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Structural Features and Mechanisms of The Korean Powerhouses: What Makes These Niche Companies Leaders in The Global Market?^{*}

By WooJin KIM [†]

Abstract. This study explores the structural features and mechanisms that allow relatively small Korean companies to secure dominant market positions in their respective business sectors. By examining five specific aspects of their operations (financing structure, financial structure, growth structure, R&D activities, and business structure), the source of these companies' unique success is better understood. Ultimately, our findings show that when these five aspects work together as a single and highly efficient "machine," these Korean powerhouses are able to secure and maintain dominant market positions in the global market. Further, we extend the concept of Korean hidden champions based on the various results of our analysis to propose six criteria useful to redefining them as Korean powerhouses.

Keywords. Corporate systems, Hidden champions, Global market leaders, Korean companies, Structural diversity

JEL. L6, M2, M21.

1. Introduction

Since the Korean War, the Republic of Korea has experienced a high level of economic growth and maintained the growth engine of its economy for quite a long time on the basis of an export-oriented growth strategy led by large manufacturing enterprises. The large enterprise-oriented unbalanced-growth policy aimed at creating a trickle down effect, which the Korean government has pushed consistently, has adhered to large enterprise-oriented economic development patterns and economic systems. This has resulted in the gradual establishment of a large enterprise-oriented business ecosystem throughout Korean industry. Moreover, within the business ecosystem created based on large enterprise-oriented economic development patterns and economic systems, large business groups in Korea, such as Samsung Group, Hyundai Motor Group, and LG Group, were able to grow into key players that led Korea's unprecedented rapid economic growth, and they could take an advantageous position to continue expanding their influence in the rapidly changing economic environment.

On the one hand, the large enterprise-oriented economic growth policy, which aimed not only to allow recovery after Korea's national economic collapse as a

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direct consequence of the Korean War but also to promote the rapid growth of the Korean economy, expecting a trickle-down effectⁱ, is considered to be a policy that has driven large enterprise-biased development and the visible and qualitative growth of the Korean economy in a short period of time. On the other hand, however, there is also an argument this policy direction on the part of the Korean government has instead caused increasing polarization between small and medium-sized enterprises (SMEs) and large enterprises (LEs) in many different spheres, which ultimately brought on the evolution of an aberrational and abnormal business environment—a large number of SMEs rely heavily on a small number of LEs in many ways—so that the self-reliance, growth potential, and competitiveness of SMEs has been consistently weakened. Such arguments about and evaluations of the direction of Korea's economic growth as staked out by the Korean government have been proven from various perspectives through diverse major economic indicators released by many different economic institutions. However, based on the objective fact that as of 2013, LEs, making up 0.2 percent of all manufacturing businesses, have created 52.4 percent of total manufacturing output or 50.5 percent of gross value added in the manufacturing sector,ⁱⁱ we can verify the LE-dependent growth structure in the Korean business ecosystem, and can imagine that the growth disparity between LEs and SMEs proceeded from the growth structure.

In the strictest sense, the LE-oriented economic structure that has taken firm root within today's Korean economy means a "standardized export items-oriented economic structure led by a very small minority of large business groups"; therefore, it is considered that from the macroeconomic perspective, such an economic structure is quite an unstable structure in which to grow the Korean economy for a long time while maintaining its structural stability and sustainability. In such an economic structure, if a very small minority of large business groups faces the inevitable structural crisis caused by internal or external economic factors, or if they fall into stagnation with poor business performance, then there is a high possibility that the direct or indirect aftermath of crisis and stagnation will spread rapidly to whole Korean economy; therefore, it can be inferred that such an economic structure is technically vulnerable to internal and external economic shock. Thus, in order to solve the underlying problems taking firm root within Korea's economic structure, which is characterized as biased and monolithic, the growth of small and middle-standing enterprises in both quantity and quality is required; there needs to be a recognition of the importance of these enterprises as potential key players that can lead the Korean economy to become stable in the future.

