nine years as Director of Technical Services at Hirslanden's Head Office in Zurich and works still as a consultant for this company. Hirslanden consists of a group of thirteen private FP hospitals/ clinics in Switzerland with more than 4'000 employees (www.hirslanden.ch/en). The main shareholder is the Medi-Clinic Group in South Africa.

*Hirslanden
hospitals*

The Hirslenden group has a small market share in comparison with public hospitals. Therefore, the private hospitals have no choice but to compete with fewer people, a smaller capital budget and R&D budget against these powerful industry leaders. However, Hirslenden's chance is to implement an efficient strategy that best matches the requirements and/ or functional demands of the organisation's environment. Especially with the introduction of DRG's, Hirslenden has a chance to define an effective strategy to outperform competitors.

**Effective
strategy**

An important issue it so find out what the new trends in this sector are; however, *"delivering health care is a complex undertaking involving a myriad of activities and challenges"* (Porter and Teisberg 2006, p.150). In the past, the strategy formulation was simple: *"hospitals sought to acquire physicians, recognising that physicians were intermediaries who brought patients and filled beds"*. In the current environment, due to the higher competition and new expensive technology, it is difficult for hospitals to afford even more investments. As Marlin, Huonker, and Sun (2002) stated, *"attracting physicians required substantial investments in facilities and technology"*. In addition, decisions concerning patient care had to be made after considering not only the welfare of the patient but also the costs involved and their long-term effect on the competitive posture of the hospital. *"Hospitals were now also forced to compete for patient admissions in order to better utilise their assets and allocate fixed costs"* (Marlin, Huonker, and Sun, 2002). Due to these changes then, hospitals have to re-think what constitutes an appropriate strategy. Hospitals are under pressure to search low-cost strategies for a revenue and profit maximisation. Marlin, Hounker, and Sun (2002) believe *"the cost containment pressures effectively mandate that hospitals strive to control costs and to become more and more efficient"*. Within Porter's typology, this would suggest that the pursuit of a low-cost strategy would be the most performance enhancing and thus the only real choice for hospital managers.

New trends

There is now a discrepancy: on the one hand, a hospital have to pursuit a low-cost strategy, on the other hand it must invest more in the acquisition process of new physicians and patients and in new trends as illustrated in figure 1.6 below (Zelman, McCue, Millikan, and Glick 2004, p.4).

Discrepancy



Figure 1.6: New trends as cost - factors in health care

However, *"the strategy that works best for a given organisation ought to be one that best matches the requirements and/ or functional demands of the organisation's environment"* (Hannan and Freeman, 1989). Therefore, this study will analyse different strategic approaches, based on a thorough analysis of the current environment with new trends, which will result in sustainable competitive advantage.

1.7 Stakeholder

An important subject is the analysis of stakeholders. They are *“individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/ or risk bearers”* (Post, Preston, and Sachs, 2002). Johnson and Scholes (2002, p.206) described *“stakeholders as those individuals or groups who depend on the organisation to fulfil their own goals and on whom, in turn, the organisation depends”*.

**Stakeholder
definition**

In a hospital, they are different stakeholder groups with different effectiveness criteria as listed below (Knott, Ahlquist, and Edmunds, 2007; and Kanji, and Moura e Sà, 2003):

**Stakeholder
groups**

- Purchasers such as patients, families, local communities, tax payers, commission groups, insurance companies and other third-party payers, and other healthcare organisation. Their focus is on quality of goods and services.
- Payers such as owners, investors, creditors, joint venture partners, and alliances partners. Their focus is on financial return and creditworthiness.
- Regulators and other entities such as government, health and local authorities, accreditation bodies, financial institutions, evaluation committees, unions, and other observers (future patient, media, etc.). Their focus is on contribution to community affaire, obedience to laws, and regulations.
- Internal members such as administrator, managers, physicians, nurses, paramedical professionals, and other staff. Their focus is on worker satisfaction, pay, and services.

- Suppliers such as equipment suppliers, pharmaceutical suppliers. This group includes also doctors, universities and other educational institutions, and other care provider. Focus in this case is on satisfactory transactions.

The key to effective strategy implementation is recognition of stakeholder management as a core competence. A contemporary hospital has to be able to respond effectively to challenges such as problems and opportunities as they arise. Especially in the last few years the key customers such as patients and attending physicians had increasing expectations of service standards and availability due to the aging population. Such innovations could be a fundamental shift from the traditional focus on the industry structure more to the resource base. Therefore, stakeholder management is important for a hospital's development with the integration of new information, new practices, and technologies.

*Stakeholder
management*

It is recommended by Ackermann, Brown, and Eden (2005, p.122), and Johnson and Scholes (2002, p.208), to use a 'power/ interest grid' for the stakeholder analysis. People with high power and high interest are key stakeholders who must be involved in the corporate strategy process. Such grid, for a private hospital group in Switzerland, is illustrated in figure 1.7 below:

Stakeholder analysis

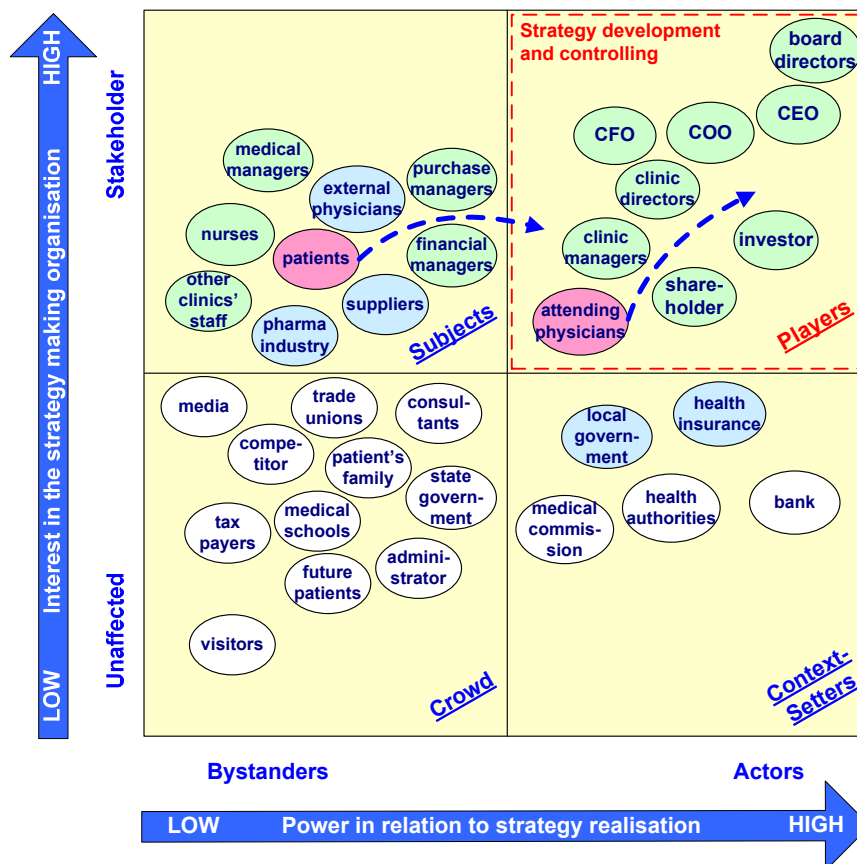


Figure 1.7: Power/ Interest grid

The key stakeholders (or players) are in the top right corner. They are responsible for the development of a strategy. In this diagram, one of the most important stakeholders is the CEO who is also a member of the board. Ritvo, Salipante, and Notz (1979) stated in their research of 545 public-access hospitals, that "the CEO is the primary interpreter of issues confronting the hospital". Coupled with Provan's (1991) finding that hospital "CEO's possesses far more information regarding strategy than other actors"; this indicates that a focus on CEO's as informants on strategy is essential.

Key stakeholders

Integrating a stakeholder perspective into the business strategy gives rise to the following practical implications (Post, Preston, and Sachs, 2002): The power and interest of any stakeholder change in the different phases of a strategy process as illustrated with arrows in the figure above. In this case the power of both the patients and attending physicians, as the key customers of a hospital, will change in the next few years. Patients can choose the hospital and the degree of insurance: private, semi-private or basic insurance. The attending physicians have a big knowledge about medical treatments. They must be integrated into the new DRG process management. Strategy is a process which lead to mutually beneficial policies rather than policies that favour one stakeholder group at the expense of another; therefore, the inter-stakeholder relationships is very important for the future.

*Integration in
strategy*

1.8 Theoretical perspective

Due to the changing environment, private hospitals are forced to define an effective strategy with their key stakeholders. Thus it is essential to know the theoretical principles of strategy formulation. According to Johnson and Scholes (2002, p.10), *“strategy is the direction and scope of an organisation over the long-term, which achieves advantage for the organisation through its configuration of resources within a changing environment and to fulfil stakeholder expectations”*.

*Strategy,
definition*

To analyse the environment, the dominant paradigm in the field during the 1980s was the competitive forces approach developed by Porter (1980). This approach, rooted in the structure-conduct-performance paradigm of industrial organisation (Mason, 1949; Bain, 1959), emphasises the actions a firm can take to create defensible positions against the following five competitive forces: entry barriers, threat of substitution, bargaining power of buyers, bargaining power of suppliers, and rivalry among industry incumbents. This approach is used in this study to help to find a position for hospitals in the health care industry from which it can best defend itself against competitive forces or influence them in its favour (Porter, 1980: 4), based on key customers' needs. In addition, the PESTEL analysis will bring up this result to a round figure.

*Environment
analysis*

Therefore, it is possible to analyse the changing environment, the requirements of stakeholder's and key customers' need. However, these elements cannot be manipulated and are similar for all competitors. For a new positioning in dynamic markets it is important to analyse the internal environment. Every organisation has actual and potential strengths and weaknesses; it is important to try to determine what they are and to distinguish one from the other. According to Hamel and Prahalad (1994), *"the essence of strategy lies in creating tomorrow's competitive advantages faster than competitors can imitate the ones you possess today"*. Therefore, this thesis provide a 'resource-based view' (RBV) and the evaluation of capabilities and bundles of capabilities. Such capabilities helps a company to change the until now successful strategy und to remain highly competitive.

*New positioning
in dynamic
markets*

Hirslanden has not a generic strategy and use not a strategic framework as described in the literature. Its current strategy is based on Puempin's (1987) Strategic Excellence Positions (SEP's, appendix A13), which was developed at the university of St.Gallen/ Switzerland. It has similarities with the RBV due to the fact that both approaches are focused on internal environment. Therefore, SEP was an effective approach in a regulated market; however, in a dynamic market other possibilities must be evaluated to reach sustainable competitive advantage.

Current strategy

2. Theory; literature review

The purpose of this literature review is to become familiar with the development of strategic management approaches over the last years. It highlights all the important principles which can be adopted in the health care sector in dynamic markets, to improve the profitability and to gain sustainable competitive advantage. 'Strategy' was chosen for the main research topic, because the contemporary organisations in Switzerland are more and more focused on a long-term success. However, *"the purpose of this literature review is not only to determine the 'answers' about what is known on a topic; in contrast, the purpose is to review previous research to develop sharper and more insightful 'questions' about the topic"* (Yin 2009, p.14).

Purpose

This literature review highlights the theory of strategic management with the following main components: strategic analysis, strategic choice, and strategy implementation with the impact on performance. This is illustrated in figure 2.1:

Structure

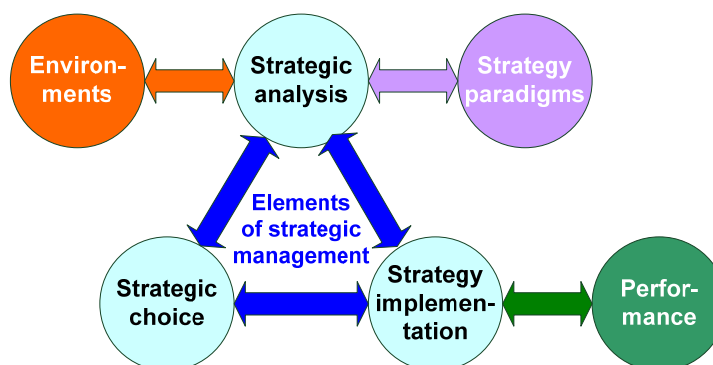


Figure 2.1:
Context of the literature review

The environment is described in section 2.1, strategic analysis with strategy paradigms in section 2.2, strategic choice in section 2.3, strategy implementation in section 2.4, and performance in section 2.5. The last section 2.6 summarises all key issues.

2.1 Introduction

Commonly, the threats to strategy are seen to emanate from outside a company due to the fundamental change as described in previous chapter (1). Although external changes can be the problem, the greater threat to strategy often comes from within.

Introduction

Contemporary hospitals in Switzerland compete on a similar level with the same conditions. They work often with the same external physicians who are intermediaries between the hospitals and patients, they have within a canton the same control from the local government, and they have the same state regulations and fixed tariffs. If they must repeat a treatment due to a failure of a process, they can charge additional money from the health insurance or directly from the patient. However, with the introduction of DRG's in 2012, hospitals receive a fixed compensation for health services delivered regardless of the actual patient treatment costs. Invariably, the implementation of DRGs exerts pressure on hospitals to increase their level of effectiveness and efficiency, to reduce their costs related to patient treatment, and to optimise their health care processes.

*DRG
introduction*

Therefore, a differentiation is only possible with better hospital services, a higher degree of knowledge from the staff and the attending physicians, and with a better infrastructure. This is the reason to analyse the internal resources and capabilities which are part of the 'resource-based view' and the 'dynamic capabilities' approach. These theories are the main construct in this research, because the roots of competitive advantage is inside a hospital, and capabilities and resources are the heart of a hospital's competitive position to reach sustainable competitive advantage.

Differentiation

2.1.1 Environment

In the traditional '*industrial age*', for at least the half of the last century, management and organisation theorists such as Taylor (1911), Urwick (1943), Brown (1945), Mooney (1947), Weber (1947), and Fayol (1949), tended "*to ignore the environment, or at least to hold it constant, as they sought universalistic principles of structure, planning, control, and the like*" (Miles and Snow 2003, p.250). Companies created value by transforming raw materials into finished products. The economy was primarily based on tangible assets - inventory, land, factories, and equipment - and an organisation could describe and document its business strategy by using financial tools such as general ledgers, income statements, and balance sheets.

*Early
perspectives*

Hence most hospitals are located at a good site and have an expensive infrastructure. Therefore, each of these early perspectives emphasised nonhuman elements of the organisation such as goals, structure, policies, and procedures, and the theorists of this period implied that their models were applicable under all types of environmental conditions. Such universalistic models were usually based on 'prescriptive school' strategies as described in section (2.2).

The primary criticism of universalistic models began mainly in the fifties due to the inability of bureaucracies to adapt to the needs of individuals and to changes in the environment. Burns and Stalker (1961) extended this notion of contingent organisational forms by noting that *“successful firms in a stable environment tended to have mechanistic or highly bureaucratised structures and processes, while successful firms in changing and uncertain environments tended to have organic or flexible structures and processes”*. Von Bertalanffy (1968), Churchman (1968), and Simon (1969) enhanced these findings by the ‘systems’ view of organisations, which portrayed them as sociotechnical mechanism that draw resources from the environment, transform them, and then export goods and services back into the environment. With the beginning of the contingency perspective, environmental factors came to be viewed as an important influence on the behaviour of organisations. A series of increasingly elaborate contingency models portraying the linkages among environment, technology, structure, and process were developed. Unlike the early theorists, who tended to treat structure and process as independent variables that could be manipulated by managers, contingency theorists viewed many internal aspects of the organisation as dependent variables, whose form was largely determined by forces originating in the organisation’s environment.

In the current ‘*information age*’, businesses must increasingly create and deploy intangible assets. These are for instance: stakeholder relationships, employee skills, knowledge, capabilities, information technologies, and a corporate culture that encourages innovation, problem solving, and general organisational improvements. *“Even though intangible assets have become major sources of competitive advantage, no tools exist in hospitals to describe them and the value they can create”* (Kaplan and Norton 2000, p.169). Thus this study is focus to define such intangible assets and to put it in relation to performance.

According to Miles and Snow (2003, p.18), “every organisation is embedded in a network of external influences and relationship which can be labelled as its environment”; however, the environment is not a homogeneous entity but rather is composed of a complex combination of factors such as product and labour market conditions, industry customs and practises, government regulations, and relations with financial and raw materials suppliers. Referred to Johnson and Scholes (2011, p.98), “external environmental analysis attempts to identify, aggregate, and interpret environmental issues as well as provide information for the analysis of the internal environment and the development of the directional strategies”.

Different environments

The following figure 2.2 shows the different environments:

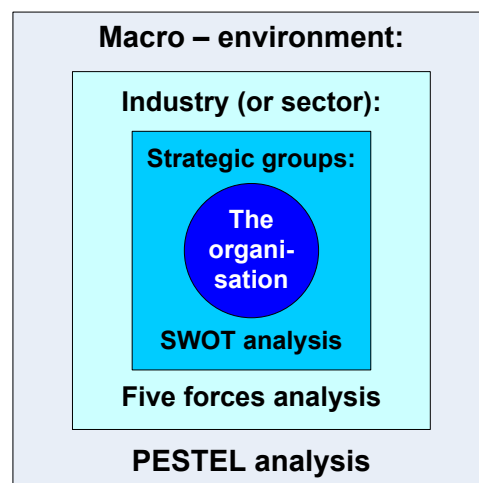


Figure 2.2:
environments

The macro-environment is the most general ‘layer’ of all environments. It consists of broad environmental factors that impact to a greater or lesser extent on almost all organisations. It is particularly important that PESTEL is used to look at the future impact of environmental factors, which may be different from their past impact.

Macro-environment

An industry or sector is the next 'layer'. Industry is a group of organisations producing the same products or services. The Five Forces framework (Porter, 1980) can be useful in understanding how the competitive dynamics within and around an industry are changing. This approach is described in the next section (2.2).

Industry or sector

Within a strategic group there are organisations that have similar characteristics to each other; however, they are quite different from those in other strategic groups. Strategic group is an intermediate 'layer' between the industry and the individual organisation. According to Johnson and Scholes (2002, pp. 134-183), *"the key issues from the business environment and the strategic capability of an organisation, that are most likely to impact on strategy development, can be summarised in a SWOT analysis"* (SWOT: Strengths, Weaknesses, Opportunities, Strengths).

Strategic group

These different layers of environments are important to understand the current changes in the Swiss health care. This sector is moving from a regulated market environment toward a more dynamic, or what Eisenhardt (1989) termed as '*high velocity*' market; however, health care will hardly become a high velocity market. The Swiss healthcare market will rather move in the next few years in direction of a '*moderately dynamic market*' with *"a relatively stable industry structure in which change occurs frequently, but along roughly predictable and linear paths"* (Eisenhardt, 1989), with identifiable key players such as patients, physicians, competing hospitals and medical suppliers. In addition, it will have clear business models based on predictable outcomes, and detailed, analytical routines that rely extensively on existing knowledge.

**Environment;
moderately
dynamic market**

Hospital managers will analyse situations *"in the context of their existing tacit knowledge and rules of thumb, and then plan and organise their activities in a relatively ordered fashion"* (Burns and Stalker, 1966), based on the 'learning before doing', approach. At the beginning of such a management process, it is for hospitals important to define an effective strategy.

2.1.2 Definition of strategy

At the beginning, it is worthwhile to see some different definitions for strategy. The word 'strategy' is derived from the Greek 'strategos' – literally, 'the art of generalship' (Hart 1967, p.527) - and means many different things to different people. Mintzberg as well as Miles and Snow (1978) have suggested that *"researchers should view strategy as a pattern in the organisation's important decision and actions"*. Chandler (1962, p.13) pointed out that *"strategy is the determination of the basic long-term goals and objectives of the enterprise and the adoption of courses of action and the allocation of resources necessary for carrying out these goals"*. Finally, Higgins and Vincze (1989) stated that *"strategy is a major organisational plan for action to reach a major organisational objective"*. Clearly, these different definitions are not mutually exclusive and thus they complement each other and urge 'eclecticism' in definition.

Definition of strategy

Strategy was initially treated as a highly situational art and as an imaginative act of integrating numerous complex decisions. On the other hand, Mintzberg (1976) as well as Miles and Snow (1978) have conceived *"strategy as a pattern in an ongoing stream of organisational decisions and actions"*. They pointed out that *"the strategy maker may formulate his strategy through a conscious process, or strategy may form gradually as he makes decisions one by one"*. The important advantage of this approach is that strategy becomes a tangible and researchable phenomenon, and observable product of the decision stream.

Evolution of strategy

Consequently, early theories of strategy offered *'prescriptions'* (section 2.2) based principally on the analysis of single organisations although these were embedded in widely different environments. The era of *'business policy'* started in the late 1960s and gained prominence in the 1970s to the early 1980s, focusing essentially on the popular basic planning model based on three works of the 1960's: Alfred Chandler's *'strategy and structure'* (1962), Igor Ansoff's (1965) *'corporate strategy'*, and the Harvard textbook *'business policy'* by Andrews, Learner, and Guth (1965). In this time the field of *'business policy'* was not yet renamed in *'strategy making'* or *'strategic management'*. All these strategy pioneers described for the first time processes of conception which matched organisational resources with environmental opportunities and constraints. This was the beginning from the prescriptive strategy making.

**Prescriptive
strategy making**

Chandler (1962, p.13) was one of the most influential early proponents of strategy. His research was the first to employ strategy as a *'descriptive'* concept. The differences between the prescriptive and descriptive strategy making are described in section (2.2).

**Descriptive
strategy making**

According to Hamel and Prahalad (1994), *"the essence of a strategy formulation lies in creating tomorrow's competitive advantages faster than competitors can imitate the ones a company possess today"*. Kaplan and Norton (2000) pointed out, *"the formulation of great strategies can be seen as an art"*. However, the strategic analysis, strategic choice and the implementation as described in figure (2.0), should not be an art. The best way to describe a strategy is the top down approach. Corporate executives should first review their mission statement and their core values, why their company exists, and what it believes in. With that information, managers can develop a strategic vision, or what the company wants to become. This vision should create a clear picture of the company's overall goal and the logic of how to arrive at that destination. Strategy implies the movement of an organisation from its present position to a desirable but uncertain future position. Because the organisation has never been to this future place, the pathway to it consists of a series of linked hypotheses.

**Formulation of
strategy**

In addition, Mintzberg and Lampel (1999, p.27) describe “*strategy formulation as judgement designing, intuitive visioning, and emergent learning. It is about transformation as well as perpetuation and must involve individual cognition and social interaction, cooperative as well as conflictive*”. It has to include analysing before and programming after as well as negotiating during, and all this must be in response to what may be a demanding environment.

Therefore, the effective formulation of strategy must include elements at the corporate level based on key stakeholders’ expectations. De Wit and Meyer’s (2004) different level strategies are illustrated in figure 2.3. This figure contains also Hirslanden’s companies and key stakeholder’s (section 1.7) at the different levels.

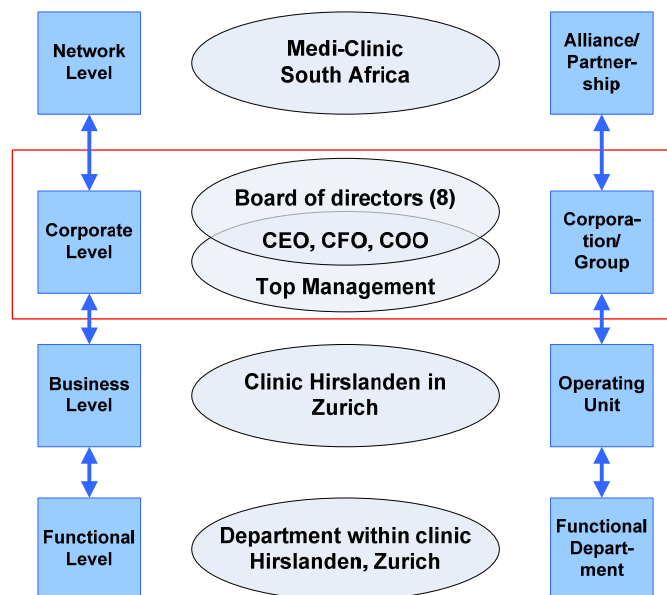


Figure 2.3: Level strategies

Ansoff (1965) introduces the corporate/ business strategy hierarchy. **Level strategies**

Corporate level strategy addresses the broad question: 'What businesses should the firm be in?' It integrates the portfolio of businesses into the organisation. According to Hambrick (1980), business level strategy deals with the question: 'How should a firm compete in a given business?' *"It integrates the functional areas, such as finance & accounting, marketing & sales, and production, and relates them to the firm's environment"* (Hofer and Schendel, 1978). Day (1984) views business strategy as the integrated actions in the pursuit of competitive advantage with functional strategies as the supportive activities essential for translating the core strategy into an effective guide for action. According to Hayes and Wheelwright (1984), *"to be effective, each functional strategy must support the competitive advantage sought, through a specific and consistent pattern of decisions"*. In other words, there is an implied underlying 'fit' or consistency between a firm's strategies at the business and functional levels. The meaning of 'strategic fit' is described in the following section.

2.1.3 Definition of strategic management

At this stage it is important to clarify what strategic management is. According to Johnson and Scholes (2002), “*strategic management is a dynamic process of strategic decision making and of aligning strategies, performance, and business results. It is a continuous activity of setting and maintaining the strategic direction of the organisation and its business, and making decisions on a day-to-day basis to deal with changing circumstances and the challenges of the business environment*”. Strategic management includes: strategic analysis, strategic choices, and strategy implementation (Johnson and Scholes, 2010; Riley 2012) as illustrated in figure 2.4 below:

Definition



Figure 2.4:
Elements of
strategic
management

This figure is part of the illustration in section (2). These three elements are described in the following sections (2.2-2.4).

According to Snow (2004), *“the predominant objective of strategic management is to promote the survival and growth of organisations with the central focus to have an ‘alignment’ between external environmental forces and internal resources and capabilities”*. The term ‘alignment’ or ‘strategic fit’ are used interchangeably in the literature. Thus the key objective of strategic management is creating ‘fit’ among a company's activities (Porter 1996, p.75). Other important elements of strategic management are ‘stretch’ and ‘strategic intent’.

Objective

Interest in exploring the concept of ‘fit’ started in the mid 1980’s. Nadler and Tushman (1980, p.40) described ‘fit’ as *“the degree to which the needs, demands, goals, objectives and/ or structure of one component are consistent with the needs, demands, goals, objectives/ or structure of another component”*. Other researcher such as Miles and Snow (1994) created the expression ‘strategic fit’ as *“a core concept of strategy formulation”*. Johnson and Scholes (2002, p.5) pointed out that ‘strategic fit’ is *“developing strategy by identifying opportunities in the business environment and adapting resources and competences so as to take advantage of these”*. According to Porter (1996, p.75), ‘strategic fit’ among many activities is fundamental not only to competitive advantage but also to the sustainability of that advantage. Positions built on systems of activities are far more sustainable than those built on individual activities; therefore, the success of a strategy depends on doing many things well, not just a few, and integrating among them.

Definition of strategic fit

Venkatraman and Camillus (1984) identify key perspectives of 'fit' based on whether the elements to be aligned are external or internal to the firm. On the one hand, external to the firm means the fit between the firm's strategy and its environment where the focus is on strategy formulation. Miles and Snow (1994, p.19) defined this external fit as '*alignment*'. On the other hand, internal to the firm describes the fit between strategy, organizational structure, and management, where the focus is on the implementation of strategy. Miles and Snow (1994, p.19) defined this internal fit as '*arrangement*'. Finally, there is also an integrated combination wherein the formulation and implementation of strategy are considered to be interactive elements. If there is a strong alignment between these elements, then a company can be described as '*tight fit*' (Miles and Snow 1994, p.19). If such companies are able to move quickly to recognize and adapt to changes in the technological, social and market environment, then they can be defined as '*early tight fit*'.

**Key
perspectives of
fit**

The second important objective of strategic management is '*stretch*'. Johnson and Scholes (2002, p.8) defined 'stretch' as the "*leverage of the resources and competences of an organization to provide competitive advantage and/ or yield new opportunities*". According to Prahalad and Hamel (1990, p.78), the product of 'stretch' can be described as a view of competition as encirclement rather than confrontation, an accelerated product-development cycle, tightly knit cross-functional teams, a focus on a few core competencies, strategic alliances with suppliers, programmes of employee involvement, and consensus. The differences between 'fit' and 'stretch' are illustrated in the following figure 2.5 (Hamel and Prahalad, 1994).

**Definition of
stretch**

Aspect of strategy: Underlying basis of strategy.	Environment-led 'fit': Strategic fit between market opportunities and organisation's resources.	Resource-led 'stretch': Leverage of resources to improve value for money.
Competitive strategy through...	'Correct' positioning. Differentiation directed by market need.	Differentiation based on competences suited to or creating market need.
How small players survive...	Find and defend a niche.	Change the 'rules of the game'.
Risk-reduction through...	Portfolio of products/ businesses.	Portfolio of competence or capabilities.
Corporate centre invests in...	Strategies of business units or subsidiaries.	Core competences or core capabilities.

Figure 2.5:
Aspects of strategy

Therefore, a company has two possibilities to provide a competitive strategy: it has to position itself correct in the market with adapting resources and competences/ capabilities for 'strategic fit' so as to take advantage, or it has to create market needs based on its own core competences. In this case, creating 'stretch' is a misfit between resources and ambitions; however, it is a very important task in strategic management to leverage resources to improve value for money.

Possibilities for a competitive strategy

The third important objective of strategic management is '*strategic intent*'. Hamel und Prahalad (2005) defined this term as a contemporary expression for strategic planning. The goal of strategic intent is to fold the future back into the present; therefore, an important question for a company is: 'What must we do differently next year to get closer to our strategic intent'. According to Hamel and Prahalad (1989, p.152), "*the traditional view of strategy focuses on the degree of fit between existing resources and current opportunities. Strategic intent creates, even more than stretch, an extreme misfit between resources and ambitions. To achieve strategic intent, a company must usually compete against larger, better-financed competitors*". Managers cannot do that simply by playing the same game better with making marginal improvements to competitors' technology and business practises. Instead, they must fundamentally change the game in ways that disadvantage incumbents. For smart competitors, the goal is not competitive imitation but competitive innovation, the art of containing competitive risks within manageable proportions.

Strategic intent

2.2 Strategic analysis

An important element of strategic management is the strategic analysis to define the strategic position of a company within the environments. According to Johnson and Scholes (2002, pp.16-18), *“the strategic position is concerned with the impact on strategy of the external environment, internal resources and capabilities, and the expectations and influence of stakeholders”*. In addition, strategic positioning means performing similar or different activities from rivals' in different ways. Referred to Porter (1994), *“strategic positions emerge from the following three distinct sources, which are not mutually exclusive and often overlap”*. First, positioning can be based on producing a subset of an industry's products or services. Porter (1996) calls this *‘variety-based positioning’* because it is based on the choice of product or service varieties rather than customer segments. Variety-based positioning makes economic sense when a company can best produce particular products or services using distinctive sets of activities. A second basis for positioning is that of serving most or all the needs of a particular group of customers. Porter (1996) defines this *‘needs-based positioning’*, which comes closer to traditional thinking about targeting a segment of customers. It arises when there are groups of customers with differing needs, and when a tailored set of activities can serve those needs best. Some groups of customers are more price sensitive than others, demand different product features, and need varying amounts of information, support, and services. The third basis for positioning is that of segmenting customers who are accessible in different ways. Although their needs are similar to those of other customers, the best configuration of activities to reach them is different. Porter (1996) calls this *‘access-based positioning’*. Access can be a function of customer geography or customer scalen - or of anything that requires a different set of activities to reach customers in the best way.

**Definition of
strategic
position**

According to Porter (1994), *“the essence of strategic positioning is to choose activities that are different from rivals”*. Strategic position has different components which are described in the sections (2.2.1 – 2.2.11). However, the positioning, once the heart of strategy, is rejected as too static for today’s dynamic markets and changing technologies. According to the new dogma, rivals can quickly copy any market position, and competitive advantage is, at best, temporary. Therefore, to reach sustainable competitive advantage a new approach must be defined with contemporary paradigms (section 2.2.2) and an effective business strategy typology (section 2.2.8).

***Essence of
strategic
positioning***

2.2.1 Ten schools of strategy formation

The ten different 'schools of thought about strategy formation', as described by Mintzberg and Lampel (1999), are illustrated along two dimensions: states of the internal process, and states of the external world. The schools scatter across the plot in figure 2.6 implying that they represent different processes:

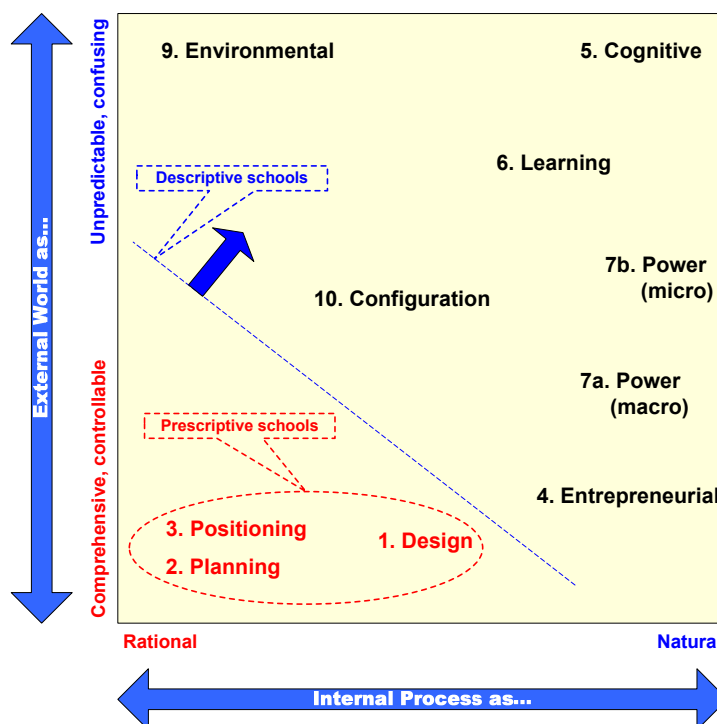


Figure 2.6:
Strategy
formation as
many processes

The first three strategy schools are part of the prescriptive strategy making:

**Prescriptive
schools**

1. 'Design school': a process of conception. Achieving fit between internal strengths and weaknesses and external threats and opportunities (SWOT analysis) as advocated by Selznick (1957), Chandler (1962), and Andrews (1987).
2. 'Planning school': a formal process. Formal, decomposable into distinctive steps, delineated by checklists and supported by techniques - especially with regard to objectives, budgets, programmes and operating plans - espoused by Ansoff (1965).

3. *'Positioning school'*: an analytical process. Generic positions selected through formalised analysis of industry situation, espoused by Porter (1980) with generic strategies, and selected through formalised analyses of industry situation (Porter's Five Forces, 1985). The literature grew in all directions to include strategic groups, value chains, game theories and other ideas, but always with the analytical bent (Hatten and Schendel, 1977, and Sun Tzu, 1971).

The other seven strategy schools are part of the descriptive strategy making - strategy making as a process:

*Descriptive
schools*

4. *'Entrepreneurial school'*: a visionary process. Unlike the design school and opposite the planning school, the entrepreneurial school rooted the strategy formation process in the 'mysteries of intuition', vague visions or broad perspectives through metaphor and different contexts (e.g. start-up, niche, private ownership, 'turnaround'). Leader controls implementation and formulates vision.
5. *'Cognitive school'*: a mental process. A more subjective interpretative or constructivist view of strategy as frames, models, maps concepts or schemas and understanding the mental processes behind them. The focus is on the cognitive biases in strategy making and on cognition as information processing, knowledge structure mapping and concept attainment.
6. *'Learning school'*: an emergent process. Strategy-as-learning includes the assumptions that strategies are emergent, can be found throughout the organisation, and formulation and implementation is intertwined. Examples include Quinn's (1980) logical incrementalism, Burgelman's (1983) notion of venturing, Mintzberg's (1978) emergent strategy and Weick's (1979) notion of retroactive sense making.

7. *'Power school'*: a process of negotiation. Strategy making is rooted in power and two separate orientations seem to exist. Micro power (7a) sees the development of strategies within organisations as essentially political – a process involving bargaining, persuasion, and confrontation among actors who divide power. Macro power (7b) views the organisation as an entity that uses its power over others and among partners in alliances, joint ventures and other network relationships to negotiate 'collective' strategies in its interest.
8. *'Culture school'*: a social process. The reverse of the power school, strategy formation as a social process rooted in culture that focuses on common interest, integration and the influence of culture that discourages significant strategic change.
9. *'Environmental school'*: a reactive process. This approach illuminates the demands of the environment and the severe limits to strategic choice. It includes 'contingency theory' that considers which responses are appropriate for particular environmental conditions and population ecology.
10. *'Configuration school'*: a process of transformation. The more extensive and integrative literature and practise, where the organisation is seen as configuration – coherent clusters of characteristics and behaviours – and integrates the claims of the other schools.

Based on these schools of thought, different paradigm of strategy were investigated.

2.2.2 Paradigms of strategy

Mainly the following five paradigms of strategy are described in the strategic management theory:

1. '*Competitive forces*': This paradigm was primarily initiated by Mason (1949) and Bain (1959), and enhanced by Michael Porter (1980) with the Five Forces Model. The focal concerns are the industry structure and competitor positioning, and emphasises the actions a firm can take to create defensible positions against competitive forces. Mintzberg and Lampel (1999, p.23) described the competitive forces as an analytical process and part of the positioning school; therefore, it is a more prescriptive approach (section 2.2.1).
Competitive forces
2. '*Strategic conflict*': This approach (Shapiro et al, 1989) is closely related to the first in its focus on product market imperfections, entry deterrence, and strategic interaction. It uses the tools of game theory and thus implicitly views competitive outcomes as a function of the effectiveness with which firms keep their rivals off balance through strategic investments, pricing strategies, signalling, and the control of information.
Strategic conflict
3. '*Resource-based view*' (RBV): It emerges when scholars and practitioners identified the pressing need for comparative analysis of firms based on their resources. "*It emphasises firm-specific capabilities and assets and the existence of isolating mechanisms as the fundamental determinants of firm performance*" (Penrose, 1959; Chandler, 1966; Teece, 1980; Rumelt, 1984; Wernerfelt, 1984). According to Mintzberg and Lampel (1999, p.23), "*the RBV is a hybrid from the cultural and learning school*" as described in section (2.1.3). It is more descriptive and research-focused. Leadership, as favoured in the design school, is not a central concern to RBV theorists. Instead "*the RBV's focus is on competencies rooted in the essence of an organisation, namely its culture*" (Barney, 1986).
Resource-based view (RBV)

4. 'Dynamic capabilities': It is an efficiency-based approach which exploiting existing internal and external firm specific competences to address changing environments. "Rudimentary efforts are made to identify the dimensions of firm-specific capabilities that can be sources of advantage, and to explain how combinations of competences and resources can be developed, deployed, and protected" (Schumpeter, 1942; Nelson and Winter, 1982; and Hamel and Prahalad, 1990). Mintzberg and Lampel (1999, p.23) see their notions of capabilities, core competence, stretch and strategic intent, and strong leadership to encourage continuous strategic learning, as a hybrid from the design and learning school. In contrast to the RBV, it is more prescriptive and practitioner-focused.
5. 'New Growth platform': The new growth platform framework, proposed by Laurie et al. (2006), is an option for achieving growth. A platform is defined as *"a set of subsystems and interfaces that form a common structure from which a stream of related products can be purposefully developed, produced and delivered"*.

Dynamic capabilities

These paradigms are described more precisely in the following sections (2.2.3 to 2.2.7).

2.2.3 Competitive forces

According to Teece et al (1997, p.511), “the dominant paradigm in strategy at least during the 1980s was the competitive forces approach”. Pioneered by Porter (1980), this approach - rooted in the structure-conduct-performance paradigm of industrial organisation (Mason, 1949; Bain, 1959) - emphasises the actions a firm can take to create defensible positions against competitive forces which are illustrated in figure 2.7 below (Reibstein, 2006):

Competitive forces

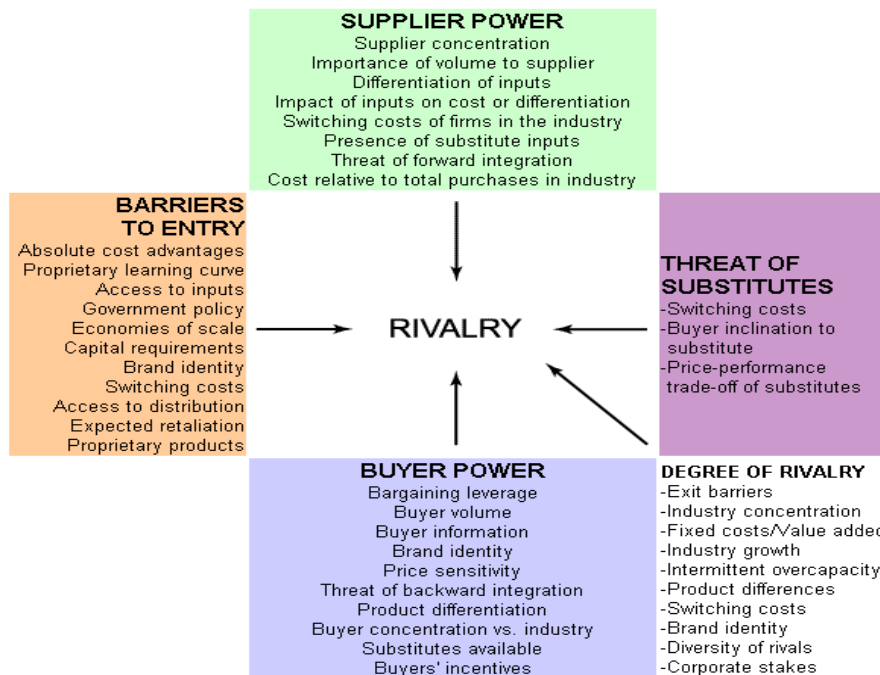


Figure 2.7:
Porter's Five Forces

Competitive forces theories have addressed the structure of industry and its effect on strategy and financial performance. According to Porter (1980), the key attributes of an industry's structure, that are thought to have an impact on firms returns, include: the existence and value of barriers to entry (Bain, 1956), the number and relative size of firms, the existence and degree of product differentiation in the industry, and the overall elasticity of demand for the industry (Barney 1986, p.792).

Key attributes

The approach can be used to help the firm finding a position in an industry from which it can best defend itself against competitive forces or influence them in its favour (Porter 1980, p.4). This five forces framework provides a systematic way of thinking about how competitive forces work at the industry level and how these forces determine the profitability of different industries and industry segments. In addition, Porter contends that a central question in a firm's competitive strategy is its relative position in the industry structure.

Positioning

2.2.4 Strategic conflict

The strategic conflict approach as strategy paradigm (Shapiro, 1989) has its intellectual roots mainly in studies of Machiavelli, Schelling, and Shapiro. It is closely related to Porter's Five Forces in its focus on product market imperfections, entry deterrence, and strategic interaction. *"The strategic conflict approach uses the tools of game theory and thus implicitly views competitive outcomes as a function of the effectiveness with which firms keep their rivals off balance through strategic investments, pricing strategies, signalling, and the control of information"*. The main thrust of work in this tradition is to reveal how a firm can influence the behaviour and actions of rival firms and thus the market environment. Examples of such moves are investment in capacity (Dixit, 1980), research and development (Gilbert and Newberry, 1982), and advertising (Schmalensee, 1983). To be effective, these strategic moves require irreversible commitments. The moves in question will have no effect if they can be costless undone. A key idea is that by manipulating the market environment, a firm may be able to increase its profits.

**Strategic
conflict**

According to Porter (1980, p.513), both the competitive forces and the strategic conflict approaches appear to share the view that profits flow from privileged market positions. They unfortunately ignore competition as a process involving the development, accumulation, combination, and protection of unique skills and capabilities. Therefore, the following sections describe new paradigms in more dynamic environments with changing technologies that can assist practitioners in the building of long-run advantage and competitive flexibility.

Market position

2.2.5 Resource-based view (RBV)

The RBV of the firm, as a further strategy paradigm, has emerged in recent years as a popular theory of competitive advantage (Fahy, 2000). According to Wang and Ahmet (2007, p.513), it has its roots in a much older discussion of corporate strengths and weaknesses. Thus it is for organisations important to try to determine what they are and to distinguish one from the other. Until the late 1980's, the RBV was characterised by a rather fragmented process of development. The earliest acknowledgment of the potential importance of firm-specific resources is to be found in the work of Robinson (1933) which was subsequently developed by Penrose (1959).

*Resource-based
view (RBV)*

The term 'RBV' was originally coined by Wernerfelt (1984). He noted that *"the capability of an organisation is its demonstrated and potential ability to accomplish against the opposition of circumstance or competition, whatever it sets out to do"*. In addition, the RBV suggests that firms build enduring advantages only through effectiveness and efficiency, and as developments in organisational economics and the study of technological and organisational change become applied to strategy questions.

RBV; definition

According to Wang and Ahmet (2007, pp.513-514), *“an essential features is that the RBV sees firms with superior systems and structures being profitable not because they engage in strategic investments as the ‘strategic conflict’ approach”*. The RBV has markedly lower costs, or offer markedly higher quality or product performance. Thus the RBV puts both vertical integration and diversification into a new strategic light. Both can be viewed as ways of capturing rents on scarce, firm-specific assets whose services are difficult to sell in intermediate markets (Penrose, 1959, Williamson, 1975, Teece, 1982-1986; and Wernerfelt, 1984). Empirical work on the relationship between performance and diversification by Wernerfelt and Montgomery (1988) provides evidence for this proposition; therefore, this approach focuses on strategies for exploiting existing firm-specific assets. In addition to these features, the important thrust of strategy is ‘where’ the company competes, the ‘how’ is relatively unimportant. According to Stalker et al. (1992, p.62), *“today in a dynamic environment the essence of strategy is not just the structure of a company’s products and markets but the dynamics of its behaviour”*. Behaviour includes how companies identify, develop and implement capabilities and core competencies. According to Amit and Shoemaker (1993), *“the resource-based view must begin to consider the contexts within which various kinds of resources will have the best influence on performance”* (Miller and Shamsie 1996, p.520). It appears that the process of resource allocation is important. Resource allocation involves deciding what resources to allocate, as well as the process of combining/ using resources to support core competencies.

**Essential
features of the
RBV**

One of the principal insights of the RBV is that not all resources are of equal importance or possess the potential to be a source of sustainable competitive advantage. Barney (1991) proposes that *“advantage-creating resources must meet the following four conditions: value, rareness, inimitability, and non-substitutability”*. Grant (1991) argues that *“levels of durability, transparency, transferability, and replicability are important determinants”*. Collis and Montgomery (1995) suggest that they must meet the following five tests: inimitability, durability, appropriability, substitutability, and competitive superiority. In addition, Amit and Schoemaker (1993) go even further, producing a list of the following eight criteria: complementarity, scarcity, low tradability, inimitability, limited substitutability, appropriability, durability, and overlap with strategic industry factors.

**Characteristics
of advantage-
generating
resource**

At this stage it is appropriate to define SCA. Kay (1993) defined *“competitive advantage as an advantage one firm has over a competitor of group of competitors in a given market, strategic group or industry”*. Advantages are: superior production system, lower level of wages and salaries, and ability to deliver superior customer service; however, the important advantages are those in which customers place some level of value (Coyne, 1986). Another important distinction in this context is the notion of Kay (1993) who defined *“competitive advantage as an edge one firm has over a competitor or group of competitors in a given market”*. Competitive advantage is derived from those factors that are at the root of the firm’s stakeholders’ perception of superior value (Coyne, 1986). Invariably, these factors are rooted in the firm’s ability to mobilise and exploit its strategic intangible assets. In addition, the terms sustained advantage (Barney, 1991) and sustainable advantage (Grant, 1991) both appears in the literature and can be interpreted in the same way. According to McGrath et al. (1995), *“sustainability does not refer to a particular time period, nor does it imply that advantages persist indefinitely but rather depends on the possibility and extent of competitive duplication”*.

