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The Effects of Corporate Diversification Strategies on Firm  
Performance - Samsung's Venture into Healthcare

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## **1.0 Introduction**

Diversification is a common growth option for firms, both in developed and emerging economies because it enables firms to increase revenues, spread risks and create shareholder value through economies of scope as well as efficient internal capital and labor markets. Against the backdrop of intensified global competition (i.e. BRIC and other emerging economies) and innovations in information technology during the past decades, which have revolutionized not only the exchange of information, but the way business is done, companies are increasingly challenged on their capability to successfully cope with accelerated change in their business environment. Due to the forces of globalization, product and industry life cycles have been continuously decreasing. As such, companies that have been successful in the past and even ones that still are today, more so than ever, must deal with the question of industry choice and corporate portfolio composition.

Within this context, James March's (1991) theory of "Exploitation & Exploration" has triggered a whole field of research that focuses on the relationship between simultaneously exploiting existing assets and capabilities and exploring novel areas to operate in, and has led to the concept of the ambidextrous firm. Especially due to decreased industry and product life cycles, firms are forced to focus strongly and invest heavily into exploring new possibilities. When it comes to exploring new industries, firms are confronted with a strategic choice between diversifying into areas related to the core business, which may be prone to similar life cycles and competitive forces, or into industries without any meaningful synergies, but also not affected by external forces in the same way.

A prime example of companies that are explorative by nature are conglomerates. These companies have grown by following a diversification strategy of entering both related and especially unrelated industries. Examples of successful conglomerates can be found within Japanese Zaibatsus and Korean Chaebols, but also within diversified firms from developed western economies such as General Electric, Siemens and Philips. One of the more successful conglomerates during the past three decades has been Samsung with a long history of unrelated

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diversification. Today, Samsung is the world's leading supplier of semiconductors and the leading consumer electronics company. Currently, Samsung's portfolio comprises businesses in information technology, consumer electronics, shipbuilding, engineering and construction, life insurance, theme parks, advertising agencies and healthcare. In its latest 10-year strategy, Samsung has laid out an ambitious plan to diversify into a number of industries, both related and unrelated: Solar Panels, LED lighting, E-vehicle batteries, Medical Devices and Biotech drugs (see Figure 1 in the appendix).<sup>1</sup> A particularly bold move was Samsung's decision to venture into healthcare on a relatively broad scale. Since 2010, Samsung has made inroads into two new industries in this field: medical devices with a focus on imaging and in-vivo and in-vitro diagnostics and biopharmaceuticals, specifically biosimilars. This thesis will focus on how Samsung is implementing this twofold diversification into healthcare and seeks to investigate the nature of unrelated diversification. The two diversification strategies pursued by Samsung within the healthcare sector are distinctly different with respect to Samsung's internal capabilities and absorptive capacity, the underlying industry structure as well as institutional and regulatory environments. As this thesis will show, the success of unrelated diversification strategies depends on a multitude of internal and external factors and the distinct capabilities of a firm.

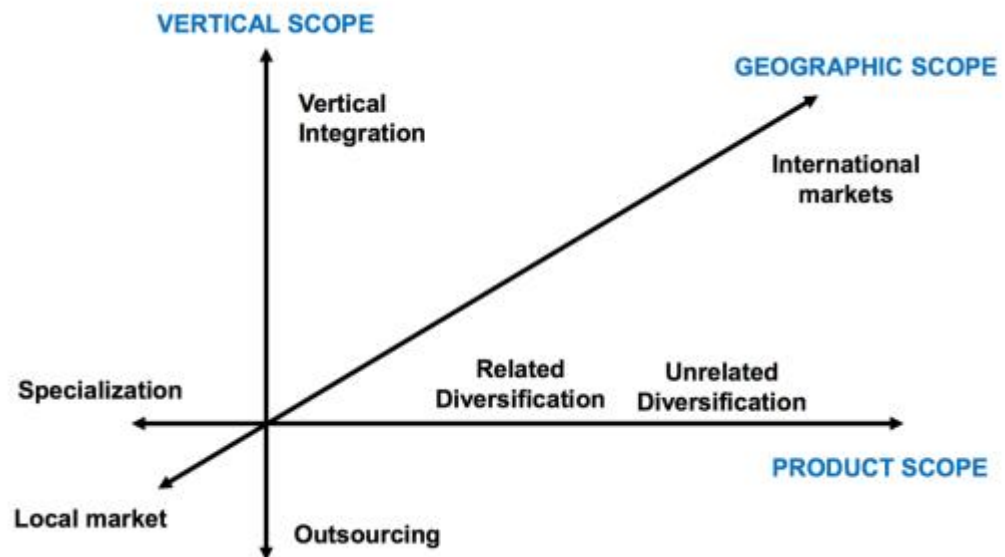
### *1.1 Diversification approaches*

When analyzing diversification behavior of firms, a fundamental distinction can be made between two directions of diversification strategies: vertical and horizontal. Vertical diversification refers to a firm moving along (upwards or downwards) the value chain within an industry to secure access to critical resources and to counteract bargaining power of suppliers and/or customers. As these diversification strategies are aimed at improving the competitive situation of a firm within the industry it already operates in, vertical diversification does little to counter the dynamic forces discussed above. Horizontal diversification on the other hand refers to a firm establishing itself along similar steps of the value chain, but within a different industry.