In the extension of such recognitions and perspectives, this study wholeheartedly accepts the argument that the importance of another new growth engine proceeding from SMEs should be magnified and discussed from various aspects as much as the importance of existing growth engines led mainly by large business groups in Korea. Therefore, this study notes that the Korean government has consistently attempted to discover small or middle-standing enterprises with high growth potential, has been giving significant support to these enterprises through a diverse range of channels, and has put considerable effort into helping these enterprises grow as key players with high levels of competitiveness in the domestic or overseas market. Above all, though, this study strongly highlights that careful study and analysis of small or middle-standing enterprises that have already secured a high level of self-reliance, high growth potential, and unmatched competitiveness—all factors that enable them to survive in the domestic or overseas market—has to precede the discovery and support of enterprises with such potential factors. In this study, we therefore consider small or middle-standing

enterprises that have achieved a high level of self-reliance and unmatched competitiveness in the global market as much as large business groups.ⁱⁱⁱ

To do so, we decide to look at 30 selected companies of the “2015 World-Class 300 & Global Specialized Enterprise Cultivation Project”—jointly selected by the Ministry of Trade, Industry and Energy (MOTIE) and the Small and Medium Business Administration (SMBA) in July 2015—as the subject of study for the primary selection. Among these 30 companies, we choose, for the secondary selection, 19 companies each in a number-one position in the domestic market or the overseas market, and, finally, 11 out of 19 companies listed on the Korean stock market are selected as the subject of this study (see Table 1). The reason that we choose the target companies for analysis from among the 30 companies selected by the Korean government is that it is necessary to consider and analyze the characteristics of the “companies with growth potential” based on the Korean government’s current criteria. Further, we take a special interest in these 11 companies because of their common features: that they have occupied and held a dominant and unique market position in specific business sectors despite not being large business groups with favorable conditions in many different spheres.

The main aim of this study is to examine the structural features and mechanisms of the corporate systems of the aforementioned 11 companies. To do so, we focus on uncovering the differences in corporate systems of these 11 companies from various perspectives, compared to other companies in the same industries having a similar business scale. In particular, by devoting our attention to examining five structures or sectors (i.e., financing structure, financial structure, growth structure, R&D activities, and business structure) from among the various structures that comprise each of the 11 companies’ corporate systems, we analyze how these 11 companies create the mechanisms for creating a business environment that helps them to hold a dominant and unique market position in a specific business sector by building their corporate systems in a manner distinct from those of other companies; and present a new criteria for Korean-type hidden champions based on this mechanism.

2. Various arguments about “hidden champions”

The companies that have secured a high level of self-reliance, high growth potential, and unmatched competitiveness that enable them to survive in the global market are defined from various perspectives. Previous studies that examined such types of companies defined them as “hidden champions,” and have attempted to analyze them mainly based on a business management perspective and methodology. The concept of hidden champions was first introduced by Simon (1990), and he defined the concept using the following three criteria: (i) number one, two, or three in the global market, or number one on its continent; (ii) revenue below \$4 billion; and (iii) a low level of public awareness (Simon, 2009, p. 15).

In some studies, the terms “hidden champion” and “small giant” has been used without precise criteria and classification, but the concept in most studies has been redefined in accordance with each researcher’s own academic argument, but basically based on Simon’s perspective on hidden champions. However, it can be said that such companies are generally understood to be “strong companies with global competitiveness or market competitiveness.” Voudouris et al. (2000) attempt to define a company that fulfills the following four criteria as a Greek hidden champion: (i) Greek owned; (ii) more than 20 and fewer than 250 employees; (iii) obtaining some revenues from outside Greece or being part of joint ventures or other types of cooperation with companies from outside Greece; and (iv) excellent performance for the last five years in several financial measures.

Further, Lee (2009) provides another definition of a hidden champion as a company with the largest share in the domestic market or one of the top three in the world market and revenue of less than KRW 1 trillion. Further, Kim (2010) frames a more extended definition of a hidden champion as company that has become a market leader in the world market by pursuing niche markets despite its small size. Moreover, since 2009, the Korea Exchange (KRX) has selected hidden champions from among the companies listed on the KOSDAQ market. According to its standards, hidden champions are categorized as companies that have world-class levels of technology and competitiveness; whose main items are in the number one, two, or three market share position in the world market; and who are expected to activate the KOSDAQ market.

Earlier studies on hidden champions were mainly conducted on German-type hidden champions, but currently the subject of study in the research field is expanding, as various types of hidden champions were gradually discovered in the United States, the United Kingdom, France, Switzerland, Japan, and so on (Simon, 1996). Moreover, a large number of studies regarding the companies that have qualified as hidden champions in various countries are based on a business management methodology as an analytical framework for study, and these studies provide key success factors and features based on such a framework. The work of Simon (1996), Venohr & Meyer (2007), Mäkeläinen (2014), Boga (2012), and Voudouris et al. (2000) are representative studies that attempt to examine hidden champions thoroughly based on a business management perspective, and focus on uncovering various characteristics and lessons from many different types of hidden champions.