**Sustainable
competitive
advantage
(SCA)**

According to the Swiss Federal Office of Public Health (2012), more than 70% of all expenses in hospitals are salaries. Thus it is important to treat employees as the greatest resources. They are the glue that holds the company together. Referring to Teece and Grant (1991), a “firm’s resource base includes all means at the disposal of the organisation for the performance of value-adding activities” (De Wit und Meyer 2010, p.113). Other authors prefer the term ‘assets’, to emphasize that the resources belong to the company (Diericks and Cool, 1989; Itami, 1987). Resources are important to reach sustainable competitive advantage; however, resources in and of themselves do not confer a sustainable competitive advantage. As Kay (1993) puts in, “a resource only becomes a competitive advantage when it is applied to an industry or brought to a market”.

Emphasis of the RBV

Therefore, the emphasis of this case study is on intangible resources as illustrated in figure 2.8 (De Wit and Meyer, 2010):

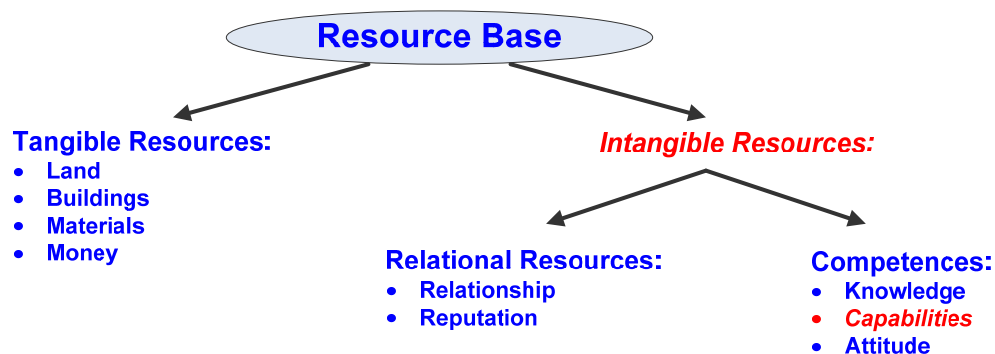


**Figure 2.8;
Resource base**

Resources comprise the following two distinct sub-groups: tangible resources, and intangible resources. In general, *“tangible resources need to be purchased, while intangibles need to be developed”* (De Wit und Meyer 2010, p.113).

Resources

Tangible resources can be referred to as the *‘hardware’* of the organisation. They are all means available to the firm that can physically be observed (touched), such as land, plant, buildings, equipment, machines, materials, money, and other capital goods and stocks, debtors and bank deposits. *“Tangible resources refer to the fixed and current assets of an organisation which have a fixed long-run capacity”* (Wernerfelt, 1989). They have the properties of ownership and their value is relatively easy to measure (Hall, 1989). An important fact is that most private hospitals have a matchable level of tangible resources. They are basically located in cities with a similar standard of: buildings, infrastructure, medical equipment, and capex (capital expenditure).

Tangible resources

Intangible resources are the *‘software’* of the organisation and cannot be touched, but largely carried within the people in the organisation. *“They include intellectual property such as trademarks and patents as well as brand and company reputation, networks and databases”* (Hall, 1992, and Williams, 1992). Within intangible resources they are a distinction between relational resources and competences. On the one hand, *“relational resources are all of the means available to the firm derived from the firm’s interaction within its environment”* (Lowendahl, 1997). Competences, on the other hand, refer to the firm’s fitness to perform in a particular field. A firm has a competence if it has the knowledge, capabilities, and attitude needed to successfully operate in a specific area.

Intangible resources

Private hospitals are different due to their intangible resources; however, the relational resources are often comparable due to the same relationship to the local government, to suppliers, and physicians. Similarly, because of the know-how transfer between hospitals in an area of specialisation such as cardiology or orthopaedics, the level of knowledge is similar. Attending chief physicians use to perform surgeries in several hospitals with the same attitude towards patients and reputation. Therefore, the key differences are capabilities; therefore, it will be the emphasis of this research.

Capabilities

According to Teece, Pisano, and Shuen (1987), “capabilities relates to the organisation’s ability to adapt, integrate, and reconfigure internal and external organisational skills, resources, and functional individual competences to match the requirements of a changing environment”. The different levels of capabilities are illustrated in figure 2.9 (Wang and Ahmet, 2007):

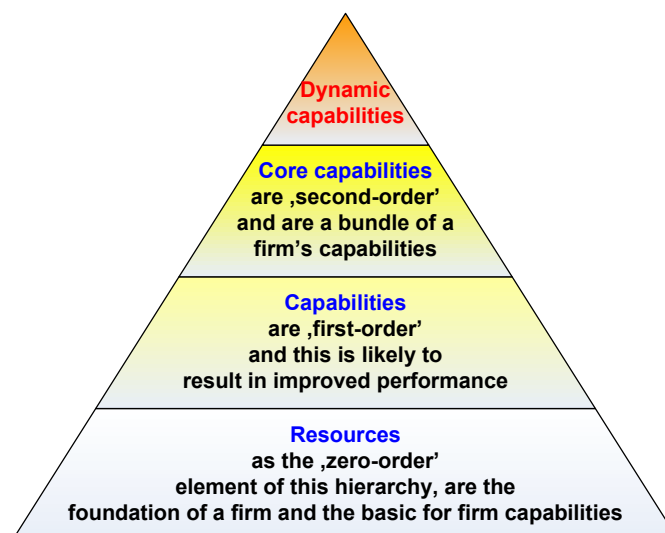


Figure 2.9;
Capabilities and
bundles of
capabilities

Resources are the 'zero-order' element of the hierarchy and the basic for companies' capabilities. The 'first-order' are capabilities, or just 'simple capabilities' (section 2.3.4). Bundles of such simple capabilities are 'second-order' and can be labelled as 'core capabilities' or 'dynamic capabilities' (section 2.3.5). Tovstiga (2010, p.90) argues that core capabilities can be a potential for competitive advantage, and dynamic capabilities can be a strategic option what a firm can do and what it might do in a changing environment.

*Level of
capabilities*

2.2.6 Dynamic capabilities approach

The original definition of dynamic capabilities, as a further strategy paradigm, referred to *“the firm’s ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments”* (Teece, Pisano, and Shuen 1997, p.516). In this definition, organisational competencies denoted managerial and organisational processes or ‘patterns of current practise and learning’, through which *“firm-specific assets are assembled in integrated clusters spanning individuals and groups”* (Teece, Pisano, and Shuen 1997, p.516). “By altering the organisation’s resource base, dynamic capabilities could then open new strategic alternatives or ‘paths’ for the firm” (Helfat, 1997). Dynamic capabilities thus reflect an organisation's *“ability to achieve new and innovative forms of competitive advantage given path dependencies and market positions”* (Barton, 1992).

**Dynamic capabilities;
definition**

According to Teece et al. (1997, pp.510-515:), *“rudimentary efforts are made to identify the dimensions of firm-specific capabilities that can be sources of advantage, and to explain how combinations of competences and resources can be developed, deployed, and protected”*. The dynamic capabilities approach seeks to provide a coherent framework which can both integrate existing conceptual and empirical knowledge, and facilitate prescription. In doing so, it builds upon the theoretical foundations provided by Schumpeter (1934, 1942), Penrose (1959), Williamson (1975, 1985), Barney (1986), Nelson and Winter (1982), Teece (1988), Prahalad and Hamel (1990), Teece (1976, 1986a, 1986b, 1988), and in Hayes, Wheelwright, and Clark (1988).

**Coherent
framework**

This 'dynamic capabilities' approach contains the following components *Components*
(Teece et al. 1997, p.515):

- The term 'dynamic' refers to the capacity to renew competences so as to achieve congruence with the changing business environment.
- The term 'capabilities' emphasises the key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organisational skills, resources, and functional competences to match the requirements of a changing environment.

However, it is not described how new trends in a changing environment can be linked to capabilities. A contemporary framework: the new growth platform, is thus described in section (2.2.7) which cope with changes. *NGP*

2.2.7 New Growth Platforms (NGP)

The new growth platform framework proposed by Laurie et al. (2006), as a further strategy paradigm, is an option for achieving growth. A platform is defined as “a set of subsystems and interfaces that form a common structure from which a stream of related products can be purposefully developed, produced and delivered”. New growth platforms challenge conventional management wisdom since they differ in their approach to innovation when compared with traditional service innovation approaches. It is first and foremost a strategic approach that focuses on building families of products, services, and businesses – that is, platforms rather than individual offerings – that capture and deliver a differentiated value offering, that enable the organisation to achieve competitive advantage in its markets. Moreover, it inherently encompasses a dynamic capability component that focuses on extending existing capabilities into multiple new domains. A NGP consists of three key components as shown in figure 2.10 below:

NGP; definition

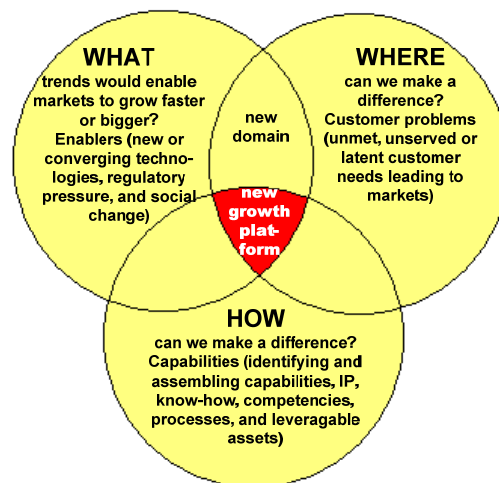


Figure 2.10: New growth platform framework

The first component addresses the ‘*what*’ question and describes new market opportunities that emerge as result of changes in the competitive environment. The second component answers the ‘*where*’ question and gives a clear understanding of how stakeholders’ needs are changing in the evolving competitive environment. Finally the third component refers to the ‘*how*’ question and clarify a unified understanding on the part of the company of how it can make a difference in the emerging competitive environment. A similar paradigm as the NGP is described in section (2.3.7).

The ‘Strategic Sweet Spot’, as a further strategy paradigm, is a variation on the new growth platform framework (NGP). This approach includes a consideration of the competitors’ offerings in delineating the unique value creation opportunity represented by the NGP. According to Collis and Rukstad (2008), “*the SSS of a company is where it meets key customers’ need in a way that rivals cannot, given the competitive context of the company*”. They identified this unique space as shown in figure 2.11 below:

SSS; definition

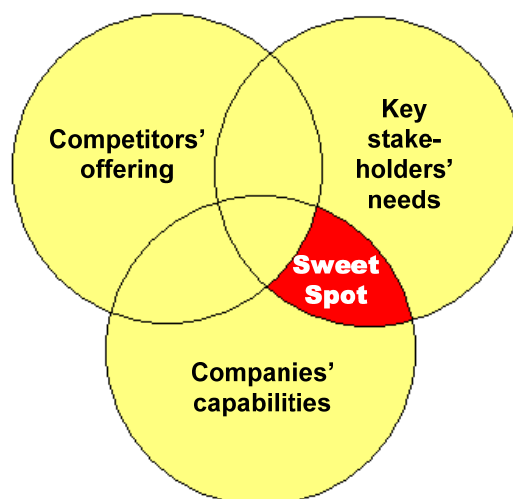


Figure 2.11:
Strategic Sweet Spot

The SSS is positioned where the prospector company meet the key stakeholders' needs better than competitors.

All these paradigm of strategy, as described in previous sections (2.2.2 – 2.2.6), help the company to strengthen the strategic position through the choice of activities that are different from rivals'. However, this is just the starting point in an extensive strategy process. The definition of a business strategy typology is also very important for a company on the way to reach sustainable competitive advantage.

*Business
strategy
typologies*

2.2.8 Business strategy typologies

This section describes briefly the most important business strategy typologies over the last years. According to Hambrick (2003, p.115), two opposing camps dominated scholarly discourse about business-level strategy, but neither approach was generating much intellectual or practical progress. On one side were the '*situationalists*', who saw the design and implementation of business-level strategy as a situational art. No two strategic settings are the same, these folks would say, and therefore strategies cannot be described in any general way. Such a philosophy, of course, spelled trouble for scholars who were interested in generalisability, theory, and prediction, and it was of little use for managers who wanted to learn from the successes and failures of other firms. On the other side were the '*universalists*'. Members of this camp believed there were universal laws of strategy such as market share, superior product quality, excellent customers' satisfaction, and so on. While the situationalists refused generalisation, the universalists proposed these typologies (figure 2.12):

Author:	Typology for strategy:	Description:
Ansoff and Steward (1967)	- First-to-market - Follow-the-leader - Applications engineering - Me-too	- Risky but potentially rewarding strategy. Features: research-intensive, high R&D investment. - Strategy for firms which uses many interfunctional techniques, and responds rapidly to change. - Strategy requires: substantial product design and engineering resources, efficiency-oriented production. - Strategy with: no research or development, ability to copy new designs quickly, and strong price.
Mintzberg (1973)	- Entrepreneurial - Adaptive - Planning mode	- Opportunity seeking, founding CEO, bold decisions, growth oriented, and high uncertainty. - Reactive incremental goal setting, relative certainty in decision-making. - Analysis dominates decision, integrated strategies, placid environment.
Utterback and Abernathy (1975)	- Performance maximising - Sales maximising - Cost maximising	- Uncertain environment, offers unique products, searches for new opportunities. - Standardised products, more stable environment, high level of competition, some product differentiation. - Standard product, extreme price competition, high efficiency, low innovation, sophisticated control techniques.

Author:	Typology for strategy:	Description:
Miles and Snow (1978)	- Defender - Prospector - Analyser - Reactor	- Stable environment, limited product range, competes through low cost or high quality, efficiency paramount, centralised structure. - Always seeking new product and market opportunities, uncertain environment, and flexible structure. - Hybrid. Core of traditional products, enters new market after viability established, matrix structure. - Lacks coherent strategy, structure inappropriate to purpose, misses opportunities, unsuccessful.
Porter (1980)	- Cost leadership - Differentiation - Focused player - Stuck in the middle	- Low price, high market share focus, standardised product, economies of scale, tight cost control. - Product uniqueness brings brand loyalty emphasis on marketing and research. - Focus on defined buyer group, product line or geographic market, niche strategy. - A firm that engages in each generic strategy, but fails to achieve any of them, is 'stuck in the middle'. It possesses no competitive advantage.
Mintzberg (1988)	- Price - Image - Design - Quality - Support - Undifferentiated strategy	- A competitive advantage must be based on prices below average market prices. - Differentiation by image refers to carving out a psychological niche in the minds of buyers. - Differentiation by design requires the enhancement of product features and design configuration through R&D and product development. - The strategy of differentiation by quality requires delivering higher reliability and performance in a product for a comparable price. - The strategy of differentiation by support implies that a firm may consciously promote a cluster of products around its core products to fulfil the complete needs of customers in a segment. - A firm pursuing an undifferentiating strategy may have no basis for differentiation or may deliberately follow a copycat strategy.
Lynch and Kordis (1990)	- Sharks - Carps - Dolphins	- The perception is that they will not be the losers; therefore, they such firms move in for striving to get as much they can in every case, regardless of the cost. - They believe that their optimal survival strategy is to be appreciated or loved. - It is the adaptive learning behaviour, as well as the creative pursuit of objectives, which leads to success.

Author:	Typology for strategy:	Description:
Treacy and Wiersema (1993)	- Operational excellence - Product leadership - Customer intimacy	- Superb operations and execution often by providing a reasonable quality at a very low price. The focus is on efficiency, streamlining operations, supply chain management, no-frills, volume counts. - Very strong in innovation and brand marketing, operating in dynamic markets. The focus is on development, innovation, design, time-to-market, high margins in a short timeframe. - Excel in customer attention and customer service. Tailor their products and services to individual or almost individual customers.
McKinsey (1999)	- Shapers - Adapters - Reserve-the-right-to-play	- Shapers develop strategies designed to drive industry structure and conduct in completely new directions. Their strategies are about creating new opportunities in a market, often generating the highest rewards and risks. - Adapters take the current industry structure and its future evolution as givens, and they react to the opportunities offered by the market. - Those that choose to reserve the right to play make incremental investments today that will help them shape the future of the industry later should they choose to do so. In essence, they are buying time, information, and positions that will enable them to re-optimize in the future.
Danny Miller (1990)	- Craftsman - Builder - Pioneer - Salesman	High-performance 'gestalts' (Miles and Snow, 2003).
Moss Kanter (2001)	- Pacesetters - Laggards	- Companies those are faster and earlier than their competitors to move core business processes. - Companies that are slower to move, behind the competitors, and dissatisfied with their progress.
Parasuraman and Colby (2002)	- Explorers - Pioneers - Sceptics - Paranoids - Laggards	- They have strong motivations to adopt as first new technologies. - They are highly motivated to adopt technology but at the same time are inhibited by a high level of insecurity and discomfort. - They have few motivations but also few inhibitions to adopt new technologies. - They believe in technology's benefits but are constrained by a high level of insecurity and discomfort. - They have little motivation and a high level of resistance to using new technologies.

Doy and Glick (1994) have criticised the universalistic authors who developed such simplistic classification systems instead of theories. They argue that typologies are complex theoretical statements that should be subjected to quantitative modelling and empirical testing. In addition, McCall (1999) stressed that, other than Miles and Snow's (1978) and Porter's (1980) typologies; there has been little empirical validation of other typologies. Therefore, these two typologies, which are the most widely used and heavily researched, are described in the following three sections.

2.2.9 The Miles & Snow typology

As described in section (2.1.3), *“a key premise in the normative literature is that a strategy should favourably align the business with its environment”* (Andrews, 1971; Hofer & Schendel, 1978; Porter, 1980). Therefore, strategy is an adaptation mechanism. Miles and Snow (1978) take a different approach at the business-level. They view strategy as relatively immutable and argued that strategy constrains the organisation in its responses to the environment. After a series of field studies in different industries, Miles and Snow (1978) discovered consistent patterns in firms' product-market strategies, which led them to propose that successful organisations develop relatively enduring patterns of strategic behaviour that actively co-align the organisation with its environment. Numerous researcher such as Hambrick (1981), James and Hatten (1995), and Segev (1987), have found strong and consistent support for the basic validity of the typology. In a wide array of settings, including hospitals, colleges, banking, industrial products, and life insurance, researchers have found strong and consistent support for the basic validity of the typology. Therefore, this typology is perhaps the most enduring and the most scrutinised. According to Zahra and Pearce (1990, p.751), this typology of strategic orientation is based on three premises. First, over a period successful organisations developed a systematic, identifiable approach to environmental adaptation: the *‘adaptive circle’*. Second, four identifiable strategic orientations exist within an industry: defender, prospector, analyser, and reactor. Third, defender, prospector, and analyser strategies, if properly implemented, can lead to effective performance in any industry.

Description

Miles and Snow (1978, p.27) presented the ‘*adaptive cycle*’ that represents “a general physiology of organisation behaviour and provides a means of conceptualising the major elements of adaptations and of visualising the relationships among them”. The cycle embodies the approaches taken by businesses with differing perspectives on the competitive environment to address three types of problems. First, ‘*entrepreneurial problems*’ that deal with the definition of market-product domain. Second, ‘*engineering problems*’ set focusing on the choice of technologies and processes to be used for production and distribution, and thus involving the organisation’s technical system. Third, ‘*administrative problems*’ set involving the selection, rationalisation, and development of organisational structure and policy processes. It is arising from structure and process issues. This is illustrated in figure 2.10 (Miles and Snow 2003, p.14):

Adaptation process

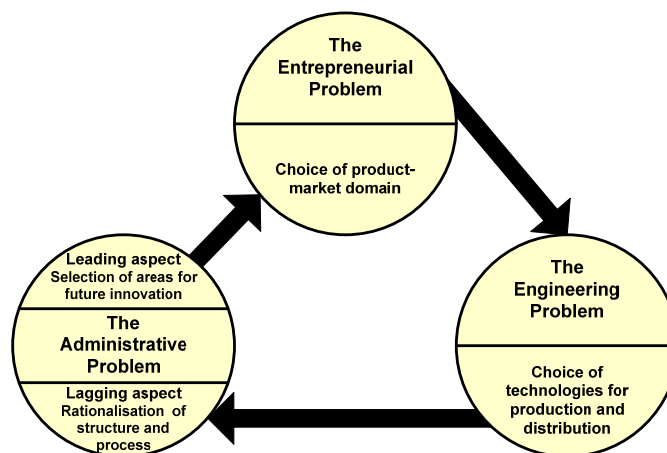


Figure 2.13: The Adaptation process

This adaptation process is based on Chandler's (1962) demonstration of the interdependence between strategy and structure, and Thompson's (1967) description of the relationship between technology and administrative processes. This cycle also linked the strategic choice perspective of Child (1972) with Weick's (1969) notion that organisations enact their environments by paying attention to some things and not others. The main objective of the adaptation cycle is to develop an understanding of the process by which organisations continually adjust to their environments. It helps to explain the emergence and stability of the four identifiable strategic orientations which exist within an industry as described in figure 2.14 (Miles, Snow, Meyer, and Coleman, 1978):

Orientation:	Dominant objectives:	Preferred strategies:	Environment:	Organisational characteristics:
Defender	Desire for a secure and stable niche in market.	Hold current market; stabilise; controlling price and service to defend current business; specialisation; marketing emphasis; tendency to vertical integration.	Stable	Tight control; centralised; production efficiency; low overhead; extensive use of formal planning.
Prospector	Evaluation of new product and market opportunities.	Innovate; find new market opportunities; growth through product and market development; take risks; constant monitoring of environmental change.	Dynamic, growing	Emphasis on flexibility; decentralised control; use of ad hoc measurements.
Analyser	Desire to match new ventures to present shape of business.	Maintain current market plus moderate innovation; stabilise; steady growth through market penetration; exploitation of applied research; followers in the market.	Moderate change	Tight control and flexibility; creativity; co-ordinating roles between functions; intensive planning.
Reactor	No clear objectives.	No clear strategy; react to specific conditions; drift.	Any condition	No clear organisational approach; depends on current needs.

The fundamental difference among these types is the rate of change in the organisational domain. Defenders are businesses that prosper through stability, reliability, and efficiency. They are engaged in little or no product/market development and stress efficiency of operations. Prospectors constitute the other end of the continuum; they constantly seek new opportunities and stress product development. Analysers exhibit characteristics of both defenders and prospectors. They prosper by purposely being more innovative in their product-market initiatives than defenders, but doing so more cautiously and selectively than prospectors. Finally, reactors vacillate in their approach to their environment, do not follow a conscious strategy, and thus are viewed as a dysfunctional organisational type.

Differences

Miles and Snow (1978) suggested that defender, prospector, and analyser strategies, if properly implemented, can lead to high performance in any industry. The reactors lack a coherent strategy; therefore, the typology proposes that the other types will outperform the no adaptive reactors.

Strategy implementation

2.2.10 Porter's competitive strategy

Shortly after Miles and Snow (1978) launched their strategy typology, Michael Porter (1980) presented his also very widespread set of 'generic strategies' as illustrated in figure 2.15:

Orientation:	Dominant objectives:	Preferred strategies:	Environment:	Organisational characteristics:
Low-cost leadership	Increase market share.	Firm sets out to become the low-cost producer in its industry. Close supervision and routinisation of tasks.	Stable	Efficiency with strong centralisation and tight cost control; standard operating procedures; limited empowerment of staff.
Differentiation	Evaluation of new product and market opportunities.	Attempt to be unique in its industry and to distinguish organisation's product or service from others in the industry.	Complex; dynamic	Organisational learning; research; customer intimacy; innovation and risk-taking.
Focus	Desire for a secure and stable niche in market.	Concentrate on specific market, region or group of customers. In cost-focus a firm seeks a cost advantage in its target segment. In differentiation-focus a firm seeks differentiation in its target segment.	Any condition	Organisational learning; research; customer intimacy; innovation and risk-taking; Tight control and flexibility; creativity; co-ordinating roles between functions; intensive planning.
Stuck in the middle, or muddle	No clear objectives.	No clear strategy; react to specific conditions; drift.	Any condition	No clear organisational approach; depends on current needs.

According to Porter (1980), “a low-cost strategy is appropriate if functional demands such as pursuing economies of scale, and reducing, controlling, and minimising costs are important for the survival of the organisation”. Conversely, “a differentiation strategy is appropriate if the functional demands imposed upon the organisation require the development of a unique product or service through heavy investments in research and development, product/ service design, and marketing”. Alternatively, firms may pursue a ‘hybrid’ - or best-cost - strategy to satisfy the functional demands of both low cost and differentiation. This was an option later not ruled out by Porter and others. In addition, there is the ‘focus strategy’. It selects a segment or group of segments in the industry and tailors its strategy to serving them to the exclusion of others. By optimising its strategy for the target segments, the focuser seeks to achieve a competitive advantage in its target segments even though it neither does nor possess a competitive advantage overall. This strategy has two variants: cost focus and differentiation focus. In cost focus a firm seeks a cost advantage in its target segment, while in differentiation focus a firm seeks differentiation in its target segment.

Orientations

Finally, Porter (1980) considered organisations with no coherent strategy, or engaged in each generic strategy but fails to achieve any of them, as being ‘stuck in the middle’ or ‘muddle’. This strategic position is usually a recipe for below-average performance. All these orientations can be illustrated with the strategy clock (Johnson and Scholes 2002, p.320) as illustrated in figure 2.16:

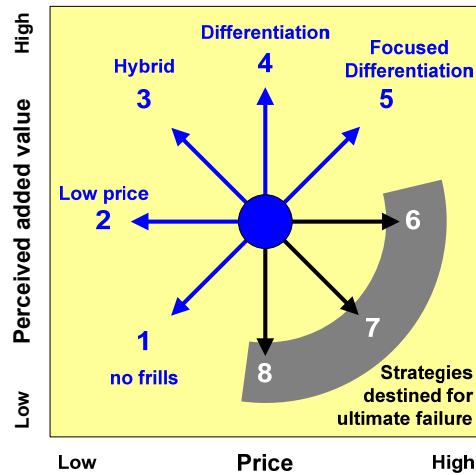


Figure 2.16:
Strategy clock

According to Johnson and Scholes (2002, p.319), this “strategy clock is the basis on which a business unit might achieve competitive advantage in its market”. It demonstrates that low-cost and differentiation strategies can lead to an above-average performance in the long run and thus to sustainable competitive advantage. The meaning of performance is described in the section (2.6). One of the tenets that underlie the choice of competitive strategy is that a well-conceived strategy positions a firm to confront the competitive forces present in the environment.

Competitive
strategy

2.2.11 Comparison: Miles & Snow, and Porter

This section is a comparison of these successful typologies as described in the sections (2.2.9 and 2.2.10). According to Ketchen (2003, p.100), both the Miles and Snow's orientations and Porter's generic strategies attempted to label and describe the common forms of competitive behaviour found in most industries. The following figure 2.17 is a comparison, based on the theories from Miles and Snow (1978), Porter (1980), Marlin, Huonker, and Sun (2002), and de Witt and Meyer (2004, p.329):

Introduction

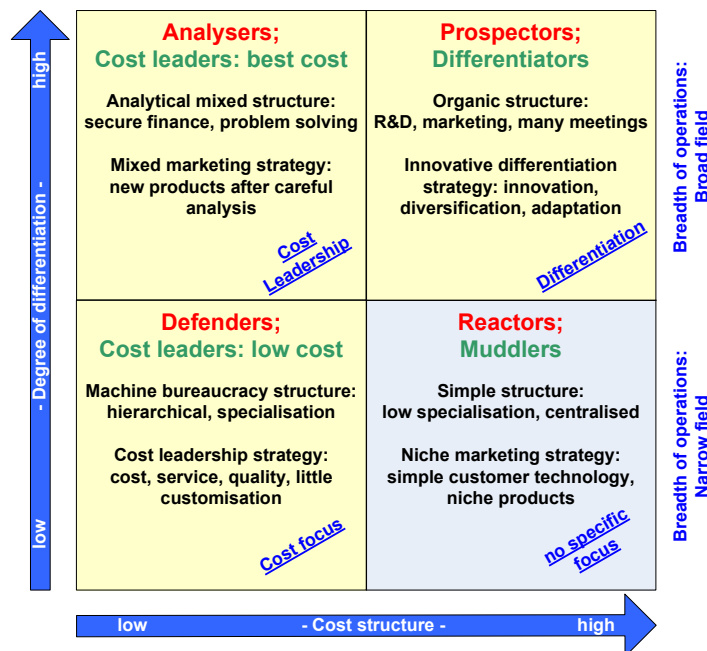


Figure 2.17:
comparison of
different
strategic
orientations

It is possible to put the different strategic orientations in this grid; however, these typologies are different. According to Ketchen (2003), they are thus more or less valuable depending on what a company asking them to do. Porter's has probably found more use among economists, and Miles and Snow's approach among organisational analysts because it makes more predictions. On the one hand, McCall (1999) described that Porter's (1980) generic strategies have been faulted by a number of factors such as ignoring marketing considerations and a bias towards big business, which limits generalisability. Other writers claim that Porter's (1980) generic strategies are also mostly defined in terms of competitive actions actually undertaken by business instead of the kinds of action intended by management. This can be a major limitation because the differences between intended and realised strategies (Mintzberg, 1987) can be due to ineffective implementation of the intended strategy. On the other hand, Miles and Snow's (1978) typology overcomes the limitations of Porter's (1980) generic strategies. It deals with a firm's intended rate of product-market change and thus, provides a format for studying successful implementation of different strategies. This is the main reason to use the Miles and Snow's approach for the classification of the hospitals in this study.

Comparison

2.3 Strategic choice

Another important element of strategic management is the strategic choice. According to Miles and Snow (2003, p.20), *“probably the most accurate way of conceptualisation the alignment process, between an organisation and their environments, is the ‘strategic-choice’ approach”* (Child, 1972). This approach argues that organisation structure is only partially preordained by environmental conditions, and it places heavy emphasis on the role of the top decision makers who serve as the primary link between the organisation and its environment. Such a strategic-choice approach has several important features as described by Miles and Snow (2003, pp.20-21). First, key stakeholders (section 1.7) are decision makers whose influence on the system is greatest. This group has problem-finding as well as problem-solving responsibilities. Second, such key stakeholders enact or create the organisation’s relevant environment (section 2.1.1). Thus the organisation responds largely to what its management ‘perceives’. Third, the key stakeholders must provide ‘scanning activities’ of those environmental elements deemed most critical to the organisation. Their have the choice of being reactive or proactive with respect to the information their gather. Forth, the key stakeholders’ adaptive decisions are constrained by the organisation’s past and current strategy, structure, and performance. Existing ‘constraints’ can be relaxed or removed by major alterations of strategy; however, any new direction chosen will have their own set of constraints. Fifth, the key stakeholders have to decide which ‘paradigm of strategy’ and ibusiness strategy typology’ are appropriate to realise the desired strategy. Finally, the key stakeholders are responsible for partitioning the environment and assigning their components to various organisational subunits. Therefore, *“strategic choices involve understanding the underlying bases for future strategy at both the corporate and business unit levels and the options for developing strategy in terms of both the directions and methods of development”* (Johnson and Scholes 2002, p.19).

Strategic-choice approach

2.4 Strategy implementation

The final important element of strategic management is to implement the intended strategy. Referring to Johnson and Scholes (2002, p.21), “*strategy into action is concerned with ensuring that strategies are working in practise*”; however, it is essential to choose the appropriate strategy.

Definition

As described in section (2.3.2), the dominant paradigm in strategy at least during the 1980s was the competitive forces approach (Porter, 1980). This ‘*prescriptive school approach*’ (section 2.1.3) must be used at the level of strategic business units and not at the level of the whole organisation Johnson and Scholes (2002, p.11). However, this model was based on the economic situation in a relatively stable market, predictable developments, and not as rapid changes in technology as today. Therefore, this model does not address today's dynamic changes that have the power to transform industries. It can be a starting point for a positioning as illustrated in the following figure 2.18:

Competitive forces

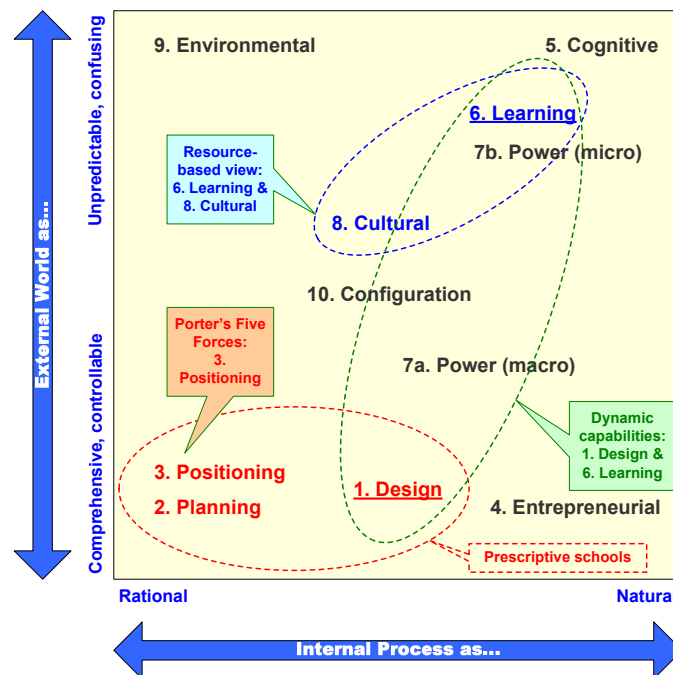


Figure 2.18: Ten schools of strategy formation

A more recent study (Birchall and Tovstiga 2005, p.7.) has shown that the new economic situation is deregulated and global with new and disruptive technology. In addition, the new economic order is interconnected and driven by a distinctive logic of networks (Kelly 1998) which order favours intangibles. Therefore, today it is important to consider strategy paradigm such as the 'resource-based view' (section 2.2.5) and 'dynamic capabilities' (section 2.2.6). However, to implement strategy it is essential to have an effective and efficient performance management. The meaning of performance is described in the following section (2.5).

*New economic
situation*

2.5 Performance

This section describes some theoretical principles how 'performance' can be measured in health care. *"Explaining, and often predicting, organisational performance is a primary research objective in the field of strategic management. Indeed, the quest to understand and control performance is an important way to distinguish strategic management from other organisational sciences"* (Hrebiniak, Joyce & Snow, 1989; Meyer, 1991; Summer et al., 1990).

Introduction

The key to implementing strategy is to have everyone in the organisation clearly understand the corporate mission and vision, to align all organisational/ business units and resources with this vision, and to use a performance measurement for controlling. Performance is linked to the internal and external environments, and it should be considered on an operational and strategic level. In this context, performance can also be considered as short-term versus long-term, and quantitative (tangibles, e.g. financial) versus qualitative (intangibles, e.g. soft key performance indicators/ KPI's) as illustrated symbolically with the performance pyramid 2.19 below (Lynch and Cross, 1991):

Strategy into action

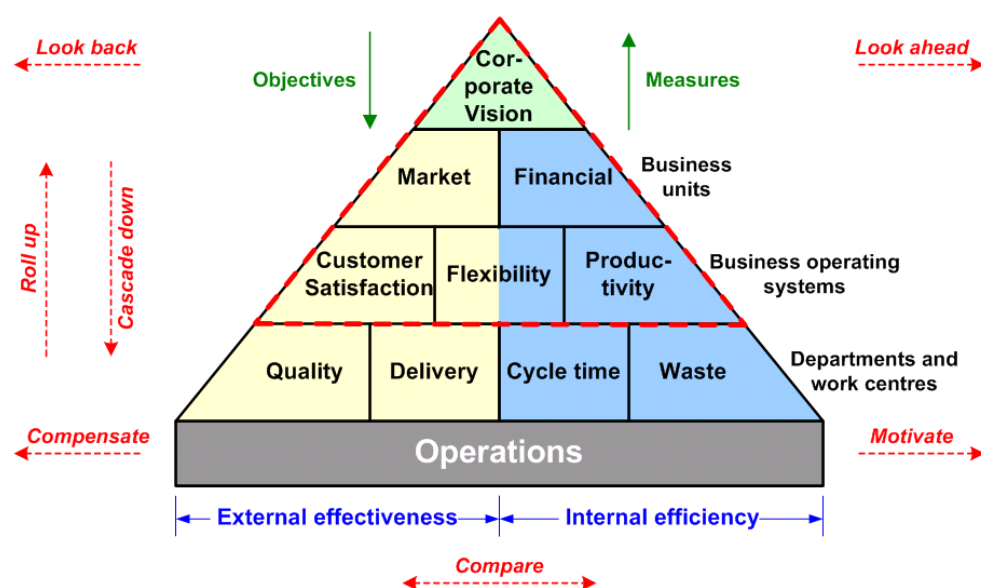


Figure 2.19:
Performance pyramid

Therefore, this pyramid combines on the one hand non-financial KPI's to analyse the market, the customer value proposition, and the productivity. On the other hand it shows the financial KPI's to analyse the internal profitability. However, it does not provide an identification of KPI's (Ghalayini et al., 1997). These indicators will be analysed in the next sections.

*KPI's
combination*

2.5.1 Definition

At the beginning it is important to clarify the following two expressions which are often discussed, but rarely defined (Neely et al, 1995): 'performance' and 'performance measurement'. Andersen und Fagerhaug (2002) believe that *"it is sufficient to have reached a point where 'performance' has replaced productivity and is generally accepted to cover a wide range of aspects of an organisation – from the old productivity to the ability to innovate, to attract the best employees, to maintain an environmentally sound outfit, or to conduct business in an ethical manner"*. According to Neely (1996), *"organisations achieve their goal - that is they 'perform' - by satisfying their customers with greater effectiveness and efficiency than their competitors"*. Moullin (2004) argued that *"performance measurement is evaluating how well organisations are managed and the value they deliver for customers and other stakeholders"*. According to Neely et al. (1995), *"performance measurement is the process of quantifying the effectiveness and efficiency of (past) action"* (Adams, Kennerly, and Neely, 1995).

*Performance
and
performance
measurement*

The goal of performance measurement is to have high productivity which is the ratio between output and input. Therefore, productivity is the product of effectiveness and efficiency as illustrated in figure 2.20 (Rolstadas 1998, p.992):

Goal of performance measurement

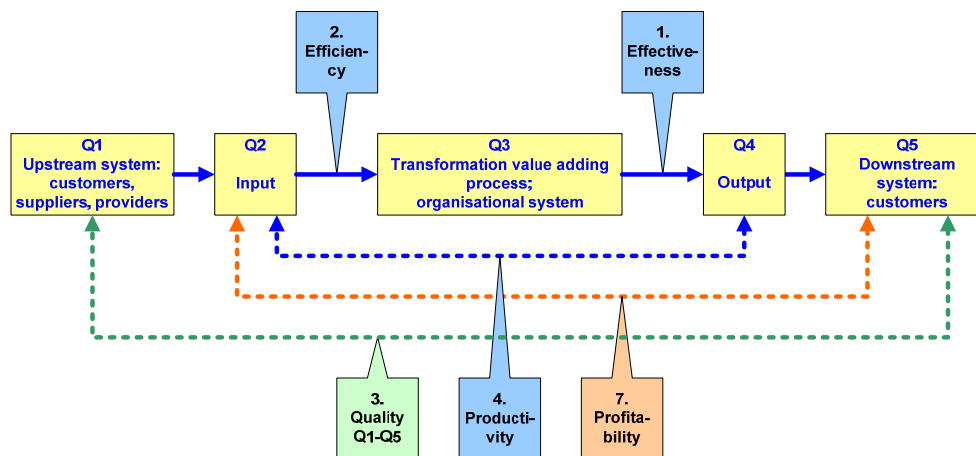


Figure 2.20: Definition of productivity

Effectiveness refers to the extent to which customer requirements are met and involves doing the right things, at the right time, with the right quality. Efficiency is a measure of how economically the firm's resources are utilised when providing a given level of customer satisfaction. Finally, high productivity, on the one hand, means having a high external effectiveness with high market shares and a high degree of customer satisfaction. On the other hand it means having a high internal efficiency with low costs and short cycle times.

High productivity

Therefore, performance measurement provides companies such as hospitals with *“hard evidence about existing practices, values, beliefs, and assumptions”* (Lim et al., 1999), and *“enables hospitals to develop a systematic means of identifying shortfalls and enhance their future performance”* (Lim & Tang, 2000).

**Performance
measurement**

To support the strategy process, it is essential to define ‘key performance indicators’. Such KPI’s are financial and non-financial metrics, used to help an organisation define and measure progress, and are typically tied to an organisation’s strategy. Globerson (1985) suggests that *“KPI’s must make possible the comparison of organisations which are in the same business”*. He suggests that ratio-based KPI’s are preferred to absolute number. In addition, such indicators should be simple and easy to use and should be selected through discussions with key stakeholders. In addition, *“KPI’s gives hospitals benchmarks and thus a basis to improve their processes. It is an investigation, based on key stakeholders’ expectations, supported by field research”*. Raju, Lonial, and Gupta (1995) analysed performance in the hospital industry in the USA. Three factors were extracted and labelled as: market development or ‘external effectiveness’, service or product development as ‘internal efficiency’, and financial performance. Therefore, financial and non-financial KPI’s should be used to measure the success of a hospital’s strategy.

**Key
performance
indicators
(KPI’s) in
hospitals**

However, most contemporary managers and investors use financial ratios only to measure the performance in their hospitals. Clearly, financial viability is crucial to survival in the dynamic health care environment (Shortell et al, 1990), although such ratios are based on historical data. Anyway, financial performance is an important part of an investigation and it is described in section (2.6.2).

**Financial
performance**

On the other hand, Maskell (1991) proposed that non-financial measures should also be adopted because competition for patients has been intensifying (Fottler and Lanning, 1986). This is described in section (2.6.3).

*Non-financial
performance*

KPI's are exemplified in different models such as Kaplan and Norton's (1992) '*Balanced Scorecard*', Moseng and Bredrup's (1993) '*Enterprise Performance Measurement*', and Kanji's '*Business Excellence Measurement System*' which is also a total quality management tool. All these models contain the analysis of the external and internal environment. This is in line with Lynch and Cross' (1991) performance pyramid which focuses on external effectiveness and internal efficiency. These models are not described in this thesis due to the facts that they are more used for a strategy implementation.

*KPI's models:
BSC, etc.*

2.5.2 Financial performance

Financial KPI's measures the internal performance in hospitals based on historical data. Such KPI's are mainly financial ratios which are generally grouped into five categories as follows (Brealey, Myers, and Marcus 2002, p.450; Zelman, McCue, Millikan, and Glick 2005, p.112). First, profitability ratios are used to measure the firm's return on its investments. Such ratios answer the question: 'How profitable is the firm?' Second, activity/efficiency ratios measure how productively the firm is using its assets. Such ratios answer the question: 'How efficiently is the firm using its assets to produce revenues?' Third, liquidity ratios measure how easily the firm can lay its hands on cash. Such ratios answer the question: 'How well is the firm positioned to meet its short-term obligations?' These ratios are not directly linked to the implication of a strategic typology; therefore, these ratios are not analysed in this study. Fourth, leverage or capital structure ratios show how heavily the company is in debt. Such ratios answer the question: 'How are the firm's assets financed?' and 'How able is the firm to take new debt?' These ratios are not directly linked to the implication of a strategic typology; therefore, these ratios are also not analysed in this study. Finally, the fifth category are business strategy variables. These addresses the question of 'how the firm should compete in the businesses it has selected?' (Hambrick, 1980).

Types of financial KPI's

To measure the performance in hospitals, following 'profitability ratios' or KPI's are proposed by experts: 1. Operating margin (OM), 2. Total margin (TM), 3. Return on assets (ROA), 4. Return on equity (ROE), 5. EBITDA (earnings before interest, taxes, depreciation, and amortisation) per bed, and 6. EVA (economy value added) per total capital. OM, TM, ROA, and ROE are proposed as significant ratios in a study in 2005, from the universities of Minnesota, North Carolina, and Southern Maine.

Profitability ratios

They identified 114 financial ratios that have proven useful for assessing financial conditions for hospitals. In addition, another study (Menachemi, Burkhardt, Shewchuk, Burke, and Brooks, 2006) examined also these indicators. EBITDA per bed is proposed by Nelson, Rust, Zahorik, Rose, Bataldem, and Siemanski (1992), as well as Hogan (2005), as benchmarking ratio in hospitals. Finally, the EVA is proposed by Stern Steward & Co (2000). They measured the performance of over 1000 companies. These ratios can be calculated as follows:

1. Operating margin (OM). This ratio measures profits earned from the organisation's main line of business. The margin indicates the proportion of profit earned for each amount (CHF) of operating revenue. It can be calculated as: $OM = (total\ operating\ revenues - total\ operating\ expenses) / (total\ operating\ expenses)$.
2. Total margin (TM). This ratio evaluates the overall profitability of the hospital using both operating surplus (loss) and non-operating surplus (loss). It can be calculated as: $TM = (total\ revenues - total\ expenses) / (total\ expenses)$. (12, p.22)
3. Return on Assets (ROA). In for profit health care organisation, the ROA is equivalent to the Return on Total Assets. ROA measures how much profit is earned for each amount (CHF) invested in assets. It can be calculated as: $ROA = (total\ revenues - total\ expenses) / (total\ assets)$.
4. Return on Equity (ROE). It is the expression of net income relative to total equity. In for profit health care organisation, the ROE is equivalent to Return on Net Assets or fund balance. ROE measures the rate of return for each amount (CHF) in owners' equity.
5. EBITDA (Earnings Before Interest Taxes and Depreciation) per bed.
6. EVA (Economic Value Added) per total capital.

Calculation of ratios

To measure the performance in hospitals, following activity ratios or KPI's are proposed by experts: 7. Total asset turnover (TAT), 8. Fixed asset turnover (FAT). TAT and FAT are proposed as significant ratios in the study from the universities of Minnesota, North Carolina, and Southern Maine (2005) as described in the previous section. These ratios can be calculated as follows:

*Activity/
efficiency ratios*

7. Total asset turnover (TAT). This ratio measures the overall efficiency of the organisation's assets to produce revenue. It answers the question: 'For every amount (CHF) in assets, how many CHF of operating revenue are being generated?'
8. Fixed asset turnover (FAT). This ratio aids in the evaluation of the most productive assets, plant, and equipment. It is a measure of how productive the fixed assets of the organisation are in generating operating revenues.

*Calculation of
ratios*

Thus the financial performance of a hospital can be measured with these eight ratios. This is better than the measurement with a single KPI. Other ratios such as the Average age of plant ratio (AAOPR), and the Staff efficiency (SE), are not considered in this study.

According to Hofer and Schendel (1978), *“the entire hospital has its own business strategy and thus can be considered as single business unit - in the business of providing ‘wellness’ or health care”*. The four KPI’s used to capture business strategy were amongst others (Ketchen, Thomas, and Snow, 1993; Nath and Sudharshan, 1994; Solucient, 1998): First, bed size: Total number of beds in a hospital. Second, occupancy rate: percentage of used beds during a year, and the occupancy rate multiplied with the number of beds. Third, specialisation: Hospital’s main departments such as cardiology, cardio surgery, orthopaedics, traumatology, spine surgery, internal medicine, gynaecology, midwifery, etc. Fourth, private patients: patients with additional insurances such as private or semi-private.

**Business
strategy
variables**

Other ratios such as the Average length of stay, the rate of inpatients and outpatients, the Scope of service index, the Employee turnover, and the Case mix index, are not considered in this study.