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<sup>1</sup> Samsung. The next big bet. The Economist, 01.10.2011

Within the area of horizontal diversification (the product scope), a further distinction can be made between the degree of relatedness of the home and target industries. While diversification into related industries enables firms to potentially exploit the most synergies, they are also prone to react in a correlated manner to the same market forces. Unrelated diversification, entering businesses with no meaningful value chain relationship or demand-side synergies with the original business, on the other hand offers the potential benefits of diversifying business risk and achieving an optimal and information-asymmetry-free capital allocation. However, it comes at the risk of increased coordination costs (from managing unrelated businesses), the lack of industry specific know-how, and moral hazard (Grant, 2010).



*Figure 1: Types and directions of diversification strategies*

The background to this thesis and the reasoning behind it stems from a long line of research on corporate diversification strategies. In this context, theory differentiates between related and unrelated diversification. Expansion into related industries is traditionally viewed as a firm's preferred mode of portfolio expansion since it allows a multinational corporation to take advantage of existing knowledge, technologies and resources and as such is deemed less risky. Although extensive research on the relationship between diversification and firm performance has been conducted, the results are contradictory. Nonetheless, a certain acceptance for the curvilinear relationship between diversification and firm performance has established itself as the predominant paradigm throughout the years. This concept argues that firm performance increases when a company

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engages in related diversification and decreases with decreasing levels of relatedness of the target industry (Grant, 2010).

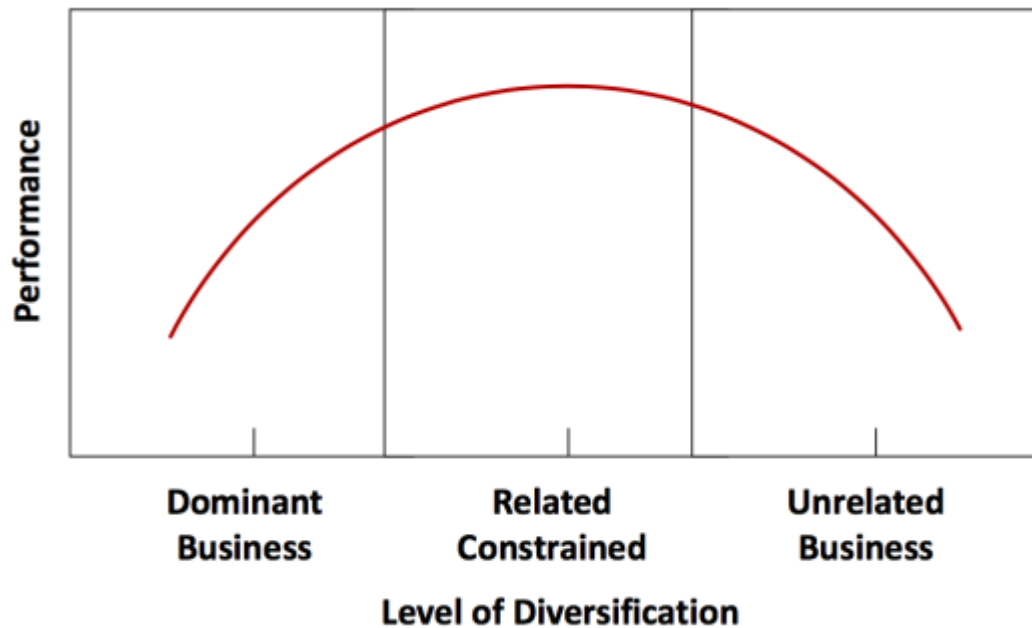


Figure 2: The curvilinear relationship

## 2.0 Research questions

The overall structure of this thesis will be guided by four overarching research questions and will center around the key words “diversification”, “firm performance”, “related” and “unrelated”.

- 1) *What is Samsung’s strategy and portfolio management approach and what are its cultural foundations?*
- 2) *Which diversification strategy is Samsung pursuing in the healthcare sector as a whole and within the designated industries specifically?*
- 3) *How does the chosen diversification strategy affect the market-entry strategy and the firm performance within the respective industries?*
- 4) *Are the prerequisites and success factors, which guided Samsung’s diversification strategies in the past still valid and applicable in a hypercompetitive and globalized environment?*

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To answer these question, it is imperative to clearly define what the term “firm performance” means and exactly how it is measured. Additionally, as will be detailed later in the thesis, diversification strategies are not absolutes, but can take many forms, ranging from directly related to entirely unrelated industries, with numerous nuances and alterations in between these two points. As such, it is necessary to both define the different types of relatedness and to specify when a diversification strategy can no longer be considered a related diversification, but a move into an unrelated industry.