2.5.3 Non-financial performance

With all these financial ratios, as described in previous sections, it is possible to measure the internal efficiency; however, the external effectiveness remains unaffected. Unlike financial assets, which can be seen as tangible assets, intangible assets are hard for competitors to imitate; however, they are a powerful source of sustainable competitive advantage. Intangible assets seldom affect financial performance directly. They work indirectly through complex chains of cause and effect. Therefore, it is necessary to measure such intangible assets with non-financial KPI's. In this light, it becomes clear that measuring the value of intangible assets is really about estimating how closely aligned those assets are to the company's strategy. According to Kaplan and Norton (2004), *"if the company has a sound strategy, and if the intangible assets are aligned with that strategy, then the assets will create value for the organisation"*.

*External
effectiveness*

The system of non-financial performance measurement, if properly designed and implemented, will focus organisational efforts onto a common purpose by directing everyone's attention into a set of key goals and objectives. Furthermore, it will constitute the basis to encourage the appropriate behaviours, assess individual and team performance and reward significant contributions towards a higher degree of efficiency and effectiveness. Finally, *"by measuring performance gaps and highlighting problems, the system will define areas where improvement is necessary and urgent, while providing a methodology to evaluate progress towards organisational excellence"* (Kanji and Sa, 2001).

*Non-financial
performance*

An essential part of the external effectiveness is the customer satisfaction, as illustrated in the performance pyramid (figure 2.16). Kumar, Subramanian, and Yauger (1998) examined 159 hospitals with the following KPI's to measure the customer satisfaction: 1. Showing commitment to key customer, 2. Creating services that offer value for key customer, 3. Understanding key customers' needs, 4. Having key customer satisfaction a major objective, 5. Measuring key customer satisfaction, 6. Providing follow-up services such as service quality in the hospital, physicians' services, communication, knowledge, comfort, infrastructure, cooperation and collaboration.

*Customer
satisfaction*

Discussions with Hirslanden's key stakeholders have shown that they are not interested in measuring the non-financial performance. They are just focused on financial performance due to the fact that such financial KPI's are easy for the handling and as benchmarking with other hospitals. Therefore, the non-financial performance is not considered in this study.

*Stakeholders'
view*

2.6 Chapter conclusion

This chapter summarises the literature review of strategic management approaches over the last years. It discusses critically strategic issues and highlights all the crucial principles which can be adopted in the health care sector to improve the profitability and to gain sustainable competitive advantage (SCA).

*Literature
review*

As starting point, a firm could apply the strategy principles from the positioning school, which is a 'prescriptive strategy making'. As described by Selznick (1957), Chandler (1962), and Andrews (1971/1987), a strategic objective is "*achieving fit between internal strengths and weaknesses and external threats and opportunities*". Such a SWOT-analysis could be the solution for a company. However, Johnson and Scholes (2002, p.10) described "*strategy as the direction of an organisation over the long-term, which achieves advantage through its configuration of resources within a changing environment*". Exactly this last point is the crucial point. These older strategy paradigm's were focused on a more stable environment such as the competitive forces initiated by Mason (1949) and Bain (1959), and enhanced by Michael Porter (1980). Today this paradigm can help to define a strategic position within a market; however, it describes neither the internal resources and capabilities, nor the expectations and influence of stakeholders.

*Starting point;
competitive
forces*

An approach, which is more focused on internal resources, is the resource based-view. This term 'RBV' was originally coined by Wernerfelt (1984) who noted that "*firms build enduring advantages only through effectiveness and efficiency, and as developments in organisational economics and the study of technological and organisational change become applied to strategy questions*". It is in line with the learning and cultural school and thus a 'descriptive' approach, in contrast to the competitive forces.

*Resource-based
view (RBV)*

However, the RBV has its limitation. According to Priem and Butler (2001), *“the RBV lacks substantial managerial implications of operational validity”*. Referring to Connor (2002) and Miller (2003), the RBV seems to tell managers to develop an appropriate organisation based on resources and capabilities which are ‘valuable’, ‘rare’, ‘inimitable’, and ‘non-substitutable’ (Barney, 2001); however, the *“RBV approach is silent on how this should be done”*. Along similar lines, Lado, Boyd, Wright, and Kroll (2006) argue *“the RBV suffers a tension between prescriptive and descriptive theorizing”*. Similarly, Barney (2002) indicates an additional limit to the applicability of the RBV: *“it holds only as long as the ‘rules of the game’ in an industry remain relatively fixed”*. In addition, there is also a lack of empirical support for the RBV. As two recent reviews point out (Armstrong & Shimizu, 2007; Newbert, 2007), other factors must be considered when explaining SCA. It has been noted several times that *“the possession of resources is not sufficient, and it is only being able to deploy these that SCA can be attained”* (Makadok, 2001; Peteraf and Barney, 2003).

Limitation of the RBV

A final issue to which the critiques draw attention is the limited way in which the RBV deals with dynamic issues such as boundaries, timing, innovation, and entrepreneurship. With its focus on the possession of resources and capabilities, the RBV is inherently static, not well equipped to explain the timing of when value is created, when rents are appropriated, and how firms innovate and generate new sources of SCA.

SCA can not last forever, but in short run it remains a powerful strategic concept; however, in dynamic markets with new trends such as DRG's and new technology (section 1.6), in which the value of resources can drastically change, hospitals need to go beyond the RBV to explain SCA. Hospitals must also accept that in a dynamic environment they cannot derive an SCA from a static set of resources. According to Denrell, Fang, and Winter (2003) and Romer (1990), *"the key differences from the current RBV are that in environments that are not highly predictable and mature, the primary locus of value creation may lie within the firm, within the imaginative and creative capabilities of the people involved in it, rather than in the market and the prices of the resources they obtain"*. Therefore, as Helfat et al. (2007) pointed out, *"although in static environments some static unique resources could lead to SCA, dynamic environments call for dynamic capabilities"*.

**Sustainable
competitive
advantage
(SCA)**

The 'dynamic capability' framework is an extension of the RBV (Erickson et al., 2006); however, it has clearly a different orientation. The rationale is that the 'traditional RBV approach' has not adequately explained how and why certain firms have competitive advantage in situations of unpredictable change (Eisenhardt and Martin, 2000). Thus dynamic capabilities - as a strategic paradigm - see competitive advantage stemming from high-performance routines operating 'inside the firm,' shaped by processes and positions. By altering the organisation's resource base, dynamic capabilities could then open new strategic alternatives for the firm (Helfat 1997). The dynamic capabilities approach refers to *"the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments"* (Teece, Pisano, and Shuen 1997, p.516). It contains the design and learning school and thus the principles from the 'prescriptive' and 'descriptive' schools. It emphasises the development of management capabilities, and difficult-to-imitate combinations of organisational, functional and technological skills.

**Dynamic
capabilities**

According to Teece et al. (1997), *“dynamic capabilities is an intangible approach and is promising both in terms of future research potential and as aid to management endeavouring to gain competitive advantage in increasingly demanding environments”*. In addition, *“because of imperfect factor markets, or more precisely the no tradability of soft assets like values, culture, and organisational experience, capabilities generally cannot be acquired - they must be built”*. According to Balaji et al. (2005), one of the key differences between RBV and dynamic capabilities is that the latter looks at an organization as consisting of a bundle of capabilities (that can change) instead of a bundle of (static) resources. Thus the dynamic capabilities concept is content-oriented with its connection to wealth creation and capture. Finally, research on dynamic capabilities is centrally concerned with organisational performance (Teece, Pisano, and Shuen, 1997). Thus this research will link capabilities as well as bundles of capabilities to financial performance.

Improved financial performance is one of the goals of organisations, and the objective of strategic management is performance improvement (Muthy, 1994; Venkatramen and Ramanujam, 1986). Thus is important to link dynamic capabilities to performance and, with this financial knowledge, to define the investing in capabilities and competencies for their development (Reed and Defilippi, 1990; Prahalad and Hamel, 1990; Stalk et al., 1992; Bharadwaj et al, 1993; Collis and Montgomery, 1995). In various studies (Brealey et al., 2002; Zelman et al., 2005; Pink et al. 2005; Nelson et al., 2005) the following KPI's are recommended for measuring the financial performance in hospitals, in this case the profitability and activity/ efficiency: OM (Operating Margin), TM (Total Margin), ROA (Return on Assets), ROE (Return on Equity), EVA per Total capital, EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortisation) per Hospital Bed, TAT (Total asset turnover), and FAT (Fixed Asset Turnover). Although Hirslanden's private hospitals use mainly the EBITDA per hospital bed as single KPI, it is in any cases reasonable to use an aggregated value as result from different KPI's as listed above.

Performance

To reach a high performance, a hospital must creating 'fit' among its activities. According to Porter (1996, p.70), *"top management is charged with the dual responsibility, of aligning the organisation with its environment and of managing the internal interdependencies thereby created, to rest on the quality of strategic fit"*. Maintaining and improving this co alignment of environmental and organisational variables is obviously a difficult task, primarily because each set of variables changes according to its own dynamics and each change places new or different demands on the administrative group. Thus if, as Thompson (1967, p.148) has pointed out, *"top managers are continually shooting at a moving target of co-alignment"*. To control the strategic process, the top management need additional models such as the New Growth Platform, the Miles & Snow typology, or Porter's competitive strategy.

Strategic fit

Such models are important to understand the changes in the environments. As mentioned in section (2.1.1), health care in Switzerland is moving from a regulated market environment toward a *'moderately dynamic market'* with identifiable key players such as patients, physicians, competing hospitals and medical suppliers. Hospital managers will analyse situations *"in the context of their existing tacit knowledge and rules of thumb, and then plan and organise their activities in a relatively ordered fashion"* (Burns and Stalker, 1966), based on the 'learning before doing', approach.

**Environment;
moderately
dynamic market**

This literature review of strategic management gives interesting ‘answers’ to hospital managers how to improve or change their strategies; however, these inputs have not a practical relevance for private hospitals to improve the performance in a moderately dynamic market and thus to gain sustainable competitive advantage. As mentioned at the beginning of this chapter (2), *“the purpose is to review previous research to develop sharper and more insightful ‘questions’ about the topic”* (Yin 2009, p.14). Therefore, the unanswered questions are: What are effective strategic orientations for private hospitals to remain highly competitive? What are the crucial capabilities and the bundles of capabilities, and how they are related to performance? What is the relationship between new trends in moderately dynamic markets, customer’s need, and hospital’s capabilities? These questions, which are similar to the research questions (section 1.4), are the basis for this research. To answer these questions, it is required to find a new model for private hospitals which contributes to knowledge in the area of strategic management.

**Questions about
the topic**

The Hirslenden group has a small market share in comparison with public hospitals. Therefore, the private hospitals have no choice but to compete with fewer people, a smaller capital budget and R&D budget against these powerful industry leaders. However, Hirslenden’s chance is to implement an efficient strategy that best matches the requirements and/ or functional demands of the organisation’s environment. The following chapters (3-7) give investors, executives, and managers crucial information how to compete successfully in the new moderately dynamic market.

**Hirslenden’s
effective
strategy**

3. Research model and hypotheses

As described in section (1.1), the Swiss health care is at the beginning of a new phase of fundamental change due to the DRG introduction by 2012. Hospitals in Switzerland compete on a similar level with the same conditions. They have the same tariffs and state regulations, within a canton the same control from the local government, and they often work with the same external physicians who are intermediaries between the hospitals and patients. Therefore, a differentiation is only possible with better hospital services, a higher degree of knowledge from the staff and the attending physicians, and with a better infrastructure. This is the reason to choose the 'dynamic capability' framework - as an extension of the RBV (Erickson et al., 2006) - as main construct in this research, because the roots of competitive advantage is inside a hospital, and capabilities and resources are the heart of a hospital's competitive position.

Introduction

3.1 Research model and questions

The model below (figure 1.3), initially developed from the theoretical review of the RBV, examines the relationship between hospitals capabilities, strategic orientation and financial performance. This model is based on the 'model of contingency relationship' by Thomas and Ramaswamy (1996). They used 'managerial characteristics' instead of the 'capabilities'. Another similar model was presented in a DBA thesis by Tin, 2003. He analysed also the strategic orientation, internal competencies, and the environment in relation to performance. Therefore, the model below is derived from the theory and thus not a completely new approach to strategy; however, it is an adaptation on the current situation in the health care sector. It is a new integrated framework that reflects current strategic thinking, for the examination of the relationship between strategic orientation, capabilities, hospitals' core capabilities, and performance.

Theory

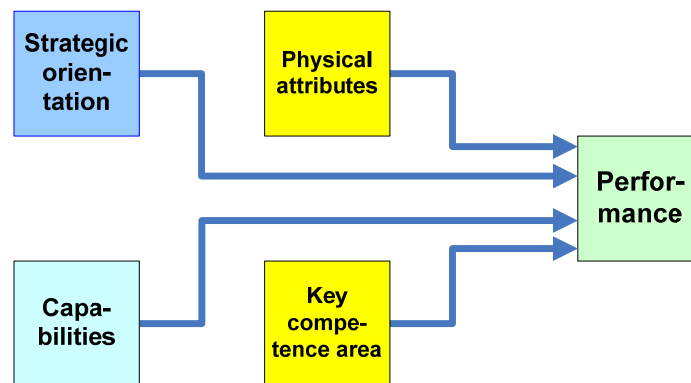


Figure 1.3:
Research model

The model above is an approach to strategy that is particularly relevant in a more dynamic market - and in this sense is relevant to managers in all sectors. It is a contribution to the general field of strategic management. In addition, it is an application of the proposed framework to the particular case of a Swiss health care group - and demonstration of how it can be used to identify the group's capabilities and bundles of capabilities.

Purpose

The constructs to be investigated are strategic orientation, capabilities, bundles of capabilities, and financial performance. However, in the new environment such as the moderately dynamic market it is also important to have the knowledge from new trends and key customers' needs. It is assumed that strategic orientation and bundles of core capabilities have a positive impact on performance and thus must be integrated in the strategy process. They are one of the key success factors in moderately dynamic markets to gain sustainable competitive advantage. The financial performance will be an aggregated value based on eight KPI's.

Constructs

The main research question is (section 1.4): 'How should private acute hospitals develop an effective strategy in a dynamic market?' To answer this question, it is required to divide this research into two parts: a case study and a survey. The case study answers the following research sub-questions as described in section (1.4):

Research question

- What is an effective strategic orientation to remain highly competitive?
- What are the key determinants of the new competitive market?
- How can key determinants be integrated in an effective strategic framework?

Part 1: case study sub-questions

The case study consists of the following five steps. The first step of this research process starts with the evaluation of the strategic orientation of the 13 hospitals. The second step starts with the evaluation of the external environment, in this case with a 'PESTEL' and Porter's Five Forces analysis. The expected result is the definition of the key success factors and new trends in the Swiss health care sector. The third step is the evaluation of key customers' needs with questionnaires for patients, attending physicians, and hospital managers. The fourth step is the analysis of the internal environment with the evaluation of capabilities. The fifth step is the testing of new integrated frameworks in health care such as the 'New Growth Platform' and the 'Strategic Sweet Spot' approach, for the examination of the relationship between new trends, key customers' needs, and hospitals' core capabilities.

In addition to these steps, different propositions will be tested. Hospitals with a higher performance, in this case with a higher EBITDA per bed, will:

*Case study
propositions*

- P1: have defined the key capabilities.
- P2: have defined these capabilities which have the highest performance rate.
- P3: have a congruency between the executives and hospitals' managers what the crucial capabilities are.

The second part of this research is a survey which answers the following research sub-questions as described in section (1.4):

*Part 2: survey
sub-questions*

- How can performance be described in private hospitals?
- What is the relationship between environment, internal context, and performance?

The survey consists of the following three steps, in addition to the steps in the case study above: The sixth step is the evaluation of financial Key Performance Indicators (KPI's) for an effective performance measurement. The seventh step is the definition of bundles of capabilities, for the evaluation of core capabilities. Finally, the last step is the testing of hypotheses.

3.2 Hypotheses

Based on the research model (figure 1.3 above), it is possible to define hypotheses which are illustrated in figure 1.4:

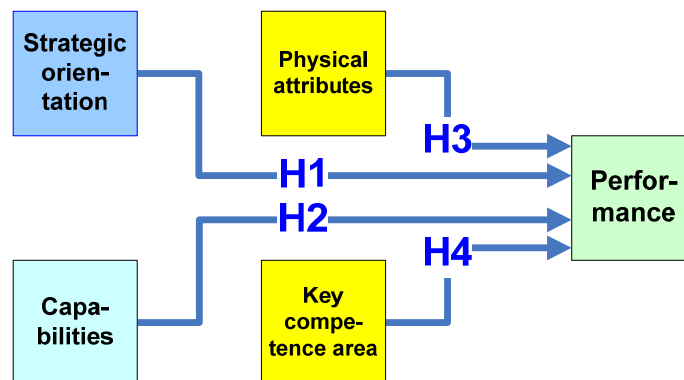


Figure 1.4:
Hypotheses

The four hypotheses, as illustrated in figure 1.4, are:

H1: Strategic orientation will have an impact on performance; prospector (or higher performing) hospitals will have a higher performance than defender (or lower performing) hospitals.

Hypothesis H1

H2: Bundles of capabilities will have a positive impact on financial performance. To reach sustainable competitive, it is for a hospital not enough to have several strong capabilities which are not linked together. Therefore, bundles of capabilities, which might be defined as core capabilities, are the firm's most strategically relevant and valuable intangible assets. It is assumed that such core capabilities must contribute positively to performance in successful hospitals. This is the initial point for the formulation of the following hypotheses, which are the result from discussion with the focus group (appendix A2):

Hypothesis H2

- H2a: Strategic marketing will have a positive impact on performance.
- H2b: Relationship management will have a positive impact on performance.
- H2c: Strategic management will have a positive impact on performance.
- H2d: Organisational development and learning will have a positive impact on performance.
- H2e: Culture will have a negative impact on performance.
- H2f: The development of the (medical and technical) infrastructure will have a positive impact on performance.

H3: Physical attributes; Hospital's size will have an impact on financial performance: the higher the occupancy rate, multiplied with the number of beds, the higher the performance. Hirslanden has 13 hospitals and it is assumed that the bigger hospitals, this means hospitals with more beds, has a higher performance. However, it is always important to have a high occupancy rate.

Hypothesis H3

H4: Key competence area - Hospital's specialisation will have an impact on financial performance; hospitals with cardiology as main specialisation, with a high rate of private patients, will have the highest performance. It is assumed that hospitals with cardiology departments, as main specialisation, will have the highest performance. Such hospitals have often a high rate of private and semi-private patients who pay more for medical treatments.

Hypothesis H4

3.3 Chapter conclusion

This chapter highlights the new research model which is derived from the theory. With this model, it will be possible to answer the research questions (section 1.4) for private hospitals in a moderately dynamic market. The purpose of this model is to provide an approach to strategy that is particularly relevant in a more dynamic market - and in this sense is relevant to managers in all sectors. It is a contribution to the general field of strategic management. In addition, it is an application of the proposed framework to the particular case of a Swiss health care group - and demonstration of how it can be used to identify the group's capabilities and bundles of capabilities. However, to answer all questions it is necessary to divide the research into two parts: a case study which analyses the new competitive environment, in this case the moderately dynamic market, and a survey for the testing of four hypotheses. The tension of these hypotheses is on strategic orientation, capabilities and bundles of capabilities, hospitals' size and its core business in relation to financial performance.

Research model

4. Research Methodology

As described in previous chapter (3), this research for private hospitals in the Swiss health care is divided into two main parts. The first part is a case study which consists of five steps for the evaluation of the strategic orientation, the key determinants in a moderately dynamic market, and an evaluation of an effective strategic framework. This case study used a combination of qualitative and quantitative methods to confirm the results and thus to answer the research questions correctly. In addition to these five steps, three propositions will be tested. The topic is: the evaluation of key capabilities and their impact on performance, and the congruency between the executives and hospitals' managers regarding the crucial capabilities. The second part of this research is a survey which consists of three steps for the evaluation of financial Key Performance Indicators (KPI's), definition of bundles of capabilities and the definition of core capabilities, and the testing of four hypotheses.

Introduction

This research is a case study based on actual observations in 13 private hospitals in Switzerland who are very successful and the trend-setters in the Swiss health care sector. It uses quantitative and qualitative research methods and generates a data base for hospital managers. Primary data was gathered with the help of a survey questionnaire that queried three of the key customer groups: patients, attending physicians, and hospitals' managers. This survey questionnaire consists of four main constructs; these sought to identify respondents' perceptions with regard to: strategic orientation of the hospitals, external environment analysis, key customers' needs, and the internal environment analysis with the capabilities and bundles of capabilities. Individual variables queried respondents' perceptions in respect of the perceived importance and perceived performance on the basis of a 5-point Likert scale. A preliminary version of the questionnaire was tested in a pilot study in two hospitals.

Data collecting

The outcomes from the pilot survey were used to make appropriate adjustments to the survey instrument before it was launched for the full-fledged investigation.

As indicated in section (2.2.9), the emphasis of this research is on the ‘first-order’ element capabilities, or just ‘simple’ capabilities (figure 2.9). Bundles of such simple capabilities are ‘second-order’ and can be labelled as ‘core capabilities’ or ‘dynamic capabilities’ (section 2.2.6) if they are positively linked to performance. Therefore, especially in the second part of this research the tension is on the evaluation of such core capabilities and even the dynamic capabilities which can help to manage change.

Emphasis

This research process consists of eight specific phases as proposed by Remenyi, Williams, Money, and Swartz (2005, p.64). First, reviewing the literature as described in chapter (2). Second, formalising a research question with sub-questions as listed in section (1.4). Third, establishing the methodology as described in this chapter (4). Forth, collecting evidence as listed in the chapters (5+6). Fifth, analysing the evidence as specified in chapters (5+6). Sixth, developing conclusions as described in chapter (7). Seventh, understanding the limitations of the research as specified in chapter (8). Eighth, producing management guidelines or recommendations as well as suggestions for future research. This is described in chapter (9).

*Research
process; eight
phases*

The essence of the research process is to answer the research questions by producing suitable evidence supported by appropriate arguments. The following process, suggested by Hair, Babin, Money, and Samouel (2003, p.50), is used for this research (Figure 4.1):

Essence of the research process

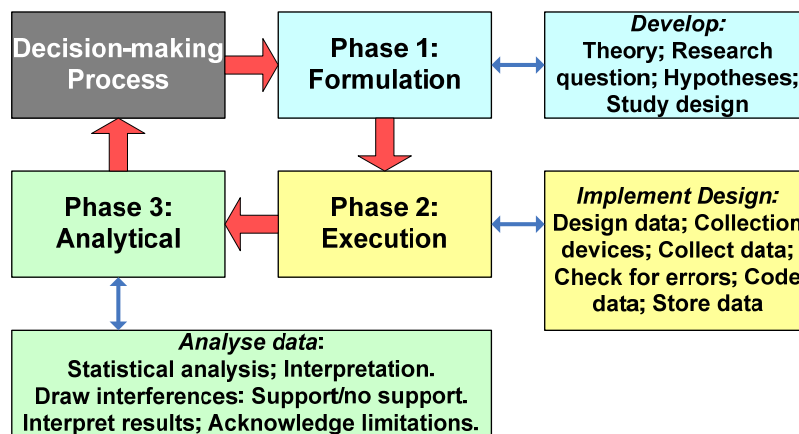


Figure 4.1:
Basic business research process

4.1 Research design

The focus of this research is on 13 private hospitals in the health care sector in Switzerland, thus it is “a contemporary phenomenon within a real-life context” (Yin 2009, p.2). In this context the case study is the preferred method to answer the research question (section 1.4): ‘How should private acute hospitals develop an effective strategy in a dynamic market?’

Context

An essential tactic is to use multiple sources of evidence. This is the reason to propose the following case study design (figure 4.2) with three embedded units of analysis:

Evidence

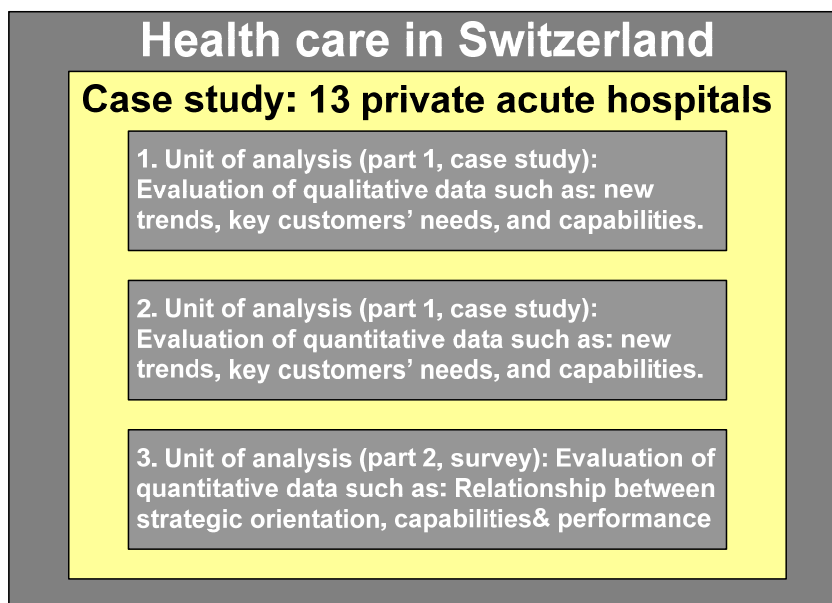


Figure 4.2; case study design

With such a single-case design, with embedded units of analysis, it is possible to respect the three principles of data collection as proposed by Yin (2009; p.114): First, use multiple sources of evidence. Second, create a case study database. Third, maintain a chain of evidence.

Principles of data collection

“A case study was called for in this study to investigate a contemporary phenomenon in depth and within its real-life context specific, especially when the boundaries between context and phenomenon are not clearly evident” (Yin 2009, p.18). The conclusion reached from the review of the literature (chapter 2) is that capabilities identification by strategy type, using only quantitative methods such as surveys, is insufficient and provides only a cursory examination of capabilities.

***Justification for
the case study
methodology***

The case study’s unique strength is its ability to deal with a full variety of evidence. This means to compare results from interviews, observations, documents, questionnaires, and reporting from databases – beyond what might be available in a conventional historical study. Even though this case study is about 13 hospitals of one single organisation, the analysis includes qualitative outcomes from the executives’ view in comparison with the quantitative results from questionnaires for hospitals’ managers and attending physicians. In addition, *“a case study inquiry copes with the technically distinctive situation in which there will be many more variables of interest than data points” (Yin, 2009; p.18).*

***Justification for
the case study
methodology***

4.2 Research strategy

According to Remenyi et al. (2004), “a research strategy may be thought of as providing the overall direction of the research including the process which the research is conducted”. The top-level strategic choices are whether the research will be theoretical or empirical. These are illustrated in figure 4.3 below (Remenyi and Money 2004, p.58):

Research strategy

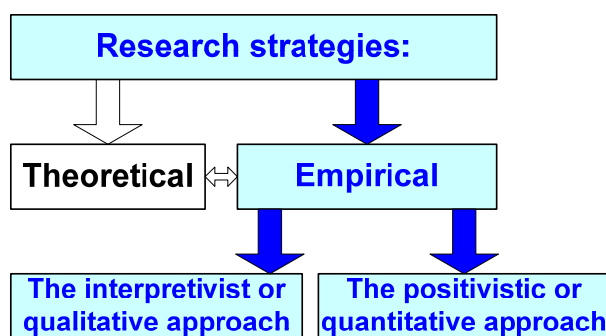


Figure 4.3:
Research strategy

This research is empirical due to the fact that a contemporary phenomenon, within a real-life context in the health care sector, is analysed. It draws on observation of primary evidence in order to understand the hospitals' business. The study used a combination of qualitative and quantitative methods to test the proposed model and research questions.

Empirical research

As described in section (4.1), the case study generates qualitative data as results from interviews with senior level executives to identify and define the strategic approach in their hospitals. The interviews provided questions about: the strategic orientation, the external environment with new trends, key customers' needs, hospital's capabilities, and how hospitals' managers and attending physicians are informed about capabilities. Since this information has received little attention in the literature, a case study approach was appropriate for theory development.

Unit of analysis 1; case study, qualitative approach

A case study was used to confirm the qualitative data from the first unit of analysis and to assist in developing the survey for the quantitative portion of this study. The literature suggests that executives must provide signals as to what capabilities are important to their hospitals' managers and attending physicians. In the study of strategy, an 'alignment' is always important, whether there is a match between the environment and strategy, or strategy and structure, or other environment/ organisation variables. The interviews from the first unit of analysis provided information to develop the survey questionnaires to ascertain whether lower level managers have received the message regarding what executives were stressing in competency development. It is posited that companies where executives and unit managers agree on competency development and implementation will experience higher performance. Therefore, this second unit is a confirmation of all results from the first unit.

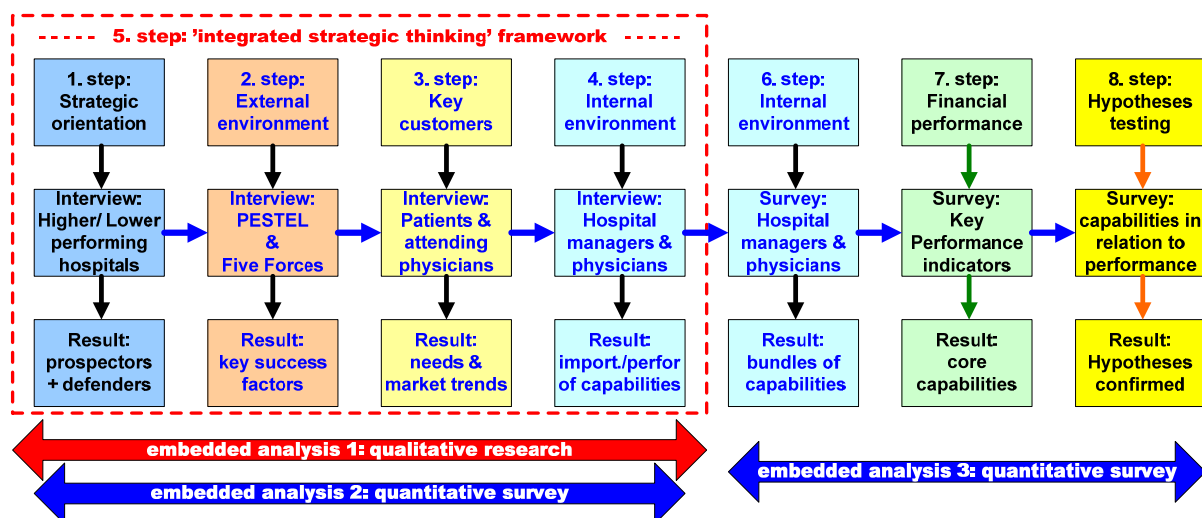
*Unit of analysis
2; case study,
quantitative
approach*

The third part used all data from the other units to test the relationship from capabilities and bundles of capabilities to performance. Therefore, this third portion of the study collected supporting data. It is an additional means to support executives' and managers' perceptions of how the importance and performance of capabilities is related to financial performance.

*Unit of analysis
3; survey,
quantitative
approach*

4.3 Research steps and tactics

As described in section (3.1), the first four steps will analyse an approach to strategy that is particularly relevant in a more dynamic market - and in this sense is relevant to managers in all sectors. The other steps will identify bundles of capabilities, their impact on performance, and testing of hypotheses. The key steps of this research process are listed in figure 4.4:



The case study protocol is described in appendix (A3). The research tactics is divided into eight steps and described in the following sections.

*Research
protocol and
tactics*

4.3.1 Strategic orientation analysis

The first step of this research process is the evaluation of the strategic orientation. At the beginning this was an important part to understand Hirslanden's corporate strategy. On the one hand, the focus group (appendix A4) was interviewed about the strategic orientation of the 13 hospitals; on the other hand the 13 hospital directors about their individual strategies. These were open-ended interviews based on the questions in appendix (A3). All interviews were recorded on tape.

**1. Step;
Strategic
orientation**

"Measuring the strategic orientation is a major issue in strategic management studies" (Huber and Power, 1985). Thus Snow and Hambrick's (1980) approaches are used to measure the strategic orientation of each hospital:

**Approaches for
measuring the
strategic
orientation**

1. Self typing, where hospital's top managers, or other key people in the hospital, characterise the strategic orientation. According to McCall (1999), *"this is the most commonly adopted method in strategic management to define the strategic orientation"*.
2. External assessment, where external health care experts, in this case the focus group (appendix A2), characterise the hospital's strategic orientation.
3. Investigator inference, where researchers assess the hospital's strategic orientation, based on all available information such as performance with an appropriate KPI.

For the analysis of the strategic orientation of these 13 hospitals, an approved questionnaire (appendix A4) was used based on the Miles and Snow's typology. This approach was also used by different researchers such as Snow and Hrebiniak (1980), Parks (1988), Conant et al. (1990), Shortell and Zajac (1990), and Tin (2003). This questionnaire was also tested in the health care sector successfully.

Self-typing

As described in section (2.2.9), in Miles and Snow's (1978) view four identifiable strategic orientations exist within an industry:

*Miles and
Snow's typology*

- Type 1, Defender: This hospital maintains a 'niche' within the health care system by offering a relatively stable set of services/ facilities. Generally this hospital is not at the forefront of new services or market developments in healthcare. It tends to ignore changes that have no direct impact on current areas of operation and concentrates instead on doing the best job possible in its existing arena.
- Type 2, Prospector: This hospital makes relatively frequent changes in its set of services/ facilities. It consistently attempts to pioneer by being 'first in' in new areas of service or market activity, even if not all of these efforts ultimately prove to be highly successful. Such a hospital responds rapidly to early signals of market needs or opportunities.
- Type 3, Analyser: This hospital maintains a relatively stable base of services while at the same time moving to meet selected, promising new service/ market developments. The hospital is seldom 'first in' with new services or facilities; however, by carefully monitoring the actions of institutions are like prospector hospital above. Such a hospital attempts to follow with a more cost-efficient or well-conceived service.

- Type 4, Reactor: This hospital cannot be clearly characterised in terms of its approach to changing its services or markets. It doesn't have a consistent pattern on this dimension. Sometimes the hospital will be an early entrant into new fields of opportunity, sometimes it will move into new fields only after considerable evidence of potential success; sometimes it will not make service/market changes unless forced to by external changes.

The results are illustrated in section (5.1).

4.3.2 Analysis of the external environment

This second step is the evaluation of the external environment for finding new trends and definition of the key success factors. The theory suggests using the 'PESTEL' and Porter's 'Five Forces' model as illustrated in section (2.1.1).

2. Step: External environment

On the one hand, the focus group (appendix A2) was interviewed, on the other hand the executives, the 13 hospital directors. All interviews were recorded on tape. With all these qualitative results from these open-ended interviews it was possible to create questionnaires (appendix A5+A6), which was given to 117 hospital managers. Thus it is possible to compare the outcomes from both units of analysis 1+2.

*Unit of analysis
1+2*

4.3.2.1 PESTEL

The PESTEL analysis is an 'orientation' tool for understanding the 'big picture' of the health care. By understanding the external environment, a hospital can take advantage of the opportunities and minimise the threats.

*PESTEL
analysis*

The additional questions were about political, economic, sociocultural, technological, environmental, and legal factors as suggested in the PESTEL model. The expected result was to receive several very important factors which could have a major impact on the strategy for private hospitals. After these interviews, it was possible to put all factors together in a questionnaire (appendix A5) and to ask the same people about the importance of the items. This questionnaire is based on the theory of Peteraf (1993, p.179) and D'Aveny (1995). The results are illustrated in section (5.2.1).

This approach, for the analysis of the macro-environment, has the following six components as illustrated in figure 4.5 below (Johnson and Scholes, 2002, p.102):

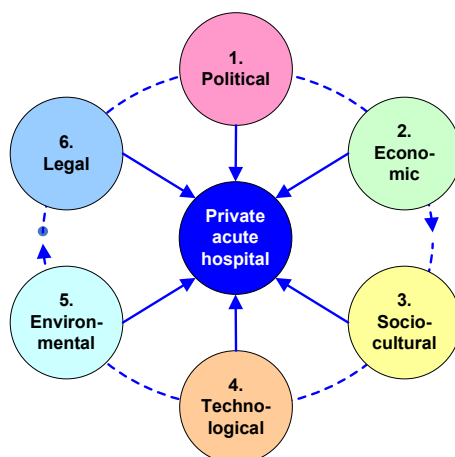


*Figure 4.5:
PESTEL
framework*

1. Political factors: These refer to government policy such as the degree of intervention in the economy. In the last few years there has been political pressure on hospitals/ clinics to reduce investments and costs. In addition, the Swiss government introduced different for a better co-ordination between hospitals to protect their interests and businesses from each other. *Political*
2. Economic factors: These include interest rates, taxation changes, economic growth, inflation and exchange rates. The health care business in Switzerland was a regulated market and not forced by competitors. This changed about five years ago. Markets started to be unstable, uncertain and with a lot of changes such as government prescriptions and reduction of investments. *Economic factors*
3. Sociocultural factors: Changes in social trends can impact on the demand for a hospital's products and the availability and willingness of individuals to work. Swiss society is on the way to be split up into two strata, the working and the upper class. The latter are rich people who have a private or semi private health care insurance. These are mainly customers of private hospitals such as Hirslanden. *Sociocultural factors*
4. Technological factors: New technologies create new products and new processes. New technology in health care is very expensive; however, hospitals must have a short payback time to survive. This is only possible with a high degree of effectiveness and efficiency. *Technological*
5. Environmental factors: They include the weather and climate change. In the last years, the Swiss government put pressure on the reduction of energy consumption (Kyoto) and of waste – in hospitals especially infectious waste. *Environmental*
6. Legal factors: These are related to the legal environment in which firms operate. The Swiss healthcare organisation introduced a consistent tariff system (TARMED), new prescription for product safety and patients' protection (HMG/ MepV). *Legal*

4.3.2.2 Five Forces analysis

This approach (section 2.2.3) analysis the micro-environment (section 2.1.1) and thus the market structure and the attractiveness of an industry. The implication of Porter's analysis for managers is that they should examine different factors before choosing an industry or new business to move into. According to Porter (1980) “the likelihood of firms making profits in a given sector depends on five factors” as illustrated in figure 4.6 below:

Five Forces approach

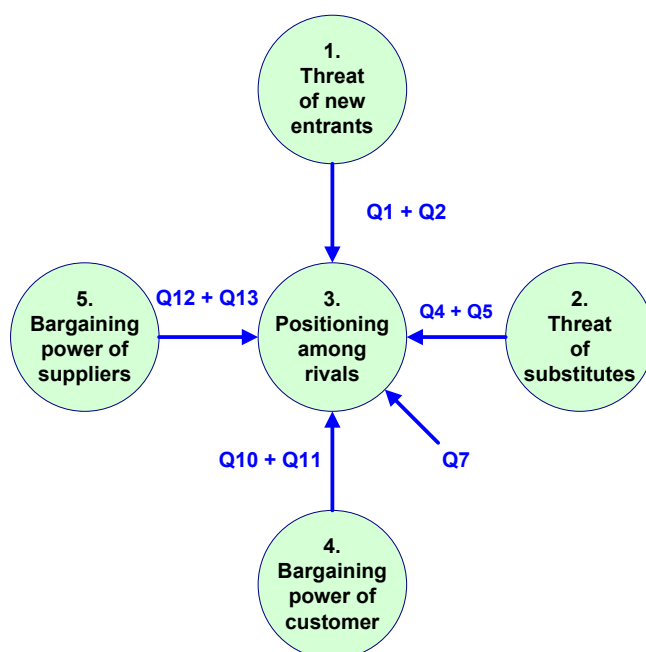


Fig. 4.6: Porter's Five Forces

1. The threat of new entrance exists; however, there are barriers for new firms to enter a new market. The more difficult it is for hospitals to start a new business, for instance cardiology or orthopaedics, the more likely it is that existing hospitals can make relatively high profits.
2. The threat of substitutes exists if buyers can switch easily to another product that does the same thing. The ease of switching depends on what costs would be involved and how similar customers perceive the alternatives to be.

New entrance

Substitutes

3. The positioning among rivals measures the degree of competition between existing firms. The higher the degree of rivalry the more difficult it is for existing firms to generate high profits. *Rivalry*
4. The stronger the bargaining power of customers such as patients in the health care sector, the more likely it is that they will be able to choose a hospital and reduce the profits of other hospitals that provide the same service. *Power of customers*
5. The stronger the power of suppliers in the health care sector, the more difficult it is for firms within that sector to make a profit because suppliers can determine the terms and conditions on which business is conducted. *Power of suppliers*

This analysis contains the following questions for the questionnaire (appendix A6), based on the prior work of Parks D.M. (1988) and Tin T.J. (2003): Q1: To what extent is the threat of new entrants a significant competitive force for your firm? Q2: To what extent do you think regionalisation is a solution? Q4: To what extent is the threat of substitute products a significant competitive force for your firm? Q5: To what extent do you feel you are able to beat competition? Q7: To what extent is jockeying among current competitors a significant competitive force for your firm? Q10: To what extent is the power of buyers a significant competitive force for your firm? Q11: If buyers are too strong, can alternative buyers be found in the region? Q12: To what extent is the power of suppliers a significant competitive force for your firm? Q13: If suppliers are too strong, can inputs from other sources be made accessible? The results are illustrated in section (5.2.2). *Questions*

4.3.3 Analysis of key customers' needs

The third step is the evaluation of key customers' needs with questionnaires (appendix A7) for 165 patients and 67 attending physicians in 13 private hospitals. In addition, 117 hospital managers are also interrogated to see possibly gaps between the internal and external view. At the beginning of a strategy formulation it is always important to know the customers' needs and to include the 'voice of customer' in the strategy formulation. In private hospitals, the key customers are patients and attending physicians. They are also key stakeholders as described in section (1.7). The attending physicians work in hospitals; however, they are not employed by the hospitals.

3. Step; Key customers' needs

In an investigation from 159 hospitals in the USA (Kumar, Subramanian, and Yauger 1998, p.214) it was suggested that, for the analysis of a market orientation, the following points must be considered: 'Customer orientation', as understanding and measuring of patients' needs, with the analysis of patient's satisfaction and the knowledge to provide follow-up services; 'Interfunctional coordination' of all service units, to work together to meet patients' needs and sharing information with each other.

Essential points as basis for the questionnaire

Therefore, it is important to involve these points in the questionnaire which consists of three main constructs with total 12 questions (X1-X12):

Questionnaire design

- Services (X1-X5). People in Switzerland are getting older. This is confirmed by the Swiss office for statistics (www.statistik.ch). Elderly patients, who are the key customer in hospitals and with a semi-private or a full private insurance, have another expectation of the provided service quality and hospital's facility. Therefore, it is important to ask questions about the service importance in hospitals.
- Know-how (X6-X8). The introduction of DRG's will increase the pressure on hospital's effectiveness and efficiency. Therefore, it is important that key people, such as attending physicians and hospital managers, have a high medical knowledge.

- Infrastructure (X9-X12). The external environment analysis has shown that the new expensive technology is an important factor; therefore, investments for the medical and technical infrastructure are increasing. In addition, it is essential to establish an optimal infrastructure for the medical and technical staff.

Individual variables queried respondents' perceptions in respect of the perceived importance on the basis of a 5-point Likert scale. The results are illustrated in section (5.3).

4.3.4 Analysis of capabilities

The fourth step is the analysis of the internal environment with the evaluation of 43 capabilities as result from literature review (chapter 2) and from practical investigation. There are two basic approaches to garnering greater resource productivity, whether those resources are capital or human. According to Hamel and Prahalad (1993), the first is ‘downsizing’ which means cutting investment and head count in hopes of becoming lean and mean. The second approach, ‘resource leveraging’, seeks to get the most out of the resources one has. Resource leverage is essentially ‘energising’, while downsizing is essentially ‘demoralising’. Therefore, the analysis of the internal environment is important in the health care sector. Hospitals are ‘service factories’ and thus capabilities are important to improve the effectiveness and efficiency. Capabilities emphasises the key role of strategic management in appropriately adapting, integrating, and reconfiguring internal and external organisational skills, resources, and functional competences to match the requirements of a changing environment.

4. Step; Internal environment

On the one hand, the focus group (appendix A2) was interviewed; on the other hand the 13 hospital directors. All interviews were recorded on tape. With all these qualitative results from these open-ended interviews it was possible to create a questionnaire (appendix A8), which was given to 117 hospital managers and 67 attending physicians. Therefore, it is possible to compare the outcomes from both units of analysis 1+2.

Unit of analysis 1+2

The questionnaire (appendix A8) consists of nine clusters and total 43 items (X13-X55). These items are based on proven questionnaires from the theory as illustrated below:

1. 'Relationship management' with eight questions, based on the study of Kumar, Subramanian, and Yauger (1998, p.214).
2. 'Marketing' with three questions, based on the study of Konant, Mokwa, and Varadarajan (1990, p.374).
3. 'Health care market development' with four questions, based on the study of Konant, Mokwa, and Varadarajan (1990, p.374).
4. 'Adaptations on health care market changes' with six questions, based on the study of Barrett, Balloun, and Weinstein (2005, p.25).
5. 'Strategic management' with seven questions, based on the study of Barrett, Balloun, and Weinstein (2005, p.25-27).
6. 'Organisational learning' with four questions, based on the study of Barrett, Balloun, and Weinstein (2005, p.26).
7. 'Organisational culture' with four questions, based on the study of Barrett, Balloun, and Weinstein (2005, p.27).
8. 'Staff development' with four questions, based on the study of Barrett, Balloun, and Weinstein (2005, p.26).
9. 'Infrastructure development' with three questions, based on the study of Barrett, Balloun, and Weinstein (2005, p.25).

Individual variables queried respondents' perceptions in respect of the perceived importance and perceived performance on the basis of a 5-point Likert scale. The results are illustrated in section (5.4).

4.3.5 Integrated framework

The fifth step is the testing of new integrated frameworks in health care such as the 'New Growth Platform' (NGP) and the 'Strategic Sweet Spot' (SSS) approach, for the examination of the relationship between new trends, key customers' needs, and hospitals' capabilities. There is not a theoretical framework which described directly the relationship of the external and the internal environments as well as key customers' needs in the health care sector. However, the NGP - as described in section (2.3.6) - has this potential to put all findings together and to show an 'integrated strategic thinking' tool in moderately dynamic markets.

*5. Step;
Integrated
frameworks*

The desired result of this research should give executives and hospital managers, on the one hand, the knowledge how to develop an approach to strategy that is particularly relevant in moderately dynamic markets, based on PESTEL, Five Forces, and the analysis of key customers' needs. On the other hand, the NGP framework should help private hospitals to have crucial information to build up an effective strategy in moderately dynamic markets. In addition, the SSS should give hospital managers information about capabilities which have a positive impact on performance. Thus the SSS is a comparison between the different groups of hospitals, for the evaluation of capabilities which meet key stakeholders' need in a way that the other hospital group cannot. The results are illustrated in section (5.5).

Expected result

4.3.6 Analysis of bundles of capabilities

The sixth step is a quantitative survey, for the evaluation of 'core capabilities' and their impact on performance, using of the software tools SPSS 16 (Statistical Package for the Social Sciences) and AMOS 16 (Analysis of Moment Structure). The results are illustrated in sections (6.2-6.4). The goal of this unit of analysis 3 is to confirm the results from both units of analysis 1+2 with a purely quantitative analysis.

*6. Step; unit of
analysis 3:
bundles of
capabilities*

4.3.6.1 Data reduction with factor analysis (PCA)

As described in section (2.2.5), an important result from the internal analysis are 'simple capabilities'. Bundles of capabilities can be labelled as 'core capabilities'. The data from the survey questionnaire for both dimensions are matched together: the 'importance' values are multiplied by the 'performance' values which resulted into a 'weighted performance' (Fishbein and Ajzen, 1970). These values are used for the factor analysis.