### ***2.1 Measuring firm performance***

To answer the research questions, it is imperative to define “firm performance” as it will be used as the key measure to assess the effectiveness and success of diversification strategies. In the past, researchers have used both accounting measures and market measures to examine the relationship between diversification and firm performance. Empirical studies, especially in developed economies, have reached conflicting results when firm performance was measured with accounting ratios, such as return on assets (ROA) or return on sales (ROS) in comparison to share price ratios, such as the Sharpe or Treynor ratio. For instance, firms diversifying into related businesses have the highest ROA, while firms diversifying into unrelated businesses have the highest share price ratios. It is clear that firm performance is a multi-dimensional concept, with at least two agreed upon dimensions: risk and return (Purkayastha *et al.*, 2012). Historically, firm performance was only measured based on returns. Only more recently was more attention given to risk measurement, since diversification that results in improved returns, but comes at the cost of higher levels of risk does not necessarily make a firm better off than diversification, which results in lower returns and lower risk. (Bettis and Mahajan, 1985). Additionally, if risk were to be excluded as a relevant dimension, it would assume that motives of diversification for the purpose of risk reduction do not exist. This, as will be covered in section 4.0, is not the case. The other crucial aspect to consider when analyzing firm performance is that both return and risk can be measured using either accounting- or market-based data. Accounting data is backward-oriented and therefore may be more vulnerable to manipulation. Although past research indicates a strong positive correlation between accounting- and market-based measures of firm performance, these lead to conflicting results when evaluating diversification

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strategies. This may be attributable to the time it takes for a firm's diversification strategy to be fully reflected in accounting-based performance measures or to the greater volatility of stock market returns to external forces. The assumption of superiority of market-based measures rests on the belief that markets act efficiently, and all future benefits of diversification strategies can be fully anticipated and as such are reflected in a firm's stock price (Purkayastha *et al.*, 2012). As both measures have their advantages and disadvantages, this thesis will follow a hybrid approach pioneered in more recent studies by Kakani (2000) and Khanna and Palepu (2000), which combines both accounting- and market-based measures when appropriate. As the case(s) being studied within the context of this thesis are ongoing, a more holistic assessment of firm performance in relation to diversification strategies needs to be used. A strategic, forward facing component needs to be introduced that considers both global megatrends, industry forecasts and the organizational structure of Samsung, including the company's current knowledge and asset base as well as potential synergies and corporate strategies to fully assess the future potential of Samsung's operations in the medical devices and biosimilar industries.

## ***2.2 Diversification and relatedness measures***

It is commonly agreed upon that diversification, as a growth strategy for firms, is based on the benefits of leveraging resources. However, which resources this specifically refers to is largely open to interpretation and strongly depends on the context i.e. particularities of the industry, firm, technologies, products, customers and a range of other dimensions. This makes it very difficult to identify the determinants of diversification decisions and creates problems when testing more complex theories, such as the resource based view, due to the lack of a uniformly applicable measure for relatedness (Bryce and Winter, 2006). Originally, the concept of relatedness in the field of strategy research was used to analyze the linkage between diversification strategy and firm performance (Chandler 1962). From there scholars of strategic management have argued that firm portfolios, which are comprised of interrelated businesses, should result in higher firm performance than in portfolios comprised of unrelated businesses because of economies of scope. However, these economies are only one (important) source of performance differences between related and unrelated firm portfolios. Since corporate diversification strategies are an aggregated product, relatedness



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measures typically combine different levels of inter-activity relatedness within the firm based on a predefined explicit or implicit weighting scheme to reach an aggregated relatedness measure on the portfolio level. As such, the most common diversification measures consist of at least two components (Bryce and Winter, 2006):

- 1) A component that assesses the degree of relatedness among activities
- 2) A component that weights these activities according to the proportion of the business they are part of

Contrary to diversification measures, relatedness measures are used to evaluate the relationship between two categories of activities and as such are directly applicable to the activity-level. Relatedness measures are commonly used as a component in the diversification measures discussed above e.g. the respective weights given to the relatedness components (Bryce and Winter, 2006). The tables (figures 5 and 6 in the appendix) depict the four most widely spread diversification and relatedness measures respectively. In the context of the Samsung case study, diversification measures will be used to assess the fit of the healthcare sector within Samsung's aggregate corporate portfolio of businesses i.e. the level of diversification represented by entering the healthcare industry, while relatedness measures will be used to compare Samsung's businesses within the healthcare sector i.e. the biosimilar and medical device industries respectively.

### **3.0 Research design and research method**

The choice of research design, which is defined as a framework for the collection and analysis of data, reflects priorities given to the different dimensions of the research process (Bryman and Bell, 2015). This thesis will follow a case study research design, building on both qualitative and quantitative data, with a focus on the former. While a case study, in its most basic form, is a detailed and intensive analysis of a specific person, event or organization, the "case" is the focus of interest while the location/setting simply provides context. For this thesis, the case of interest is the relationship between (unrelated) diversification and firm performance, while the example of Samsung provides the context to analyze said case. Case study research designs most often face issues of external validity i.e. uncertainty whether the results from one/a few cases can be generalized to a larger population. However, as some might argue that the point of conducting research is to examine specifics rather than to generalize, this thesis aims to examine the

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specific case of Samsung diversifying into healthcare because it seems to run contradictory to the popular concept of a curvilinear relationship between diversification and firm performance. As such, this can be considered a “black swan” case study. However, it certainly is not the only example of unrelated diversification strategies yielding different results in terms of firm performance than what is to be expected according to the majority of literature on this subject. As this thesis will incorporate primary and secondary data, it is important to be aware of the advantages and disadvantages of both. Data collected by researchers, that is tailored for a specific purpose and where the researcher has complete knowledge of the data collection process, is considered primary data. In this context, one of the most common concerns raised is that of subjectivity, as the data may rely heavily (too much) on the point of view of the researcher. Additionally, replicability can be an issue, as the lack thereof makes results difficult to generalize. Secondary data on the other hand offers the advantage of having access to verified, high-quality information through numerous data sets. In general, secondary data has the advantage of being far less time consuming to gather, thus leaving the researcher more time to focus on analyzing the data and providing the opportunity to expand the scope of the research either longitudinally or comparatively. An obvious downside is the lack of familiarity and control over the data set (Bryman and Bell, 2015). This thesis will follow a case study approach that will expand the single case nature of “Samsung” both on a comparative and longitudinal level, as comparisons will be drawn between two distinct businesses within the Samsung conglomerate and will be analyzed over a period of time. As such, this thesis will make use of a wide range of sources as well as qualitative and quantitative data. These include prior case studies on Samsung, financial and annual reports, market studies, press releases and unbiased external data sources (information from third parties). Additionally, the author will try to conduct semi-structured interviews with and/or gather information through questionnaires from managerial contacts within Samsung BioLogics and the Samsung Medical Technology division to further supplement the case study with empirical data if possible.

#### **4.0 Literature review**

The relationship between diversification and performance has important implications for many fields of study such as strategic management, industrial

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organization and financial management. Traditionally research on the relationship between diversification and performance has been focused on developed economies, while more recent studies have looked at this relationship in the context of emerging markets and how these findings compare to the traditional perspectives. Although the potential advantages of diversification are known, the relationship with firm performance is not clear, as it is not possible to easily generalize the findings of past empirical studies. Both for developed and emerging economies, studies have shown positive (Rhodes 1973, Chatterjee 1986, Chang and Hong 2000), negative or non-existent (Bettis and Hall 1982, Perry 1998, Kakani 2000, Saple 2000, Chu 2004) and curvilinear (Rumelt 1974, Markides and Williamson 1996, Khanna and Palepu 2000) relationships between diversification and firm performance. The empirical literature can be divided into three broad categories, which this review will follow: the external, the internal and the financial perspective.

#### ***4.1 The external perspective***

The primary focus of most of the early studies (pre-1974) in this field was on the extent and motives of diversification. Rumelt's (1974) seminal study introduced a new categorical measure of diversification, which influenced research in this field for the following decades. Rumelt's major contribution was the finding that firms with portfolios diversified into related areas outperform other types of diversification by benefiting from economies of scope. Although there is strong support from numerous subsequent studies for Rumelt's findings on related diversification, other research (Demsetz, 1974; Montgomery, 1985 etc.) has shown that performance in diversified firms is related to the industry structure. Bettis (1981) showed that diversification can lead to the creation of entry barriers, which in turn leads to higher industry profitability. Starting with the research of Bettis and Hall (1982) several studies found that the differences between the profitability of Rumelt's categories disappears when accounting for the industry bias in the sample used, concluding that there is no significant relationship between diversification and firm performance.

Due to the contradicting results from the post-Rumelt studies, researchers started examining other performance measures. Michel and Shaked (1984) and Dubofsky and Varadarajan (1987) looked at the increase in shareholder's value, a market-

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based measure. Both studies found that unrelated diversification was superior to related diversification regarding the firm's performance. Building on these findings Wernerfelt and Montgomery (1986) found that industry profitability and industry growth have different implications for related and unrelated diversification. Their findings suggest that related diversification is better in highly profitable industries, while unrelated diversification is preferable in high growth industries. In contrast to the market-measures, Hoskisson (1987) and Hill *et al.* (1992) examined the relationship between diversification and firm structure in a group of related studies. Their findings suggest that related diversification requires co-operative organizational forms, while unrelated diversification requires competitive structures. Thus, the authors argue that vertically integrated firms achieve economies by reducing transaction costs. Related diversified firms benefit from exploiting synergies, while unrelated diversified firms achieve financial economies by risk reduction, portfolio management and internal capital markets. Teece *et al.* (1994) on the other hand examined the environments effect on firm structures. They argue that due to low path dependence, slow learning and weak selection, conglomerates will continue to exist. However, in environments characterized by rapid learning and fast technological advances, networked firms may arise.

Since no clear conclusion about diversification and performance could be derived from the perspective of different performance measures and firm structures, studies began to focus on the effect of synergies and economies of scope on diversification. According to Perry (1998) two businesses are said to have synergies if the combination of the two creates opportunities that are not available to either of them separately. Such synergies may stem from the sharing of infrastructure, tangible and intangible resources (e.g. marketing and R&D operations, brand names, production and distribution facilities/systems) (Teece 1982). Carter (1977) was among the first to examine the difference in performance between diversified and undiversified firms in this context with the conclusion that diversified firms outperform undiversified ones. Carter argues that the reason for the difference in performance stems from the synergies that diversified firms can utilize unlike their specialized counterparts. However, there are also downsides to diversification and there is a limit to the level of diversification that positively influences firm performance. Deneffe (1993) found

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that diversified firms postponed entry into new markets compared to undiversified firms in order to take advantage of cost externalities from experience transfer from their core product to new markets. Economies of scope are a specific form of synergy that is usually considered in terms of cost savings of producing two or more goods for a diversified firm relative to undiversified firms. According to Teece (1980), only if economies of scope are based on the use of a common and reoccurring set of proprietary know-how or specialized and indivisible physical assets, can a diversified firm achieve performance benefits.