*Core
capabilities*

Factor analysis with PCA is a statistical approach that analyse the interrelationships among these 43 capabilities (as questionnaire responses) and to explain these variables in terms of their common underlying dimensions, known as factors (Hair et al. 2005, p.17). Any decision on the number of factors to be retained should be based on the following five considerations (Hair et al. 2005, p.122): First, factors with 'eigenvalues' greater than 1.0. Second, enough factors to meet a specified percentage of variance explained, usually $\geq 60\%$. According to Hair and Samouel (2009), values $> 55\%$ are also acceptable. Third, several alternative solutions, for instance the choice of one more, and one less factor than the initial solution, to ensure the best structure is identified. Fourth, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (MSA). According to Hair et al.'s (1998) guidelines KMO values are: ≥ 0.80 meritorious; ≥ 0.70 middling; ≥ 0.60 mediocre; ≥ 0.50 miserable; ≤ 0.5 unacceptable. The KMO value should exceed the recommended minimal value of 0.6 (Kaiser, 1974). Fifth, the Bartlett's test of sphericity should reach a statistical significance of $p < 0.05$, as recommended by Pallant (2003).

Factor analysis

For the data analysis of the 43 capabilities (appendix A8), the factor analysis was used with the extraction method: 'Principal Component Analysis' (PCA) as well as the rotation method: 'Varimax' with 'Kaiser Normalisation'. Varimax criterion centres on simplifying the columns of the factor matrix. *"This rotational approach maximises the sum of variance of required loadings of the factor matrix"* (Hair, Black, Babin, Anderson, and Tatham 2005, p.126). This method was selected due to Kaiser's (1970, 1974) experiment which indicated that *"the factor pattern obtained by Varimax orthogonal rotation of factors tends to be more invariant than that obtained by the analytically simpler Quartimax method when different subsets of variables are analysed"* (Hair et al. 2005, p.126).

**Data analysis;
PCA and
Varimax**

Hair et al. (2005, p.113) recommend that the minimum absolute sample size should be 50 observations. In this research we have a sample size of: $N = 184$, with 67 physicians and 117 hospital managers. They are divided into 81 respondents in the 5 prospector (higher performing) and 103 respondents in the 8 defender (lower performing) hospitals. However, Hair et al. (2005, p.113) also recommend to have a minimum of five observations per variables. With total 43 capabilities, this would be 215 observations. Unfortunately, in this research it is impossible to have more respondents due to the limited numbers of attending physicians and managers in these 13 hospitals. This means, all relevant managers from all 13 hospitals are included in this research. In such a case, Hair et al. (2005, p.128) propose guidelines for an identifying of significant factor loadings based on sample size. With a sample of: $N = 184$, a factor loading of ≥ 0.416 is required for significance. Although this factor loading is minimally acceptable, values ≥ 0.5 are generally considered necessary for practical significance.

Sample size

The expected results with PCA are: First, data reduction through finding a way of condensing the information contained in a number of original variables into a smaller set of factors with a minimal loss of information (Hair et al 2005, p.17). Second, the groups of variables in factors that are by definition highly intercorrelated, are assumed to represent dimensions within the data. Such factors are bundles of capabilities which can be defined as core capabilities. Third, the investigation gives results for both dimensions 'importance' and 'performance' in the five prospector and the eight defender hospitals. However, the results are not linked to organisational performance. This will be analysed in section (4.3.6.2).

*Expected
results*

4.3.6.2 Multiple regressions

The multiple regressions maximize the overall predictive power of the independent variables as represented in the variate. In addition, it compares several sets of independent variables to ascertain the predictive power of each variate. The regression equation obtained is as follows: $y = a + b_{13}x_{13} + b_{14}x_{14} + b_{15}x_{15} + \dots + b_{43}x_{43}$; where: x_{13} to x_{43} are the capabilities' values as mean from the different variables (X_{13} - X_{55}) as illustrated in the questionnaire in appendix (A8). a = constant; intercept. b_{13} to b_{43} : these are the standardised coefficients (Beta; β), as result from the SPSS analysis. Finally, y stands for financial performance and is an aggregated mean value from the last five years. It consists of the six KPI's as listed in section (4.3.7).

*Multiple
regressions*

Multiple regressions are used to match the factors (result from section 4.3.6.1) with performance. Thus this analysis links the 'simple capabilities', as independent (predictor) variables, to performance as the single dependent (criterion) variable. For the financial performance the aggregated values from eight financial ratios, over a time period of five years, are used. Finally, capabilities are positively linked to performance, if they have a level of significance for regression weight: $p < 0.05$. In a final step, 'bundles of capabilities' will be put in relation to performance. This is described in the following section.

*Capabilities
linked to
performance*

4.3.6.3 Analysis of dynamic capabilities (SEM)

As described in section (4.3.6.2), multiple regressions are a powerful tool to analyse the relationship between a single dependent variable (criterion) and several variables (predictor). Therefore, a wide range of managerial and theoretical questions can be addressed; however, the multiple regression share one common limitation. It can examine only a single relationship at a time (Hair et al. 2005, p.705). For this reason, the structural equation modelling (SEM), an extension of several multivariate techniques such as the factor analysis or the multiple regression analysis, is used to explain the relationships among multiple variables. SEM is known by many names: covariance structure analysis, latent variable analysis, and sometimes is even just referred to by the name of the specialised software package use. In this case, the AMOS 16 (Analysis of Moment Structure) is used for this investigation.

SEM

SEM examines the structure of interrelationships expressed in a series of equations, similar to a series of multiple regression equation. These equations depict all of the relationships among constructs, the dependent and independent variables, involved in the analysis. Constructs are unobserved or latent factor represented by multiple variables.

Constructs

In this case, the independent variables are the factors, as result from the PCA, which consist of the different variables X13-X55 from the questionnaire in appendix (A8).

Independent variables

The dependent variables are the financial constructs F18. This is an aggregated value which consists of eight KPI's as described in next section (4.3.7).

Dependent variables

For this SEM analysis with AMOS, the goodness of fit criteria for the model is (figure 4.7):

Goodness of fit criteria

Measure:	Criteria:
Chi-square	Chi / df < 3
Degree of freedom: df	
GFI	≥ 0.9
AGFI	≥ 0.8

The GFI (goodness of fit index) was devised by Jöreskog and Sörbom (1984) for ML and Uls estimation, and generalized to other estimation criteria by Tanaka and Huba (1985). The possible range of GFI (Goodness-of-Fit Index) values is 0 to 1 with higher values indicating better fit. In the past, GFI values greater than 0.90 typically were considered good (Hair, Black, Babin, Anderson, and Tatham 2005, p.747).

GFI

The AGFI (Adjusted Goodness-of-Fit Index) tries to take into account differing degrees of model complexity. It does so by adjusting GFI by a ratio of the degrees of freedom used in a model to the total degrees of freedom available. The AGFI penalizes more complex models and favours those with a minimum number of free paths (Hair, Black, Babin, Anderson, and Tatham 2005, p. 747). AGFI values greater than 0.80 typically were considered good (Samouel and Hair 1998, p.88). **AGFI**

The PGFI (Parsimony Goodness-of-Fit Index), suggested by Mulaik et al. (1989), is a modification of the GFI and adjust it using the parsimony ratio (PR). Theoretically, the values range between 0 and 1. Thus, two models can be compared and the one with a higher PGFI is preferable based on the combination of fit and parsimony represented by this index (Hair, Black, Babin, Anderson, and Tatham 2005, p.750). **PGFI**

4.3.7 Analysis of financial performance

The seventh step is the evaluation of financial Key Performance Indicators (KPI's), based on the theory (section 2.5.2), for an effective performance measurement. Organisational performance is a primary research objective in the field of strategic management as described in chapter (2); therefore, it is important to involve performance in this unit of analysis 3.

7. Step; unit of analysis 3: KPI's

This evaluation started with a discussion appraisal with financial managers/ CFO's in 13 hospitals. The goal was the definition of the most significant KPI's (appendix A9) for performance measurement. Because the salaries of all managers are based on financial performance, their tension is thus on financial KPI's. Therefore, the following KPI's are assessed as effective KPI's: Operating margin (OM), Total margin (TM), Return on Assets (ROA), Return on Equity (ROE), EBITDA (Earnings Before Interest Taxes and Depreciation) per bed, EVA per total capital, Total asset turnover (TAT), and Fixed asset turnover (FAT). The results are illustrated in section (6.1).

Financial ratios; evaluation

4.3.8 Hypotheses testing

The last step is the testing of hypotheses (section 3.2) with SPSS and AMOS.

*8. Step;
Hypotheses*

The first hypothesis H1 can be answered with a mean comparison with all KPI's (section 6.1). H1a: Prospector hospitals will have a higher financial performance as defender hospitals. H1b: Prospector hospitals will have a lower non-financial performance as defender hospitals.

Hypothesis H1

The second hypothesis H2 can be answered with the SEM analysis (section 6.4). H2a: Strategic marketing will have a positive impact on performance. H2b: Relationship management will have a positive impact on performance. H2c: Strategic management will have a positive impact on performance. H2d: Organisational development and learning will have a positive impact on performance. H2e: Culture will have a negative impact on performance. H2f: The development of the (medical and technical) infrastructure will have a positive impact on performance.

Hypothesis H2

The third hypothesis can be answered with a mean comparison (section 6.5) with the number of beds per hospital and the occupancy rate. The higher the occupancy rate, multiplied with the number of beds, the higher the performance.

Hypothesis H3

The fourth hypothesis for Hospital's specialisation is linked to the hypothesis H2. Prospector hospitals maintain also cardiology, in contrast to the defender hospitals which are more focused on orthopaedics.

Hypothesis H4

4.4 Pilot study

A preliminary version of the questionnaire was tested in a pilot study in two hospitals; one in the German speaking part, and the other in the French speaking part of Switzerland. The outcomes from the pilot survey were used to make appropriate adjustments to the survey instrument before it was launched for the full-fledged investigation. All steps were always discussed with the CEO's from the different hospitals who gave the green light for further measures. *Pre-Test*

This approach is in line with Foddy (1993) who proposed four methods for question testing: First, piloting on a small sample. Second, asking respondents to answer questions and then rephrase them in their own words. Third, ask questions, then ask series of questions designed to uncover respondent's interpretations of key concepts. Fourth, have respondents think aloud as they formulate answers to questions. *Theory*

4.5 Interviews

One of the most important sources of case study information is the interview (Yin 2009, p.106). Interviews are used to uncover specific information from participants who know or have access to the information being investigated. Interviews allow the researcher to acquire more details and greater insight. However, interviews are verbal reports only and as such are subject to the problem of bias as well as poor and inaccurate articulation and listening. According to Jick (1979), *"interview evidence should be corroborated wherever possible by the process of triangulation"* as described in section (4.7).

Interviews

The research started with open-ended, in-depth interviews for the focus group (appendix A2). With such interviews, the researcher asks the respondents for the facts of a matter as well as their own insights into certain occurrences as described in the case study protocol (appendix A3).

*Unit of analysis
1; in-depth
interviews*

The data from unit of analysis 1 is verified by focused interviews with executives (13 CEO's). The interviews were still open-ended; however, they are followed a set of more structured questions, as listed in the case study protocol (appendix A2), along the lines of a formal survey. Thus it was possible to produce a questionnaire for the quantitative data collection.

*Unit of analysis
2; focused
interviews*

4.6 Survey

The final part is a data collection for testing the congruity between hospital managers and attending chief physicians, on key success factors and capabilities. This data was collected using a survey questionnaire, which questions were the result from interviews with the focus group. The survey questionnaire was pre-tested by the hospitals with all CEO's.

*Unit of analysis
3; survey with
quantitative data*

The hospitals were given all questionnaires to rate the key success factors, new trends, key customers' needs, and the importance and performance of capabilities. The measurement technique used a Likert-type scale of 1 (very low/ not at all important) to 5 (very high/ very important).

Likert scale

The means for each hospital group was compared using Analysis of Variance (ANOVA). ANOVA is used to test difference in means when there are three or more independent groups. 'One way' ANOVA is also appropriate when only one dependent variable is used. Each capability was used as the dependent variable to compare both hospitals groups. For this test the level of significance was also set a $p \leq .05$.

*Survey Data
Analysis*

4.7 Documentation for triangulation

With such a single-case design (figure 4.2), with three embedded units of analysis, it was possible to respect the three principles of data collection as proposed by Yin (2009, p.114). First, use multiple sources of evidence from 13 private hospitals, because a single measure may not capture all of the subtle theoretical nuances of strategy as it is currently defined. According to (Snow and Hambrick (1980), *“reliance on a single source will almost certainly yield a limited view of the organisation’s current basis for competing”*). Therefore, data was collected on the one hand from the focus group as the focus group and from executives who are involved in the strategy formulation and implementation process. On the other hand, all data is certified by the hospitals, with all managers and attending chief physicians, who are also members of the hospital’s management. Second, create a case study database for all hospitals which enables to carry out statistical analysis and thus to check the results again. Third, maintain a chain of evidence with the comparison of the outcomes from all three units of analysis 1-3. In the case study, additional supporting data is provided through the use of documents. During company visits, documents relating to any of the concepts behind strategy were requested in addition to the financial data in a period of five years. Such documents are: strategy from all hospitals, with the description of the SEP’s (appendix A13), and confidential financial reports that include information for calculating the financial ratios for all 13 hospitals (appendix A9).

*Principles of
data collection*

4.8 Data analysis

The methods of analysis for this study are both qualitative and quantitative. This research started with a workshop and face-to-face interviews with the focus group to gather qualitative data. The second part was the collection of primary data with self-completion questionnaires, which are based on the theory, from executives. In the third part it was requested to gain quantitative data via E-mails from hospital managers and attending physicians who had not the time for longer interviews due to the time pressure in business. However, it was impossible to collect data from patients with this method; therefore, in this case it was required to talk with this people and afterwards to complete the questionnaire.

Data collection

A questionnaire is a predetermined set of questions designed to capture primary data from these respondents. Primary data are collected for the purpose to understand the requirements of customers, to receive information about capabilities, and to have the possibility as researcher to be involved in every aspect of turning the data into knowledge. The advantage of such primary data collection methods is to have unfiltered information from executives, managers and attending physicians who are involved in day-to-day operations.

Primary data

The result from all questionnaires and from the MIS (Management information system) was put in the SPSS database. Therefore, it was enabled to produce secondary data with statistical analysis such as: factor and cluster analysis, multiple regression, and structural equation modelling (SEM).

Secondary data

The data gathered from the interviews was analyzed using qualitative methods. Miles and Huberman (1994, p.10) defined analysis as *“consisting of three concurrent flows of activity: data reduction, data display, and conclusion drawing/ verification”*.

Data Analysis

Data reduction is *“the process of selecting, focusing, simplifying, abstracting, and transforming the data”*. In the first units of analysis 1+2, the selection of important data is as follows: definition of items with a very high importance or performance, and items which are extremely significant. In the unit of analysis 3, the PCA is used to define the relevant items.

Data Reduction

According to Miles and Huberman (1994, p.141), *“data display is a visual format that presents information systematically so the users can draw conclusion. Analysis of qualitative data rests very centrally on displays that compress and order data to permit drawing conclusions, while guarding against the overload and potential for bias that appears when we try to analyse extended, unreduced text”*. In the first units of analysis 1+2, all very important data is displayed with integrated frameworks such as NGP and SSS. In the unit of analysis 3, mainly tables are used for the illustration of the relevant outcome. There were two rounds of data display and analysis. In the first units of analysis 1+2, very important and significant items are displayed. In the unit of analysis 3, mainly the relationships between different important items are analysed and illustrated.

Data Display

All relevant information is summarised in chapter (7). Conclusions will be drawn mainly on capability identification and analysis. Finally, the limitations of this study and suggestions for future research are described in chapters (8+9).

**Drawing and
Verifying
Conclusions**

4.9 Chapter conclusion

This chapter describes the research methodology. A notion of this study is to use a combination of qualitative and quantitative methods to test the proposed model and research questions. An essential tactic is to use multiple sources of evidence, to create a case study database, and to maintain a chain of evidence. This is the reason to propose a case study design with following embedded units of analysis: 1. Unit of analysis for the qualitative data collection with a case study, for the evaluation of new trends, key customers' needs, and capabilities. The main sources of evidence are interviews with focus group and executives from the 13 hospitals. The goal is to have all important information to define an effective strategy in moderately dynamic markets. 2. Unit of analysis for the quantitative data collection, for the evaluation of new trends, key customers' needs, and capabilities. The main sources of evidence are questionnaires for hospital managers, attending chief physicians and patients as hospitals' key customers. The goal is to verify the qualitative results from the first unit with the quantitative outcome from investigation in the 13 hospital. 3. Unit of analysis for the evaluation of quantitative data with a survey, for the evaluation of core capabilities and their impact on performance. This part uses the data from the other two units to analyse the relationships between capabilities, bundles of capabilities and their impact on performance. The goal is to test the congruity between hospital managers and attending chief physicians, on key success factors and capabilities. A preliminary version of all questionnaire was tested in a pilot study in two hospitals; one in the German speaking part, and the other in the French speaking part of Switzerland. Thus it is possible to correct relevant data which can be used for the strategy formulation. The proposed process of data analysis is: data reduction, data display, and conclusion drawing/ verification.

*Research
methodology*

5. Results case study; units of analysis 1+2

This chapter summarises all results mainly from the quantitative analysis. It comprises the evaluation of the strategic orientation, the PESTEL and Five Forces analysis, key customers' needs, and capabilities. The last step is the analysis of these results with different strategic frameworks.

5.1 Result: Strategic orientation analysis

The results from the open-ended interviews with Hirslanden's focus group are: Hirslanden has not a generic strategy and use not a strategic framework as described in the literature. Its current strategy is based on Puempin's (1987) Strategic Excellence Positions (SEP's), which was developed at the University of St.Gallen/ Switzerland. The SEP's are illustrated in appendix (A13). These SEP's are communicated to hospital's managers and attending physicians; however, it is impossible to know which are the capabilities within a SEP which lead to competitive advantage. In addition, such SEP's are not strategic orientations which can be compared between different hospitals.

Current strategy

At the beginning of this analysis it was possible to divide these 13 hospitals into five higher and eight defender hospitals. Prospector hospitals have a higher EBITDA per bed and have a powerful cardiology department. In the past, these five hospitals founded the Hirslanden group. Defender hospitals provide mainly orthopaedics and were acquired by the Hirslanden group during the period 1997 through 2005.

Strategic orientation

All 13 hospitals CEO's filled out a self-assessment questionnaire (appendix A4) which is based on *Miles and Snow's* typology. Therefore, the directors from the five 'higher performing' hospitals declared themselves as 'prospectors', with cardiology as major specialisation. The other directors from the eight 'lower performing' hospitals declared themselves as 'defenders', with orthopaedics as major specialisation. No one declared himself neither as 'analyser' nor as 'reactor'.

*Strategic
orientation; self
typing*

This result was double-checked by the focus group (appendix A2) who confirmed these strategic orientations.

*External
assessment*

Finally the performance with the KPI: 'EBITDA per hospital bed', was checked with a hierarchical cluster analysis in SPSS, with a squared Euclidean distance method (dendogram in appendix A4). This is a measure of similarity that represents the sum of the squared distances without taking the square root (Hair et al. 2005, p.558). Thus the results above are confirmed again.

*Investigator
inference*

Therefore, all three methods produced the same result. The 13 hospitals can be divided into two groups: Five 'prospector' and eight 'defender' hospitals.

Conclusion

5.2 Result: External environment

This section illustrates the results from the PESTEL and Five Forces analysis for both units of analysis 1 (qualitative) and 2 (quantitative).

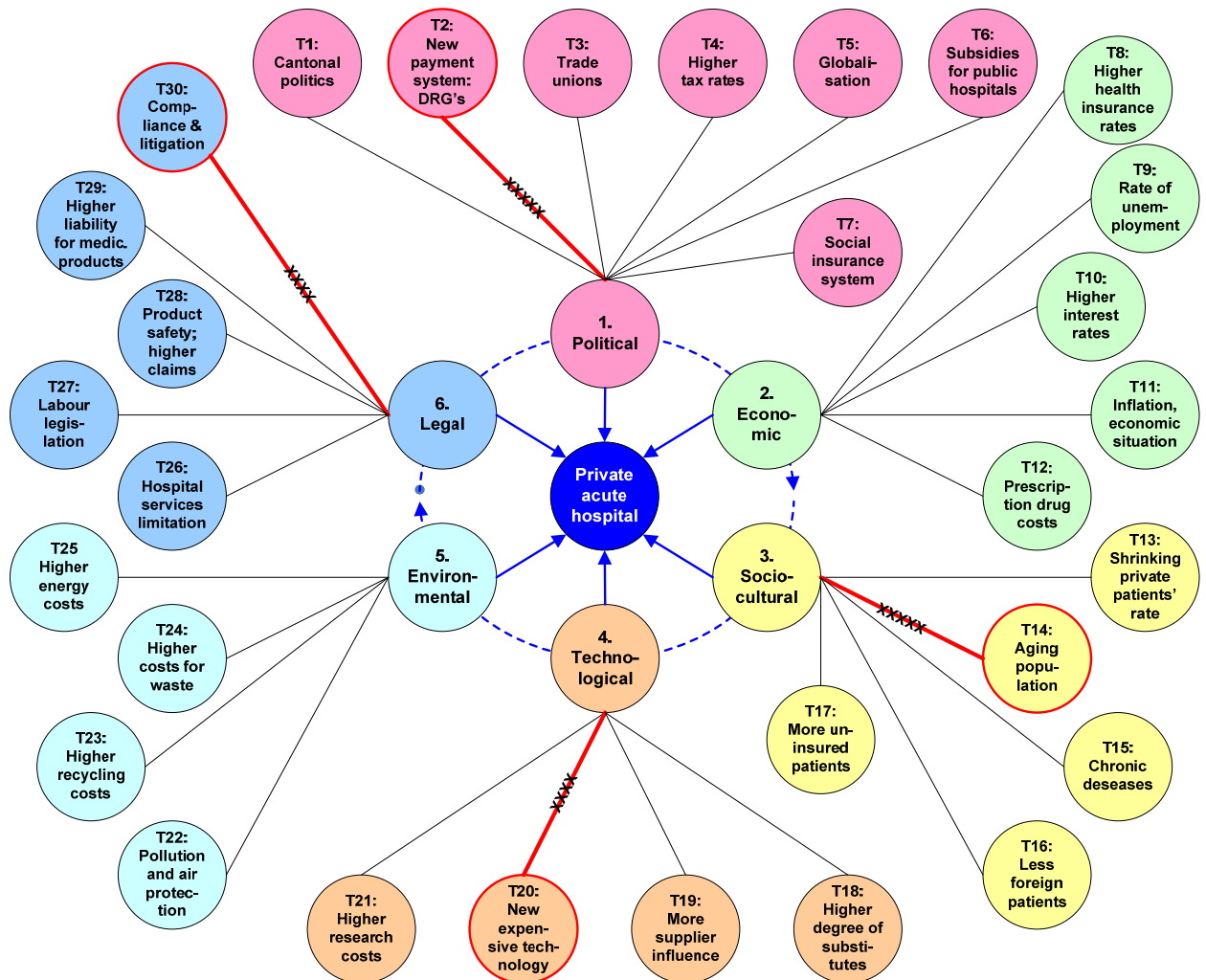
5.2.1 PESTEL

The qualitative result from the interviews with the focus group (appendix A2) was the questionnaire in appendix (A5) which consists of 30 items. 13 executives answered this questionnaire and two items are treated as very significant with a mean ≥ 4.5 . First, T2: New payment system: DRG's, and second T14: Aging population. In addition, two items are treated as important with a mean ≥ 4.0 . Third, T20: New expensive technology, especially the medical devices, and fourth T30: Compliance and litigation. It is interesting to see these four factors above are congruent with new trends which are described in section (1.6).

*Qualitative
result: unit of
analysis 1*

The quantitative result from the PESTEL analysis with the questionnaire, which was given to 117 hospital managers, is illustrated in figure 5.1:

*Figure 5.1:
PESTEL; unit of
analysis 2*



Therefore, the hospital managers confirmed the qualitative results. Very important items are, with a mean ≥ 4.5 , are: First, T2: New payment system: DRG's, and second T14: Aging population. In addition, two items are treated as important with a mean ≥ 4.0 : Third, T20: New expensive technology, especially the medical devices, and fourth T30: Compliance and litigation.

Significant factors

There is a congruency between the investigation with executives and hospital managers.

Conclusion

5.2.2 Result: Five Forces analysis

The qualitative result from the interviews with the focus group (appendix A2) was the questionnaire in appendix (A6) which consists of 9 items. 13 executives answered this questionnaire and two items are treated as very significant with a mean ≥ 4.5 . First, Q7: To what extent is jockeying among current competitors a significant competitive force for your firm? Executives think that competition is really a difficulty for private hospitals. They are more and more under pressure from public hospitals which have the investments to increase their infrastructure and quality of all services. Second, Q10: To what extent is the power of buyers a significant competitive force for your firm? The executives think that, with the introduction of DRG's, the pressure on private hospitals will be higher. Key buyers of hospital's services, such as patients with semi-private and private insurance and attending physicians, will be in the position to choose their favourite hospital. In addition, two additional items are treated as important with a mean ≥ 4.0 . Third, Q5: To what extent do you feel you are able to beat competition? The executives think that the private hospitals are in a strong position and that they can beat the competition regarding the threat of substitutes. Fourth, Q13: If suppliers are too strong, can inputs from other sources be made accessible? Executives think that suppliers will have more power in the future, due to new technology and better relationship with chief physicians in medical research. However, hospitals will have the choice to make business at least with three globalised firms.

*Qualitative
result: unit of
analysis 1*

The quantitative result from the Five Forces analysis with the questionnaire, which was given to 117 hospital managers, is illustrated in figure 5.2:

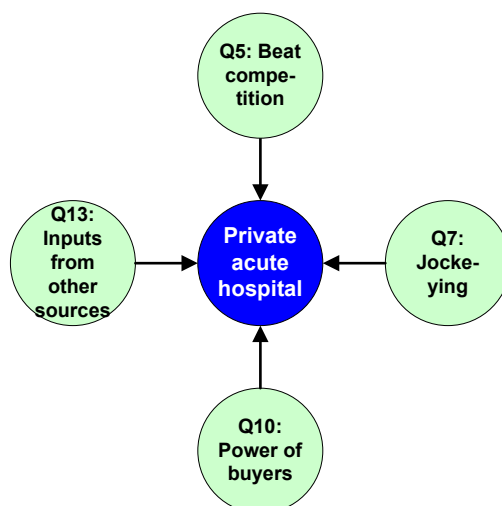


Figure 5.2: Five Forces; unit of analysis 2

The hospitals managers treated only one factor as significant with a mean ≥ 4.0 . Q7: To what extent is jockeying among current competitors a significant competitive force for your firm? In addition, three items are treated as important with a mean ≥ 3.5 . Second, Q5: To what extent do you feel you are able to beat competition? Third, Q10: To what extent is the power of buyers a significant competitive force for your firm? Forth, Q13: If suppliers are too strong, can inputs from other sources be made accessible?

Significant factors

There is almost a congruency between the investigation with executives and hospital managers; however, these four items are assessed higher by the executives. Discussions with the focus group have shown that in future mainly two factors can influence the private hospitals negatively. This is the competition from other hospitals (Q7) and the power of buyers (Q10), in our case the power of key customers such as patients and attending physicians. This result is confirmed by the executives in the first unit of analysis.

Conclusion

5.2.3 Key success factors; trends

As conclusion from the environment analysis, the following factors in figure 5.3 must be considered from hospitals in moderately dynamic markets to remain highly competitive:



Figure 5.3: Key success factors (KSF)

These factors can be labelled as key success factors (KSF). This was confirmed by the focus group. KSF is the term for an element that is necessary for a hospital to achieve its mission and for ensuring the success in the health care sector. Therefore, KSF's are elements that are vital for a successful strategy and what help to bring the hospital get ahead.

However, only four factors are new trends which must be considered carefully. First, T2: New payment system, DRG's. Second, T14: Aging population. Third, Q7: Higher competition from public hospitals. Fourth, Q10: Power of buyers, especially from patients and physicians.

New trends

The introduction of DRG's will increase the pressure on hospital's effectiveness and efficiency. Therefore, it is important that key people such as attending physicians and hospital managers have a high medical knowledge.

DRG's

People in Switzerland are getting older. Elderly patients, who are the key customer in hospitals, especially people with semi-private and private insurance, have another expectation of the provided service quality and hospital's facility. Therefore, it is important for hospitals to adapt the services in the next years.

*Aging
population*

5.3 Result: Key customers' needs

The following five variables from the questionnaire in appendix (A7) have a mean ≥ 4.5 and can be treated as very important. First, X1: Hospital services provided in clinic (medical treatment, services in patients room, etc.). Second, X5: Service provided by attending physicians (services for patients, information about treatments and cure, etc.). Third, X6: Knowledge of medical staff in clinic. Fourth, X7: Knowledge of attending physicians. Fifth, X8: Cooperation and collaboration between clinic and physicians.

Very important items

There are not significant variance between the answers from 117 hospital managers (employees), 165 patients, and 67 attending physicians. In addition, there are also not significant differences between the five prospector and the eight defender hospitals. The reliability of this analysis is illustrated in figure 5.4 below:

Comparison

<i>Dimension: 'Importance'</i>	<i>5 prospector hospitals; sample size (N)</i>	<i>Reliability: Cronbach's Alpha (α)</i>	<i>8 defender hospitals; sample size (N)</i>	<i>Reliability: Cronbach's Alpha (α)</i>
Patients	63	0.70	102	0.73
Attending physicians & hospital managers	25 + 56 = 81	0.91	42 + 61 = 103	0.94

Figure 5.4: Cronbach's Alpha (α) for perceived importance dimension.

Therefore, the new key customers' needs are based on these five points above. It is important that the hospitals services and the support from physicians are superior. In addition, it is essential that the staff and the attending physicians have an excellent medical knowledge and that their coordination and collaboration are organised very well.

Key customers' needs

5.4 Result: Capabilities

The qualitative result from the interviews with the focus group (appendix A2) was the questionnaire in appendix (A8) which consists of 43 items. 13 executives answered this questionnaire with the variables X13 to X55. Thus it was possible to collect qualitative results.

*Qualitative
result: unit of
analysis 1*

The questionnaire was given to 117 hospital managers and 67 attending physicians; therefore, it was enabled to collect quantitative results and to compare them with the outcome from the qualitative analysis.

*Quantitative
result: unit of
analysis 2*

5.4.1 Importance; mean comparison

13 executives answered this capability questionnaire. Following six items are treated as very important with a mean ≥ 4.5 (appendix A8). First, X13: Relationship of clinic with attending physicians. Second, X15: Relationship of clinic with patients. Third, X21: Reputation/ image / brand/ label of the clinic. Fourth, X24: Ability to widen the customer base through focused market penetration and development. Fifth, X36: Visionary, capable leadership in clinic. Sixth, X44: Quality management in clinic. Seventh, X48: Cooperation with physicians in clinic.

*Qualitative
result: unit of
analysis 1*

In addition to these items above, the executives in the five prospector hospitals treated the following four capabilities also as very important. First, X22: Strategic marketing of the clinic. Second, X23: Networking with physicians, politicians, and institutions. Third, X53: Development of technical infrastructure of the clinic. Fourth, X54: Development of medical infrastructure of the clinic.

*Five prospector
hospitals*

The executives in the eight defender hospitals treated the following three capabilities also as very important. First, X18: Relationship of clinic with insurance companies. Second, X45: Nurturing of the culture for working in clinic. Third, X47: Communication between management and staff.

*Eight defender
hospitals*

The differences between both hospitals groups are: Five prospector hospitals have a tension on 'marketing' and 'infrastructure development', whereas eight defender hospitals have a tension on 'relationship management' and 'culture'.

*Qualitative
result: unit of
analysis 1*

The quantitative result from the capability analysis with the questionnaire, which was given to 67 physicians and 117 hospital managers (N = 184), has the following reliability (figure 5.5):

*Quantitative
result: unit of
analysis 2*

<i>Dimension: 'Importance'</i>	<i>5 higher perform. hospitals; sample size (N)</i>	<i>Reliability: Cronbach's Alpha (α)</i>	<i>8 lower perform. hospitals; sample size (N)</i>	<i>Reliability: Cronbach's Alpha (α)</i>
Attending physicians & hospital managers	25 + 56 = 81	0.91	42 + 61 = 103	0.94

Figure 5.5:
Cronbach's
Alpha (α) for
perceived
importance
dimension

There are not significant variance between attending physicians and hospital managers; however, the following seven variables, with a mean ≥ 4.5 , are treated as very important. First, X13: Relationship of clinic with attending physicians. Second, X15: Relationship of clinic with patients. Third, X18: Relationship of clinic with insurance companies. Fourth, X21: Reputation/ image / brand/ label of the clinic. Fifth, X24: Ability to widen the customer base through focused market penetration and development. Sixth, X36: Visionary, capable leadership in clinic. Seventh, X48: Cooperation with physicians in clinic.

Gap: Physicians
and managers

In addition to the seven very important variables as illustrated above, in prospector hospitals the following four variables are also treated as very important (mean ≥ 4.5). First, X32: Acquiring-process for finding new patients with additional insurance. Second, X37: Decision making process in clinic. Third, X44: Quality management in clinic. Fourth, X54: Development of medical infrastructure of the clinic.

Prospector
hospitals

In addition to the seven very important variables, in defender hospitals the following two variables are also treated as very important (mean ≥ 4.5). X45: Nurturing of the culture for working in clinic, and X47: Communication between management and staff.

Defender
hospitals

Therefore, there is almost a congruency between the investigation with executives and hospital managers; however, there are the following deviations: The executives assessed the item X44: Quality management in clinic, as very important. All hospitals managers confirmed, that the item: X18: Relationship of clinic with insurance companies, is for them very important. In the five prospector hospitals, following three items are not confirmed from the hospital managers. First X22: Strategic marketing of the clinic, second X23: Networking with physicians, politicians, and institutions; and third X53: Development of technical infrastructure of the clinic. In the eight defender hospitals, all items are confirmed; therefore, there is an alignment between executives and hospital managers.

Conclusion

5.4.2 Performance; mean comparison

13 executives answered this capability questionnaire. There is no item which was assessed with a very high performance with a mean ≥ 4.5 (appendix A8).

*Qualitative
result: unit of
analysis 1*

However, the executives in the five prospector hospitals assessed the following three capabilities with a very high performance (mean ≥ 4.5). First, X21: Reputation/ image / brand/ label of the clinic. Second, X44: Quality management in clinic, as very important. Third, X54: Development of medical infrastructure of the clinic.

*Five prospector
hospitals*

The executives in the eight defender hospitals assessed only one capability with a very high performance (mean ≥ 4.5). X48: Cooperation with physicians in clinic.

*Eight defender
hospitals*

The differences between both hospitals groups are: Five prospector hospitals have a good performance on 'marketing', 'organisational learning' and 'infrastructure development', whereas eight defender hospitals have a tension on 'culture'.

*Qualitative
result: unit of
analysis 1*

The quantitative result from the capability analysis with the questionnaire, which was given to 67 physicians and 117 hospital managers (N = 184) has the following reliability (figure 5.6):

*Quantitative
result: unit of
analysis 2*

<i>Dimension: 'Performance'</i>	<i>5 higher perform. hospitals; sample size (N)</i>	<i>Reliability: Cronbach's Alpha (α)</i>	<i>8 lower perform. hospitals; sample size (N)</i>	<i>Reliability: Cronbach's Alpha (α)</i>
Attending physicians & hospital managers	25 + 56 = 81	0.94	42 + 61 = 103	0.95

*Figure 5.6:
Cronbach's
Alpha (α) for
perceived
performance
dimension*

Unfortunately, there is no item with a very high performance (mean ≥ 4.5). In addition, there are not significant variances between attending physicians and hospital managers.

Therefore, there is not a perfect alignment between the investigation with executives and hospital managers. The executives in the five prospector hospitals assessed the following three capabilities with a very high performance. First, X21: Reputation/ image / brand/ label of the clinic. Second X44: Quality management in clinic. Third X54: Development of medical infrastructure of the clinic. The hospital managers and attending physicians think that these three items have only a high performance with a mean about 4. In addition, the executives in the five prospector hospitals assessed the following capability with a very high performance: X48: Cooperation with physicians in clinic. The hospital managers and attending physicians think that this item has only an average performance with a mean = 3.46 (mean for 13 hospitals = 3.39).

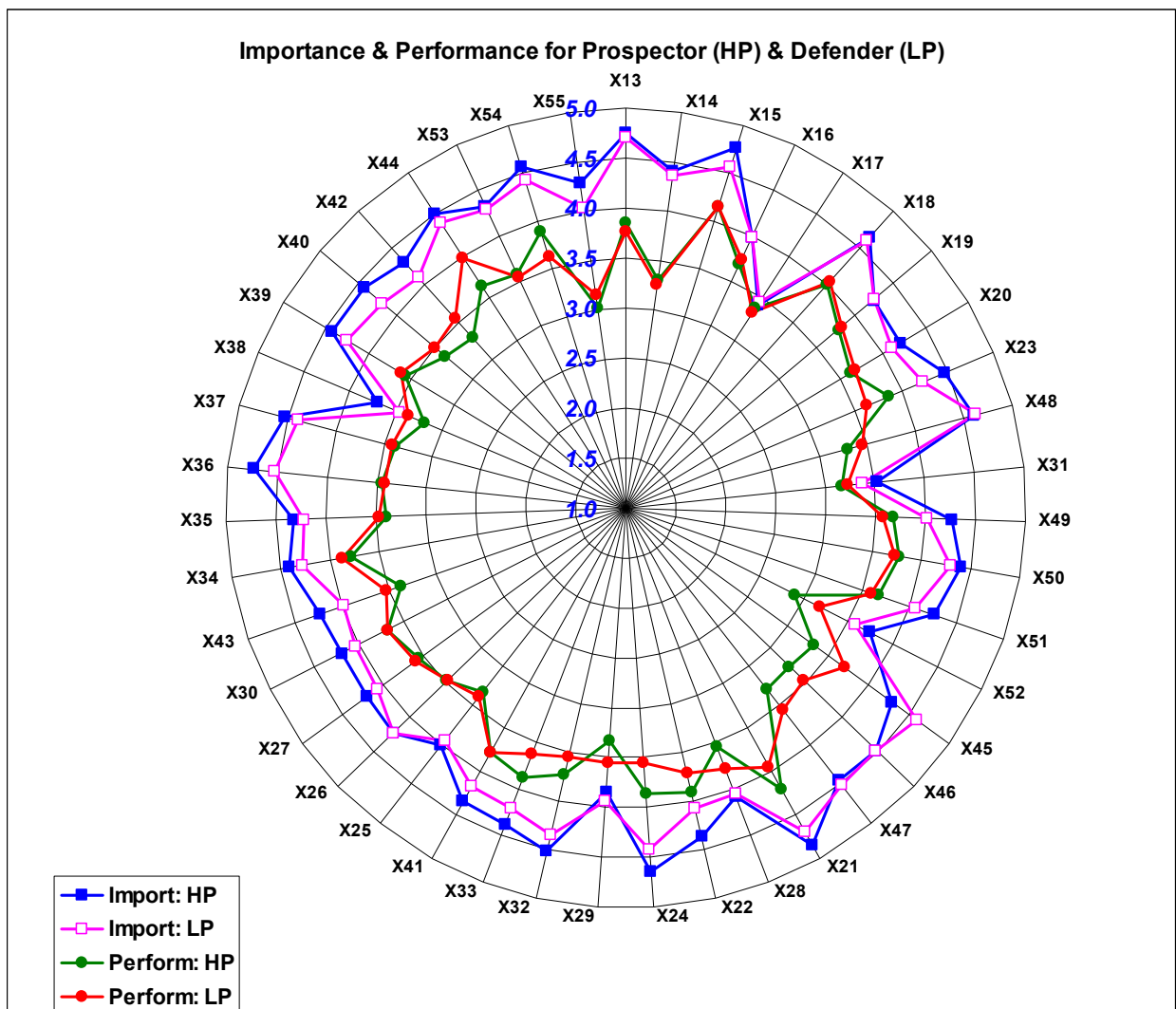
Conclusion

Finally, the analysis in both sections (5.4.1 and 5.4.2) was focussed on both the 'importance' and the 'performance' dimension; however, it is crucial to see these dimensions in relation to each other. This is described as 'gap analysis' in the following section (5.4.3).

Gap analysis

5.4.3 Gap analysis; comparison importance/ performance

In this section, the results from both dimensions 'importance' and 'performance' are compared with each other. This leads to the following figure 5.7 for the five prospector (HP) and eight defender (LP) hospitals:



Based on this diagram, it is possible to analyse the two groups of hospitals individually. This leads to the following figure 5.8 for prospector hospitals with a gap ≥ 1 between perceived importance and perceived performance. This method is proposed by Hilb et al. (2005).

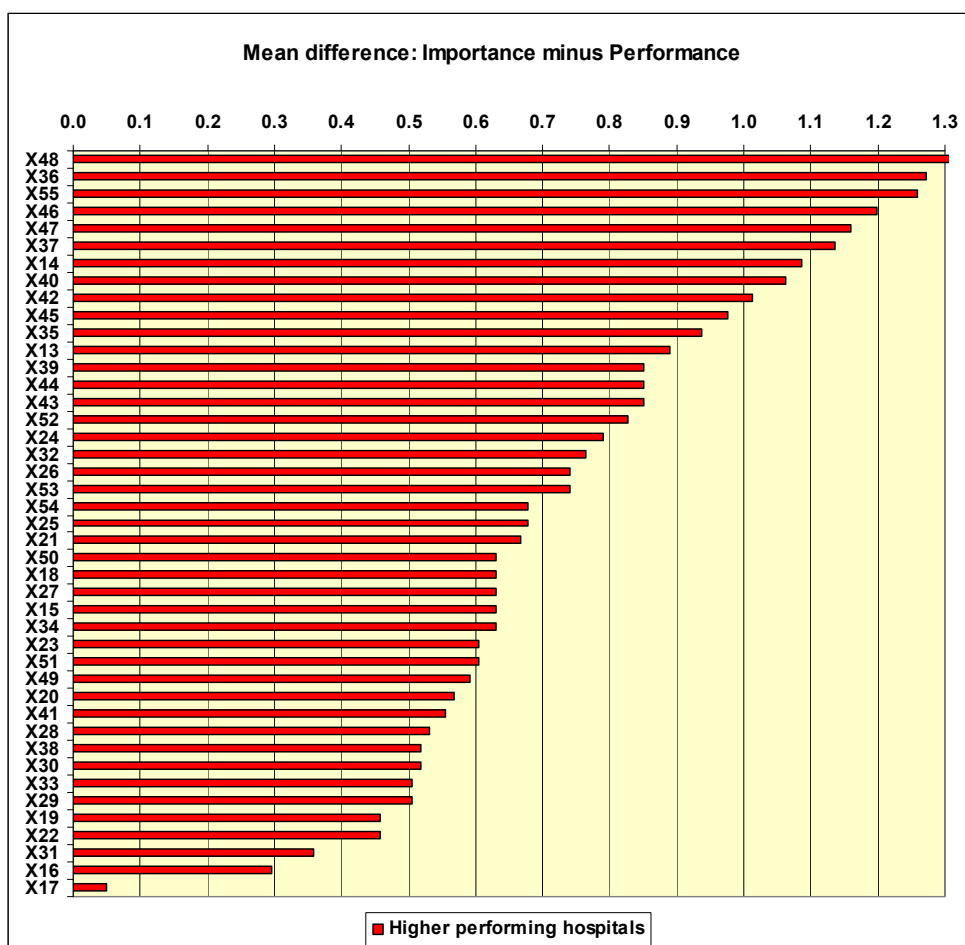


Figure 5.8: Gap analysis; prospector hospitals

This gaps analysis shows that in nine variables the difference between perceived importance and performance is more than 1 and must be improved in future. First, X14: Relationship of clinic with external physicians. Second, X36: Visionary, capable leadership in clinic. Third, X37: Decision making process in clinic. Fourth, X40: Coordination between clinical departments. Fifth, X42: Performance measurement process in clinic. Sixth, X46: Ability to unify confliction options and to generate motivation. Seventh, X47: Communication between management and staff. Eighth, X48: Cooperation with physicians in clinic. Ninth, X55: Development and initialisation of IT-software in clinic. Especially to consider are the very important variables: X36, X37, and X48.

The next step is the analysis of the defender hospitals. This leads to the following figure 5.9, with a gap ≥ 1 (Hilb et al., 2005) between perceived importance and perceived performance.

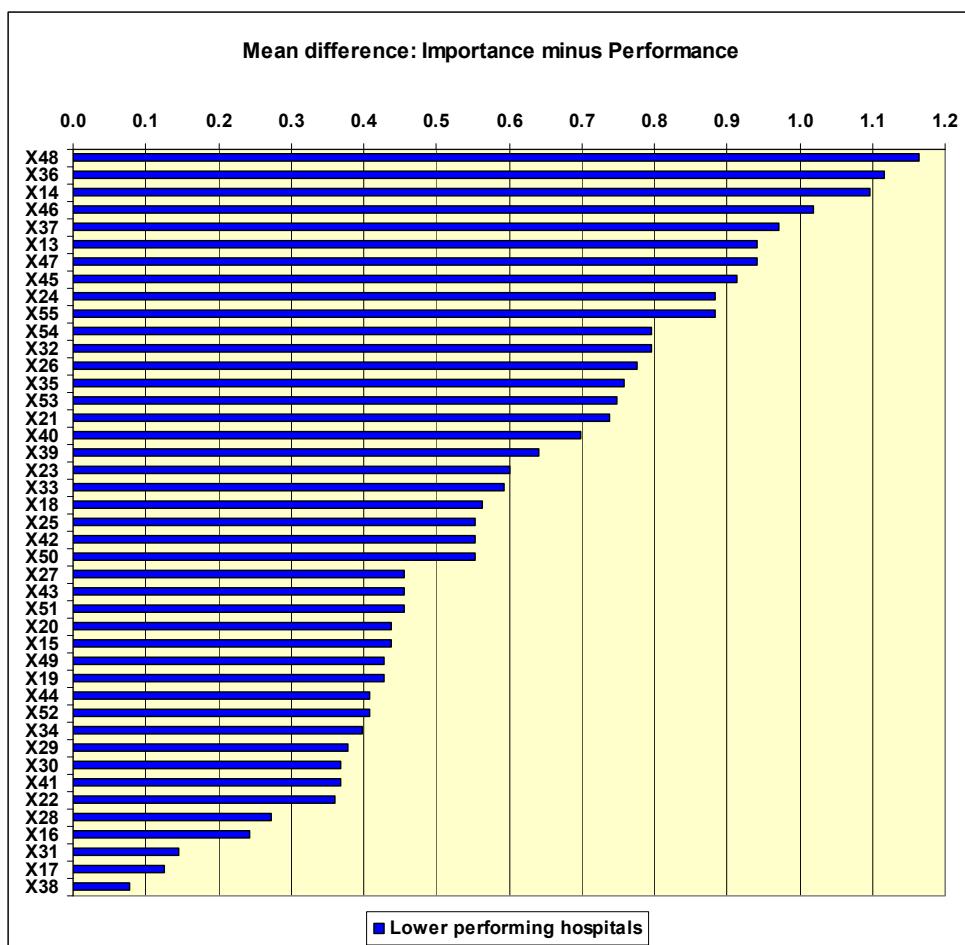


Figure 5.9: Gap analysis; defender hospitals

This gaps analysis shows that in four variables the difference between perceived importance and performance is more than 1 and must be improved in future. First, X14: Relationship of clinic with external physicians. Second, X36: Visionary, capable leadership in clinic. Third, X46: Ability to unify confliction options and to generate motivation. Fourth, X48: Cooperation with physicians in clinic. Especially to consider are the very important variables: X36 and X48.

5.5 Result: Integrated framework

This section summarise all the results from this chapter 5 and proposes two strategic approaches: the NGP and the SSS, for the visualisation.