A different approach to understanding the effect of diversification on firm performance is to analyze the market power a diversified firm has opposed to an undiversified firm. According to Markham (1973) market power refers to the ability of a market participant to influence the price and the nature of the product in the market. The foundation for market power is the existence of entry barriers (Baumol *et al.*, 1982) and according to Montgomery (1994) these are created by diversified firms through cross-subsidization, mutual forbearance and reciprocal buying. Some studies (Edwards, 1955; Hill, 1985) on the other hand argue that if a firm is larger than its competitors, it will have more market power, regardless of the type of diversification strategy it follows. Nonetheless, both perspectives conclude that diversification based only on market power has a positive relationship with firm performance. However other studies, most prominently Singh and Montgomery (1987) disagree. They argue that firms expanding into businesses related to their core product, will transfer skills in technology, marketing or specialized management, which in turn help in developing expertise and market power relative to the competition. Related diversifiers are more likely to create entry barriers based on economies of scope, patents, experience advantages and brand reputation than unrelated diversifiers (Singh and Montgomery, 1987). Although Markham (1973) argues that the increase in market power for unrelated diversifiers can stem purely from the size of the firm, these benefits should also apply to related diversifiers (Singh and Montgomery 1987) and as such related diversifiers have more market power than their unrelated counterparts. However, Gribbin (1976) raises the point that a diversified firm (both related and unrelated) with an insignificant position in numerous markets, will not have any market power.

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#### 4.1.1 *The institutional perspective in emerging economies*

The studies covered so far have investigated the effect of industry structures on the performance of diversified firms in developed economies. The respective researchers have based their hypotheses on one crucial assumption: markets are efficient due to competitive forces. This assumption, which is already debatable in developed countries, does not hold in emerging economies due to the absence of intermediary institutions (Khanna and Palepu, 1997), the lack of well-defined property rights (Devlin *et al.*, 1988) and weak legal frameworks, resulting in opportunistic behavior, bribery and corruption (Nelson *et al.*, 1998). Due to these constraints, the Industrial Organization Perspective has been expanded through the “Institutional Perspective”. This approach highlights the influence of systems around organizations that impact social and organizational behavior (Scott, 1995). In this context, several studies argue that organic growth of firms in emerging economies is limited by the institutional constraints mentioned above and, as such, diversified (network-based) growth is more viable (Peng and Health, 1996; Child and Lu, 1996; Guillen, 2000; Khanna and Palepu, 2000a, b etc.) The argument behind this series of studies is that due to the lack or inefficiency of intermediate institutions (financial and market intermediaries), diversified firms can achieve scale and scope advantages from internalizing those lacking, intermediate functions (Chakrabarti *et al.*, 2007). Building on this concept, Khanna and Palepu (1997, 1999, 2000a, b) postulated that increasing degrees of diversification may increase firm performance in emerging economies due to the slow development of markets and institutions. They argue that through increased (unrelated) diversification, firms may be able to create internal markets that are more efficient than external ones. Due to the lack of intermediaries in developing economies, internalization can be viable and lead to higher profitability. In more developed economies, diversified firms do not gain equally from internalizing operations because it becomes increasingly difficult to match the efficiency of relatively developed markets. A similar relationship can be observed in terms of the costs of diversification. Building on this line of reasoning, Villalonga (2004) and Leaven and Levine (2007) argue that diversified firms in developed economies have higher costs of diversification, which in turn results in lower firm performance. A specificity related to the case of Samsung is discussed in the line of research conducted by Backman (1999), who argued that within many Asian firms, diversification is driven by factors not captured by the research on market

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inefficiencies. These factors include aspects such as the exploitation of privileged access to information, licenses and markets. Again, this advantage decreases in more developed economies with better developed institutional environments (Kock and Guillen, 2001).

Although there are numerous studies supporting the institutional perspective, research has been done that provides contradictory results. While Kakani (2000) found an inverse relationship between diversification and firm performance measures, Saple (2000) found that diversification has no effect on firm performance at all. However, she discovered an inverted-U-shaped relationship between synergy (a proxy for diversification in the economic model) and firm performance. As such these results did not differ to those of firms in developed economies. These discrepancies in the performance of diversified firms are addressed by Khanna and Rivkin (2001). They argue that an inability to profit from diversification indicates a lacking selection environment, in which weak organizational structures are not removed. There are two problems with this line of research. First, it is questionable if it is possible to empirically prove that diversified firms arise because of market failure (Gould and Lewontin, 1979). It seems plausible that diversified firms may arise due to completely different reasons, such as a set of special skills and abilities of entrepreneurs (Granovetter, 1994). Secondly, the assumption of the existence of an ideal point, in which no market inefficiencies exist and as such firms do not need to diversify, is very difficult to confirm. This theory would postulate that once economies reach this ideal (developed) point, diversified firms would split apart. However, there still exist a number of diversified firms in developed economies, which can be considered market driven and “efficient”, raising considerable doubt about the rationale that diversified firms arise due to market failures (Purkayastha *et al.*, 2012).

#### ***4.2 The internal perspective***

The internal perspective grants new insights into the diversification-performance relationship by looking at how firms gain competitive advantages. The resource based view (RBV) argues that there are no long-term advantages of diversification that is based on generic resources, since they are imitable and abundantly available and lose value if they are transferred to markets that are different to the

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ones that they originated from (Wernerfelt and Montgomery 1988). Markides and Williamson (1996) argue that diversification strategies that are based on valuable, durable, inimitable and non-substitutable inputs provide the foundation for sustainable competitive advantages. Collis and Montgomery (1995) found that such firm specific inputs can be utilized when diversifying into related industries. They also argue that firms need to continuously upgrade existing and acquire new resources since market forces and competition may quickly render a certain competitive advantage useless. Building on these findings, Prahalad and Hamel (1990) argue that resources and capabilities that are utilized beyond the products they were developed for create an opportunity for diversification. Three mistakes that companies make when trying to diversify by leveraging resources are: managers overestimating the transferability of specific assets and capabilities, managers overestimating their own capabilities to compete in a highly profitable industry and managers falsely assuming that generic resources are a source of competitive advantages in new markets, regardless of the market/industry dynamics (Collis and Montgomery 1995). In short, the RBV states that firms will only then have sustainable competitive advantages when they diversify into products that are related to the resources and capabilities that they already possess (Teece *et al.* 1994).