5.5.1 New Growth platform (NGP)

This section is the practical evaluation of a NGP in moderately dynamic markets. It starts with the external analysis, key customers' needs', and it ended with the internal evaluation of capabilities. It uses the results from the 'importance' dimension of bots units of analysis 1+2.

*Framework:
NGP*

The environmental analysis, with the PESTEL and the Five Forces investigation, assessed the following four trends in the health care sector as described in section (5.2.3): First, T2: New payment system, DRG's. Hospitals are now under pressure to initiate projects to introduce the new concept of DRG's, the new Swiss standard in 2012. Second, T14: Aging population, a demographic shift (so-called 'baby boomers') showing disproportionate growth in the segment of the population attaining higher longevity. Moreover, this segment is not only well-situated economically; these people are prepared to pay better health care services and demand a comfortable infrastructure. Third, Q7: Higher competition from public hospitals. Due to the economic situation and special "cantonal" contracts with insurance companies, public hospitals will invest more in their business; therefore, they will compete more the private hospitals. Fourth, Q10: Higher power of key customers such as patients and attending physicians. With the introduction of the DRG's and special offers from insurance companies, patients and physicians will have the possibility to choose their favoured hospitals. They can be also in another canton.

*Environmental
analysis*

The following five variables from the questionnaire in appendix (A7) have a mean ≥ 4.5 and can be treated as very important. First, X1: Hospital services provided in clinic (medical treatment, services in patients room, etc.). Second, X5: Service provided by attending physicians (services for patients, information about treatments and cure, etc.). Third, X6: Knowledge of medical staff in clinic. Fourth, X7: Knowledge of attending physicians. Fifth, X8: Cooperation and collaboration between clinic and physicians.

Key customers' needs

The NGP, as result from the qualitative interviews with 13 executives, are illustrated in in figure 5.10:

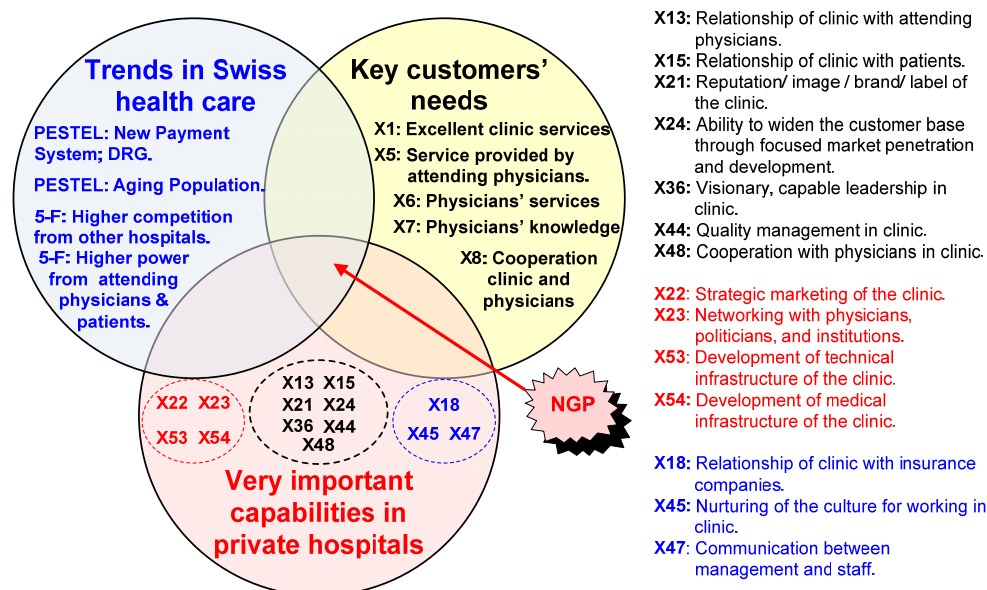
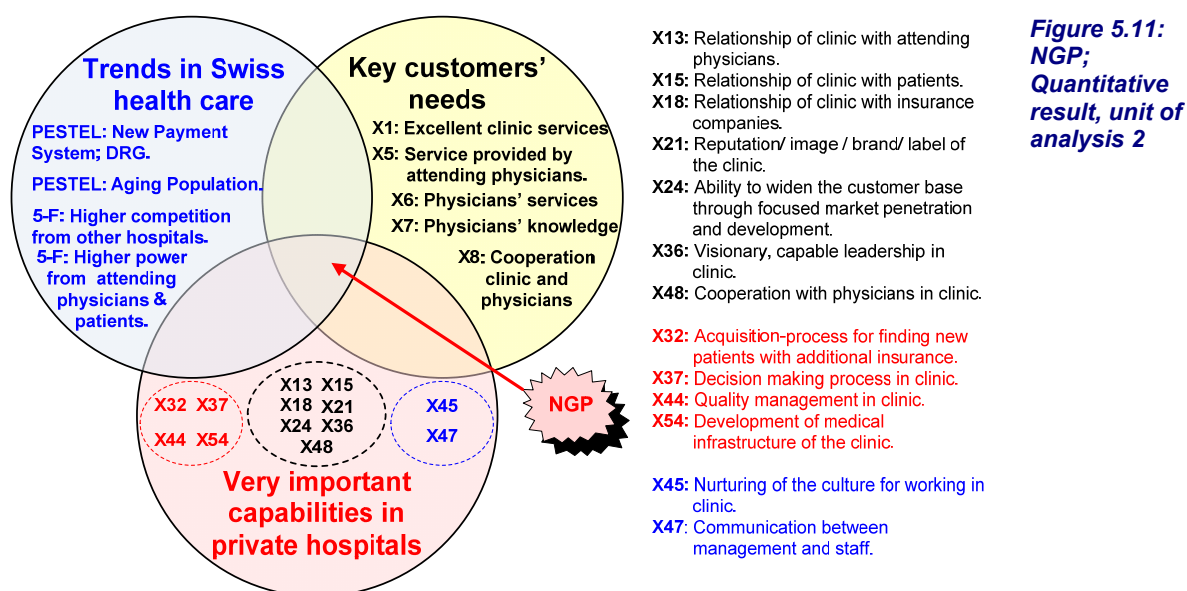


Figure 5.10:
NGP; Qualitative
result, unit of
analysis 1

The NGP, as result from the quantitative questionnaires with hospital managers and attending physicians, are in figure 5.11:



There is almost a congruency between the investigation with executives and hospital managers; however, there is the following deviation which is visible in the NGP's above. First, the executives assessed the item: X44 Quality management in clinic, as very important. This item is confirmed by the managers in the five prospector hospitals only. Second, all hospitals managers confirmed, that the item X18: Relationship of clinic with insurance companies, is for them very important. This is confirmed by the executives in the eight defender hospitals only. Third, in the five prospector hospitals, four additional capabilities are appointed. Only the item X54: Development of medical infrastructure of the clinic is confirmed by the executives and the hospital managers. The other three items in the five prospector hospitals: X22 Strategic marketing of the clinic; X23 Networking with physicians, politicians, and institutions; and X53 Development of technical infrastructure of the clinic, are not confirmed by the hospital managers.

Conclusion

They assessed the following two items: X32 Acquiring- process for finding new patients with additional insurance; and X37 Decision making process in clinic. Fourth, in the eight defender hospitals, the items X45 and X47 are confirmed; therefore, there is an alignment between executives and hospital managers.

The differences between both hospitals groups are: First, five prospector hospitals have a tension on 'infrastructure development'. The intended strategy from executives is to include 'strategic marketing'; however, hospital managers and attending physicians are more focussed on processes management such as: acquisition, decision making, and quality management. Second, eight defender hospitals have a tension on 'relationship management' and 'culture'. Therefore, for sustainable competitive advantage, a NGP must be based on all items as illustrated above. However, to reach a higher competitiveness, a private hospital needs to improve two variables, X36: Visionary, capable leadership; and X48: Effective cooperation with attending physicians. This is the result from the gap analysis (section 5.4.3).

*Tensions from
hospital groups*

5.5.2 Strategic Sweet Spot (SSS)

This section is the practical evaluation of a SSS in moderately dynamic markets. It uses the results from the 'performance' dimension and compares the results between the five prospector and the eight defender hospitals.

Framework: SSS

The SSS, as result from the qualitative interviews with 13 executives, are illustrated in figure 5.12:

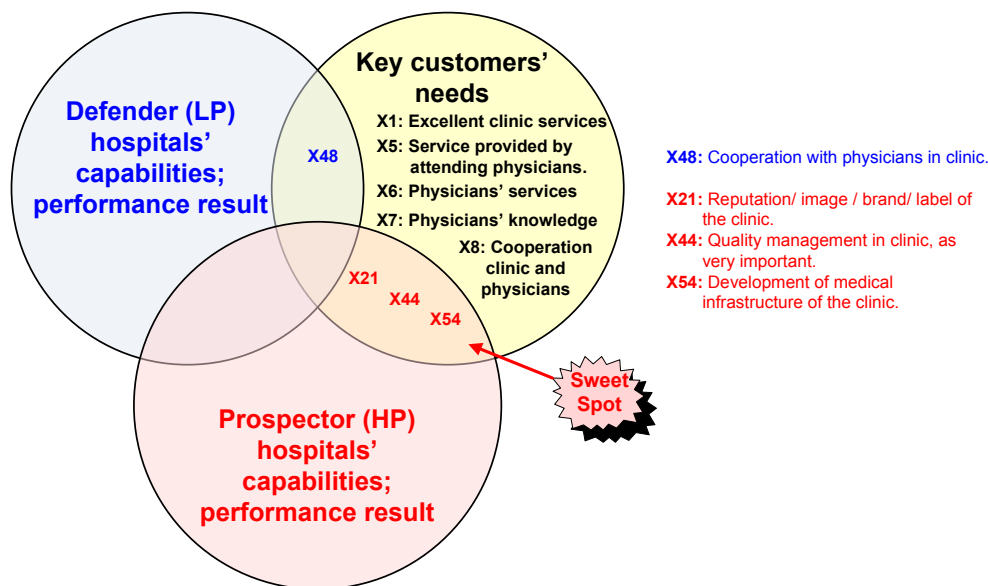
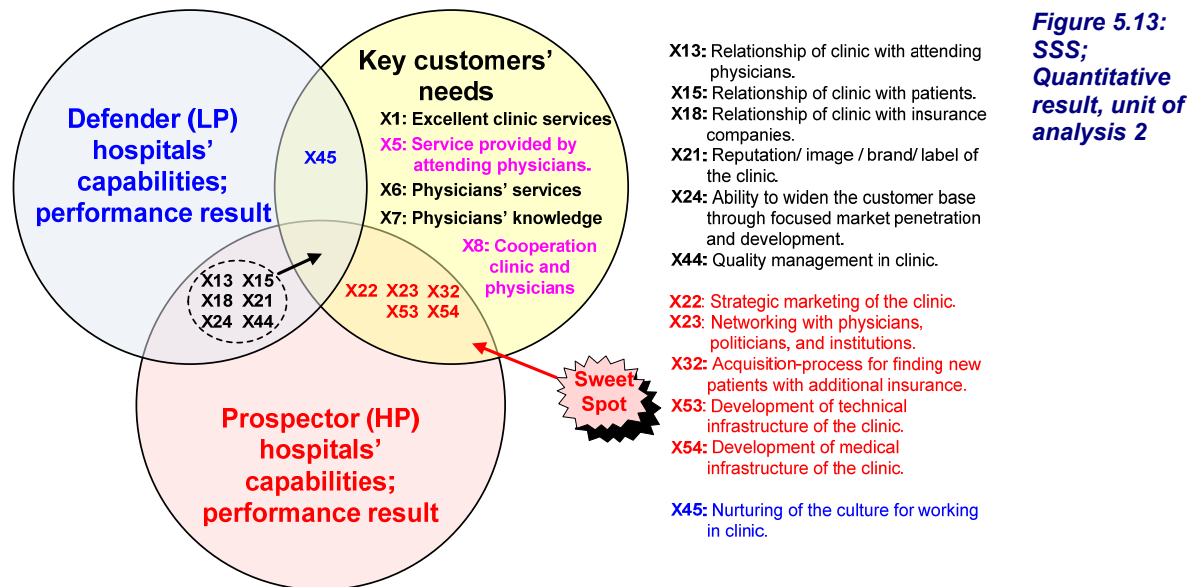


Figure 5.12:
SSS; Qualitative result, unit of analysis 1

The SSS, as result from the quantitative questionnaires with hospital managers and attending physicians, are in figure 5.13:



All very important capabilities, as evaluated in section (5.4.1), are: X13, X15, X18, X21, X22, X23, X24, X32, X36, X37, X44, X45, X47, X48, X53, X54 (appendix A8). The following variables have a mean < 3.5 and thus they are not included in the figures (5.13 & 5.14) above: X36, X37, X47, and X48.

There is not in each case a congruency between the investigations with executives and hospital managers. The following deviations are visible in the SSS's frameworks above. On the one hand, the executives in the five prospector hospitals declared three items as capability with very high performance: First, X21: Reputation/ image / brand/ label of the clinic; second X44: Quality management in clinic, as very important; and third X54: Development of medical infrastructure of the clinic. Only one item is confirmed by the hospital managers and attending physicians: X54. In addition to the items above, the hospital managers and attending physicians in the five prospector hospitals assessed the following four items as capability with high performance: First X22: Strategic marketing of the clinic; second X23: Networking with physicians, politicians, and institutions; third X32: Acquisition-process for finding new patients with additional insurance; and fourth X53: Development of technical infrastructure of the clinic. On the other hand, the executives in the eight defender hospitals assessed only one items as capability with very high performance: X48: Cooperation with physicians in clinic. This items is not confirmed by the hospital managers and attending physicians. In addition to the items above, the hospital managers and attending physicians in the eight defender hospitals assessed the following item as capability with high performance: X45: Nurturing of the culture for working in clinic. Finally, all hospitals managers and attending physicians confirmed, that the following six items are capabilities with high performance: First X13: Relationship of clinic with attending physicians; second X15: Relationship of clinic with patients; third X18: Relationship of clinic with insurance companies; fourth X21: Reputation/ image / brand/ label of the clinic; fifth X24: Ability to widen the customer base through focused market penetration and development; and sixth X44: Quality management in clinic.

Conclusion

The differences between both hospitals groups are: Five prospector hospitals perform better, because they have an effective 'strategic marketing', better 'organisational learning' through effective 'process management', and an excellent 'infrastructure'. The eight defender hospitals perform good due to their 'culture' which enable an efficient 'cooperation' especially with attending physicians.

*Performance
from hospital
groups*

5.5.3 Comparison; NGP and SSS

Regarding the result from two previous sections, there is the following conclusion. On the one hand, the NGP is based on the questionnaire data from the perceived 'importance' dimension. This approach highlights the capabilities which could match the future trends, based on key customers' needs. Therefore, it is a tool for a strategy formulation or the definition of the 'strategic intent'.

*Comparison:
NGP and SSS*

In addition, the NGP gives hospital managers crucial information about the environmental and highlights new trends in the health care sector. On the other hand, SSS is based on the questionnaire data from the perceived 'performance' dimension. This approach seeks to analyse the current situation with these capabilities which match optimally the key customers' needs. This tool is the result from the realised strategy, and it is not such future focussed as the NGP.

Therefore, it is possible to collect all information and to describe how a hospital can make a difference to provide excellent services to key customers in moderately dynamic markets. Health care in Switzerland is currently facing major drivers of change, the new trends, as investigated in the PESTEL and Five Forces analysis. Private hospitals have, to achieve a sustainable position of competitive advantage, to succeed in embedding the very important capabilities into all of its processes. This leads to the following figure 5.14 (NGP: trends, customers' needs, capabilities):

*Moderately
dynamic
markets*

WHAT trends would enable group's markets to grow faster and bigger?	WHERE can the hospital group make a difference?	HOW can the hospital group make a difference on the basis of its very important capabilities?
PESTEL; T2: New payment system DRG	Utilisation of the high-level medical knowledge of the attending physicians (X7), and cooperation with physicians (X8).	X13: Good relationship of clinic with attending physicians; X18: Relationship of clinic with insurance companies; and X48: Effective cooperation with physicians.
PESTEL; T14: Aging population	Excellent hospital services (X1), in cooperation with physicians (X6 + X8). Comprehensive information for all key stakeholders (X5).	X15: Good relationship of clinic with patients; X21: High reputation; X24: Ability to widen the stakeholder base through focused market penetration and development; X32: Acquisition-process for finding new patients with additional insurance; X45: Nurturing of the culture for working in clinic; X47: Communication between management and staff; and X54: Development of medical infrastructure.
Five Forces; Q7: Higher competition from public hospitals.	Higher effectiveness and efficiency, in cooperation with all physicians (X6 + X8).	X23: Networking with physicians, politicians, and institutions; X36: Visionary, capable leadership in clinic; X37: Decision making process in clinic; X44: Quality management in clinic. X53: Development of technical infrastructure of the clinic. X54: Development of medical infrastructure of the clinic.
Five Forces; Q10: Power of buyers, especially from patients and physicians.	Excellent hospital services (X1), in cooperation with physicians (X6 + X8). Comprehensive information for all key stakeholders (X5).	X21: Reputation/ image / brand/ label of the clinic; X22: Strategic marketing of the clinic; X24: Ability to widen the customer base through focused market penetration and development; and X32: Acquisition-process for finding new patients with additional insurance.

This table above is the description of the NGP and an ideal starting point for executives for a strategy formulation in a changing environment.

5.6 Chapter conclusion

This section summarises all case study's results from the unit of analysis 1 with the qualitative investigation, and the unit of analysis 2 with the quantitative investigation. It comprises the evaluation of the strategic orientation, the PESTEL and Five Forces analysis, key customers' needs, and capabilities. The last step is the analysis of these results with two frameworks; the NGP (New Growth Platform) and SSS /Strategic Sweet Spot).

Content of this case study

The external environment analysis started with the evaluation of the strategic orientation, the 13 hospitals can be divided into two groups: the five 'higher performing' or 'prospector' hospitals; and the eight 'lower performing' or 'defender' hospitals. As results from the PESTEL analysis, two very significant factors with a mean ≥ 4.5 are evaluated: First, T2: New payment system, DRG's; and second, T14: Aging population. In addition, two significant factors with a mean ≥ 4.0 are: First, T20: New expensive technology; and second, T30: Compliance and litigation. As result from the Five Forces analysis, only one factor is very significant with a mean ≥ 4.0 , Q7: Higher competition from public hospitals. In addition, three significant factors with a mean ≥ 4.0 are: First, Q5: Beat competition; second, Q10: Power of buyers, especially from patients and physicians; and third, Q13: Inputs from suppliers. These eight factors are labelled as Key Success Factors (KSF's); however, only the following four as new trends: T2, T14, Q7, and Q10.

Results; external environment with KSF's and new trends

The internal environment analysis started with the evaluation of the five very important key customers' needs, with a mean ≥ 4.5 , are: First, X1: Hospital services provided in clinic; second, X5: Service provided by attending physicians; third, X6: Knowledge of medical staff in clinic; fourth, X7: Knowledge of attending physicians; and fifth, X8: Cooperation and collaboration between clinic and physicians. On the one hand, the qualitative analysis of the 'importance' dimension of capabilities has shown the following result: Five prospector hospitals have a tension on 'marketing' and 'infrastructure development'; and the other eight defender hospitals have a tension on 'relationship management' and 'culture'. The quantitative analysis of the 'importance' dimension of capabilities has shown that the congruency, between the investigation with executives and hospital managers, is better in the eight defender hospitals. On the other hand, the qualitative analysis of the 'performance' dimension of capabilities has shown the following result: Five prospector hospitals have a good performance on 'marketing', 'organisational learning' and 'infrastructure development'; and the other eight defender hospitals have a tension on 'culture'. The quantitative analysis of the 'performance' dimension of capabilities has shown that there is not a perfect alignment between the investigation with executives and hospital managers. In addition, the gap analysis between the perceived 'importance' and perceived 'performance' dimension has shown that a hospital, to reach a higher competitiveness, needs to improve two variables: First, X36: Visionary, capable leadership; and second, X48: Effective cooperation with attending physicians.

*Result: internal
environment
with capabilities*

In changing or more dynamic environment, such as the moderately dynamic market, a strategy formulation should be based on a framework. In this research both the NGP and the SSS approach are evaluated as the best way to put all results together. On the one hand, the NGP is based on the questionnaire data from the perceived 'importance' dimension. This approach highlights the capabilities which could match the future trends, based on key customers' needs. Therefore, it is a tool for a strategy formulation or the definition of 'strategic intent'. On the other hand, the SSS is based on the questionnaire data from the perceived 'performance' dimension. This approach seeks to analyse the current situation with these capabilities which match optimally key customers' needs. This tool is the result from the realised strategy; however, it is not such future focussed as the NGP.

*Results:
Integrated
frameworks*

With all these results it is finally possible to answer the following three research sub-questions as described in section (3.1): First, what is an effective strategic orientation to remain highly competitive? There are two possibilities to remain highly competitive. If a hospitals decide to be a prospector, then its focus should be on 'marketing', 'organisational learning', and 'infrastructure development'. If a hospital declares itself as defender, in this case the tension should be on 'relationship management' and 'culture'. Second, what are the key determinants of the new competitive market? In a moderately dynamic market such as the health sector, the key determinants in the external environment are: KSF's and new trends. KSF's help hospitals managers to understand the current strategic position, new trends are important for the definition of new strategic options to remain highly competitive. The key determinant of the internal environment are capabilities. In private hospitals a differentiation, to outperform competitors, are only possible with effective capabilities which lead to sustainable competitive advantage. Third, how can key determinants be integrated in an effective strategic framework? The NGP approach is an effective tool to put the crucial information together.

*Research
questions; part
1: case study*

In addition to the research question, with these results it is enabled to test the three propositions as listed in section (3.1). Therefore, prospector hospitals which have a higher performance, in this case a higher EBITDA per bed, will have at first defined the key capabilities. This first proposition is fulfilled. Executives defined eleven very important capabilities. These capabilities are confirmed by the hospital managers and attending physicians; however, there are some differences. The executives have a tension on 'strategic marketing' (X22; X23), and 'development of technical infrastructure' (X53). In contrast, hospital managers see more the importance on the 'process management' (X32; X37), and 'relationship management' with insurance companies (X18). Second, prospector hospitals will have defined these capabilities which have the highest performance rate. According to the executives, the three capabilities with a very high performance rate are: 'reputation' (X21), 'quality management' (X44), and 'development of medical infrastructure' (X54). The hospital managers confirmed these items, thus this second proposition is fulfilled as well; however, the managers identified eight other capabilities with a high performance: 'relationships' with attending physicians, patients, and insurance companies (X13; X15; X18), 'market development' (X24), 'strategic marketing' (X22), 'networking' (X23), acquisition (X32), and 'development of technical infrastructure' (X53). Third, prospector hospitals will have a congruency between the executives and hospitals' managers what the crucial capabilities are. There is to some extent a congruency between executives and hospitals' managers and physicians. On the one hand, executives think that the three crucial capabilities are: the 'strategic marketing', 'relationship management with key customers', and the 'development of the infrastructure'. They think that these capabilities contribute to a high performance, together with the 'quality management', as part of the 'process management'. In contrast, hospital managers pointed out the following two crucial capabilities: 'process management', and 'relationship management'. However, they confirmed that 'strategic marketing', 'relationship management', and the 'development of the infrastructure' have an impact on performance; therefore, these capabilities are important for the strategy formulation in this new moderately dynamic market.

6. Results from survey; unit of analysis 3

The goal of this unit of analysis 3, a purely quantitative analysis, is to confirm the results from both units of analysis 1+2. It evaluates especially the 43 capabilities and bundles of them and their impact on performance.

6.1 Result: Performance; KPI's

This section shows the chosen KPI's (section 2.6.2) from both groups of hospitals, which were discussed and chosen with the financial managers/ CFO's in the 13 hospitals. The values are given in percentage in figure 6.1 due to the confidentiality in these private hospitals.

Performance

	Key Performance Indicator (KPI), time period of 5 years:	Mean of 5 prospector hospitals in %	Mean of 8 defender hospitals in %
F1	OM: Operating Margin	75.4	48.1
F2	TM: Total Margin	51.5	15.0
F3	ROA: Return on Assets	57.3	18.0
F4	ROE: Return on Equity	63.2	19.7
F5	EVA per Total capital	69.3	38.4
F6	EBITDA per Bed in hospital	74.5	28.1
F7	TAT: Total asset turnover	64.5	64.5
F8	FAT: Fixed Asset Turnover	56.5	44.1

*Figure 6.1:
Financial KPI's*

This KPI's (Key Performance Indicators) are based on a relative scale in which 100% refers to the highest KPI-value achieved in the overall 13-hospital group. Thus the five prospector hospitals have significant higher financial performance than the other eight defender hospitals. The exception is the TAT which has exactly the same value of 64.5%. These financial KPI's measures the internal performance in hospitals based on historical data as mean from a five year period. The reliability analysis (section 4.3.6) for these ratios is illustrated in figure (6.2), with a Cronbach's Alpha = 0.923, and a KMO = 0.709.

Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
F1 F1: OM	18.1853	36.566	.716	.967	.915
F2 F2: TM	18.7290	35.665	.772	.962	.911
F3 F3: ROA	18.5331	32.462	.958	.990	.895
F4 F4: ROE	18.3945	32.413	.958	.973	.895
F5 F5: EVA/ Total capital	18.1059	33.708	.866	.968	.903
F6 F6: EBITDA/ Bed	18.4374	32.894	.807	.946	.908
F7 F7: TAT	18.0635	39.612	.331	.969	.943
F8 F8: FAT	18.4533	35.482	.598	.937	.926

Figure 6.2:
Reliability analysis

Cronbach's alpha should exceed a threshold of 0.7, although a 0.60 level can be used in exploratory research (Hair, Black, Babin, Anderson, and Tatham 2005, p.139; and Nunnally, 1978). For the further investigation, the construct F18 is used as an aggregated value from all financial KPI's. It is the result from the sum of all variables divided by the number of variables (mean): $F18 = (P1 + P2 + P3 + P4 + P5 + P6 + P7 + P8) / 8$.

Aggregated value for financial performance

6.2 Result; Factor analysis (PCA)

This section illustrated the results from the Principal Component Analysis with the criteria as described in section (4.3.6). The respondents (N = 184) were the same as in the units of analysis 1+2: 117 hospital managers, and 67 attending physicians. The survey yielded the following responses for the weighted performance, with an indication of very high levels of reliability (Cronbach's $\alpha \geq 0.70$) of the field research data, shown in the figure 6.3. The results are the following six factors (appendix A10):

Criteria for PCA

KMO² = 0.897; N = 184; Sig. = 0.000; Absolute values > 0.5

¹Extraction Method: Principal Component Analysis

²Kaiser-Meyer-Olkin Measure of Sampling Adequacy

³Variance explained (Rotation Sums of Squared Loadings)

Component ¹	Cluster identification:	% var ³	KMO ²
1	1. Strategic management: Key items: X38, X36, X27, X37, X25, X35	13.86	0.890
2	2. Organisational learning: Key items: X42, X43, X44	9.66	0.814
3	3. Infrastructure development: Key items: X54, X53, X51, X50	8.76	0.798
4	4. Organisational culture: Key items: X47, X45, X48, X46	8.11	0.785
5	5. External relationship management: Key items: X18, X19, X20	7.73	0.786
6	6. Strategic marketing: Key items: X21, X22, X23	7.32	0.704

**Figure 6.3: PCA;
6 factors, with
KMO's**

Total variance explained = 55.4

With these six factors, there are about 55% of the population explained and thus there is a data reduction from 43 to 24 variables. Hair et al. (2006, p.197) recommended to have at least 5 observations per variable. In this case, there are 8 observations with a total of: N = 184, for the further studies. In addition, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy have to be assessed according to Hair et al's (1998) guideline and should exceed the recommended minimal value of 0.6 (Kaiser, 1974).

*Variable
reduction; KMO*

With these KMO's above, and a significance < 0.05 , this analysis is relevant.

Figure (5.3) shows the six most important 'bundles of capabilities' for all hospitals. There are labelled as: First, 'Strategic management' and consists of 6 capabilities: X38 Change management in clinic; X36 Visionary, capable leadership in clinic, X27 Ability to gain knowledge to detect fast regulation shifts; X37 Decision making process in clinic; X25 Ability to gain knowledge about competitors' strengths/ weaknesses; and X35 Strategy implementation. Second, 'Organisational learning' which consists of 3 capabilities: X42 Performance measurement process in clinic; X43 Knowledge management in clinic: and X44 Quality management in clinic. Third, 'Infrastructure development' and consists of 3 capabilities: X54 Development of medical infrastructure of the clinic; X53 Development of technical infrastructure of the clinic; X51 Education and development of competence of technical staff in clinic, and X50 Education and development of competence of medical staff in clinic. Fourth, 'Organisational culture' and consists of 4 capabilities: X47 Communication between management and staff; X45 Nurturing of the culture for working in clinic; X48 Cooperation with physicians in clinic; and X46 Ability to unify confliction options and to generate motivation. Fifth, 'External relationship management' and consists of 3 capabilities: X18 Relationship of clinic with insurance companies; X19 Relationship of clinic with local government; and X20 Relationship of clinic with medical commissions/ state government. Sixth, 'Strategic marketing' and consists of 3 capabilities: X21 Reputation/ image / brand/ label of the clinic; X22 Strategic marketing of the clinic; and X23 Networking with physicians, politicians, and institutions.

Factors

6.3 Result: Multiple regression analysis

The results from the multiple regressions (appendix A12) are illustrated in figure 5.4:

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.623	.489		5.360	.000
X36 Leadership	.165	.095	.192	1.736	.084
X37 Decision making.	-.111	.108	-.113	-1.027	.306
X38 Change Mgmt.	.120	.092	.114	1.300	.196
X27 Knowledge regul.	-.104	.087	-.102	-1.197	.233
X25 Knowledge comp.	-.159	.094	-.162	-1.691	.093
X35 Strategy implement.	.080	.107	.081	.747	.456
X42 Perform. measur.	-.110	.101	-.104	-1.095	.275
X43 Knowledge Mgmt.	.110	.111	.097	.983	.327
X44 Quality Mgmt.	-.101	.105	-.089	-.959	.339
X50 Educ. med. staff	.162	.122	.120	1.329	.186
X51 Educ. techn. staff	-.044	.117	-.036	-.374	.709
X53 Infrastructure tech.	-.043	.112	-.039	-.389	.698
X54 Infrastructure med.	.384	.099	.359	3.892	.000
X45 Culture	-.495	.095	-.480	-5.193	.000
X46 Motivation	.229	.112	.211	2.043	.043
X47 Communication	-.088	.104	-.084	-.843	.401
X48 Cooperation	-.201	.075	-.199	-2.673	.008
X18 Rel. with insurance	.031	.087	.029	.360	.719
X19 Rel. with local gov.	-.085	.107	-.080	-.801	.424
X20 Rel. with state gov.	-.047	.093	-.045	-.500	.617
X21 Image	.183	.084	.173	2.181	.031
X22 Strat. marketing	-.034	.087	-.034	-.386	.700
X23 Networking	.107	.087	.099	1.222	.223

a. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

Figure 6.4:
*important
factors, linked
to performance*

The R-square value, also known as the coefficient of determination, is an indicator of how well the model fits the data. $R^2 \sim 0.5$ indicates that we have explained about 50% of the original variability and that we have accounted a main part of the variability with the variables specified in the model. The statistically significant Bartlett's test of sphericity ($\text{sig} < 0.05$) indicates that sufficient correlation exists among the variables to proceed (Hair et al. 2006, p.115). The most widely used level of significance is 0.05, although researchers use levels ranging from 0.01 (more demanding) to 0.10 (less conservative).

There are the following three variables which have a sig. < 0.05 and, on the one hand, a positive impact on performance: First, X54: Development of medical infrastructure of the clinic; $\beta = 0.359$. Second, X46: Ability to unify confliction options and to generate motivation; $\beta = 0.211$. Third, X21: Reputation/ image / brand/ label of the clinic; $\beta = 0.173$. On the other hand, there are the following two variables which have a sig. < 0.05 and a negative impact on performance: First, X48: Cooperation with physicians in clinic; $\beta = -0.199$. Second, X45: Nurturing of the culture for working in clinic; $\beta = -0.480$.

*Capabilities;
impact on
performance*

6.4 Result; SEM

This section describes the Structural Equation Modelling (SEM) analysis of the six factors or bundles of capabilities, based on the results from the PCA in section (6.2). These six factors are analysed in relation to the financial performance with the following model 6.5:

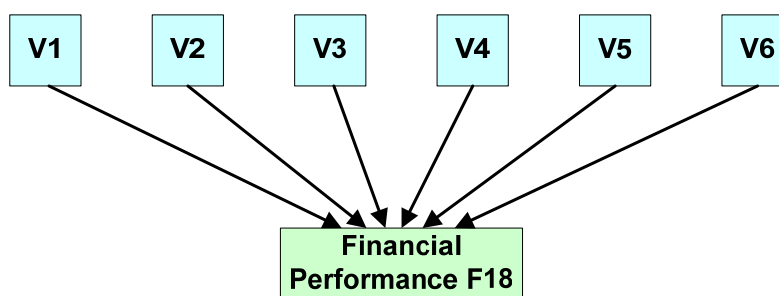


Figure 6.5: SEM, model for financial performance

Looking at the model above, the final regression equation obtained is as follows: $y = a + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_6X_6$; where $y = F18$. First, for the financial performance the construct F18, as described in section (6.1), is used. Second, X_1 to X_6 are factors' values which are the mean from the six factors (F1-F6) as evaluated in section (6.2). Third, b_1 to b_{10} are the standardised estimates as result from the SEM (appendix A11).

Regression equation

The result is listed in figure 6.6:

Structural Equation Modelling (SEM): Financial Performance

Chi-Square = 62.3; 13df; GFI = 0.90; AGFI = 0.80

Significance: $p = 0.000$

Figure 6.6: SEM, financial performance, result

Rank:	Cluster identification:	Standardised coefficient β
1	3. Infrastructure development: Key items: X54, X53, X51, X50	0.302***
2	6. Strategic marketing: Key items: X21, X22, X23	0.217***
3	4. Organisational culture: Key items: X47, X45, X48, X46	-0.298***
4	5. External relationship management: Key items: X18, X19, X20	-0.141**

Level of significance for regression weight:

- * $P < 0.10$
- ** $P < 0.05$
- *** $P < 0.01$

The GFI (goodness of fit index) is above the value of 0.90; therefore this model is considered as good (Hair, Black, Babin, Anderson, and Tatham 2005, p. 747). The AGFI (Adjusted Goodness-of-Fit Index) is equal the value of 0.80; therefore this model is considered as good (Samouel and Hair, 1998, p.88).

Goodness of fit criteria

The different regression weights are listed in figure 6.7 below:

Standardised Regression Weights			Estimate	S.E.	C.R.	P	Standardised Estimate
F18	←	V1	.009	.179	.052	.958	.005
F18	←	V2	-.155	.157	-.989	.323	-.087
F18	←	V3	.576	.157	3.667	***	.302
F18	←	V4	-.562	.170	-3.299	***	-.298
F18	←	V5	-.208	.112	-1.856	.063	-.141
F18	←	V6	.321	.103	3.115	.002	.217

*Figure 6.7:
Regression
weights in
prospector
hospitals;
importance*

Significance: $p \leq 0.05$ for V3 + V4 + V6; V6 has a significance of: $p \leq 0.10$.

Therefore, the following two factors have a positive impact on performance: V3 'Infrastructure development', and V6 'Strategic marketing'. Contrary, two factors have a negative impact: V4 'Organisational culture', and V5 'External relationship management'.

Conclusion

6.5 Hypotheses testing

All hypotheses, as described in section (4.3.8), can be answered now with the results from both chapters (5+6). The first hypothesis, H1: 'Prospector hospitals will have a higher performance than defender hospitals', is confirmed. The investigation in section (6.1) has shown clearly that the five prospector hospitals have a much higher financial performance than the other eight defender hospitals. The exception is the TAT which shows exactly the same value for both hospital groups. The mean values for an aggregated value of all eight ratios are: 3.29 for prospectors, and 2.10 for defenders.

Hypothesis H1

The second hypothesis, H2: 'Bundles of capabilities will have a positive impact on financial performance', is partly confirmed. Based on section (6.2) the results, which are divided into six sub-hypotheses, are: First, H2a: Strategic marketing will have a positive impact on performance. This hypothesis is confirmed. Marketing has a positive correlation to performance; however, the infrastructure development is more dominant. Second, H2b: Relationship management will have a positive impact on performance. This hypothesis is not confirmed. The level of significance is only 0.063 instead of > 0.05 . In addition, the result is a negative value, thus this factor helps not directly to improve the financial performance. Third, H2c: Strategic management will have a positive impact on performance. This hypothesis is not applicable because of the low level of significance of > 0.10 . Fourth, H2d: Organisational development and learning will have a positive impact on performance. This hypothesis is not applicable due to the low level of significance of > 0.10 . Fifth, H2e: Culture will have a negative impact on performance. This hypothesis is confirmed. Sixth, H2f: The development of the (medical and technical) infrastructure will have a positive impact on performance. This hypothesis is confirmed. It is the most dominant factor.

Hypothesis H2

The third hypothesis, H3: 'Physical attributes - Hospital's size will have an impact on financial performance; the higher the occupancy rate, multiplied with the number of beds, the higher the performance', is confirmed. The first step is the analysis of the number of beds in all hospitals. The mean of the five prospector hospitals is 132.5 beds, of the defender hospitals only 77.8 beds (appendix A9). The prospector hospitals have a higher financial performance as proved in hypotheses H1; therefore, this hypothesis is also confirmed - the more beds, the higher the performance. However, the occupancy rate must be calculated which is the second step. The occupancy rate in % is listed in appendix (A9) as well. The mean value for the prospector hospitals (HP) is 72.3%, for the other defender hospitals (LP) only 65.8%. The last step is the calculation of the values: 'beds x occupancy rate'. The outcome is illustrated with figure 6.8:

Hypotheses H3

Report

F13 F13: BZ x OR

Perf...	Mean	N	Std. Deviation
1 "HP"	2.9751	5	1.21480
2 "LP"	1.8866	8	.98565
Total	2.3053	13	1.16723

Figure 6.8: mean of the occupancy rates in both hospital groups

Therefore, this hypothesis is supported. The five prospector hospitals (HP) have higher values (mean = 2.9751; 97.3 beds) and thus a higher financial performance than the other eight defender hospitals (mean = 1.8866; 52.8 beds).

The fourth hypothesis, H4: 'Key competence area - Hospital's specialisation will have an impact on financial performance', is confirmed. The five prospector hospitals, with cardiology as main specialisation, have the highest rate of private patients and thus the highest performance as proved in hypotheses H1. In contrast, the defender hospitals have orthopaedics as main specialisation. The second part is the evaluation of the percentage of private and semi-private patients. The five prospector hospitals have a value of 82.5%, in contrast to the defender hospitals with only 57.7% (appendix A9). The outcome is illustrated with the figure 6.9:

Hypothesis H4

Report

F16 F16: Private patients

Perf...	Mean	N	Std. Deviation
1 "HP"	4.1149	5	1.11269
2 "LP"	2.8203	8	1.16043
Total	3.3182	13	1.27591

Figure 6.9: mean of the private patients in both hospital groups

Therefore, this hypothesis is supported. The five prospector hospitals (HP) have higher values (mean = 4.1149) and thus a higher financial performance than the other eight defender hospitals (LP).

The following table (Figure 6.10) summarises the results for all hypotheses:

Hypothesis	Findings in context of research model	Statistical findings out of the context	Comments
H1: Prospector hospitals will have a higher performance than defender hospitals.	Supported		This hypothesis is confirmed. The mean values for the aggregated value F18 are: in five prospector hospitals = 3.29; in eight defender hospitals = 2.10.
H2a: Strategic marketing will have an impact on performance.	Supported		This hypothesis is confirmed. Marketing has a positive correlation to performance; however, the infrastructure development is more dominant.
<i>H2b: Relationship management will have a positive impact on performance.</i>	<i>Not supported</i>		<i>This hypothesis is not confirmed. The level of significance is only 0.063 instead of > 0.05. In addition, the result is a negative value.</i>
<i>H1c: Strategic management will have a positive impact on performance.</i>	<i>Not supported</i>		<i>This hypothesis is not applicable because of the low level of significance of > 0.10.</i>
<i>H2d: Organisational development and learning will have a positive impact on performance.</i>	<i>Not supported</i>		<i>This hypothesis is not applicable because of the low level of significance of > 0.10.</i>
H2e: Culture will have a negative impact on performance.	Supported		This hypothesis is confirmed; therefore, culture has a negative impact on performance.
H2f: The development of the (medical and technical) infrastructure will have a positive impact on performance.	Supported		This hypothesis is confirmed. It is the most dominant factor.
H3: Physical attributes - Hospital's size will have an impact on financial performance: The higher the occupancy rate, multiplied with the number of beds, the higher the performance.		Supported	The means of: beds x occupancy rate, are: in the five prospector hospitals = 97.3 beds, in the eight defender hospitals = 52.8 beds.
H4: Key competence area - Hospital's specialisation will have an impact on financial performance; hospitals with cardiology as main specialisation, with a high rate of private patients, will have the highest performance.		Supported	This hypothesis is confirmed. The five prospector hospitals have a value of 82.5%, in contrast to the defender hospitals with only 57.7%.

6.6 Chapter conclusion

This chapter summarises survey's results from the unit of analysis 3 with the quantitative investigation. It comprises the evaluation of KPI's, the factor analysis (PCA), a multiple regression, and a SEM. The construct F18, as average of five years (2005-2009), is used as aggregated value from all financial KPI's. It is the result from the sum of all variables divided by the number of variables (mean). The factor analysis has as result six factors, which are similar as the original clusters in the questionnaire (appendix A8). They consists of total 23 simple capabilities and are labelled as: 1. 'Strategic management', 2. 'Organisational learning', 3. 'Infrastructure development', 4. 'Organisational culture'; 5. 'External relationship management', and 6. 'Strategic marketing'. On the one hand, from these 23 simple capabilities, the following three has a positive impact on performance and thus are very important: First, X54: Development of medical infrastructure of the clinic; second, X46: Ability to unify confliction options and to generate motivation; and third, X21: Reputation/ image / brand/ label of the clinic. On the other hand, there are the following two variables which has a negative impact on performance: First, X48: Cooperation with physicians in clinic; and second: X45 Nurturing of the culture for working in clinic. On the other hand, from these six factors above, the following two has a positive impact on performance and can be labelled as 'core capabilities': 3. 'Infrastructure development', and 6. 'Strategic marketing'. Concerning the four hypotheses, it is confirmed that prospector hospitals have a higher performance than defender hospitals. Second, it is also confirmed that 'culture' has a negative impact on financial performance. Third, it is true that hospital's size has an impact on financial performance: The higher the occupancy rate, multiplied with the number of beds, the higher the performance. Fourth, it is also confirmed that hospitals with cardiology as main specialisation, with a high rate of private patients, have the highest performance.

*Content and
results*

With all these results it is finally possible to answer the other two research sub-questions as described in section (3.1). First, how can performance be described in private hospitals? Financial performance is coherent and an often used criterion in private hospitals for measuring the success. In this research it is suggested to us an aggregated value from financial KPI's such as Operating Margin, Total Margin, Return on Assets, ROE: Return on Equity, EVA per Total capital, EBITDA per Bed in hospital, TAT: Total asset turnover, and Fixed Asset Turnover.

*Research
questions; part
2: survey*

Second, what is the relationship between environment, internal context, and performance? To understand this relationship, at least three steps are required. 1. step: evaluation of the strategic orientation of a private hospital with a questionnaire as created by Miles and Snow (appendix A4). 2. step: evaluation of capabilities and bundles of capabilities, which are the key determinant of the internal environment, with a questionnaire as designed in appendix (A8). With a factor analysis (PCA) it is possible to analyse the interrelationships among these capabilities and to explain these variables in terms of their common underlying dimensions. The 3. step is to put all variables in relation to the aggregated performance value. An effective way is the multiple regression which links the 'simple capabilities', as independent (predictor) variables, to performance as the single dependent (criterion) variable. The multiple regressions maximize the overall predictive power of the independent variables and compare several sets to ascertain the predictive power of each variate. However, the multiple regressions share one common limitation. It can examine only a single relationship at a time. For this reason, the structural equation modelling (SEM), an extension of several multivariate techniques such as the factor analysis or the multiple regression analysis, is used to explain the relationships among multiple variables.

Therefore, with such a thorough analysis it is possible, to give hospital managers and executives an advice how to compete in a moderately dynamic market. To compete successfully and to reach sustainable competitive advantage, two strategic orientations are analysed: prospector hospitals, with cardiology as main specialisation, and defender hospitals, with orthopaedics as main key specialisation. Both hospitals should integrate the following single capabilities into their strategy: development of medical infrastructure, maintaining the ability to unify confliction options and to generate motivation, and finally promote a high reputation, image and brand. However, to outperform competitors it is crucial to integrate as well both core capabilities into strategy: the 'infrastructure development', and 'strategic marketing'.

7. Discussion and conclusion

There is quite a low status attached to 'management' in the medical field, and business is almost an 'inconvenient' word. According to Porter and Teisberg (2006), "*the literature on strategy for health care organisations is virtually nonexistent*". Many practitioners consider the whole idea of competition in the health care to be suspect. Physicians are taught that competition is wasteful, that it promotes self-interested behaviour, and that it undermines patient care. Thus practitioners have the general to preserve rather than change their hospitals' strategy; however, all hospitals are forced, due to the DRG introduction in 2012, to improve the effectiveness and efficiency to remain highly competitive. The starting point is the formulation of a powerful strategy which is a key determinant of its performance.

*Management in
the medical field*

As this research has shown, the 13 private hospitals in Switzerland are more focused on prescriptive strategy making. They look behind at established data that is analysed, and they try to position themselves in the health care market. The top management use Puempin's (1987) Strategic Excellence Positions (appendix A13), a strategic approach which was appropriate in a static health care market, and for the performance measurement 'historical' financial ratios such as: OM; TM; ROA; ROE; EVA/Total capital; EBITDA/bed; TAT; and FAT (section 6.1). Such ratios have two components: a numerator: 'income' and a denominator such as: 'investments, net assets, or capital employed'. In a service industry such as the health care, with cost of labour as the most dominant expenditure, a more appropriate denominator may be head count. Managers know that raising net income is likely to be harder than cutting assets and head count. To increase the numerator, top management must have a sense of where new opportunities lie, must be able to anticipate changing customer needs, and must have invested in building new capabilities. Therefore, they try to apply the design school conception to achieving '*fit*' between market opportunities and organisational resources.

*Prescriptive
strategy
making;
Positioning*

Such prescriptive strategy making was successful in the last years for these hospitals in a comprehensive, controllable and regulated market with simple environment conditions.

The environmental analysis has shown that the Swiss healthcare market will move in the next few years in direction of a '*moderately dynamic market*' with "*a relatively stable industry structure in which change occurs frequently, but along roughly predictable and linear paths*" (Eisenhardt, 1989), with identifiable key players such as patients, physicians, competing hospitals and medical suppliers. However, it will be more unpredictable than in the last years with fundamental changes such as the new payment system DRG, the new expensive technology, the aging population with changing customers' service perception, and more compliance and litigation. Thus the contemporary strategy must be based on descriptive schools. This new environment leads to a new direction as illustrated in figure 7.1 with the arrow: 'New strategy for private hospitals'.