On a theoretical level the RBV provides a clear link between diversification and firm performance, however there are only few empirical studies that research this connection. This is primarily due to the difficulty of measuring the concepts of resources and capabilities. One empirical study that has used the RBV is that of Robins and Wiersema (1995), which measures the flows of technology between businesses as an indicator of relatedness. They found that the greater the technological interrelationships, the higher the performance of the firms. Similar research was conducted by Ilinitch and Zeithmal (1995), which studied the relationship between managerial relatedness and the performance of diversified firms. They found that there is a significant, positive relationship between the degree of managerial relatedness of the business areas and the firm's performance. Markides and Williamson (1994, 1996) developed measures of relatedness based on brand recognition, organizational systems, customer and brand loyalty and found a positive relationship with firm performance. Finally, Brush (1996) studied the extent of resource sharing between acquired and acquiring firms and



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concluded that the most successful acquisitions had the highest level of resource sharing. The results of these studies have shown that firms following a highly-related diversification strategy outperform firms following a more unrelated diversification approach.

#### *4.2.1 The RBV in the context of emerging economies*

The country and industry context in which firms operate directly influence the types of resources they acquire over time (Porter 1990). This can be seen in the example of the emerging economies of East Asia, Latin American and Southern Europe that developed in the 1960s and 1970s that primarily entered mature industries (e.g. simple assembled goods, electrical appliances, rubber, steel, and chemicals). As the governments of these emerging economies sought to nurture local businesses they protected them from foreign competition, which allowed these businesses to leverage both local and foreign contacts to acquire foreign technology and resources with which they could serve their domestic markets (Haggard, 1990). This has lead Kock and Guillen (2001) to argue that such protectionist behavior and other barriers in emerging economies not only distort the value of firms' resources and capabilities, but expands them to incorporate factors such as political and bureaucratic contracts and connections, which they argue are important drivers of firm performance in emerging economies. Furthermore, this ability to build and leverage these contacts and connections can not only be used in a multitude of industries, but actively leads to an organizational form characterized by following unrelated diversification strategies: the business group. This organizational structure has led to the formation of some of the leading conglomerates from emerging economies, which have dominated the private sectors in these countries (Ghemawat and Khanna, 1998). Khanna and Rivkin (2001) define business groups as a set of firms that are bound together through a combination of formal and informal ties that take coordinated actions, while legally remaining independent. The research on business groups in the context of the resource based view, although limited, can be divided into three general streams.

The oldest and most extensive stream of research began with the studies of Leff (1976 and 1978), which explains business groups as a response to the lack of intermediary institutions and the resulting market imperfections. In the context of

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emerging economies, Chang and Hong (1998) discovered that Korean chaebols benefit from value-enhancing internal product and labor markets, while Khanna and Palepu (1999) found a positive correlation between product, labor, and capital market intermediation for Chilean and Indian business groups, for both accounting and stock market measures of firm performance. Furthermore, both Hong (2000) and Yiu *et al.* (2005) found that Korean and Chinese business groups respectively have a higher firm performance than focused companies. The second stream of research comes from a more sociological standpoint and views business groups as an arrangement of formal and informal relationships that connect affiliates (Granovetter, 1994). The resulting network of relationships, also defined as social capital by other lines of research (Adler and Kwon 2002; Bhappu 2000), is built based on mutual trust and the concept of reciprocity. Violating these fundamental values can permanently damage a relationship and can result in both social and economic exclusion, which in turn acts as a form of negative reinforcement for the members of the network to adhere to the norms. Adler and Kwon (2002) consider the processing of high quality information among the participants, exerting mutual influence and power, and resource sharing as the primary benefits of such networks. The downside to business groups is the risk of becoming overly entrenched in said networks, which can lead to parochialism, xenophobia, isolationism and inertia, which run counter to organizational performance, especially in a globalized world (Chung, 2004). The third stream takes a more critical stance towards business groups and argues that they are counterproductive as they allow a small number of firms to receive preferential treatment from the ruling forces in the country in question and as such are a barrier to the allocation of resources through competitive forces (Ghemawat and Khanna, 1998). Additionally, this close connection to the power structures of the respective countries leads to bail outs of firms in times of distress. This is especially problematic when firms are considered too large to fail (Fisman, 2001).

#### ***4.3 The financial perspective***

The role of finance regarding the diversification-performance relationship covers three areas. The first area is focused on the aspect of risk reduction; the second area covers the economies of internal capital markets and the third area is based on agency theory. Amit and Linvat (1988) argue that firms diversify into unrelated areas because the earnings from these businesses are negatively

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correlated and as such reduce the overall variance (risk) of the firm. Lewellam (1971) and Perry (1998) claim that a firm's goal is to ensure stable earnings and as such follow unrelated diversification strategies to reduce their overall business risk. However, several researchers argue that a conglomerate merger does not yield economic advantages (Levy and Sarnat 1970). No additional value is created from minimizing unsystematic risk in unrelated diversified firms since investors can achieve the desired levels of personal portfolio risk at a much lower cost (Montgomery and Singh 1984) and consequently firms should not be concerned with such strategies, as they are not valued by the stock market and the shareholders (Lubatkin and O'Neill 1987). Although firms can reduce their systematic risk through related diversification, Lubatkin and Chatterjee (1994) argue that these benefits stem from synergies and the sharing of resources in related business rather than from risk diversification.

Williamson (1975) argues that internal capital markets are an explanation for diversification as they enable diversified firms to reduce the transaction costs of raising and allocating capital. Caper (2003) extends this line of research, showing that undiversified firms are more dependent on external sources for raising capital, which are not only more expensive than internally generated funds, they also allow capital to be allocated more effectively within the firm (Stein 1997). Additionally, corporate headquarters within a diversified firm, which act as internal capital markets, have more information about their business units and auditing systems, allowing them to control managers through incentive systems, whereas managers in undiversified firms more often behave opportunistically due to information asymmetries (Jones and Hill 1988; Williamson 1975). Nonetheless, internal capital markets also have disadvantages: they reduce entrepreneurial incentives of managers (Gertner *et al.* 1994), they create agency problems (Stein 1997) and they can lead to inefficient capital allocations if the business areas are not financially independent (Lamont 1997) and as such cross-subsidization is not always effective (Berger and Ofek 1995; Shin and Stulz 1997).

Agency theory offers a different explanation for the diversification behavior of firms, suggesting that diversification may occur because of managers striving for personal gains. Some researchers in this field argue that diversification may stem

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from the power and prestige of managing a large firm (Jensen 1986), the lower risk of managers being unemployed (Amihud and Lev 1981) and the relationship between the compensation of managers and firm size (Jensen and Murphy 1990). Additionally, Jensen (1986) posits that excess cash flows can also lead managers to diversify. He argues that managers can be hesitant to use excess capital as dividends, as this would decrease the resources under their control. Nevertheless, most empirical evidence suggests a different explanation for diversification. Dennis *et al.* (1997) propose that firms run by managers tend to diversify less than owner-controlled firms and there is a clear relationship between diversification and the intensity of ownership.

#### *4.3.1 The financial perspective in the context of emerging economies*

When research in the field of the financial perspective is conducted on emerging economies, it focuses on the areas of transaction cost economics and agency theory. In this context, transaction cost economics argue that when the costs of doing business in the open market are low, resource allocation should follow open market mechanisms, but when these costs are relatively high, firms should internalize the transactions (Todorova, 2007). In the context of emerging economies, market failure can be caused by a variety of reasons: opportunistic behavior of suppliers, inefficient information processing, ineffective price mechanisms or lacking contractual obligations (Chang and Hong, 2000). As these market inefficiencies make it more difficult for firms to conduct day-to-day business, finding ways to mitigate these costs will lead to better firm performance. Business groups represent the predominant method of reducing transaction costs in emerging economies, as they offer the affiliated firms three advantages. First, the organizational structure of business groups allows for appropriating quasi-rents which are accumulated due to the low transaction costs of accessing rare and imperfectly marketed resources such as capital and information (Chung, 2004). Second, in the absence of developed capital markets, business groups represent an alternative to portfolio diversification. Last, business groups also integrate vertically to eliminate problems arising from bilateral monopolies or oligopolies (Chang and Choi, 1988). As discussed before, one reason for the development of business groups can be found in the theory of social capital (section 4.2.1), with the benefits of such organizational structures being high quality information processing among the participants, mutual influence and power, and solidarity

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(Tsai and Ghoshal, 1988). In the context of the financial perspective, this means that if members that are part of a business group can capitalize on these benefits, they will be able to reduce transaction costs and thus improve the firm's performance.

When turning to agency theory, a line of research by Jensen and Meckling (1976), Fama and Jensen (1983), Classen *et al.* (1999) and Thomsen and Pedersen (2000) argues that professional managers with very small personal equity stakes in the company, may pursue actions such as diversification that reduce shareholder value, while firms with a concentrated ownership outperform those with dispersed ones as they have stronger incentive to monitor the performance of their managers and discipline them. Building on this line of research, Gong and Kim (1999) reason that business group managers are more efficient than professional managers, as the former have an ownership incentive. This however, does not eliminate agency problems. In emerging economies, conflicts between owner-managers (those who have corporate control of the business) and minority shareholders of the affiliated firms are common. More specifically, managers of business groups may transfer resources i.e. capital from one affiliate to another to strengthen its competitive position without compensating the shareholders of the affiliate firm that is providing the resources (Chung, 2004). Often the founder families also manage these business groups, which means that abusing insider information and expropriating minority shareholders through intra-group business transactions are common practices (Chang, 2003). Although agency problems also occur in develop economies, corporate governance mechanisms in emerging economies are still weak and can bring entire business groups down as evidenced by the Asian financial crisis in the 1990s (Lim *et al.*, 2009).

#### ***4.4 Synthesis of the three views***

Due to the long-lasting interest, countless studies from different schools of thought, have been conducted on the topic of diversification strategies over the last 60 years. As the results of these studies are often contradictory between the different perspectives, as well as within (especially in the context of developed vs. emerging economies), the table below summarizes the predominant conclusions that can be drawn from each of the three schools of thought (internal perspective, external perspective, financial perspective).