*Descriptive
strategy
making;
Learning*

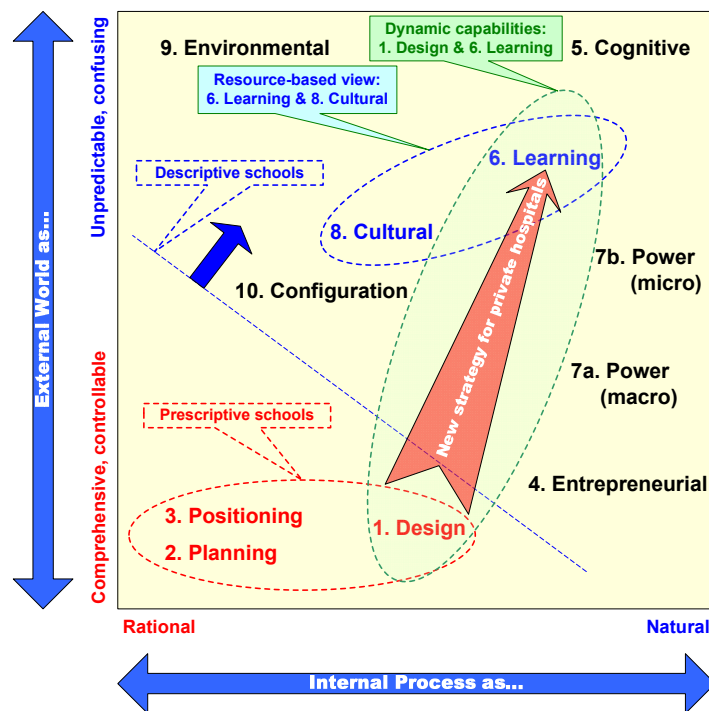


Figure 7.1: Ten School of strategy formation

Therefore, hospitals have to move in the next years along the 'dynamic capability' framework, which is an extension of the RBV (Erickson et al., 2006), to form natural internal processes with unique core capabilities to remain highly competitive in the unpredictable external environment. This implies to have a culture which encourages organisational learning. The competitive strategy through a correct positioning and strategic 'fit' must be developed to a resource-led 'stretch', a differentiation based on capabilities suited to key customers' needs. The next sections describe how private hospitals may improve the effectiveness and efficiency with 'strategic intent', based on the evaluation of simple capabilities and bundles of capabilities. It defines the competitive position and answers also the research questions.

**Stretch;
Strategic intent**

Different studies has shown that the top acute hospitals in the health care market have demonstrate timely responsiveness and rapid and flexible product innovation, coupled with management skills to effectively coordinate and redeploy internal and external capabilities. Not surprisingly, industry observers have remarked that hospitals can accumulate a large stock of valuable technology assets and still not have many useful capabilities. Strategic management, strategic planning, and the belief in health care practice, all work together to tightly constrain the range of available means. However, such planning activities are not enough for contemporary hospitals to outperform competitors. Innovation, as a crucial element, would be an isolated activity. Therefore, it is important to adopt Hamel and Prahalad's (2005) idea of strategic intent which is clear about ends and flexible about means; it leaves room for improvisation. Thus it is possible to stimulate creativity and increase the level of innovation. However, innovation may range from incremental refinement to frame-breaking or disruptive change. It is referred to the former as institutional and to the latter as revolutionary innovation. For contemporary hospitals in Switzerland, it is not enough to be only focused on institutional innovation.

Innovation

Through the globalisation and powerful medical research, hospitals are forced to act in an evolutionary manner. Evolutional or sustainable innovation is a dual innovation strategy that not only focuses on the financial success and penetration of the hospitals' current services offering; it also helps hospitals focus on building their long-term capabilities to commercialise emerging market opportunities (Birchall and Tovstiga 2005, p.78).

7.1 Discussion of results

At this stage it is appropriate to define private hospitals. They are service organisations, or service factories, with a high degree of customer orientation. They receive neither subsidies from governments nor other investments from charities, sponsors, or foundations. Private hospitals rely on their unique capabilities which are the basis for an excellent service and a high degree of key customers' satisfaction. Hospitals cannot change the external environment or the fixed tariff structure. They have not enough power to influence governments to change prescription and regulation; they can influence only the internal environment. Therefore, the key point of this investigation is the evaluation of capabilities which are the highest asset of a service organisation.

*Private
hospitals;
definition*

This perception leads to a strategy paradigm which is not mainly based on the external environment, paradigm such as 'Porter's Five Forces' or 'Strategic conflict'. According to Teece, Pisano, and Shuen (1997), these paradigms are mainly focused on industries and products. Therefore, the RBV and 'dynamic capability perspective' are chosen for the analysis of capabilities and processes. Unfortunately, these approaches have not a short-run capacity for strategic reorientation as Porter's Five Forces. The focal concern of the RBV is the asset fungibility, whereas the dynamic capabilities focus the asset accumulation, the replicability and inimitability. Private hospitals must realise that, in this current 'information age', they must increasingly create and deploy intangible assets such as: internal and external relationships with key stakeholder, capabilities, and a corporate culture that encourages organisational learning and development as well as infrastructure developments. According to Kaplan and Norton (2000, p.169), *"even though intangible assets have become major sources of competitive advantage, no tools existed to describe them and the value they can create"*. This is the main reason to search for a strategy tool to put all information together, as basis for a successful strategy formulation. This has lead to the investigation of the NGP and the SSS, which is an excellent starting point in moderately dynamic markets.

*Strategy
paradigm*

This research was an opportunity for strengthening the connection between concepts and measures of strategy. As more is learned about different types or aspects of strategy, especially the intended versus realised strategies (Mintzberg, 1978). The NGP with the 'importance' dimension can be seen as the intended strategy, the SSS with the 'performance' dimension as the realised strategy. Both are excellent tools for the visualisation and comparison of the outcomes from the unit of analysis 1 (qualitative data) and unit of analysis 2 (quantitative data).

*Intended versus
realised strategy*

7.2 Implications for hospital

With the NGP below, all crucial results are illustrated in figure 7.2:

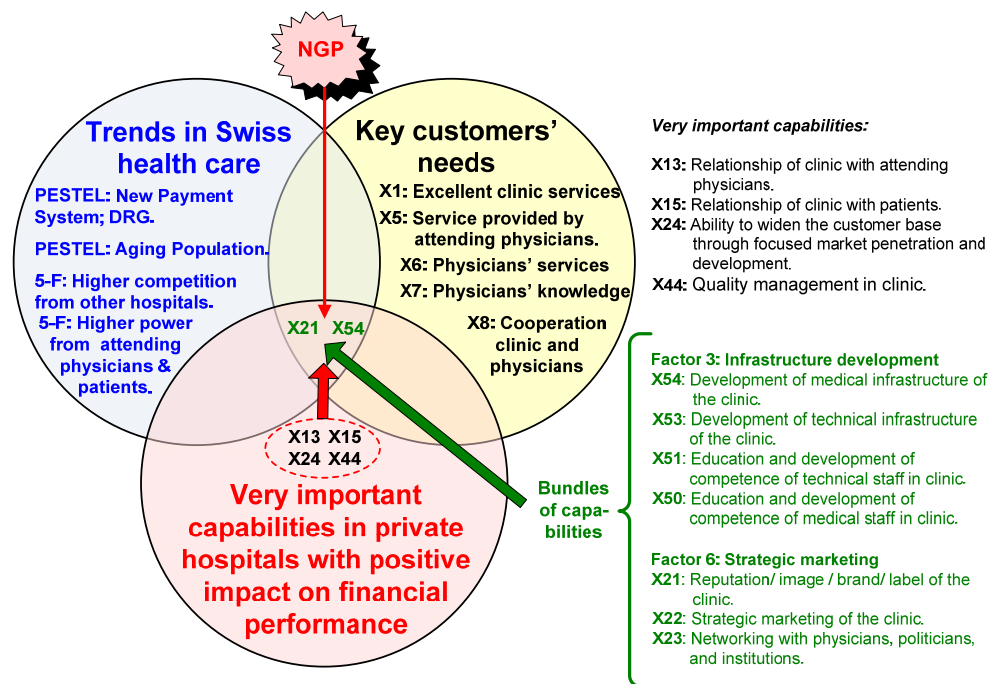


Figure 7.2: NGP, result from case study

This NGP is the starting point for the focus group to define a new strategy in moderately dynamic markets. The trends and key customers' needs remain unmodified. This means, that hospital cannot manipulate these factors. The focus is thus on capabilities; therefore, the top management must consider the following six crucial capabilities: First, X13: Relationship of clinic with attending physicians; second, X15: Relationship of clinic with patients; third, X21: Reputation/ image / brand/ label of the clinic; fourth, X24: Ability to widen the customer base through focused market penetration and development; fifth, X44: Quality management in clinic; and sixth, X54: Development of medical infrastructure of the clinic.

Crucial capabilities

These six crucial capabilities are assessed in all three units of analysis 1-3 as very important, with a high impact on performance as well. They are also integral parts of factors, or bundles of capabilities, which are positively linked to performance. There are two factors which can be defined as 'core capabilities': First, 3. 'Infrastructure development', which consists of four 'simple' capabilities: X54 Development of medical infrastructure of the clinic; X53 Development of technical infrastructure of the clinic; X51 Education and development of competence of technical staff in clinic, and X50 Education and development of competence of medical staff in clinic. Second, 6. 'Strategic marketing', which consists of three 'simple' capabilities: X21 Reputation/ image / brand/ label of the clinic; X22 Strategic marketing of the clinic; and X23 Networking with physicians, politicians, and institutions. These two core capabilities are representative, among others, for the financial success in these private hospitals.

Core capabilities

It is interesting to see that respondents in the five prospector hospitals assessed in both units of analysis 1+2 all six crucial capabilities as very important. In addition, they assessed three of them (X21, X44, X54) as crucial capabilities with a very high impact on performance. Therefore, it is essential to have multiple sources of evidence and thus the certainty, that the results are plausible. With this information, hospitals managers have now the choice, on the one hand, 'to do nothing', to rely on 'ad hoc' problem solving within the different medical departments, and thus to minimise costs. On the other hand, they can invest in 'core capabilities' based on a 'best practise' approach. The former possibility may bring positive short-term results in departments, but not the expected long-term success after the DRG implementation with the intended increase of effectiveness and efficiency in the organisation of the entire hospital. Therefore, it is proposed to invest at first in core capabilities which are the key to competitive advantage in changing environments.

Outlook

The first step of implementation is to understand and improve the 'simple capabilities' which shape together a 'core capability'. Brown and Eisenhardt (1997) termed this property '*sequenced steps*' with learning from the simpler and more predictable capabilities around management, services, processes, and relationships in hospitals. This is also valid for the crucial capabilities. Therefore, 'core capabilities' consist of many well-known processes that have to be studied extensively. Eisenhardt and Martin (2000) stated that "*their value for competitive advantage lies in their ability to alter the resource base: create, integrate, recombine, and release resources*". They are thus not robust processes which lead per se to sustainable competitive advantage. It is the 'best practise process in moderate dynamic markets' which is essential due to the following reasons: to know which strategic capabilities have an influence on performance, their constitution of different capabilities, the well-known learning mechanism how to modify the capabilities, and the resource configuration that hospital managers build using such core capabilities. The second step is to leverage such crucial and core capabilities, within the hospital or between hospitals, which leads to a resource-led 'stretch' with lower costs and time savings. According to Sirmon et al. (2007), "*leveraging refers to the application of a firm's capabilities to create value for customers and wealth for owners*". In private hospitals the leverage by knowledge combination emphasises the creation of new know-how and thus reduces the probability of core rigidities. This means combining knowledge with other crucial capabilities. Furthermore, knowledge and capabilities can be leveraged in a way which enables to reach the 'strategic intent' with an increase of performance as well as eventually economies of scope and scale. According to Argot (1999), such "*combinative capabilities may contribute to the resolution of the hospitals' permanent struggle to find the right balance between exploration and exploitation as knowledge combination is simultaneous – exploration as well as exploitation*". Effective leveraging of the hospital's capabilities will result in organisational learning and a culture of capability adaptation to meet the expectations of key customers' needs.

7.3 Research questions

All research questions (section 1.4) are discussed in this section. It starts with the answering of the main research question: 'How should private acute hospitals develop an effective strategy in a dynamic market?' As mentioned in section (7.1), private acute hospitals are service organisations with a high degree of customer orientation. Because they are not subsidised, they must reach a high performance to remain highly competitive. Thus they must rely on their unique capabilities which are the basis for an excellent service and a high degree of key customers' satisfaction. Private hospitals have a small market share in comparison with public hospitals. Therefore, they must compete with fewer people and a smaller capital budget against these powerful industry leaders. However, private hospital's chance is to implement an efficient strategy that best matches the requirements and/ or functional demands of the organisation's environment. Such an effective strategy is based on four key determinants. First, such hospitals have the choice to follow two strategic orientations. Hospitals with cardiology as main specialisation act as prospectors with a high financial performance and a higher occupancy rate multiplied by the number of beds, whereas hospitals with orthopaedics act as defenders with a lower performance; however, both strategic orientations are sustainable. Second, it is required that in a changing environment, in this case in a moderately dynamic market, new trends and Key Success Factors must be included into the new strategy formulation. Third, it is always important to involve the key customer's voice into the strategy process. Hospitals' key customers are still the attending physicians and patients. In the past, hospitals sought to acquire attending physicians, recognising that physicians were intermediaries who brought patients and filled beds. However, attracting physicians required substantial investments in facilities and technology. In the current environment, due to the higher competition and new expensive technology, it is difficult for hospitals to afford even more investments.

Main research question

Therefore, the focus is even more on attending physicians who have a big knowledge about medical treatments and a good relationship to patients. In addition, attending physicians must be integrated into the new DRG process management due to their medical knowledge and their engagement in medical research with suppliers. The focus now is to integrate physicians more in hospitals' internal processes. Fourth, it is very important to know hospital's intangible resources which lead to a high reputation. One of the key issues are capabilities; therefore, crucial 'single' capabilities and bundles of important capabilities – or core capabilities - must also be integrated into an effective strategy. The suggested framework, to bring all crucial information in a context, is the NGP approach as illustrated in figure (7.2). This framework shows clearly how to describe a new effective strategy for creating 'fit' among its activities.

7.3.1 Sub-questions 1-3; unit of analysis 1+2

At this stage it is possible to substantiate the research question with the sub-questions. The following three research sub-questions can be answered as follows: First, what is an effective strategic orientation to remain highly competitive? There are two possibilities. On the one hand, if a hospital decide to be a prospector, then its focus should be on 'marketing', 'organisational learning', and 'infrastructure development'. On the other hand, if a hospital declares itself as defender, in this case the tension should be on 'relationship management' and 'culture'. However, there are different perspectives on the competitive environment. Miles and Snow (2003) propose the '*adaptive cycle*', which embodies the approaches taken by businesses to address three types of problems in figure 7.3:

*Sub-questions
1-3; case study*

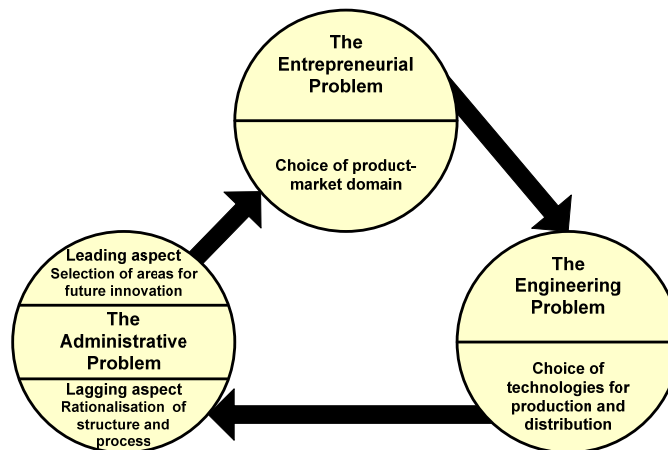


*Figure 7.3: The
Adaptation
process*

With this circle it is enabled to describe the strategic orientation of both hospitals groups in figure 7.4:

Hospitals:	Five prospector hospitals (5 HP)	Eight defender hospitals (8 LP)
Entrepreneurial problem	Continuous environment scanning and market development. Growth through acquisition of new physicians and patients, and fast introduction of new technology as well as new tariff systems (DRG's).	Focused and narrow market segment with limited environment scanning. Focus on efficiency and productivity. Low degree of new service development.
Engineering problem	Bigger hospitals with more departments and thus multiple technologies. Lower degree of routinisation.	Smaller hospitals with fewer departments and tendency towards vertical integration.
Administrative problem	Independent organisations in specialisation departments. High marketing activities and more influence from top management. Extensive rather than intensive planning.	Functional organisation with a high degree of standardisation, and service and financial control. Long tenure of top management. Intensive rather than extensive planning.

Figure 7.4:
Strategic orientation

Second, what are the key determinants of the new competitive market? In a moderately dynamic market such as the health sector, the key determinants in the external environment are: KSF's, and new trends. KSF's help hospitals managers to understand the current strategic position, whereas new trends are important for the definition of new strategic options to remain highly competitive. The key determinant of the internal environment are capabilities. In private hospitals a differentiation, to outperform competitors, are only possible with effective capabilities which lead to sustainable competitive advantage. The NGP in the section (7.1) has illustrated two bundles of capabilities with a positive impact on performance; thus they are labelled as core capabilities. One is more external oriented, the other more internal oriented as illustrated in figure 7.5:

More external oriented: Factor 6: Strategic marketing	More internal oriented Factor 3: Infrastructure development
X21: Reputation/ image / brand/ label of the clinic. X22: Strategic marketing of the clinic. X23: Networking with physicians, politicians, and institutions.	X54: Development of medical infrastructure of the clinic. X53: Development of technical infrastructure of the clinic. X51: Education and development of competence of technical staff in clinic. X50: Education and development of competence of medical staff in clinic.

Figure 7.5: Core capabilities

Third, how can key determinants be integrated in an effective strategic framework? The NGP approach is an effective tool to put the crucial information together. It gives managers information which single capabilities are crucial for the future business based on key customers' needs and new trends. This is important information to improve single processes within a hospital; however, it is not enough for a strategy formulation. The entire hospital has its own business strategy and thus can be considered as single business unit - in the business of providing 'wellness' or health care (Hofer and Schendel, 1978). Therefore, the following KPI's are used to capture the business strategy: Physical attributes with the occupancy rate multiplied with the number of beds, and the Key competence area with hospital's specialisation.

7.3.2 Sub-questions 4+5; unit of analysis 3

The other two research sub-questions can be answered as follows: First, how can performance be described in private hospitals? Financial performance is coherent and an often used criterion in private hospitals for measuring the success. In this research it is suggested to us an aggregated value from financial KPI's such as Operating Margin, Total Margin, Return on Assets, ROE: Return on Equity, EVA per Total capital, EBITDA per Bed in hospital, TAT: Total asset turnover, and Fixed Asset Turnover. Globerson (1985) suggested that the use of ratio-based KPI's is preferred to absolute number. Such indicators should be simple and easy to use and should be selected through discussions with key stakeholders. In addition, KPI's gives hospitals benchmarks and thus a basis to improve their processes. Thus such financial KPI's should be used to measure the success of a hospital's strategy due to the fact that financial viability is crucial to survival in the dynamic health care environment (Shortell et al., 1990), although such ratios are based on historical data. A single performance measure may not capture all aspects. Reliance on a single source will almost certainly yield a limited view of the organisation's current basis for competing. Therefore, for financial performance six KPI's are used to measure the profitability and two activity ratios for the measure how efficiently a hospital using its assets to produce revenues. Second, what is the relationship between environment, internal context, and performance? This relationship is illustrated with the research model in section (3.1). It is the relationship between the strategic orientation of a hospital, its capabilities and bundles of capabilities, an aggregated performance value. An effective way for the analysis are the multiple regressions and the structural equation modelling (SEM) which are used to explain the relationships among multiple variables. Therefore, with such a thorough analysis it is possible to give hospital managers and executives an advice how to compete in a moderately dynamic market.

*Sub-questions
4+5; survey*

7.4 Strategic options; value

This section describes strategic options, based on the NGP in section (7.2). The critical question concerning a NGP is whether this strategy paradigm creates value for hospitals' key customers. Value in health care is determined in addressing the patient's particular medical condition over the full cycle of care, from monitoring and prevention to treatment, and to ongoing disease management. However, competition in health care must take place where value is actually created. According to Porter and Teisberg (2006, p.5), the problem is that the *"competition does not take place at the medical condition level, or over the full care cycle"*. Competition in the current health sector is too local. Participants have misdefined the relevant business from a value perspective and thus the competition takes place on broad service lines, not individual services. This was the reason to evaluate crucial and core capabilities which help to understand the full circle of care where value is determined. With financial performance it is possible to measure the overall profitability and activity of a hospital and to put these ratios in relation to capabilities. This analysis helps to strengthen the value-based competition on results which is a positive-sum competition in which all system participants can benefit. When hospitals, with their attending physicians, win by delivering superior care more efficiently, patients, insurance companies, and employers also win. This leads finally to a higher reputation of the hospital and a better strategic position. Therefore, the focus of hospitals should be on value for patients, not just lowering costs. Minimising costs is simply the wrong goal, and will lead to counterproductive results. Cost savings must arise from true efficiencies, not from staff reducing, cost shifting, restricting care, or reducing quality. To this effect, short-term savings that lead to long-term cost increases do not improve value.

NGP and value

Another coherent investigation, in addition to capabilities, was the analysis of key customers' needs with a questionnaire in appendix (A7). An additional benefit was to understand what the main value drivers are. A value driver is an activity or organisational focus which enhances the perceived value of a service in the perception of the customer and which therefore creates value for the hospital. Value drivers in the past were the right choice of range and types of services provided, in a controllable external world with rational internal processes as illustrated in figure 7.1. Competition was regional in Swiss cantons, with the same tariff system. Thus it was for a hospital easy to be competitive with their experienced physicians, standardised technology, and high reputation. However, the introduction of DRG's changed the essence of competition. The competition will be more national, not just local, with market services based on excellence, uniqueness, and strong results. Hospitals are forced to provide higher quality with a lower budget in a moderately dynamic market in which change occurs frequently, but along roughly predictable and linear paths.

Value drivers

Finally, the innovation will play an important role in this new market. Innovation means not only to buy new medical technology. It means to increase value for customers through new ways of organising, measuring, and managing health care processes over the full cycle of care. There are tremendous gains to be achieved from simply using today's medical science more effectively. Therefore, new technology and a good infrastructure are important; however, the major problem facing today and in future is not technology but management, with an effective marketing and customer relationship.

Innovation

A hospital's strategy, which must include such important issues, has to deal with industry forces such as actual and potential competitors, buyer and supplier behaviour, and service substitutes (Porter, 1980). If a hospital's strategy enables it to respond to, predict, or dictate these environmental forces, it is likely to be high performing. Swiss hospitals have the following three strategic options to remain highly competitive. First, to choose an appropriate strategic orientation for achieving high efficiency and operational excellence, and demonstrate value through improved performance measurement systems. This will increase the level of transparency which will enable other options such as: achieving financial strength through cost reduction, downsizing while remaining economically viable, cost avoidance through external cost shifting, diversifying into related health care activities so as to become less dependent on inpatient revenues, and outsourcing of activities which are not a core business of a hospital. Second, to invest in the core capability 'strategic marketing', which will grow the market share through market analysis and key stakeholder focus, and development of a higher reputation and brand image. Third, to invest in the core capability: 'infrastructure development', which will result in strategic alliances and partnerships with physicians and suppliers. This leads to a higher level of knowledge, better learning, and higher quality of services within centres of special medical specialisation. However, these strategic options are not enough to reach sustainable competitive advantage. Hospitals must also reduce errors through an effective quality management, they have to give incentives to increase value rather than shift costs, and have to increase value for its key stakeholders through an efficient information management on provider's experiences, outcomes, and costs.

*Strategic
options*

7.5 Contribution of the study

This case study examines mainly the relationship between a hospital's strategic orientation, capabilities, key competence areas, and financial performance. It uses a theoretically based economic framework, makes several contribution to the advancement of theory in strategy and strategic management as well as insights to investors, executives and managers how to compete successfully in a moderately dynamic environment. This study is, to author's knowledge, the first to evaluate empirically the associations between new trends, key customers' needs, capabilities, and performance in private for-profit hospitals. It enables managers from health care organisations to reduce costs with a development of strategies which are both effective and efficient. Effective means 'to do the right thing' and not just 'do things right' (efficiency). Therefore, a great deal of emphasis has been placed in this research on effectiveness to reach sustainable competitive advantage. The expectation of this research is to evaluate a model for Swiss private acute hospitals which will help hospital managers to improve the strategic position of their hospitals. It is also a process to define the critical success factors, core competencies, and effective strategic orientation.

Purpose

This empirical study provides an approach to strategy that is particularly relevant in moderately dynamic markets - and in this sense it is relevant to managers in all sectors. It is a contribution to the general field of strategic management. In addition, it is an application of the proposed framework to the particular case of a Swiss health care group - and demonstration of how it can be used to identify the group's capabilities and beyond this, even its core capabilities. Obviously, it is a contribution to the specific field of strategy in the health care sector, which helps to improve the performance in the hospital. Another contribution to theory is testing an old theory, Miles and Snow's (1978, 2003) strategic typology, and assessing its current relevance using Swiss private hospitals as the context.

Contribution to knowledge

This thesis is a synthesis of ideas and data and provides a critical evaluation of relevant work. In addition, it demonstrates some kind of original contribution to the specific field as described with the following three main forms. First, substantive contribution as new knowledge about the world of management. This thesis is a practical testing of strategy framework such as the NGP and SSS in the moderately dynamic health care market. Second, empirical contribution as new theories and ideas. It describes the use of the NGP and SSS for the illustration of all results. This is the starting point for the strategy formulation, based on new trend, key customers' needs, and crucial capabilities. Third, methodological contribution as new methods of investigation. The evaluation of capabilities and bundles of capabilities is carried out with a qualitative and quantitative approach (unit of analysis 1+2). Additional information, control of the outcome, and the impact of capabilities and bundles of capabilities on performance is conducted with statistical methods (unit of analysis 3) such as the factor analysis (PCA), multiple regression, and structural equation modelling (SEM).

*Synthesis of
data and idea*

7.6 Conclusion

Swiss health care is changing from a regulated market, with standardised tariffs and relatively static market environment, to a moderately dynamic market. Hospitals are being forced to improve their services and to increase the level of know how in view of the new payment system DRG by 2012. The main target for hospital managers is to improve the level of effectiveness and efficiency and thus to reach sustainable competitive advantage. The primary goal of this study is the development of a new integrated framework that reflects current strategic thinking, for the examination of the relationship between new trends, key customers' needs, hospitals' capabilities and core capabilities, and their impact on performance. The main research question is: 'How should private acute hospitals develop an effective strategy in a dynamic market?'

*Introduction;
goal*

Due to the fact that a hospital might be thought of a 'service factory', it is advisable to apply the RBV as theoretical foundation; however, the rationale is that the 'traditional RBV approach' has not adequately explained how and why certain firms have competitive advantage in situations of unpredictable change (Eisenhardt and Martin, 2000). Therefore, this research used the 'dynamic capabilities' as the vehicle for an appropriate strategic response to the forces that are driving irreversible change in the Swiss health care environment through their delivery of new forms of value in the face of the changing needs of relevant stakeholders. The dynamic capability approach, which is part on the RBV theory, can help to reach this ambitious target through a formulation of a powerful strategy. It is the finding of crucial capabilities as well as 'bundles of capabilities'. It is defined that such bundles can be defined as 'core capabilities' if they are positively linked to performance. Core capabilities can alter the resource configuration based on a 'best-practise' and 'learning before doing' approach in such a moderately dynamic market.

Theory

Therefore, the research model, initially developed from the theoretical review of the RBV, examines the relationship between hospitals capabilities, strategic orientation, and financial performance. The purpose of this model is to provide an approach to strategy that is particularly relevant in moderately dynamic markets - and in this sense it is relevant to managers in all sectors. In addition, it is an application of the proposed framework to the particular case of a Swiss health care group - and demonstration of how it can be used to identify the group's capabilities and beyond this, even its dynamic capabilities. Obviously, this level is a contribution to the specific field of strategy in the health care sector, which helps to improve the performance in private hospital. This model helps testing the hypotheses in the field of private hospitals with a tension on strategic orientation, capabilities, core capabilities, hospitals' size and specialisation, in relation to financial performance. A notion of this study is to use a combination of qualitative and quantitative methods to test the proposed model and research questions. An essential tactic is to use multiple sources of evidence, to create a case study database, and to maintain a chain of evidence. This is the reason to propose a case study design with following three embedded units of analysis: 1. Qualitative case study for the evaluation of new trends, key customers' needs, and capabilities; 2. Quantitative survey for the evaluation of new trends, key customers' needs, and capabilities; and 3. Quantitative survey for the evaluation of core capabilities and the impact on performance.

*Research model
and
methodology*

According to Kaplan and Norton (2000, p.169), *“even though intangible assets have become major sources of competitive advantage, no tools existed to describe them and the value they can create”*. This is the main reason to search for a strategy tool to put all information together, as basis for a successful strategy formulation. This has lead to the investigation of the NGP, which is an excellent starting point for the strategy definition in moderately dynamic markets.

*Strategy tool;
NGP*

The investigations with the units of analysis 1-3, have shown interesting results: The five prospector and eight defender hospitals should involve the infrastructure and strategic management into their corporate strategy. These core capabilities, which have a positive impact on performance, are assessed from all executives and managers as very important. Other crucial single capabilities are: Relationship with key customers such as attending physicians and patients, market development, and quality management.

Result

This investigation has shown that different capabilities form together clusters which are labelled as core capabilities, if they are positively linked to performance. Such core capabilities, and other crucial simple capabilities, are the foundation to build a bridge between the current situation with simple and static market environment, and the future environment in a moderately dynamic market. They are not robust processes which lead per se to sustainable competitive advantage; they are 'best practise' processes in moderate dynamic markets. Its goal is a series of temporary competitive advantage in changing environments. Another important aspect is the leverage of core capabilities by knowledge combination for the creation of new know-how. Effective leveraging of the hospital's capabilities will result in organisational learning and a better culture for the capability adaptation to meet the expectations of key customers. With an efficient management of these 'core capabilities', which correlates positively to performance, hospitals can improve all processes and thus increase the level of knowledge. This leads to a higher customer satisfaction and a better reputation which helps to outperform competitors and to reach sustainable competitive advantage – also in moderate dynamic markets.

Discussion

The health care in Switzerland will be more under pressure in the next years. This is the result of digitalisation, globalisation, deregulation, and the introduction of DRG's by 2012. Private hospitals must realise that, in this current 'information age', they must increasingly create and deploy intangible assets such as: internal and external relationships with key stakeholder, core capabilities such as infrastructure development, strategic marketing, and a corporate culture that encourages organisational learning and development. One reaction from hospitals on these threats is to increase the level of efficiency and effectiveness, to act faster as competitors, and thus to gain sustainable competitive advantage. This research will be the base for all further business strategies.

Final remark

8. Limitations of the research

According to Snow (2003), *“organisational strategy is a complex and important phenomenon that merits continued research emphasis”*. The discussion in this chapter will serve as a point of departure for raising and analysing additional theoretical and methodological concerns. The key determinant in the reviewed research seems to be the ranking of the most important capabilities and identifying which ones support a specific strategic orientation. Since capabilities support the competitive methods that provide an organisation advantage they were analysed in relation to performance. However, what is notable about this study is that the questionnaire is derived from the theory and that they use pre-generated lists of items. Concerning the questionnaire, there are three critical issues. First, there is not exactly the same wording in German and French, what the pre-testing of questionnaires had shown. Second, since the assessment of the pre-test and post test was conducted mainly by the author himself, in agreement with the focus group, it is unavoidable that in this case study certain degree of subjectivity can be found. Second, the focus is on capabilities, in this case not on competences, which are a little confusing for physicians and hospital managers. Third, there are 43 capabilities appointed (appendix A8) as results from workshops and discussions with the focus group (appendix A2). However, it is not clear that only these capabilities have an impact on financial performance. In addition, finding of capabilities that create competitive advantage is not enough. The question of the necessity for congruency between all management levels in the development and implementation of capabilities is unresolved. Core capabilities manifest themselves differently in hospitals due to factors such as management of linkages, company culture, and how organization participants are signalled to develop and deploy resources. These variables may be unique to the specific hospital and must be investigated within such a service factory. It appears that alignment is necessary between external and internal forces of the hospital to reach sustainable competitive advantage.

*Limitation;
questionnaire*

Although this research methodology was carefully prepared, there are still some limitations and shortcomings. First of all, the research was conducted in the two private hospital groups, the five prospector and eight defender hospitals. These hospitals have their specialisation such as cardiology and orthopaedics. To see the whole picture, other hospitals with a different specialisation or hospitals with a strategic orientation such as 'analysers' or 'reactors' must be also included in the research. Second, the population of the experimental group is sufficient, but not significant to develop a theory which is valid for all private hospitals. Hair et al. (2005, p.113) recommend that the minimum absolute sample size should be 50 observations. In this research we have a sample size of: $N = 184$, with 67 physicians and 117 hospital managers. However, Hair et al. (2005, p.113) also recommend to have a minimum of five observations per variables. With total 43 capabilities, this would be 215 observations. Unfortunately, in this research it is impossible to have more respondents due to the limited numbers of attending physicians and managers in these 13 hospitals.

This means, all relevant managers from all 13 hospitals are included in this research. In such a case, Hair et al. (2005, p.128) propose guidelines for an identifying of significant factor loadings based on sample size. With a sample of: $N = 184$, a factor loading of ≥ 0.416 is required for significance. Although this factor loading is minimally acceptable, values ≥ 0.5 are generally considered necessary for practical significance. Third, according to Yin (1994), *"if a case study is not carefully planned it will lack rigor"*. There is also the potential for bias, especially if mainly one researcher is gathering the data as in this study. There is also the difficulty of managing a large amount of data, as illustrated in the chapters (5+6). Miles and Hubermann (1994) suggest the difficulty in using qualitative data is that the methods of analysis are not well formulated. Thus this study is limited in generalisability as is the drawback with case studies (Yin, 1994).

These limitations were addressed by exposing the data to several methods of data reduction, display and analysis. Limitations also arise during the process of creating and conducting a survey (chapter 6). Reliability and validity are other issues in survey research, especially of concern when surveys are developed and used for the first time.

This research has shown that in a changing environment, such as the moderately dynamic market, the environmental analysis is important for understanding the whole context. However, the environmental analysis has also some limitations. First, environmental analysis cannot foretell the future and thus managers cannot see everything what can have an impact on their hospitals' performance. Second, sometimes pertinent and timely information is difficult or impossible to obtain. This can lead to delays between the occurrence of external events and management's ability to interpret them. Third, sometimes there is a general inability on the part of the hospital to respond quickly enough to take advantage of the issue detected. Finally, manager's strongly held beliefs sometimes inhibit them from detecting issues or interpreting them rationally. In the last few years, managers were successful with a strategy based on 'positioning' in the health care market.

*Limitation;
environmental
analysis*

Other limitation is the dilemma how to organise a hospital for success. 'Positioning' is not appropriate in the new moderately dynamic market as this research has shown. However, there is not a panacea for managers how to act in this new market. The key questions are: should they creating knowledge or sharing knowledge, should they push the change management or should they have a continuity, and do they must enable an innovation or still be based on stability?

*Limitation;
dilemmas in
strategy*

This case study gives managers an approach to strategy that is particularly relevant in a changing environment; however, it fails to describe further key determinants such as: building hierarchies and networks, describe vertical accountability versus horizontal integration, analyse the centralising and devolving, and investigation of holistic solution versus best practise on each element.

Therefore, this study tested a modified model using newly developed interview and survey questions. While great effort was made to ensure the validity and reliability of these instruments; however, the best means of creating validity and reliability are time and re-testing. This leads to the next chapter (9) in which some suggestions for further research is described.

Future research

9. Suggestions for future research

This case study attempts to contribute to research on strategic management, in exploring mainly the relationship between a hospital's strategic orientation, capabilities, key competence areas, and financial performance. Several researcher such as Snow and Hrebiniak (1980), Conant et al. (1990), Thomas and Ramaswamy (1996), Woodside et al. (1999), Tin (2003), and Lichtenstein (2005) examined also the relationship among strategy, competences, and organisational performance in different companies. In addition, other researcher such as Hambrick (1983), Namiki (1989), and Pelham (1999) assessed the influence of the environment on organisational performance. All researchers used the Miles and Snow's strategic typology. The results of this case study will have positive implications for strategy researchers in term of suggestions for further research as well as fur hospital managers on how the findings could be put to practical use. On the one hand, strategy researcher could be use other strategic typologies as listed in section (2.2.8), to describe the different strategic orientations of private hospitals. Porter's (1980, 1985) strategic typology, for example, is another important approach of business-level strategies derived through empirical observations, which could be used by researchers. New empirical studies could also be carried out to test other characterisations of the moderately dynamic market that could influence the strategy, and which could help bring about a better understanding of the relationships. These include using variables such environment uncertainty as describe by Jauch and Kraft (1986), or the product life cycle stage of the business or of medical devices. Additional performance measures besides the profitability and activity KPI's (section 2.6.2), such as market share change and cash flow – which are prominent in literature, can also be considered as valid measures for testing Miles and Snow's contention that prospector and defender hospitals perform well. Another idea is the introduction of the balanced scorecard (BSC) as the construct for performance measurement.

Further research

BSC is increasingly being introduced and deployed in many private hospitals in Switzerland. In addition, it would be also very interesting to execute exactly the same research in public hospitals in Switzerland. This would show the differences between these 'archivals' and would confirm which capabilities are really crucial regarding the performance in hospitals. Another suggestion is to conduct such a case study in hospitals in other countries, for instance in Germany, which have introduced DRG's. Finally, an important research is to analyse other KPI's in hospitals, not only the financial performance which is based on historical data. A starting point is the investigation of key customer's satisfaction and the level of contentment of employees within the different medical departments in a hospital, in relation to capabilities and core capabilities. This would also lead to the strategic options of resource and investment allocation to increase the productivity in a hospital and thus to outperform competitors.

Therefore, there is still a lack of sufficient research in the RBV view and especially the dynamic capabilities, more so in the service industry and most especially the health care sector where there is little means of protection of capabilities. While competitive methods which are used in the hospitality industry have been explored, based on performance measurement, the capabilities to support these methods have been largely ignored. The review exposes areas within the field which still require research such as what are core capabilities and how are they sustained and developed. In addition, the range of services is often too broad in terms of service lines, especially in the case of hospitals but also in some physician groups. Thus there is a lack of co-ordination within hospitals to find synergies and to have a better utilisation of resources and capabilities. It is recommended to enable additional research in this area. This is the only way to close the gaps between the expectations of key stakeholders such as patients and physicians, and the delivered services.

10. Appendices: References/ Bibliography

- A1 References
- A2 Focus group
- A3 Case study protocol
- A4 Strategic orientation
- A5 PESTEL
- A6 Five Forces analysis
- A7 Questionnaire: Key customers' needs
- A8 Questionnaire: Capabilities
- A9 Key Performance Indicators (KPI's)
- A10 Strategic capability analysis; PCA
- A11 Dynamic capability analysis; SEM
- A12 Multiple Regression
- A13 SEP's
- A14 Definitions
- A15 List of figures

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A2 Focus group; strategy making group

All executives in this focus group defined the corporate strategy for Hirslanden's 13 hospitals many year ago. Now these health care sector experts work for public institutions such as public hospitals or they run their own consultancy office. *Experts*

- Dr. Robert Bider, Hirslanden's former CEO. Currently he run his own consultancy office.
- Joseph Rohrer, Hirslanden's former COO. Currently he is CEO at two university hospitals in Germany.
- Dr. Teo Albarano, Hirslanden's former medical research executive. Currently he is director in a medical health department in a Wellbeing & Spa Hotel.
- Dipl. Ing. Urs Baumberger, Hirslanden's former hospital director. Currently he is the CEO from a public hospital in Switzerland.
- Dr. Andreas Kohli, Hirslanden's former hospital director. Currently he is the CEO from a public hospital in Switzerland.
- Dr. Sandra Kobelt, Hirslanden's former communications and marketing executive. Currently she works in the energy sector.
- Dr. Nicola Fielder, Hirslanden's former HRM executive. Currently she work for a health care consultancy office.
- Thierry Siegrist, Hirslanden's former hospital director. Currently he is the CEO from a public hospital in Switzerland.

The interviews with these people are treated as 'reference: personal communication'.

Executives (CEO's) from hospitals:

Andre Steiner, Philippe Keller, Guy Jaquet, Jean-Francois Andrey, Martin Rauber, Alexander Rohner, Jean-Marc Zumwald, Pierre Frédéric Guex, Dominik Utiger, Simone Schwinger, Stephan Eckhart, Daniel Liedtke, Nicolaus Fontana.

A3 Case study protocol

This case study protocol is based on the proposition of Yin (2009, p.80) and Remenyi et al. (2005, p.172):

A. Introduction to the case study and purpose of protocol:

A. Purpose of protocol

- Case study model, questions, hypotheses, and prepositions: Chapter (3).
- Theoretical framework for the case study: section (1.8).
- Protocol can be seen as guideline for the whole data collection process.

B. Data collection procedures

B. Data collection procedures

Primary data collection from focus group (appendix A5), all 13 hospitals executives (CEO's; appendix A5), and all hospital managers (117) and attending chief physicians (67); finally, focused interviews with patients (165):

Date:	Focus group	Executives; CEO's (13)	Hospitals (13)	Action; Measures; Results
19.01.06	X			Workshop and brainstorming: External environment.
24.01.06	X			Discussion about possible research questions.
08.02.06		X		Discussion about possible research questions.
09.03.06	X			Discussion about current strategy.
05.04.06	X			Workshop and brainstorming: Strategy.
08.06.06	X			Workshop and brainstorming: Possible strategies in changing environment; hypotheses.
28.09.06	X			Strategy discussion with CEO Dr. Robert Bider and Prof. Dr. George Tovstiga in Zurich.

Date:	Focus group	Executives; CEO's (13)	Hospitals (13)	Action; Measures; Results
23.11.06	X			Evaluation of the strategic orientation; open-ended interviews with the questionnaire below (C.) and questionnaire in appendix (A6).
18.01.07		X		Evaluation of the strategic orientation and hypotheses; focused interviews with the questionnaire below (C.) and questionnaire in appendix (A6).
07.02.07	X			PESTEL + Five Forces questionnaire design.
31.05.07	X			PESTEL + Five Forces questionnaire testing.
01.06.07		X		PESTEL + Five Forces; focused interviews.
07.06.07			X	PESTEL + Five Forces questionnaire (appendix A7+A8) for 117 hospital managers.
22.11.07	X			Workshop and brainstorming: Internal environment, prepositions and hypotheses.
17.01.08		X		Workshop and brainstorming: Internal environment, prepositions and hypotheses.
29.05.08	X			Capability and customer's needs questionnaire design.
05.06.08			X	Workshop and brainstorming with managers; capabilities and core competencies.
10.10.08		X		Capability and customer's needs questionnaire testing in Zurich and Lausanne; focused interviews.
13.10.08			X	Capability and customer's needs questionnaire adaptation and testing in Zurich and Lausanne.
17.10.08	X	X		Positive feedback for questionnaires.
22.10.08			X	Start of interviews with managers and physicians; appraisal of capabilities (appendix A10).
20.11.08			X	Start of interviews with patients; appraisal of capabilities.
05.02.09		X	X	Evaluation of the KPI's (appendix A11) from all 13 hospitals with the CFO delegate from the group: Andreas Zellweger.
12.03.09	X			Discussion of results.
06.05.09		X		Discussion of results.
15.05.09			X	Discussion of results.
04.11.10	X	X	X	Presentation of final results; research colloquium.
16.02.11	X	X	X	Presentation of final results; research colloquium.

C. Case study questions: Questionnaire for focus group and executives
(based on Yin, 1989):

**C. Case study
questions**

- Has a generic corporate strategy been formulated?
- Does executives use a strategic framework?
- Does the executives (hospital directors) are involved in the strategy process?
- Who in top management is responsible for signalling to hospital managers: a) what the capabilities are; b) how they are to be developed?
- What is the executive's process used to communicate/ signal to hospital managers: a) what the capabilities are; b) how they are to be developed; c) the resources allocated to them.
- How is the communication process between top management and hospitals evaluated and controlled?
- Does hospital's managers and attending physicians are involved in the strategy process?
- Do hospital's managers and attending physicians have an understanding of the strategic key issues?
- Has the hospital's strategy been matched to the generic corporate strategy?
- What are new trends in the health care sector?
- Who are key customers? What are the key customers' needs?
- What is the strategic orientation of the hospital?

- What are the capabilities that are essential to realising the intended strategy?
- Which capabilities are important for the hospital?
- Which capabilities are important for hospital's performance?
- Which are the hospital's core capabilities?

A4 Strategic orientation

Questionnaire proposed by Snow and Hrebiniak, 1990 (Cornell University):

“Which one of the following four descriptions (Type 1, 2, 3, 4) most closely fits your organisation compared to other firms in the health care sector? Please consider your hospital as a whole and note that none of the types listed below is inherently ‘good’ or ‘bad’. Please tick as appropriate in the space provided.”

**Questionnaire;
introduction**

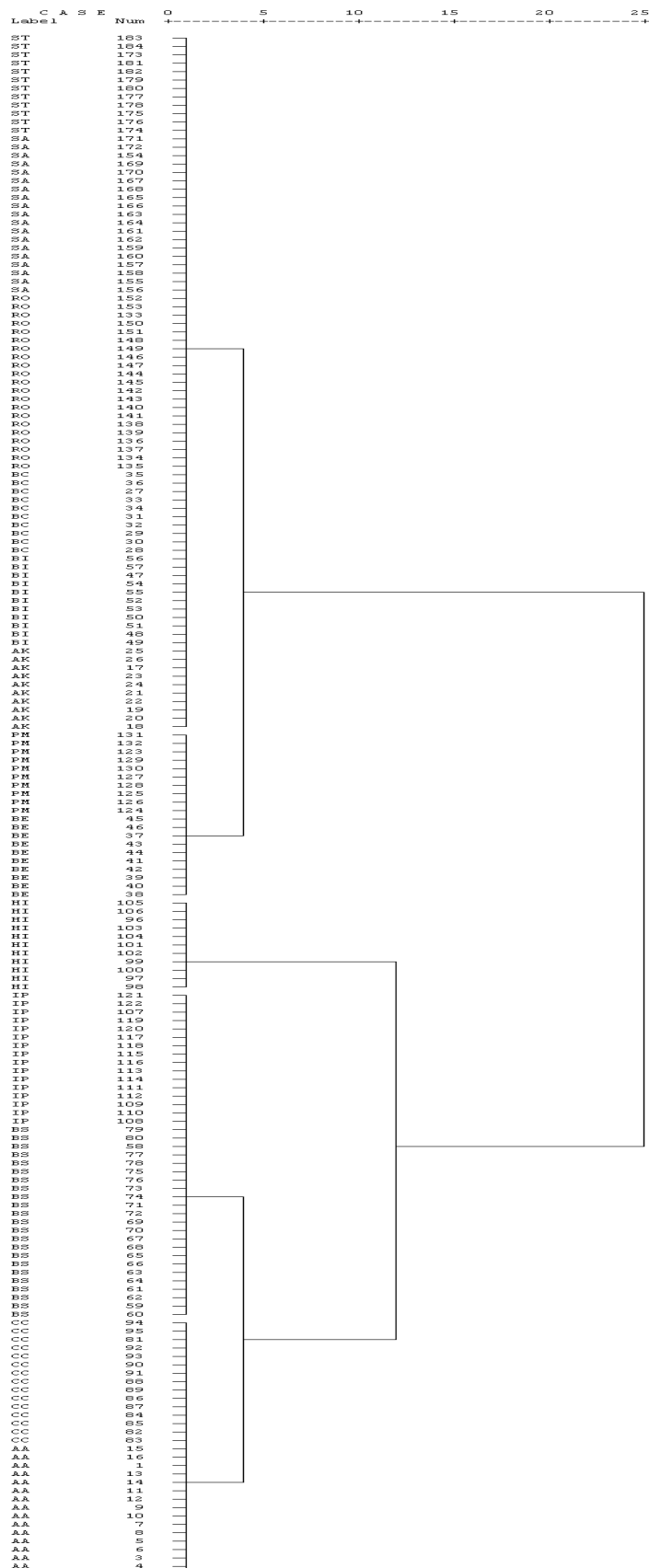
1. Which one of the following descriptions most closely fits your organization compared to other firms in the industry? (Please consider your division or company as a whole and note that none of the types listed below is inherently "good" or "bad.")

- _____ Type 1 This type of organization attempts to locate and maintain a secure niche in a relatively stable product or service area. The organization tends to offer a more limited range of products or services than its competitors, and it tries to protect its domain by offering higher quality, superior service, lower prices, and so forth. Often this type of organization is not at the forefront of developments in the industry — it tends to ignore industry changes that have no direct influence on current areas of operation and concentrates instead on doing the best job possible in a limited area.
- _____ Type 2 This type of organization typically operates within a broad product-market domain that undergoes periodic redefinition. The organization values being "first in" in new product and market areas even if not all of these efforts prove to be highly profitable. The organization responds rapidly to early signals concerning areas of opportunity, and these responses often lead to a new round of competitive actions. However, this type of organization may not maintain market strength in all of the areas it enters.
- _____ Type 3 This type of organization attempts to maintain a stable, limited line of products or services, while at the same time moving out quickly to follow a carefully selected set of the more promising new developments in the industry. The organization is seldom "first in" with new products or services. However, by carefully monitoring the actions of major competitors in areas compatible with its stable product-market base, the organization can frequently be "second in" with a more cost-efficient product or service.
- _____ Type 4 This type of organization does not appear to have a consistent product-market orientation. The organization is usually not as aggressive in maintaining established products and markets as some of its competitors, nor is it willing to take as many risks as other competitors. Rather, the organization responds in those areas where it is forced to by environmental pressures.

*****HIERARCHICAL CLUSTER ANALYSIS

Dendrogram using Average Linkage (Between Groups)

Rescaled Distance Cluster Combine



Result SPSS:
Hierarchical
cluster analysis

A5 PESTEL analysis

Questionnaire: PESTEL analysis in Swiss health care									
Pos.	Factors from the PESTEL analysis of the Swiss health care sector, as result from interviews with health care specialists:	Importance: How significant is this factor for private clinics?							
		1	2	3	4	5			
		not at all significant	not signif.	neutral	signif.	extremely significant			
1. Political	T1 Politics of the Swiss cantons.				X				
	T2 New payment system: DRG's.						X	!	
	T3 Power and influence of trade unions.		X						
	T4 Higher federal tax rates.			X					
	T5 Globalisation and the impact on Swiss health care.			X					
	T6 Higher subsidies for public hospitals.			X					
	T7 Social insurance system (only one insurance institution)			X					
2. Economic	T8 Higher health insurance rates.		X						
	T9 Higher rate of unemployment.			X					
	T10 Higher interest rates.		X						
	T11 Inflation, unstable economic situation.		X						
	T12 Higher prescription drug costs.		X						
3. Sociocultural	T13 Shrinking rates of private patients.			X					
	T14 Aging population with other perception of service quality.						X	!	
	T15 Chronic diseases of people.		X						
	T16 Less foreign patient.		X						
	T17 More uninsured people.		X						
4. Technological	T18 Higher degree of substitutes.			X					
	T19 More influence of suppliers.		X						
	T20 New expensive technology.				X	!			
	T21 Higher medical research costs.		X						
5. Environmental	T22 Higher costs for pollution and air protection.			X					
	T23 Higher costs for recycling.		X						
	T24 Higher costs for waste, especially infectious waste.		X						
	T25 Higher costs for energy: electricity, water, oil, natural and medical gas.			X					
6. Legal	T26 Limitation of hospital services through cantonal prescriptions.			X					
	T27 Labour legislation; higher power of labour unions.		X						
	T28 Product safety; higher claims of customers an their lawyers.		X						
	T29 Higher liability for medical products.			X					
	T30 Higher rate of compliance and litigation.				X	!			

Remark: This survey is for a thesis and is completely confidential.
The result is not for a benchmarking, it is for the development and service improvement.
 If you like the results from your clinic, please write down your E-mail address:
 Thank you for the cooperation and help!

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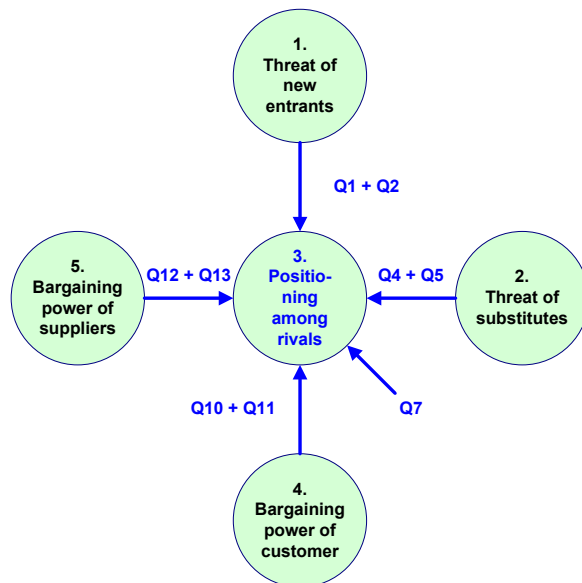
Perform Performance:Total

	Sum	N	Mean	Std. Deviation	% of Total Sum	% of Total N
T1	423	120	3.53	.850	100.0%	100.0%
T2	547	120	4.56	.754	100.0%	100.0%
T3	248	120	2.07	.950	100.0%	100.0%
T4	376	120	3.13	.840	100.0%	100.0%
T5	363	120	3.02	.793	100.0%	100.0%
T6	350	120	2.92	.931	100.0%	100.0%
T7	358	120	2.98	.830	100.0%	100.0%
T8	258	120	2.15	.967	100.0%	100.0%
T9	377	120	3.14	.792	100.0%	100.0%
T10	267	120	2.23	1.000	100.0%	100.0%
T11	257	120	2.14	.938	100.0%	100.0%
T12	264	120	2.20	.949	100.0%	100.0%
T13	320	120	2.67	.964	100.0%	100.0%
T14	553	120	4.61	.639	100.0%	100.0%
T15	284	120	2.37	.970	100.0%	100.0%
T16	255	120	2.13	.922	100.0%	100.0%
T17	255	120	2.12	.903	100.0%	100.0%
T18	400	120	3.33	.833	100.0%	100.0%
T19	279	120	2.33	.936	100.0%	100.0%
T20	509	120	4.24	.907	100.0%	100.0%
T21	236	120	1.97	.888	100.0%	100.0%
T22	343	120	2.86	.823	100.0%	100.0%
T23	247	120	2.06	.892	100.0%	100.0%
T24	263	120	2.19	.964	100.0%	100.0%
T25	385	120	3.21	.969	100.0%	100.0%
T26	408	120	3.40	1.048	100.0%	100.0%
T27	283	120	2.36	.906	100.0%	100.0%
T28	286	120	2.38	1.022	100.0%	100.0%
T29	370	120	3.08	.875	100.0%	100.0%
T30	493	120	4.11	.828	100.0%	100.0%

A6 Five Forces analysis

Five Forces model (Porter, 1980):

Porters "Five Forces" model (1980)



1. Threat of new entrants: deals with the likelihood that new competitors will enter your industry or target market, and increases in significance as there are fewer economies of scale, lower product differentiation, or lower capital requirements.

Q1: To what extent is the threat of new entrants a significant competitive force for your firm?

Q2: To what extent do you think regionalisation is a solution?

2. Threat of substitute products: deals with the likelihood that your customers could be supplied by firms who use different production materials but whose products serve the same needs as your product, and increases in significance as there are more products made using different production technologies (sugar versus Assugrin).

Q4: To what extent is the threat of substitute products a significant competitive force for your firm?

Q5: To what extent do you feel you are able to beat competition?

3. Jockeying among current competitors: deals with competitive actions between the strongest competitor in your industry, and increases in significance as there are many or equally balanced competitors, there is a slow industry growth, high fixed or storage costs, or high exit barriers.

Q7: To what extent is jockeying among current competitors a significant competitive force for your firm?

4. Power of buyers: deals with the extent to which your customers can influence your plans. Customers are important to all firms, but the emphasis here is on the extent to which you are dependent on one or a few specific customers. Buyers power increases, as buyers are concentrated or purchase a large volume relative to seller's sales; the product represents a significant fraction of the buyer's costs; and the buyer faces few switching costs.

Q10: To what extent is the power of buyers a significant competitive force for your firm?

Q11: If buyers are too strong, can alternative buyers be found in the region?

5. Power of suppliers: deals with the extent to which your suppliers can influence your plans. The emphasis here is on the extent to which you depend on one or a few specific suppliers. Supplier power increases as the industry is dominated by a few companies and is more concentrated than the industry it sells to; there are no substitute products for you to buy, and the products you buy are very differentiated.

Q12: To what extent is the power of suppliers a significant competitive force for your firm?

Q13: If suppliers are too strong, can inputs from other sources be made accessible?

Questionnaire, Environmental Analysis; Porters Five Forces:

Pos.	Competitive forces:	1	2	3	4	5
		not at all significant	not signif.	neutral	signif.	extremely significant
1	Threat of new entrants: deals with the likelihood that new competitors will enter your industry or target market, and increases in significance as there are fewer economies of scale, lower product differentiation, or lower capital requirements.					
Q1	To what extent is the threat of new entrants a significant competitive force for your firm?		X			
Q2	To what extent do you think regionalisation is a solution?			X		
2	Threat of substitute products: deals with the likelihood that your customers could be supplied by firms who use different production materials but whose products serve the same needs as your product, and increases in significance as there are more products made using different production technologies (sugar versus Assugrin).					
Q4	To what extent is the threat of substitute products a significant competitive force for your firm?		X			
Q5	To what extent do you feel you are able to beat competition?				X	
		not much				very much
3	Jockeying among current competitors: deals with competitive actions between the strongest competitor in your industry, and increases in significance as there are many or equally balanced competitors, there is a slow industry growth, high fixed or storage costs, or high exit barriers.					
Q7	To what extent is jockeying among current competitors a significant competitive force for your firm?				X	!
4	Power of buyers: deals with the extent to which your customers can influence your plans. Customers are important to all firms, but the emphasis here is on the extent to which you are dependent on one or a few specific customers. Buyers power increases, as buyers are concentrated or purchase a large volume relative to seller's sales; the product represents a significant fraction of the buyer's costs; and the buyer faces few switching costs.					
Q10	To what extent is the power of buyers a significant competitive force for your firm?				X	!
Q11	If buyers are too strong, can alternative buyers be found in the region?		X			
		not so				possibly yes
5	Power of suppliers: deals with the extent to which your suppliers can influence your plans. The emphasis here is on the extent to which you depend on one or a few specific suppliers. Supplier power increases as the industry is dominated by a few companies and is more concentrated than the industry it sells to; there are no substitute products for you to buy, and the products you buy are very differentiated.					
Q12	To what extent is the power of suppliers a significant competitive force for your firm?			X		
Q13	If suppliers are too strong, can inputs from other sources be made accessible?				X	
		not so				possibly yes
Remark: This survey is for a thesis and is completely confidential. The result is not for a benchmarking, it is for the development and service improvement. If you like the results from your clinic, please write down your E-mail address: Thank you for the cooperation and help!						

Report

Perform Performance		Q1 New entrants	Q2 Regionalisation	Q4 Threat of substitutes	Q5 Beat competition	Q7 Jockeying	Q10 Buyer power	Q11 Buyer alternatives	Q12 Supplier power	Q13 Supplier alternatives
1 HP	Mean	2.12	3.14	2.18	4.20	4.60	4.02	2.18	3.26	3.92
	N	50	50	50	50	50	50	50	50	50
	Std. Deviation	.689	.606	.720	.639	.606	.553	.720	.633	.665
2 LP	Mean	1.46	2.36	1.28	3.48	3.98	3.12	1.34	2.24	3.56
	N	50	50	50	50	50	50	50	50	50
	Std. Deviation	.579	.663	.497	.863	.869	.435	.626	.591	.733
Total	Mean	1.79	2.75	1.73	3.84	4.29	3.57	1.76	2.75	3.74
	N	100	100	100	100	100	100	100	100	100
	Std. Deviation	.715	.744	.763	.838	.808	.671	.793	.796	.719

A7 Questionnaire: Key customers' needs

The following questionnaire with twelve questions (X1-X12) is used for the evaluation of key customers' needs and key customers' satisfaction:

1. Questionnaire: Key customers' needs

Note: Key customers include attending physicians and patients.

Pos.	Factors:	Importance: How important are these factors for our clinics' key customers?					Performance: How well does our clinic perform on this factor?				
		1 not at all imp.	2 not imp.	3 neutral	4 imp.	5 very imp.	1 very low	2 low	3 neutral	4 high	5 very high
Services	X1 Hospital services provided in clinic. (medical treatment, services in patients room, etc.)					X !				X	
	X2 General services provided in clinic. (room service, hotel, restaurant, payment, etc.)				X					X	
	X3 Additional services provided in clinic. (parking, general information about clinic, etc.)				X					X	
	X4 Customer information in clinic. (information about servicesm physicians, treatments, etc.)				X					X	
	X5 Service provided by attending physicians. (services for patients, information about treatments and cure, etc.)					X !				X	
Know How	X6 Knowledge of medical staff in clinic.					X !				X	
	X7 Knowledge of attending physicians.					X !					X
	X8 Cooperation and collaboration between clinic and physicians.					X !				X	
Infrastructure	X9 Technical infrastructure in patients room / sickroom.				X					X	
	X10 Technical/ sanitary infrastructure in clinic.				X					X	
	X11 General infrastructure. (restaurant, physiotherapie, reception, entrance hall, etc.)				X					X	
	X12 The clinic is close to your domicile.			X						X	

I am in the clinic:

I am patient: ☐

I am attending physician: ☐

I am employee: ☐

Remark: This survey is for a thesis and is completely confidential. The result is not for a benchmarking, it is for the development and service improvement.

If you like the results from your clinic, please write down your E-mail address:

E-Mail:

Thank you for the cooperation and help!

Your remarks:

OLAP Cubes

Clinic:Total

	Sum	N	Mean	Std. Deviation	% of Total Sum	% of Total N
X1	1693	349	4.85	.387	100.0%	100.0%
X2	1497	349	4.29	.615	100.0%	100.0%
X3	1456	349	4.17	.686	100.0%	100.0%
X4	1472	349	4.22	.677	100.0%	100.0%
X5	1676	349	4.80	.471	100.0%	100.0%
X6	1654	349	4.74	.483	100.0%	100.0%
X7	1683	349	4.82	.425	100.0%	100.0%
X8	1601	349	4.59	.608	100.0%	100.0%
X9	1456	349	4.17	.665	100.0%	100.0%
X10	1499	349	4.30	.594	100.0%	100.0%
X11	1447	349	4.15	.673	100.0%	100.0%
X12	1200	349	3.44	.956	100.0%	100.0%

All clinics:		X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12
Employee	Mean	4.87	4.45	4.36	4.35	4.77	4.72	4.83	4.50	4.19	4.38	4.32	3.44
	N	117	117	117	117	117	117	117	117	117	117	117	117
	Std. Deviation	.406	.533	.549	.661	.462	.523	.460	.638	.669	.583	.582	.933
Patient	Mean	4.82	4.19	3.98	4.25	4.84	4.80	4.84	4.64	4.18	4.25	3.99	3.59
	N	165	165	165	165	165	165	165	165	165	165	165	165
	Std. Deviation	.397	.698	.777	.659	.485	.416	.403	.596	.718	.609	.724	.988
Physician	Mean	4.88	4.24	4.31	3.90	4.78	4.63	4.78	4.63	4.12	4.27	4.24	3.06
	N	67	67	67	67	67	67	67	67	67	67	67	67
	Std. Deviation	.327	.464	.528	.654	.455	.546	.420	.573	.508	.566	.605	.814
Total	Mean	4.85	4.29	4.17	4.22	4.80	4.74	4.82	4.59	4.17	4.30	4.15	3.44
	N	349	349	349	349	349	349	349	349	349	349	349	349
	Std. Deviation	.387	.615	.686	.677	.471	.483	.425	.608	.665	.594	.673	.956

Table 5.1: Key customers' needs; result importance

High performance clinics:		X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12
Employee	Mean	4.95	4.55	4.32	4.32	4.77	4.75	4.89	4.43	4.18	4.36	4.34	3.21
	N	56	56	56	56	56	56	56	56	56	56	56	56
	Std. Deviation	.227	.537	.508	.636	.426	.437	.312	.657	.690	.586	.640	.756
Patient	Mean	4.87	4.19	3.92	4.22	4.92	4.76	4.90	4.65	4.22	4.21	3.89	3.51
	N	63	63	63	63	63	63	63	63	63	63	63	63
	Std. Deviation	.336	.737	.829	.683	.272	.429	.296	.626	.706	.626	.721	1.014
Physician	Mean	4.92	4.24	4.32	3.88	4.80	4.60	4.76	4.72	4.20	4.24	4.24	2.88
	N	25	25	25	25	25	25	25	25	25	25	25	25
	Std. Deviation	.277	.436	.476	.781	.408	.577	.436	.542	.500	.597	.523	.666
Total	Mean	4.91	4.34	4.15	4.20	4.84	4.73	4.88	4.58	4.20	4.27	4.13	3.28
	N	144	144	144	144	144	144	144	144	144	144	144	144
	Std. Deviation	.288	.639	.689	.695	.368	.461	.332	.632	.665	.606	.688	.890

Table 5.2: Prospector hospitals

Low performance clinics:		X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12
Employee	Mean	4.80	4.36	4.39	4.38	4.77	4.69	4.77	4.56	4.20	4.39	4.30	3.66
	N	61	61	61	61	61	61	61	61	61	61	61	61
	Std. Deviation	.511	.517	.585	.687	.496	.593	.560	.620	.654	.585	.527	1.031
Patient	Mean	4.79	4.20	4.02	4.27	4.78	4.82	4.79	4.63	4.16	4.27	4.05	3.64
	N	102	102	102	102	102	102	102	102	102	102	102	102
	Std. Deviation	.430	.675	.744	.647	.574	.408	.452	.579	.728	.600	.723	.973
Physician	Mean	4.86	4.24	4.31	3.90	4.76	4.64	4.79	4.57	4.07	4.29	4.24	3.17
	N	42	42	42	42	42	42	42	42	42	42	42	42
	Std. Deviation	.354	.484	.563	.576	.484	.533	.415	.590	.513	.554	.656	.881
Total	Mean	4.81	4.25	4.19	4.23	4.78	4.75	4.79	4.60	4.15	4.31	4.16	3.55
	N	205	205	205	205	205	205	205	205	205	205	205	205
	Std. Deviation	.440	.597	.684	.665	.532	.499	.478	.592	.665	.586	.663	.987

Table 5.3: Defender hospitals

Comparison:		X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12
High performance clinics:		4.91	4.34	4.15	4.20	4.84	4.73	4.88	4.58	4.20	4.27	4.13	3.28
Low performance clinics:		4.81	4.25	4.19	4.23	4.78	4.75	4.79	4.60	4.15	4.31	4.16	3.55
Total		4.85	4.29	4.17	4.22	4.80	4.74	4.82	4.59	4.17	4.30	4.15	3.44
Scale:		5	4	4	4	5	5	5	5	4	4	4	3

Table 5.4: Comparison

A8 Questionnaire: Capabilities

The following questionnaire with 43 (X13-X55) questions is used for the evaluation of capabilities in private hospitals. These 43 items are the base for the analysis of crucial capabilities and bundles of capabilities with software tools. In different workshops with the top management and a focus group the most important 'capabilities' of a hospital is described and listed in the questionnaire below.

According to Teece, Pisano, and Shuen (1997), "capabilities relates to the organisation's ability to adapt, integrate, and reconfigure internal and external organisational skills, resources, and functional individual competences to match the requirements of a changing environment". In addition, "they refer to the organisation's potential to carrying out a specific activity or set of activities". Sometimes the term 'skill' is used to refer to the ability to carry out a narrow (functional) task or activity, while the term 'capability' is reserved for the quality of combining a number of skills.

Please indicate the level of importance and the level of performance for each capability regarding the support for the strategy formulation.

X13 = Capability that support the relationship of clinic with attending physicians. This is a capability which supports relationship of physicians within hospitals. This includes having an excellent communication, cooperation and coordination. The first question is about the importance. Do you think that this capability is important for a clinic? The second question is about the performance. Do you think that our clinic has an excellent performance regarding this capability? *Example*

Five higher performing hospitals (5 HP) are prospectors; the eight lower performing hospitals (8 LP) are defenders. *Key*

2. Questionnaire: Strategic capabilities in private hospitals

Pos.	Capabilities that support the:	Importance: How important is this capability for our clinic?					Performance: How well does our clinic perform on this factor?				
		1	2	3	4	5	1	2	3	4	5
		not at all imp.	not imp.	neutral	imp.	very imp.	very low	low	neutral	high	very high
Relationship	X13 Relationship of clinic with attending physicians.					X				X	
	X14 Relationship of clinic with external physicians.				X				X		
	X15 Relationship of clinic with patients.					X				X	
	X16 Relationship of clinic with key suppliers.				X					X	
	X17 Relationship with pharma industry.			X					X		
	X18 Relationship of clinic with insurance companies.					X				X	
	X19 Relationship of clinic with local government.				X					X	
Marketing	X20 Relationship of clinic with medical commissions/ state government. (Swissmedic, H+, etc.)				X					X	
	X21 Reputation/ image / brand/ label of the clinic.					X				X	
	X22 Strategic marketing of the clinic.				X					X	
Health care market	X23 Networking with physicians, politicians, and institutions.				X					X	
	X24 Ability to widen the customer base through focused market... penetration and development.					X				X	
	X25 Ability to gain knowledge about competitors' strenghts/ weaknesses.				X				X		
Adaptation on market changes	X26 Ability to gain knowledge to detect fast technology shifts.				X				X		
	X27 Ability to gain knowledge to detect fast regulation shifts.				X					X	
	X28 Administrative preparation against compliance and litigation.				X					X	
Adaptation on market changes	X29 Service adaptation concerning aging population.				X				X		
	X30 Knowledge to detect fast new medical treatments.				X					X	
	X31 Medical treatments of chronic diseases.			X					X		
	X32 Acquisition-process for finding new patients with additional insurance.				X					X	
	X33 Knowledge about new tariffs such as the DRG's.				X					X	

Pos.	Capabilities that support the:	Importance: How important is this capability for our clinic?					Performance: How well does our clinic perform on this factor?				
		1	2	3	4	5	1	2	3	4	5
		not at all imp.	not imp.	neutral	imp.	very imp.	very low	low	neutral	high	very high
Management	X34 Strategy formulation with corporate identity, mission and objectives.										
	X35 Strategy implementation.										
	X36 Visionary, capable leadership in clinic.										
	X37 Decision making process in clinic.										
	X38 Change management in clinic.										
	X39 Process management in clinic.										
	X40 Coordination between clinical departments.										
Organisational learning	X41 Innovation, new service and new business development.										
	X42 Performance measurement process in clinic.										
	X43 Knowledge management in clinic.										
	X44 Quality management in clinic.										
Culture	X45 Nurturing of the culture for working in clinic.										
	X46 Ability to unify conflicting options and to generate motivation.										
	X47 Communication between management and staff.										
	X48 Cooperation with physicians in clinic.										
Staff development	X49 Education and development of competence of managers.										
	X50 Education and development of competence of medical staff in clinic.										
	X51 Education and development of competence of technical staff in clinic.										
	X52 Staff training for cooperation with attending physicians.										
Infrastructure	X53 Development of technical infrastructure of the clinic.										
	X54 Development of medical infrastructure of the clinic.										
	X55 Development and initialisation of IT-software in clinic.										

This questionnaire is published 2012 in Opatija, Croatia, at the Interdisciplinary Management Research VIII.

The results for all 13 hospitals, for the importance dimension, are:

**Results; all
hospitals**

All clinics:	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X33
Employee Mean	4.73	4.47	4.75	4.11	3.70	4.60	4.36	4.26	4.85	4.39	4.38	4.55	4.13	4.35	4.27	4.15	3.99	4.26	3.68	4.48	4.40
N	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Std. Deviation	.485	.581	.524	.640	.780	.588	.636	.709	.421	.643	.626	.636	.804	.780	.750	.780	.815	.724	.849	.690	.670
Physician Mean	4.73	4.19	4.51	3.76	3.00	4.67	4.04	3.96	4.63	3.88	4.25	4.48	3.69	4.04	3.85	3.94	3.72	3.84	3.04	4.31	4.10
N	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Std. Deviation	.447	.743	.533	.740	.759	.504	.706	.747	.573	.862	.659	.660	.802	.614	.744	.649	.623	.751	.806	.656	.721
Total Mean	4.73	4.37	4.66	3.98	3.45	4.63	4.24	4.15	4.77	4.21	4.33	4.52	3.97	4.24	4.12	4.07	3.89	4.11	3.45	4.42	4.29
N	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184
Std. Deviation	.470	.656	.539	.697	.841	.559	.677	.736	.493	.769	.639	.644	.829	.737	.773	.740	.760	.760	.885	.681	.702

All clinics:	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55
Employee Mean	4.44	4.38	4.62	4.42	3.87	4.34	4.43	4.35	4.15	4.24	4.45	4.50	4.53	4.49	4.62	4.21	4.47	4.28	3.96	4.36	4.54	4.25
N	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
Std. Deviation	.648	.679	.568	.646	.826	.659	.592	.606	.673	.665	.533	.596	.581	.596	.537	.726	.581	.641	.594	.565	.642	
Physician Mean	4.19	4.09	4.61	4.51	3.01	4.34	4.06	4.06	4.28	3.85	4.43	4.43	4.40	4.48	4.60	3.97	4.12	3.93	3.10	4.21	4.42	3.96
N	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
Std. Deviation	.657	.570	.650	.612	.977	.708	.547	.649	.831	.680	.743	.657	.629	.587	.579	.550	.537	.559	.987	.478	.555	.661
Total Mean	4.35	4.27	4.62	4.45	3.56	4.34	4.29	4.24	4.20	4.10	4.45	4.47	4.48	4.48	4.61	4.12	4.34	4.15	3.65	4.30	4.49	4.14
N	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184
Std. Deviation	.660	.655	.598	.634	.973	.675	.601	.636	.735	.694	.616	.618	.600	.591	.551	.675	.589	.635	1.040	.558	.563	.663

There are not significant variance between attending physicians and hospital managers (employees). The next two tables show the results for the five prospector hospitals:

**Results:
Importance**

Higher performing clinics:	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X33
Employee Mean	4.70	4.43	4.80	4.09	3.66	4.61	4.29	4.25	4.88	4.54	4.54	4.66	4.13	4.34	4.36	4.16	3.93	4.32	3.80	4.52	4.50
N	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Std. Deviation	.502	.568	.444	.668	.721	.528	.594	.694	.384	.538	.538	.581	.740	.837	.699	.682	.892	.664	.796	.687	.632
Physician Mean	4.88	4.32	4.68	3.76	2.92	4.76	4.12	4.08	4.84	4.00	4.32	4.60	3.72	4.00	3.80	3.92	3.64	3.88	2.92	4.48	4.12
N	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Std. Deviation	.332	.690	.476	.831	.812	.436	.666	.702	.374	.764	.557	.500	.614	.408	.645	.640	.490	.781	.812	.510	.666
Total Mean	4.75	4.40	4.77	3.99	3.43	4.65	4.23	4.20	4.86	4.37	4.47	4.64	4.00	4.23	4.19	4.09	3.84	4.19	3.53	4.51	4.38
N	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
Std. Deviation	.462	.606	.455	.733	.821	.504	.618	.697	.379	.660	.550	.555	.725	.746	.726	.674	.798	.726	.896	.635	.663

Higher performing clinics:	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55
Employee Mean	4.55	4.45	4.73	4.43	4.04	4.38	4.52	4.39	4.18	4.32	4.46	4.36	4.55	4.48	4.63	4.32	4.52	4.41	4.00	4.36	4.63	4.32
N	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
Std. Deviation	.630	.685	.486	.628	.713	.676	.504	.593	.606	.636	.571	.645	.537	.632	.489	.636	.539	.596	.786	.554	.524	.606
Physician Mean	4.16	4.08	4.72	4.76	2.96	4.56	4.20	4.24	4.60	4.04	4.60	4.16	4.32	4.40	4.56	4.12	4.16	3.96	3.12	4.24	4.48	4.20
N	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Std. Deviation	.688	.493	.458	.436	1.020	.583	.500	.436	.500	.611	.577	.554	.557	.577	.583	.526	.473	.735	1.013	.436	.510	.645
Total Mean	4.43	4.33	4.73	4.53	3.70	4.43	4.42	4.35	4.31	4.23	4.51	4.30	4.48	4.46	4.60	4.26	4.41	4.27	3.73	4.32	4.58	4.28
N	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
Std. Deviation	.670	.652	.475	.593	.955	.651	.521	.551	.605	.638	.573	.621	.550	.613	.517	.608	.543	.671	.949	.520	.521	.617

The next two tables show the results for the eight defender (or lower performing) hospitals:

Lower performing clinics:		X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X33
Employee	Mean	4.75	4.51	4.70	4.13	3.74	4.59	4.43	4.26	4.84	4.26	4.23	4.44	4.13	4.36	4.20	4.13	4.05	4.21	3.56	4.44	4.31
	N	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	Std. Deviation	.471	.595	.587	.618	.835	.642	.670	.728	.454	.705	.668	.671	.866	.731	.792	.866	.740	.777	.886	.696	.696
Physician	Mean	4.64	4.12	4.40	3.76	3.05	4.62	4.00	3.88	4.50	3.81	4.21	4.40	3.67	4.07	3.88	3.95	3.76	3.81	3.12	4.21	4.10
	N	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
	Std. Deviation	.485	.772	.544	.692	.731	.539	.733	.772	.634	.917	.717	.734	.902	.712	.803	.661	.692	.740	.803	.717	.759
Total	Mean	4.71	4.35	4.58	3.98	3.46	4.60	4.25	4.11	4.70	4.08	4.22	4.43	3.94	4.24	4.07	4.06	3.93	4.05	3.38	4.35	4.22
	N	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
	Std. Deviation	.478	.696	.586	.671	.861	.600	.724	.766	.557	.825	.685	.695	.906	.734	.808	.790	.731	.784	.876	.710	.727

Lower performing clinics:		X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55
Employee	Mean	4.33	4.31	4.52	4.41	3.72	4.31	4.34	4.31	4.11	4.16	4.44	4.62	4.51	4.49	4.62	4.10	4.43	4.16	3.92	4.36	4.46	4.18
	N	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	Std. Deviation	.651	.672	.622	.668	.897	.647	.655	.620	.733	.688	.501	.522	.622	.566	.582	.790	.618	.663	1.069	.633	.594	.671
Physician	Mean	4.21	4.10	4.55	4.36	3.05	4.21	3.98	3.95	4.10	3.74	4.33	4.60	4.45	4.52	4.62	3.88	4.10	3.90	3.10	4.19	4.38	3.81
	N	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
	Std. Deviation	.645	.617	.739	.656	.962	.750	.563	.731	.932	.701	.816	.665	.670	.594	.582	.550	.576	.431	.983	.505	.582	.634
Total	Mean	4.28	4.22	4.53	4.39	3.45	4.27	4.19	4.17	4.11	3.99	4.40	4.61	4.49	4.50	4.62	4.01	4.29	4.06	3.58	4.29	4.43	4.03
	N	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
	Std. Deviation	.648	.656	.669	.660	.977	.689	.643	.687	.815	.721	.647	.581	.640	.575	.579	.707	.620	.591	1.107	.588	.587	.678

The results for all 13 hospitals, for the performance dimension, are listed below:

Results; all hospitals

All clinics:		X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X33
Employee	Mean	3.85	3.36	4.04	3.70	3.40	4.00	3.77	3.62	4.13	3.85	3.80	3.69	3.44	3.67	3.68	3.75	3.28	3.70	3.19	3.75	3.82
	N	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
	Std. Deviation	.750	.804	.700	.660	.720	.754	.781	.717	.701	.757	.710	.814	.803	.766	.703	.765	.775	.647	.754	.808	.805
Physician	Mean	3.75	3.13	4.31	3.75	3.27	4.09	3.87	3.72	3.96	3.72	3.60	3.66	3.21	3.15	3.42	3.57	3.76	3.63	3.24	3.43	3.60
	N	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
	Std. Deviation	.766	.776	.763	.612	.510	.668	.757	.692	.976	.867	.889	.930	.769	.764	.819	.874	.698	.813	.720	1.062	.889
Total	Mean	3.81	3.28	4.14	3.72	3.35	4.03	3.80	3.65	4.07	3.80	3.73	3.68	3.36	3.48	3.59	3.68	3.46	3.67	3.21	3.64	3.74
	N	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184
	Std. Deviation	.755	.799	.733	.641	.653	.724	.772	.708	.814	.799	.784	.856	.797	.803	.756	.809	.781	.711	.740	.919	.841

All clinics:		X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55
Employee	Mean	3.97	3.69	3.87	3.70	3.43	3.75	3.55	3.81	3.54	3.50	3.94	3.73	3.53	3.56	3.38	3.62	3.81	3.66	2.94	3.62	3.84	3.23
	N	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117	117
	Std. Deviation	.798	.814	.804	.833	.735	.819	.760	.706	.783	.738	.746	.827	.794	.845	.955	.785	.586	.684	.864	.796	.787	.855
Physician	Mean	3.64	2.99	2.67	2.90	3.04	3.36	3.24	3.76	3.27	3.40	3.67	3.19	3.13	3.25	3.39	3.61	3.66	3.58	3.25	3.45	3.60	2.85
	N	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67	67
	Std. Deviation	.965	.826	1.186	.971	.767	.829	.761	.780	.880	.799	.805	.973	.952	1.020	.969	.717	.592	.721	.823	.909	.854	.821
Total	Mean	3.85	3.43	3.43	3.41	3.29	3.61	3.43	3.79	3.44	3.47	3.84	3.53	3.39	3.45	3.39	3.62	3.76	3.63	3.05	3.56	3.75	3.09
	N	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184	184
	Std. Deviation	.874	.885	1.119	.965	.767	.842	.773	.732	.828	.760	.777	.917	.873	.922	.957	.759	.591	.697	.860	.841	.818	.860

There are not significant variance between attending physicians and hospital managers (employees). The next two tables show the results for the five prospector (or higher performing) hospitals:

**Results:
Performance**

Higher performing clinics:		X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X33	X34
Employee	Mean	3.95	3.41	4.02	3.71	3.43	3.93	3.63	3.52	4.07	3.91	3.86	3.75	3.45	3.73	3.71	3.68	3.20	3.82	3.29	3.73	3.96	3.98
	N	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
	Std. Deviation	.773	.910	.751	.653	.657	.628	.728	.738	.710	.769	.724	.858	.807	.798	.653	.741	.749	.636	.780	.774	.785	.842
Physician	Mean	3.68	3.08	4.40	3.64	3.28	4.24	4.12	3.88	4.48	3.92	3.88	4.08	3.04	2.96	3.20	3.28	3.64	3.32	2.92	3.76	3.68	3.40
	N	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
	Std. Deviation	.476	.572	.577	.569	.458	.723	.666	.781	.872	.997	.927	.954	.539	.735	.764	.843	.700	.900	.640	1.165	.852	1.118
Total	Mean	3.86	3.31	4.14	3.69	3.38	4.02	3.78	3.63	4.20	3.91	3.86	3.85	3.32	3.49	3.56	3.56	3.33	3.67	3.17	3.74	3.88	3.80
	N	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
	Std. Deviation	.703	.831	.720	.625	.603	.670	.742	.766	.781	.840	.787	.896	.755	.853	.725	.791	.758	.758	.755	.905	.812	.967

Higher performing clinics:		X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55
Employee	Mean	3.98	3.68	3.95	3.75	3.34	3.73	3.52	3.82	3.54	3.48	3.73	3.59	3.54	3.43	3.43	3.73	3.86	3.79	2.88	3.61	3.95	3.16
	N	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56	56
	Std. Deviation	.842	.917	.862	.879	.793	.884	.738	.664	.738	.809	.842	.869	.852	.806	.912	.751	.645	.706	.916	.867	.840	.930
Physician	Mean	3.40	2.76	2.36	2.60	2.84	3.24	3.00	3.72	2.76	3.16	3.48	2.72	2.72	3.00	3.00	3.52	3.60	3.40	2.96	3.52	3.80	2.72
	N	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
	Std. Deviation	1.118	.723	1.075	.866	.746	.831	.707	.843	.779	.800	.714	.843	.891	1.041	.866	.586	.577	.764	.841	.872	.866	.737
Total	Mean	3.80	3.40	3.46	3.40	3.19	3.58	3.36	3.79	3.30	3.38	3.65	3.32	3.28	3.30	3.30	3.67	3.78	3.67	2.90	3.58	3.90	3.02
	N	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81	81
	Std. Deviation	.967	.958	1.184	1.021	.808	.893	.763	.720	.828	.815	.809	.946	.939	.901	.914	.707	.632	.742	.889	.864	.846	.894

The next two tables show the results for the eight defender (or lower performing) hospitals:

Low performing clinics:		X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X33	X34
Employee	Mean	3.75	3.31	4.07	3.69	3.38	4.07	3.90	3.70	4.18	3.80	3.75	3.64	3.44	3.61	3.66	3.82	3.36	3.59	3.10	3.77	3.69	3.95
	N	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	Std. Deviation	.722	.696	.655	.672	.778	.854	.810	.691	.695	.749	.699	.775	.807	.737	.750	.785	.797	.642	.724	.844	.807	.762
Physician	Mean	3.79	3.17	4.26	3.81	3.26	4.00	3.71	3.62	3.64	3.60	3.43	3.40	3.31	3.26	3.55	3.74	3.83	3.81	3.43	3.24	3.55	3.79
	N	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
	Std. Deviation	.898	.881	.857	.634	.544	.625	.774	.623	.906	.767	.831	.828	.869	.767	.832	.857	.696	.707	.703	.958	.916	.842
Total	Mean	3.77	3.25	4.15	3.74	3.33	4.04	3.83	3.67	3.96	3.72	3.62	3.54	3.39	3.47	3.61	3.79	3.55	3.68	3.23	3.55	3.63	3.88
	N	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
	Std. Deviation	.795	.776	.746	.656	.692	.766	.797	.663	.827	.759	.768	.802	.831	.765	.783	.812	.789	.675	.730	.926	.852	.796

Low performing clinics:		X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55
Employee	Mean	3.95	3.70	3.80	3.66	3.51	3.77	3.57	3.80	3.54	3.52	4.13	3.85	3.52	3.67	3.34	3.52	3.77	3.54	3.00	3.64	3.74	3.30
	N	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61
	Std. Deviation	.762	.715	.749	.793	.674	.761	.784	.749	.828	.673	.591	.771	.744	.870	.998	.808	.529	.647	.816	.731	.728	.782
Physician	Mean	3.79	3.12	2.86	3.07	3.17	3.43	3.38	3.79	3.57	3.55	3.79	3.48	3.38	3.40	3.62	3.67	3.69	3.69	3.43	3.40	3.48	2.93
	N	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
	Std. Deviation	.842	.861	1.221	.997	.762	.831	.764	.750	.801	.772	.842	.943	.909	.989	.962	.786	.604	.680	.770	.939	.833	.867
Total	Mean	3.88	3.47	3.42	3.42	3.37	3.63	3.50	3.80	3.55	3.53	3.99	3.70	3.47	3.56	3.46	3.58	3.74	3.60	3.17	3.54	3.63	3.15
	N	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103	103
	Std. Deviation	.796	.826	1.071	.924	.727	.804	.778	.746	.813	.711	.721	.861	.814	.925	.988	.799	.559	.662	.822	.826	.780	.833

All very important capabilities, as evaluated above, are: X13, X15, X18, X21, X22, X23, X24, X32, X36, X37, X44, X45, X47, X48, X53, X54. The performance of these variables for both the prospector and defender hospitals are illustrated below:

**Results:
Performance**

Comparison:	X13	X14	X15	X16	X17	X18	X19	X20	X21	X22	X23	X24	X25	X26	X27	X28	X29	X30	X31	X32	X33
Higher performing clinics:	3.86	3.31	4.14	3.69	3.38	4.02	3.78	3.63	4.20	3.91	3.86	3.85	3.32	3.49	3.56	3.56	3.33	3.67	3.17	3.74	3.88
Low performing clinics:	3.77	3.25	4.15	3.74	3.33	4.04	3.83	3.67	3.96	3.72	3.62	3.54	3.39	3.47	3.61	3.79	3.55	3.68	3.23	3.55	3.63
Total Mean	3.81	3.28	4.14	3.72	3.35	4.03	3.80	3.65	4.07	3.80	3.73	3.68	3.36	3.48	3.59	3.68	3.46	3.67	3.21	3.64	3.74

Comparison:	X34	X35	X36	X37	X38	X39	X40	X41	X42	X43	X44	X45	X46	X47	X48	X49	X50	X51	X52	X53	X54	X55
Higher performing clinics:	3.80	3.40	3.46	3.40	3.19	3.58	3.36	3.79	3.30	3.38	3.65	3.32	3.28	3.30	3.30	3.67	3.78	3.67	2.90	3.58	3.90	3.02
Low performing clinics:	3.88	3.47	3.42	3.42	3.37	3.63	3.50	3.80	3.55	3.53	3.99	3.70	3.47	3.56	3.46	3.58	3.74	3.60	3.17	3.54	3.63	3.15
Total Mean	3.85	3.43	3.43	3.41	3.29	3.61	3.43	3.79	3.44	3.47	3.84	3.53	3.39	3.45	3.39	3.62	3.76	3.63	3.05	3.56	3.75	3.09

The following variables have a mean < 3.5 and thus they are not included in the section (5.5.2): X36, X37, X47, and X48.

A9 Key Performance Indicators (KPI's)

This financial ratios are the result from a management information system in the time period: 2005-2009 (five years).