PERSPECTIVES	External	Internal	Financial
<b>Predominant findings in developed economies</b>	<ul style="list-style-type: none"> <li>• Related diversification yields the best results if accounting measures are used to assess firm performance</li> <li>• Industry profitability plays a major role</li> <li>• Unrelated diversification yields the best results if market measures are used to assess firm performance</li> </ul>	<ul style="list-style-type: none"> <li>• Related diversifiers that are able to create structures through which strategically important resources can be transferred, will be successful</li> </ul>	<ul style="list-style-type: none"> <li>• As systematic risk is not diversifiable, diversification is not beneficial</li> <li>• A diversified firm can benefit from internal capital markets</li> <li>• Diversification decisions may be motivated by managers seeking personal gains</li> </ul>
<b>Predominant findings in emerging economies</b>	<ul style="list-style-type: none"> <li>• As institutions are inefficient, greater diversification can be beneficial</li> </ul>	<ul style="list-style-type: none"> <li>• As emerging markets mature, diversified firms must learn not only to acquire, but also to share intangible resources and capabilities across other firms within the same business group</li> </ul>	<ul style="list-style-type: none"> <li>• Un- or underdeveloped capital markets lead to the development of diversified, hierarchical firms</li> </ul>

Figure 3: Summary of the three research perspectives

## 5.0 Samsung’s venture into healthcare

### 5.1 Samsung history/evolution and background

### 5.2 Samsung organizational structure

### 5.3 Relevant industries within healthcare

#### 5.3.1 Medical device industry

#### 5.3.2 Biosimilar industry

### 5.3 Comparing medical devices and biosimilars – critical issues and prerequisites for success

#### 5.3.1 Analysis based on the Three Pillars Framework (Desmon, 2007)

### 5.4 Future outlook

## 6.0 Conclusion

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## 8.0 Appendix

<b>Fresh fields</b>					
Samsung's new business areas					
Sector	Investment, \$bn	Ownership	Targets for 2020		
			Sales, \$bn	Jobs	Status
Solar panels	5.1	100% Samsung SDI	8.5	10,000	Production began in January
LED lighting	7.3	50% Samsung Electronics, 50% Samsung Electro-Mechanics	15.2	17,000	Already selling in South Korea
E-vehicle batteries	4.6	50% Samsung SDI, 50% Bosch	8.7	7,600	Initial operations began in November 2010
Biotech drugs	1.8	40% Samsung Electronics, 40% Samsung Everland, 10% Samsung C&T, 10% Quintiles	1.5	1,000	Factory to begin in 2013; developing biosimilars now for patents expiring in 2016
Medical devices	1.0	100% Samsung Electronics	8.5	10,300	Blood-testing unit available, X-ray machine ready in 1-2 years, acquired ultrasound maker

Sources: Samsung; *The Economist*

Figure 4: Samsung's target businesses

Measures	Empirical Base	Relatedness Component	Primary Usage	Source
<b>Herfindahl Index</b>	Patterns of firm revenue within portfolio	None in the base measure. Gollop and Monihan include Euclidean distances among product class input shares	Diversification research: Berry 1971, 1975	Berry, 1971
<b>Entropy</b>	Patterns of firm revenues within portfolio; Standard Industrial Classification (SIC) hierarchical structure	Entropy calculated separately for 2-digit and 4-digit industries; difference in these scores is relatedness	Diversification research: Palepu 1985	Jacquemin and Berry, 1979
<b>Wrigley-Rumelt Classifications</b>	Patterns of firm revenues within portfolio – categorization into one of nine categories based on three ratios: specialisation, vertical and related	Business is related if revenue from largest group of related activities (defined by researcher) is greater than 70 percent (related ratio) while no single industry's revenue is greater than 70 percent (specialization ratio)	Diversification research	Wrigley, 1970; Rumelt, 1974
<b>Concentric</b>	Patterns of firm revenues within portfolio; Standard Industrial Classification (SIC) hierarchical structure	Based on distances in the hierarchy of the SIC system; pairwise relatedness decreases as codes share only the same 3-digit, the same 2-digit, or different 2 digit codes, respectively	Diversification research; e.g. Montgomery and Wernerfelt, 1988	Caves, Porter and Spence, 1980

Figure 5: Diversification Measures

Measure	Empirical Base	Relatedness Component	Primary Usage	Source
<b>Scherer input- output-matrix based</b>	R&D flows based on patent usage data	Based on similarity between profiles of technology inflows	Tests of the resource-based view	Robins and Wiersema, 1995; Scherer, 1982
<b>Occupational Categories</b>	Occupational classes	Based on similarity between occupational classes between industries	Tests of the resource-based view	Farjoun, 1990, 1994
<b>Technological distance</b>	Patents	Based on assignments made by the Canadian Patent Office of patents to industries of likely use, which in turn are matched to the US SIC system using Silverman's (1996) U.S. Patent Class—U.S. SIC concordance	Tests of the resource-based view	Silverman, 1996, 1999
<b>Present Measure</b>	All diversification moves in the US manufacturing economy	Implicit in methodology and arising from economy of scope arguments	Tests of the resource-based view; examination of longitudinal expansion decisions	Current study

Figure 6: Relatedness measures