Key Performance Indicators (KPI's):															
Pos.		Pos.	AA	BS	PM	SA	AK	RO	BC	CC	ST	BI	BE	HI	IP
	<i>X = Prospector (HP) hospitals:</i>		X	X	O	O	O	O	O	X	O	O	O	X	X
Profitability	F1 Operating Margin (OM):	F1	0.700	0.703	0.274	0.521	0.447	0.543	0.535	0.590	0.624	0.525	0.382	1.000	0.777
	F2 Total Margin (TM):	F2	0.308	0.446	0.001	0.326	0.184	0.323	0.119	0.290	0.171	0.025	0.054	1.000	0.531
	F3 Return on Assets (ROA):	F3	0.421	0.578	0.002	0.620	0.236	0.191	0.189	0.371	0.198	0.003	0.002	1.000	0.496
	F4 Return on Equity (ROE):	F4	0.602	0.660	0.000	0.546	0.240	0.215	0.293	0.420	0.234	0.006	0.037	1.000	0.475
	F5 EVA per Total capital:	F5	0.731	0.706	0.346	0.634	0.287	0.071	0.599	0.507	0.507	0.289	0.344	1.000	0.519
	F6 EBITDA per bed:	F6	0.642	0.766	0.159	0.358	0.307	0.258	0.323	0.562	0.379	0.304	0.158	1.000	0.758
	EBITDA increase in last two years in %:		2.8	0.7	0.9	6.7	-2.4	2.0	5.9	4.8	12.9	20.8	-12.3	8.1	17.8
Efficiency	F7 Total asset turnover (TAT):	F7	0.730	0.696	0.744	1.000	0.626	0.311	0.685	0.653	0.574	0.462	0.755	0.634	0.509
	F8 Fixed asset turnover (FAT):	F8	0.481	0.756	0.536	1.000	0.473	0.264	0.308	0.453	0.308	0.217	0.420	0.575	0.559
	F9 Average age of plant ratio (AAOPR):	F9	0.663	0.550	0.841	0.896	0.901	0.684	0.543	0.428	0.615	0.393	1.000	0.548	0.492
	F10 Staff efficiency (SE):	F10	0.664	0.638	0.779	0.817	0.767	1.000	0.510	0.403	0.577	0.769	0.803	0.696	0.594
Productivity, Business strategy	F11 Bed Size (BZ):	F11	117	93	47	162	56	62	66	92	159	43	28	227	134
	F12 Occupancy rate (OR) in %:	F12	0.803	0.897	0.691	0.785	0.791	0.622	0.455	0.502	0.661	0.663	0.593	0.794	0.618
	F13 Bed Size x Occupancy rate (BZ x OR):	F13	94	83	32	127	44	39	30	46	105	29	17	180	83
	F14 Average lengths of stay (ALOS):	F14	0.792	0.730	1.000	0.725	0.815	0.693	0.762	0.728	0.654	0.756	0.636	0.680	0.789
	F15 Employee turnover (ET) in %:	F15	0.462	0.380	0.303	0.278	0.347	1.000	0.456	0.435	0.532	0.503	0.612	0.400	0.392
	F16 Private patients (PT) in %:	F16	0.735	0.491	0.228	0.410	0.463	0.765	0.921	0.995	0.727	0.610	0.493	0.975	0.931
	F17 Inpatients (IP) in %:	F17	0.562	0.738	0.768	0.852	0.422	0.562	0.400	0.399	0.485	0.241	0.450	0.651	0.648
	Key Services in hospitals:														
	F18 Orthopaedics, traumatology and spine surgery	F18	X		X	X	X	X	X		X	X	X	X	X
	F19 Cardiology and Cardiosurgery	F19	X	X						X	X			X	X
Key customer satisfaction	F20 Internal medicine	F20			X	X			X		X			X	
	F21 Gynaecology and midwifery	F21	X			X	X			X			X	X	X
	F22 Employees' satisfaction with services	F22	0.753	0.740	0.720	0.691	0.720	0.766	0.752	0.752	0.737	0.813	0.744	0.767	0.709
	F23 Patients' satisfaction with services	F23	0.752	0.888	0.760	0.930	0.920	0.748	0.833	0.874	0.792	0.748	0.904	0.776	0.792
	F24 Physicians' satisfaction with services	F24	0.760	0.720	0.744	0.728	0.728	0.834	0.744	0.784	0.776	0.792	0.856	0.776	0.808
	F25 Employees' satisfaction with knowledge	F25	0.848	0.752	0.693	0.676	0.693	0.805	0.800	0.761	0.771	0.800	0.787	0.822	0.758
	F26 Patients' satisfaction with knowledge	F26	0.800	0.920	0.807	0.913	0.958	0.793	0.854	0.862	0.787	0.787	0.953	0.773	0.760
	F27 Physicians' satisfaction with knowledge	F27	0.773	0.720	0.800	0.627	0.693	0.914	0.733	0.787	0.800	0.773	0.867	0.733	0.773
	F28 Employees' satisfaction with infrastructure	F28	0.714	0.764	0.750	0.729	0.760	0.750	0.760	0.760	0.671	0.825	0.730	0.650	0.664
	F29 Patients' satisfaction with infrastructure	F29	0.740	0.805	0.805	0.848	0.863	0.775	0.788	0.862	0.635	0.760	0.940	0.740	0.700
	F30 Physicians' satisfaction with infrastructure	F30	0.690	0.690	0.660	0.720	0.700	0.743	0.700	0.730	0.710	0.750	0.880	0.680	0.780

Key Performance Indicators (KPI's):		Prospector (HP)	Defender (LP)	TOTAL
Pos.		Total: 5 hospitals	Total: 8 hospitals	Total: 13 hospitals
	$X = \text{Prospector (HP) hospitals:}$	X	O	(mean)
Profitability	F1 Operating Margin (OM):	0.754	0.481	0.586
	F2 Total Margin (TM):	0.515	0.150	0.291
	F3 Return on Assets (ROA):	0.573	0.180	0.331
	F4 Return on Equity (ROE):	0.632	0.197	0.364
	F5 EVA per Total capital:	0.693	0.384	0.503
	F6 EBITDA per bed:	0.745	0.281	0.459
	EBITDA increase in last two years in %:	6.827	4.300	
Efficiency	F7 Total asset turnover (TAT):	0.644	0.645	0.644
	F8 Fixed asset turnover (FAT):	0.565	0.441	0.488
	F9 Average age of plant ratio (AAOPR):	0.536	0.734	0.658
	F10 Staff efficiency (SE):	0.599	0.753	0.694
Productivity; Business strateg	F11 Bed Size (BZ):	132.5	77.8	98.872
	F12 Occupancy rate (OR) in %:	0.723	0.658	0.683
	F13 Bed Size x Occupancy rate (BZ x OR):	97.3	52.8	69.904
	F14 Average lengths of stay (ALOS):	0.744	0.755	0.751
	F15 Employee turnover (ET) in %:	0.414	0.504	0.469
	F16 Private patients (PT) in %:	0.825	0.577	0.673
	F17 Inpatients (IP) in %:	0.600	0.523	0.552
	Key Services in hospitals:			
	F18 Orthopaedics, traumatology and spine surgery		Orthopaedics	
	F19 Cardiology and Cardiosurgery	Cardiology		
	F20 Internal medicine			
	F21 Gynaecology and midwifery			
Key customer satisfaction	F22 Employees' satisfaction with services	0.744	0.743	0.743
	F23 Patients' satisfaction with services	0.816	0.829	0.824
	F24 Physicians' satisfaction with services	0.770	0.775	0.773
	F25 Employees' satisfaction with knowledge	0.788	0.753	0.767
	F26 Patients' satisfaction with knowledge	0.827	0.857	0.845
	F27 Physicians' satisfaction with knowledge	0.757	0.776	0.769
	F28 Employees' satisfaction with infrastructure	0.710	0.747	0.733
	F29 Patients' satisfaction with infrastructure	0.769	0.802	0.789
	F30 Physicians' satisfaction with infrastructure	0.714	0.733	0.726

A10 Strategic capability analysis; PCA

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.897
Bartlett's Test of Sphericity	Approx. Chi-Square	4474.801
	df	903.000
	Sig.	.000

PCA for 13 hospitals; importance x performance

Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	14.400	33.488	33.488	5.959	13.859	13.859
2	2.535	5.895	39.382	4.153	9.657	23.516
3	1.966	4.573	43.955	3.767	8.760	32.276
4	1.863	4.334	48.289	3.489	8.113	40.389
5	1.587	3.691	51.980	3.325	7.733	48.121
6	1.487	3.457	55.437	3.146	7.316	55.437
7	1.376	3.201	58.638			
8	1.210	2.813	61.451			
9	1.172	2.724	64.176			
10	1.036	2.409	66.585			
11	.996	2.316	68.902			
12	.948	2.204	71.105			
13	.850	1.976	73.082			
14	.819	1.905	74.987			
15	.764	1.778	76.764			
16	.744	1.729	78.494			
17	.688	1.601	80.095			
18	.618	1.437	81.532			
19	.583	1.356	82.888			
20	.572	1.331	84.219			
21	.551	1.282	85.501			
22	.495	1.150	86.651			
23	.482	1.120	87.771			
24	.466	1.083	88.854			
25	.442	1.028	89.883			
26	.392	.912	90.795			
27	.378	.879	91.674			
28	.344	.799	92.473			
29	.313	.728	93.201			
30	.298	.693	93.894			
31	.295	.687	94.581			
32	.268	.622	95.203			
33	.255	.592	95.795			
34	.230	.534	96.330			
35	.229	.532	96.862			
36	.213	.496	97.357			
37	.199	.463	97.821			
38	.187	.436	98.256			
39	.172	.401	98.657			
40	.162	.376	99.033			
41	.156	.363	99.396			
42	.147	.342	99.738			
43	.113	.262	100.000			

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component					
	1	2	3	4	5	6
X38 Change Mgmt.	.747					
X36 Leadership	.727					
X27 Knowledge regul.	.640					
X37 Decision making.	.612					
X25 Knowledge comp.	.597					
X35 Strategy implement.	.585					
X26 Knowledge techn.						
X30 Med. treatment						
X39 Process Mgmt.						
X17 Rel. with pharma						
X31 Chronic diseases						
X33 DRG						
X55 Infrastructure IT						
X52 Training staff						
X34 Strategy formulation						
X14 Rel. with ext. phys.						
X42 Perform. measur.		.680				
X43 Knowledge Mgmt.		.626				
X44 Quality Mgmt.		.582				
X15 Rel. with pat.						
X41 Innovation						
X28 Admin. preparation						
X24 Market developm.						
X29 Service adapt.						
X54 Infrastructure med.			.752			
X53 Infrastructure tech.			.731			
X51 Educ. techn. staff			.722			
X50 Educ. med. staff			.628			
X49 Educ. managers						
X47 Communication				.712		
X45 Culture				.661		
X48 Cooperation				.610		
X46 Motivation				.601		
X40 Coordination						
X18 Rel. with insurance					.757	
X19 Rel. with local gov.					.662	
X20 Rel. with state gov.					.656	
X16 Rel. with supp.						
X13 Rel. with att. phys.						
X21 Image						.712
X22 Strat. marketing						.676
X23 Networking						.589
X32 Acquisition patients						

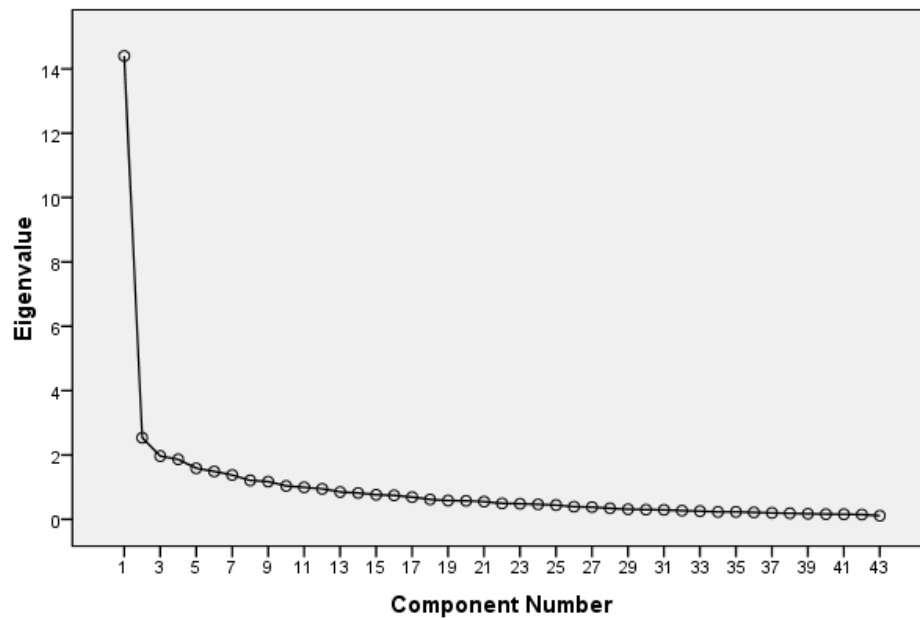
Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 9 iterations.

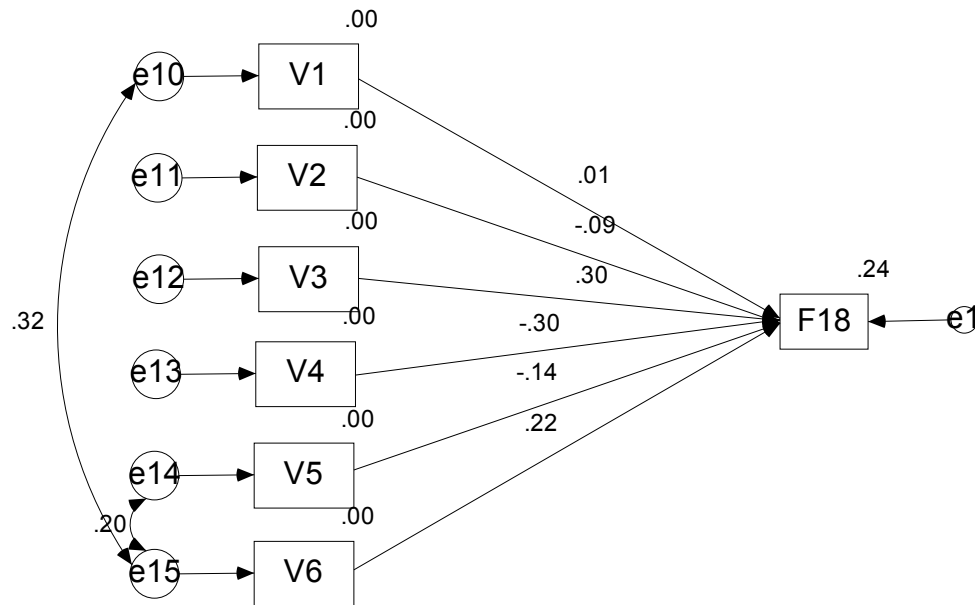
*PCA for 13
hospitals;
importance x
performance*

*Scree plot for 5
HP hospitals;
importance*

Scree Plot



A11 Dynamic capability analysis; SEM



*Model
(standardised
estimates) for
financial
performance for
prospector
hospitals (5HP);
importance*

Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
F18 <---	V1	.009	.179	.052	.958	
F18 <---	V2	-.155	.157	-.989	.323	
F18 <---	V3	.576	.157	3.667	***	
F18 <---	V4	-.562	.170	-3.299	***	
F18 <---	V5	-.208	.112	-1.856	.063	
F18 <---	V6	.321	.103	3.115	.002	

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
F18 <---	V1	.005
F18 <---	V2	-.087
F18 <---	V3	.302
F18 <---	V4	-.298
F18 <---	V5	-.141
F18 <---	V6	.217

Covariances: (Group number 1 - Default model)

		Estimate	S.E.	C.R.	P	Label
e10 <-->	e15	.085	.024	3.603	***	
e14 <-->	e15	.063	.024	2.594	.009	

Correlations: (Group number 1 - Default model)

		Estimate
e10 <-->	e15	.324
e14 <-->	e15	.197

A12 Multiple Regression

Regression for 23 variables after PCA for 13 hospitals:

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.624 ^a	.390	.302	.70085

a. Predictors: (Constant), X23 Networking, X53 Infrastructure tech., X18 Rel. with insurance, X48 Cooperation, X21 Image, X45 Culture, X50 Educ. med. staff, X27 Knowledge regul., X44 Quality Mgmt., X38 Change Mgmt., X20 Rel. with state gov., X22 Strat. marketing, X42 Perform. measur., X54 Infrastructure med., X37 Decision making., X47 Communication, X25 Knowledge comp., X51 Educ. techn. staff, X43 Knowledge Mgmt., X19 Rel. with local gov., X46 Motivation, X35 Strategy implement., X36 Leadership

b. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.149	23	2.180	4.439	.000 ^a
	Residual	78.591	160	.491		
	Total	128.740	183			

a. Predictors: (Constant), X23 Networking, X53 Infrastructure tech., X18 Rel. with insurance, X48 Cooperation, X21 Image, X45 Culture, X50 Educ. med. staff, X27 Knowledge regul., X44 Quality Mgmt., X38 Change Mgmt., X20 Rel. with state gov., X22 Strat. marketing, X42 Perform. measur., X54 Infrastructure med., X37 Decision making., X47 Communication, X25 Knowledge comp., X51 Educ. techn. staff, X43 Knowledge Mgmt., X19 Rel. with local gov., X46 Motivation, X35 Strategy implement., X36 Leadership

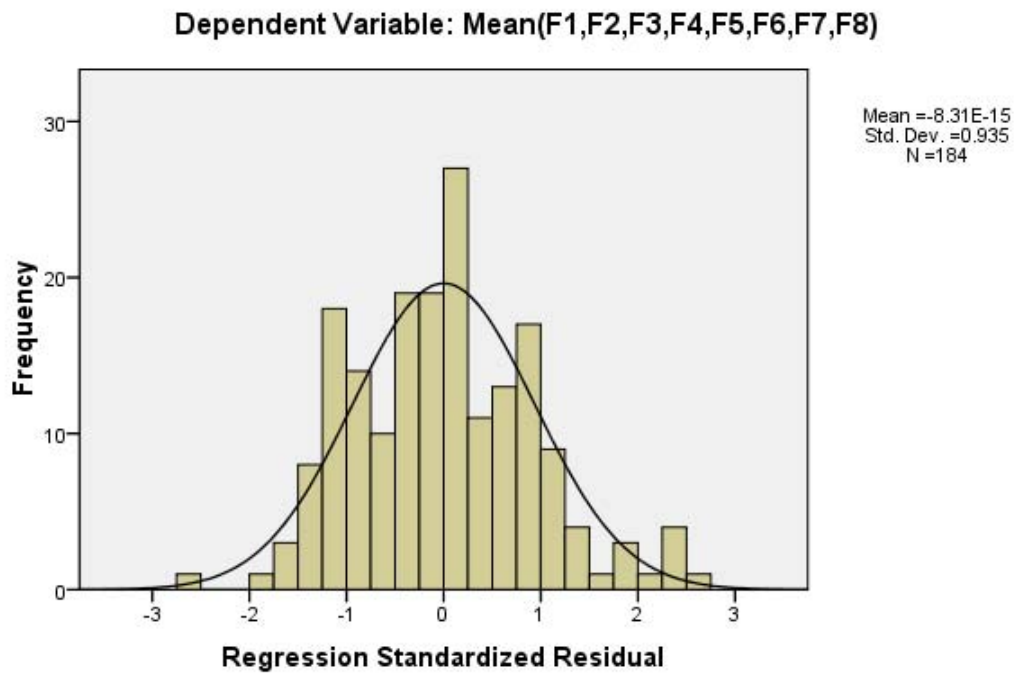
b. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.623	.489		5.360	.000
	X36 Leadership	.165	.095	.192	1.736	.084
	X37 Decision making.	-.111	.108	-.113	-1.027	.306
	X38 Change Mgmt.	.120	.092	.114	1.300	.196
	X27 Knowledge regul.	-.104	.087	-.102	-1.197	.233
	X25 Knowledge comp.	-.159	.094	-.162	-1.691	.093
	X35 Strategy implement.	.080	.107	.081	.747	.456
	X42 Perform. measur.	-.110	.101	-.104	-1.095	.275
	X43 Knowledge Mgmt.	.110	.111	.097	.983	.327
	X44 Quality Mgmt.	-.101	.105	-.089	-.959	.339
	X50 Educ. med. staff	.162	.122	.120	1.329	.186
	X51 Educ. techn. staff	-.044	.117	-.036	-.374	.709
	X53 Infrastructure tech.	-.043	.112	-.039	-.389	.698
	X54 Infrastructure med.	.384	.099	.359	3.892	.000
	X45 Culture	-.495	.095	-.480	-5.193	.000
	X46 Motivation	.229	.112	.211	2.043	.043
	X47 Communication	-.088	.104	-.084	-.843	.401
	X48 Cooperation	-.201	.075	-.199	-2.673	.008
	X18 Rel. with insurance	.031	.087	.029	.360	.719
	X19 Rel. with local gov.	-.085	.107	-.080	-.801	.424
	X20 Rel. with state gov.	-.047	.093	-.045	-.500	.617
	X21 Image	.183	.084	.173	2.181	.031
	X22 Strat. marketing	-.034	.087	-.034	-.386	.700
	X23 Networking	.107	.087	.099	1.222	.223

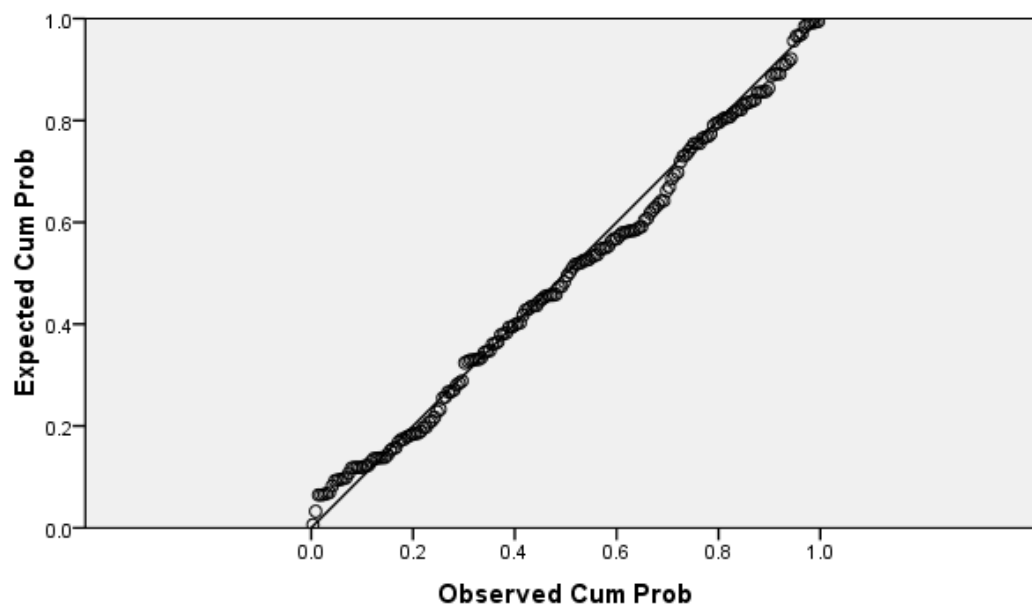
a. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

Histogram



Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Mean(F1,F2,F3,F4,F5,F6,F7,F8)



Five prospector hospitals (5HP) with 23 variables:

Model Summary^{b,c}

Model	R				
	Perform Performance = 1 HP (Selected)	Perform Performance ~ 1 HP (Unselected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.592 ^a	.072	.350	.088	.52242

a. Predictors: (Constant), X23 Networking, X21 Image, X48 Cooperation, X50 Educ. med. staff, X18 Rel. with insurance, X54 Infrastructure med., X27 Knowledge regul., X44 Quality Mgmt., X38 Change Mgmt., X20 Rel. with state gov., X45 Culture, X22 Strat. marketing, X42 Perform. measur., X25 Knowledge comp., X19 Rel. with local gov., X51 Educ. techn. staff, X46 Motivation, X35 Strategy implement., X43 Knowledge Mgmt., X37 Decision making., X53 Infrastructure tech., X47 Communication, X36 Leadership

b. Unless noted otherwise, statistics are based only on cases for which Perform Performance = 1 HP.

c. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8.394	23	.365	1.337	.186 ^a
	Residual	15.557	57	.273		
	Total	23.950	80			

a. Predictors: (Constant), X23 Networking, X21 Image, X48 Cooperation, X50 Educ. med. staff, X18 Rel. with insurance, X54 Infrastructure med., X27 Knowledge regul., X44 Quality Mgmt., X38 Change Mgmt., X20 Rel. with state gov., X45 Culture, X22 Strat. marketing, X42 Perform. measur., X25 Knowledge comp., X19 Rel. with local gov., X51 Educ. techn. staff, X46 Motivation, X35 Strategy implement., X43 Knowledge Mgmt., X37 Decision making., X53 Infrastructure tech., X47 Communication, X36 Leadership

b. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

c. Selecting only cases for which Perform Performance = 1 HP

Coefficients^{a,b}

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.472	.653		5.315	.000
	X36 Leadership	-.008	.122	-.014	-.062	.951
	X37 Decision making.	-.118	.118	-.189	-1.000	.322
	X38 Change Mgmt.	.161	.113	.227	1.420	.161
	X27 Knowledge regul.	-.228	.116	-.310	-1.959	.055
	X25 Knowledge comp.	.169	.141	.227	1.198	.236
	X35 Strategy implement.	.136	.118	.222	1.152	.254
	X42 Perform. measur.	-.043	.139	-.052	-.307	.760
	X43 Knowledge Mgmt.	.172	.135	.241	1.274	.208
	X44 Quality Mgmt.	-.045	.121	-.059	-.370	.713
	X50 Educ. med. staff	-.031	.145	-.036	-.217	.829
	X51 Educ. techn. staff	-.263	.133	-.344	-1.977	.053
	X53 Infrastructure tech.	-.169	.144	-.234	-1.174	.245
	X54 Infrastructure med.	.392	.117	.576	3.359	.001
	X45 Culture	.037	.120	.053	.305	.761
	X46 Motivation	.084	.140	.122	.600	.551
	X47 Communication	-.036	.142	-.054	-.255	.799
	X48 Cooperation	-.084	.099	-.123	-.854	.397
	X18 Rel. with insurance	.076	.115	.094	.658	.513
	X19 Rel. with local gov.	.056	.136	.068	.410	.684
	X20 Rel. with state gov.	-.066	.120	-.093	-.551	.584
	X21 Image	.054	.109	.069	.493	.624
	X22 Strat. marketing	-.121	.108	-.175	-1.123	.266
	X23 Networking	-.169	.110	-.229	-1.535	.130

a. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

b. Selecting only cases for which Perform Performance = 1 HP

Eight defender hospitals (8LP) with 23 variables:

Model Summary^{b,c}

Model	R				
	Perform Performance = 2 LP (Selected)	Perform Performance <= 2 LP (Unselected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.653 ^a	.	.426	.259	.54559

a. Predictors: (Constant), X23 Networking, X51 Educ. techn. staff, X18 Rel. with insurance, X21 Image, X48 Cooperation, X43 Knowledge Mgmt., X45 Culture, X25 Knowledge comp., X53 Infrastructure tech., X20 Rel. with state gov., X22 Strat. marketing, X38 Change Mgmt., X47 Communication, X50 Educ. med. staff, X27 Knowledge regul., X42 Perform. measur., X37 Decision making., X54 Infrastructure med., X46 Motivation, X44 Quality Mgmt., X19 Rel. with local gov., X36 Leadership, X35 Strategy implement.

b. Unless noted otherwise, statistics are based only on cases for which Perform Performance = 2 LP.

c. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.472	23	.760	2.552	.001 ^a
	Residual	23.516	79	.298		
	Total	40.988	102			

a. Predictors: (Constant), X23 Networking, X51 Educ. techn. staff, X18 Rel. with insurance, X21 Image, X48 Cooperation, X43 Knowledge Mgmt., X45 Culture, X25 Knowledge comp., X53 Infrastructure tech., X20 Rel. with state gov., X22 Strat. marketing, X38 Change Mgmt., X47 Communication, X50 Educ. med. staff, X27 Knowledge regul., X42 Perform. measur., X37 Decision making., X54 Infrastructure med., X46 Motivation, X44 Quality Mgmt., X19 Rel. with local gov., X36 Leadership, X35 Strategy implement.

b. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

c. Selecting only cases for which Perform Performance = 2 LP

Coefficients^{a,b}

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.292	.500		4.587	.000
	X36 Leadership	.124	.113	.186	1.101	.274
	X37 Decision making.	-.156	.129	-.206	-1.213	.229
	X38 Change Mgmt.	.107	.108	.139	.999	.321
	X27 Knowledge regul.	-.098	.095	-.136	-1.031	.306
	X25 Knowledge comp.	-.102	.101	-.150	-1.011	.315
	X35 Strategy implement.	-.112	.143	-.144	-.788	.433
	X42 Perform. measur.	-.149	.106	-.205	-1.401	.165
	X43 Knowledge Mgmt.	-.053	.136	-.061	-.390	.698
	X44 Quality Mgmt.	.062	.133	.073	.464	.644
	X50 Educ. med. staff	.289	.137	.278	2.107	.038
	X51 Educ. techn. staff	-.015	.146	-.016	-.101	.920
	X53 Infrastructure tech.	.264	.125	.311	2.115	.038
	X54 Infrastructure med.	-.042	.126	-.050	-.334	.740
	X45 Culture	-.298	.119	-.363	-2.496	.015
	X46 Motivation	.152	.134	.180	1.137	.259
	X47 Communication	-.060	.113	-.074	-.531	.597
	X48 Cooperation	-.146	.081	-.197	-1.795	.077
	X18 Rel. with insurance	-.024	.093	-.032	-.259	.796
	X19 Rel. with local gov.	-.041	.113	-.057	-.364	.717
	X20 Rel. with state gov.	.012	.103	.016	.119	.906
	X21 Image	.091	.107	.120	.847	.399
	X22 Strat. marketing	.076	.095	.102	.799	.427
	X23 Networking	.064	.097	.079	.663	.509

a. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

b. Selecting only cases for which Perform Performance = 2 LP

13 hospitals, 6 factors:

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.488 ^a	.238	.212	.74447

a. Predictors: (Constant), V6 MEAN(X21,X22,X23), V3 MEAN(X54,X53,X51,X50), V5 MEAN(X18,X19,X20), V2 MEAN(X42,X43,X44), V4 MEAN(X47,X45,X48,X46), V1 MEAN(X38,X36,X27,X37,X25,X35)

b. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

ANOVA^b

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.639	6	5.107	9.214	.000 ^a
	Residual	98.101	177	.554		
	Total	128.740	183			

a. Predictors: (Constant), V6 MEAN(X21,X22,X23), V3 MEAN(X54,X53,X51,X50), V5 MEAN(X18,X19,X20), V2 MEAN(X42,X43,X44), V4 MEAN(X47,X45,X48,X46), V1 MEAN(X38,X36,X27,X37,X25,X35)

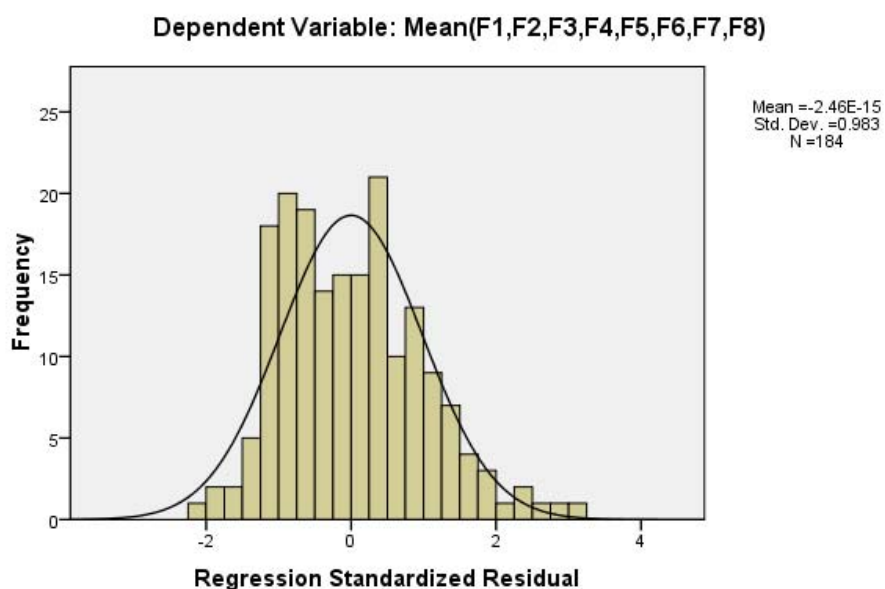
b. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.591	.460		5.632	.000
	V1 MEAN(X38,X36,X27,X37,X25,X35)	.009	.114	.008	.082	.935
	V2 MEAN(X42,X43,X44)	-.155	.108	-.120	-1.439	.152
	V3 MEAN(X54,X53,X51,X50)	.576	.118	.388	4.884	.000
	V4 MEAN(X47,X45,X48,X46)	-.562	.113	-.421	-4.986	.000
	V5 MEAN(X18,X19,X20)	-.208	.096	-.164	-2.173	.031
	V6 MEAN(X21,X22,X23)	.321	.105	.243	3.064	.003

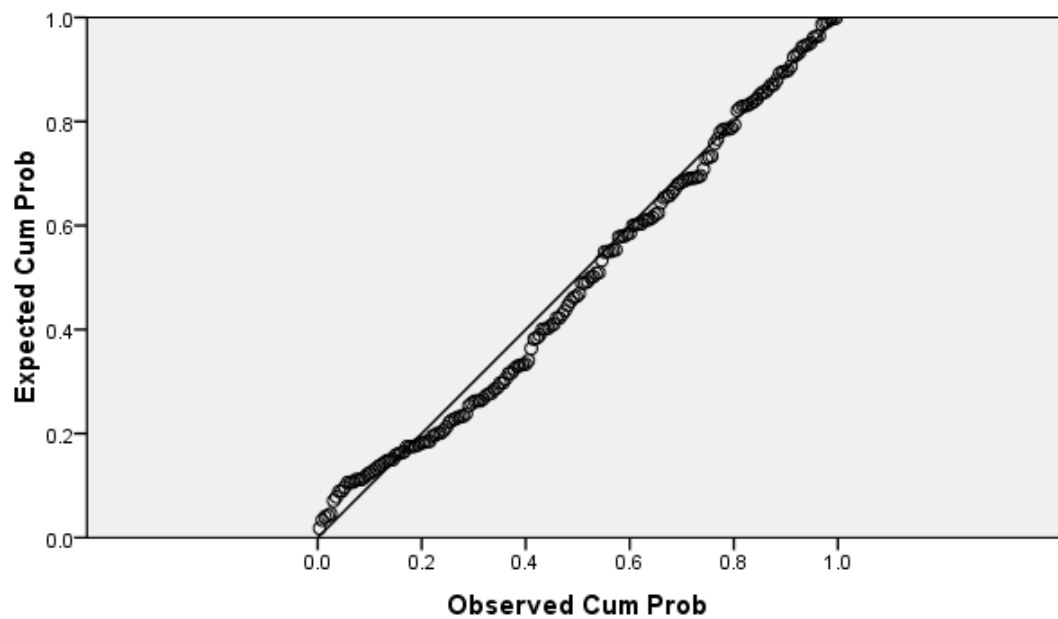
a. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

Histogram



Normal P-P Plot of Regression Standardized Residual

Dependent Variable: Mean(F1,F2,F3,F4,F5,F6,F7,F8)



Eight defender hospitals (8LP) with 6 factors:

Model Summary^{b,c}

Model	R				
	Perform Performance = 2 LP (Selected)	Perform Performance ~ 2 LP (Unselected)	R Square	Adjusted R Square	Std. Error of the Estimate
1	.512 ^a	.018	.262	.216	.56143

a. Predictors: (Constant), V6 MEAN(X21,X22,X23), V3 MEAN(X54,X53,X51,X50), V5 MEAN(X18,X19,X20), V4 MEAN(X47,X45,X48,X46), V2 MEAN(X42,X43,X44), V1 MEAN(X38,X36,X27,X37,X25,X35)

b. Unless noted otherwise, statistics are based only on cases for which Perform Performance = 2 LP.

c. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

ANOVA^{b,c}

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.729	6	1.788	5.673	.000 ^a
	Residual	30.259	96	.315		
	Total	40.988	102			

a. Predictors: (Constant), V6 MEAN(X21,X22,X23), V3 MEAN(X54,X53,X51,X50), V5 MEAN(X18,X19,X20), V4 MEAN(X47,X45,X48,X46), V2 MEAN(X42,X43,X44), V1 MEAN(X38,X36,X27,X37,X25,X35)

b. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

c. Selecting only cases for which Perform Performance = 2 LP

Coefficients^{a,b}

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.396	.452		5.305	.000
	V1 MEAN(X38,X36,X27,X37,X25,X35)	-.141	.123	-.159	-1.141	.257
	V2 MEAN(X42,X43,X44)	-.142	.110	-.151	-1.294	.199
	V3 MEAN(X54,X53,X51,X50)	.512	.123	.455	4.164	.000
	V4 MEAN(X47,X45,X48,X46)	-.441	.122	-.423	-3.602	.001
	V5 MEAN(X18,X19,X20)	-.124	.096	-.142	-1.294	.199
	V6 MEAN(X21,X22,X23)	.250	.111	.263	2.246	.027

a. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

b. Selecting only cases for which Perform Performance = 2 LP

Coefficients^{a,b}

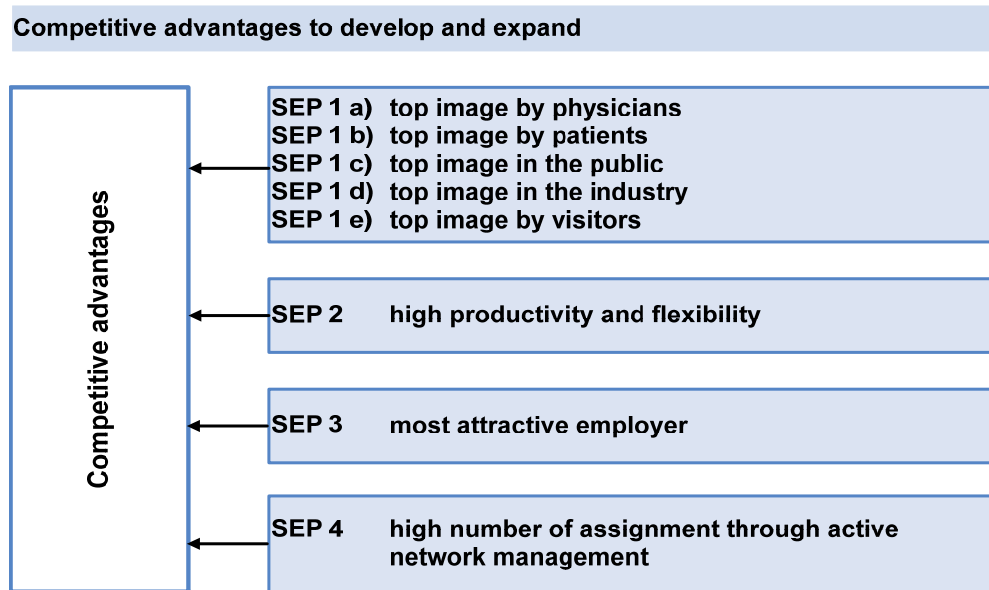
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.471	.894		-3.882	.000
	V1 V1=mean(X38,X36,X27,X37,X25,X35,X26,X30,X39,X17,X31)	.474	.262	.219	1.806	.074
	V2 V2=mean(X42,X43,X44,X15,X41)	.015	.284	.006	.053	.958
	V3 V3=mean(X54,X53,X51,X50)	.707	.250	.278	2.832	.006
	V4 V4=mean(X47,X45,X48,X46)	.226	.209	.110	1.083	.282
	V5 V5=mean(X18,X19,X20,X16)	.315	.207	.139	1.520	.132
	V6 V6=mean(X21,X22,X23)	.203	.194	.100	1.044	.299

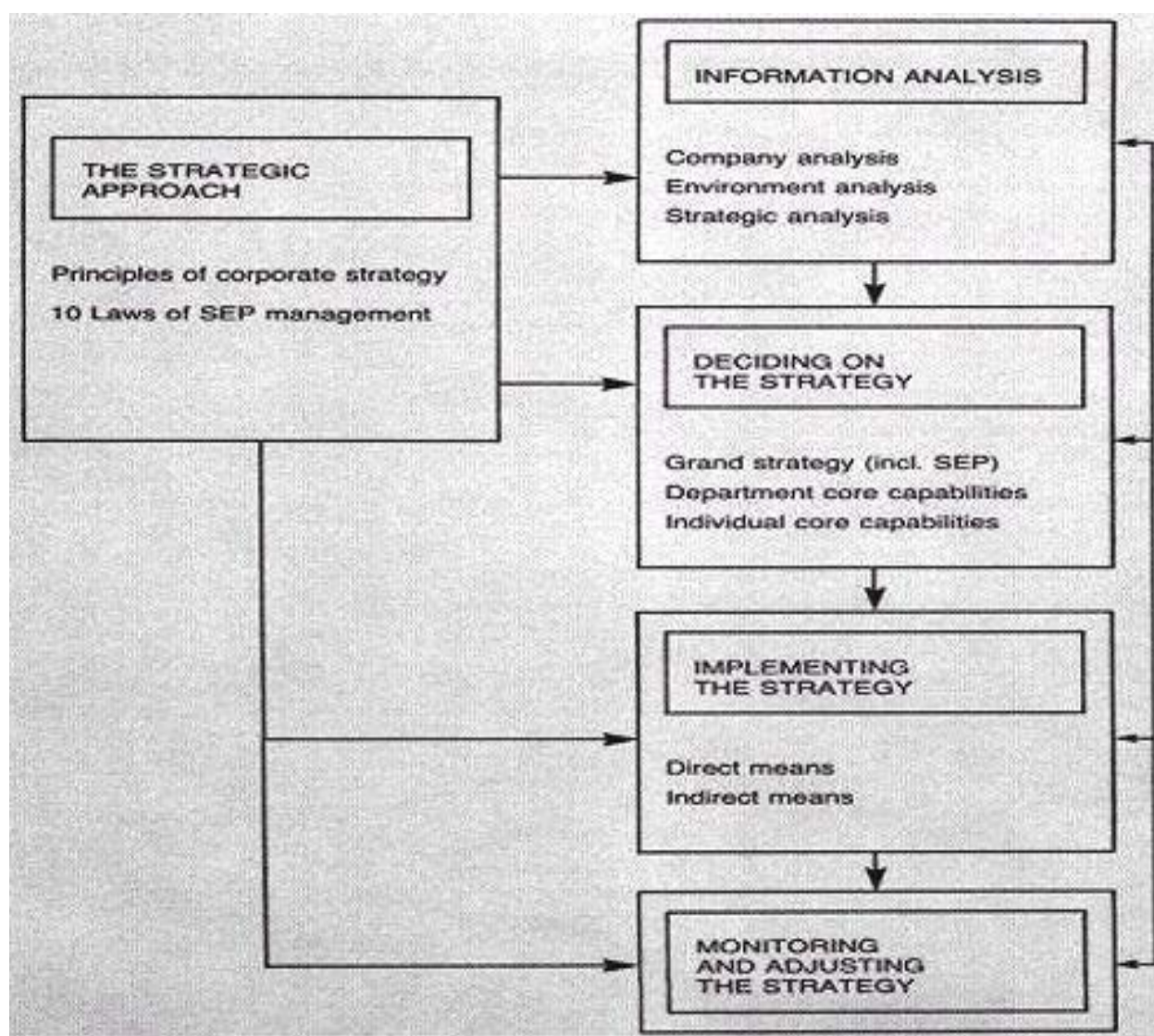
a. Dependent Variable: F18 Mean(F1,F2,F3,F4,F5,F6,F7,F8)

b. Selecting only cases for which Perform Performance = 2 LP

A13 SEP's

Hirslanden's current strategy is based on Puempin's (1987) Strategic Excellence Positions, which was developed at the university of St.Gallen/ Switzerland. The eight SEP's are, with the strategic approach, are:





A14 Definitions

Acute hospitals provide at least minimal medical, surgical or obstetrical services for admitted patient treatment and/ or care, and provide round-the clock comprehensive qualified nursing services as well as other necessary professional services. They must be licensed by the state or territory health authority. Most of the patients have acute conditions or temporary ailments and the average stay per admission is relatively short.

Acute hospital

'For-profit' hospitals provide at least minimal medical, surgical or obstetrical services for admitted patient treatment and/ or care, and provide round-the clock comprehensive qualified nursing services as well as other necessary professional services. The focus of this research is at 'Hirslanden', a very successful private hospital group which consists of thirteen acute hospitals.

'For-profit' hospitals

Hospitals are institutions that provide medical, surgical, or psychiatric care and treatment for the sick or the injured. They are devoted to the diagnosis and care of outpatients. A hospital can be seen as medical establishment run by several specialists working in cooperation and sharing the same facilities.

Hospital

For every DRG, hospitals will receive a fixed price, separate from the actual costs of the patient treatment. Health care systems world-wide are currently in a state of disarray. Costs are notoriously high while serious quality issues abound. The Swiss health care landscape is also changing. This regulated market moves towards a moderately dynamic market with relatively stable industry structure in which change occurs frequently, but along roughly predictable paths, with identifiable key players such as patients, physicians, hospitals and suppliers.

DRG

An important part of competences are capabilities. They refer to the organisation's potential to carrying out a specific activity or set of activities. Sometimes the term 'skill' is used to refer to the ability to carry out a narrow (functional) task or activity, while the term 'capability' is reserved for the quality of combining a number of skills. In addition, capabilities have proved more difficult to delineate and are often described as invisible assets (Itami, 1987) or intermediate goods (Amit and Schoemaker, 1993). Essentially, capabilities encompass the skills of individuals or groups as well as the organisational routines and interactions through which all the firm's resources are co-ordinated (Grant, 1991). Typical of the latter are the following examples: teamwork, organisational culture, and trust between management and workers.

Capability

According to Johnson and Scholes (2002, p. 184), *"core competences define a firm's fundamental business as core. They must accordingly be derived by looking across the range of a firm's (and its competitors) products and services"*. Referring to Prahalad and Hamel (1990, p.82), *"core competence is communication, involvement, and a deep commitment to working across organisational boundaries. It involves many levels of people and all functions. Core competence does not diminish with use. Unlike physical assets, which do deteriorate over time, competencies are enhanced as they are applied and shared"*.

Core competences

According to Reeves and Ford (2004, p. 298), *"organisational capabilities are part of an organisation's economic and capital assets, both tangible and intangible, and include assets such as human organisational resources and processes, formal and informal structures, planning, controlling, and coordination processes, and relations among organisational groups and between the organisation and its environment"*. In addition, the mentioned that *"dynamic capabilities are a subset of organisational capabilities"*.

Organisational capabilities

According to Reeves and Ford (2004, p. 298), “*strategic capabilities are a subset of dynamic capabilities, which are, in turn, a subset of organisational capabilities. Strategic capabilities are specific organisational dynamic capabilities and are the firm’s most strategically relevant and valuable intangible assets. Unlike dynamic capabilities, strategic capabilities are focused on attaining an organisation’s strategic objectives whether those include competitive advantage or not*”. Barney (1986) argues that “*to be strategic, a capability must be honed to a user need, unique, and difficult to replicate*”. In addition, Johnson and Scholes (2002, pp.147-148) defined strategic capability as “*the ability to perform at the level required for success*”.

**Strategic
capability**

A15 List of figures

Figure	Description	Source	Section
1.1	Changing environment	Alimpic, 2012 (published in Opatija, Croatia)	1.1
1.2	Costs in Swiss health care between 1960 and 2010 (in Billion CHF)	http://www.ovs.ch/gesundheit/kosten-gesundheitssysteme-nach-schweiz-446.html	1.1
1.3	Research model	Based on Thomas and Ramaswamy, 1996; and Tin, 2003	1.4
1.4	Hypotheses	Based on Thomas and Ramaswamy, 1996; and Tin, 2003	1.5
1.5	Market segmentation: Private hospitals in Switzerland	Alimpic, 2012	1.6
1.6	New trends as cost -factors in health care	Zelman, McCue, Millikan, and Glick 2004, p.4	1.6
1.7	Power/ Interest grid; stakeholder	Based on Ackermann, Brown, and Eden 2005, p.122; and Johnson and Scholes 2002, p.208	1.7
2.1	Context of the literature review	Alimpic, 2012	2.
2.2	Environments	Johnson and Scholes 2011, p.98	2.1.1
2.3	Level strategies	De Wit and Meyer, 2004	2.1.2
2.4	Elements of strategic management	Johnson and Scholes 2002, pp.16-17	2.1.3
2.5	Aspects of strategy	Hamel and Prahalad, 1994	2.1.3
2.6	Strategy formation as many processes; 10 schools of strategy	Based on Mintzberg and Lampel, 1999	2.2.1
2.7	Porter's Five Forces	Reibstein, 2006	2.2.3
2.8	Resource base	De Wit and Meyer, 2010	2.2.5
2.9	Capabilities and bundles of capabilities	Wang and Ahmet, 2007	2.2.5
2.10	New growth platform framework	Laurie, Doz, and Sheer, 2006	2.2.7
2.11	Strategic Sweet Spot	Collis and Rukstad, 2008	2.2.7
2.12	Typologies for strategy	Alimpic, 2012; based on different researcher typologies.	2.2.8
2.13	The Adaptation process	Miles and Snow 2003, p.14	2.2.9
2.14	Strategic orientations	Miles, Snow, Meyer, and Coleman, 1978	2.2.9
2.15	Generic strategies	Michael Porter, 1980	2.2.10
2.16	Strategy clock	Johnson and Scholes 2002, p.320	2.2.10
2.17	Comparison of different strategic orientations	Based on Miles and Snow, 1978; Porter, 1980; Marlin, Huonker, and Sun, 2002; and de Witt and Meyer 2004, p.329	2.2.11

Figure	Description	Source	Section
2.18	Ten schools of strategy formation	Alimpic, 2012; based on Mintzberg and Lampel, 1999	2.4
2.19	Performance pyramid	Lynch and Cross, 1991	2.6
2.20	Definition of productivity	Rolstadas 1998, p.992	2.6.1
4.1	Basic business research process	Hair, Babin, Money, and Samouel 2003, p.50	4
4.2	Case study design	Alimpic, 2012	4.1
4.3	Research strategy	Remenyi and Money 2004, p.58	4.2
4.4	Research process	Alimpic, 2012	4.3
4.5	PESTEL	OxfordUniversity Press, 2007	4.3.2.1
4.6	Five Forces	Porter, 1980	4.3.2.2
4.7	Goodness of fit criteria	Jöreskog and Sörbom, 1984	4.3.6.3
5.1	Quantitative result from the PESTEL analysis	Alimpic, 2012	5.2.1
5.2	Quantitative result from the Five Forces analysis	Alimpic, 2012	5.2.2
5.3	Key success factors (KSF)	Alimpic, 2012	5.2.3
5.4	Cronbach's Alpha (α) for perceived importance dimension.	Alimpic, 2012	5.3
5.5	Cronbach's Alpha (α) for perceived importance dimension	Alimpic, 2012	5.4.1
5.6	Cronbach's Alpha (α) for perceived performance dimension	Alimpic, 2012	5.4.2
5.7	Gap analysis; comparison importance/ performance	Alimpic, 2012	5.4.3
5.8	Gap analysis; prospector hospitals	Alimpic, 2012	5.4.3
5.9	Gap analysis; defender hospitals	Alimpic, 2012	5.4.3
5.10	NGP; Qualitative result, unit of analysis 1	Alimpic, 2012	5.5.1
5.11	NGP; Quantitative result, unit of analysis 2	Alimpic, 2012	5.5.1
5.12	SSS; Qualitative result, unit of analysis 1	Alimpic, 2012	5.5.2
5.13	SSS; Quantitative result, unit of analysis 2	Alimpic, 2012	5.5.2
5.14	NGP: trends, customers' needs, capabilities	Alimpic, 2012	5.5.3
6.1	Financial KPI's	Alimpic, 2012 (published in Opatija, Croatia)	6.1
6.2	Reliability analysis	Alimpic, 2012	6.1
6.3	PCA; 6 factors, with KMO's	Alimpic, 2012 (published in Opatija, Croatia)	6.2

Figure	Description	Source	Section
6.4	Important factors, linked to performance	Alimpic, 2012	6.3
6.5	SEM, model for financial performance	Alimpic, 2012 (published in Opatija, Croatia)	6.4
6.6	SEM, financial performance, result	Alimpic, 2012; SPSS 16 output (published in Opatija, Croatia)	6.4
6.7	Regression weights in prospector hospitals; importance	Alimpic, 2012; SPSS 16 output	6.4
6.8	Mean of the occupancy rates in both hospital groups	Alimpic, 2012; SPSS 16 output	6.5
6.9	Mean of the private patients in both hospital groups	Alimpic, 2012; SPSS 16 output	6.5
6.10	Summary of results for all hypotheses	Alimpic, 2012	6.5
7.1	Ten School of strategy formation; dynamic capability framework	Alimpic, 2012, based on Mintzberg and Lampel, 1999	7
7.2	NGP, result from case study	Alimpic, 2012, based on Laurie, Doz, and Sheer, 2006	7.2
7.3	The Adaptation process	Miles and Snow 2003	7.3
7.4	Strategic orientation	Alimpic, 2012	7.3
7.5	Core capabilities	Alimpic, 2012	7.3