However, there are relatively fewer arguments regarding Korean hidden champions; and these have not been actively extended. It can be said that the main reason for this lies in the special characteristics of Korean academia, which tends to center its research focus and direction on large enterprise-oriented study or specific industry-oriented study. It is an undeniable fact that hidden champions as a subject of study have not attracted the attention of a large number of researchers in Korean academia for quite a long time, and because of this, multifaceted and in-depth research into hidden champions has not been actively conducted. Thus, the body of research regarding hidden champions has been relatively less diverse not only in quantity but also in quality. Nevertheless, studies that have set Korean hidden champions as the subject of analysis have been consistently carried out by some researchers and a small number of research groups. Lee (2009) attempts to explore success types and pitfalls in 24 Korean hidden champions and to categorize them into eight types to suggest the implications for corporate strategy and government policy; Kim (2010) provides a desirable strategy and success model for the growth of Korean hidden champions through critical success factor analysis of global hidden champions, and suggests strategic directions for them. Further, Chang & Ko (2014) attempt to categorize various key success factors of hidden champions and to examine whether or not small Korean IT companies that have successfully grown into small but globally competitive enterprises have such success factors in a strategic area and management area.

However, the analysis of success factors and the unique features of hidden champions in a large number of previous studies is very comprehensive, and has been mainly conducted based on a business management perspective and methodology; therefore, these studies are limited in their ability to progress to in-depth study and an academic argument regarding the various structures that comprise their corporate systems. Therefore, in order to attempt to provide in-depth and various arguments on hidden champions, it is necessary to analyze the diverse structural features embedded in their corporate systems; it is also necessary to

approach the distinguishing features of hidden champions from an economic perspective and methodology by comparing hidden champions with other companies in the same industry.

3. The Korean powerhouses

As mentioned in the introduction, the purpose of this study is to uncover the structural features of 11 selected companies; how these structural features are any different from other companies in the same industry having a similar business scale; and what mechanism helps them to hold the number one positions in their global markets, by analyzing their empirical data.

As of 2014, the average sales of the 11 selected companies were 137,197 million KRW, and 10 companies employed less than 600 employees. These 11 companies are engaged in various business sectors such as electronic components, semiconductors, mechanical equipment, medical products, chemical products, and metallic mineral products. More than half of these companies are listed on the KOSDAQ market—the rest of them are listed on the KOSPI market—and on average it has taken 13 years since foundation to be listed on the Korean securities market (See Table 1). According to the Framework Act of Small and Medium Business,^{iv} six out of 11 companies are classified as SMEs, but the other five companies—which do not belong to a “Business Group Subject to Limitations on Cross-Shareholding,” and have gone beyond the bounds of SMEs in line with the law—are categorized as middle-standing enterprises.^v Moreover, all of the 11 companies have at least one subsidiary company: six companies own more than nine subsidiary companies, and the other five companies have fewer than three subsidiary companies. In terms of market position, six companies are in the number one position in the domestic market; four companies hold the number one position in the overseas market; and one company occupies the number one position in both markets.

Table 1. *The Korean powerhouses*

| Company | Status | Mainstay Products | Sales in KRW (m) | Employees | Market Position | Listed Market | Foundation [Flotation] |
|---------------------|---------|----------------------------|------------------|-----------|---------------------------------|---------------|------------------------|
| KISCO | non-SME | Reactive Dyes | 190,395 | 440 | 1 ^D | □ | 1977 [1995] |
| METABIOMED | SME | Medical Diagnosis | 35,475 | 181 | 1 ^W | □ | 1990 [2008] |
| VATECH | non-SME | 2D X-Ray Diagnostic Device | 96,863 | 512 | 1 ^D | □ | 1992 [2006] |
| BORYUNG PHARM | non-SME | High Blood Pressure Drug | 359,490 | 1,044 | 1 ^D | □ | 1963 [1988] |
| SSANGYONG MATERIALS | non-SME | Ferrite Magnet | 100,216 | 299 | 1 ^D , 1 ^W | □ | 2000 [2009] |
| CELL BIOTECH | SME | Mixed Lactic Acid Bacteria | 40,461 | 101 | 1 ^W | □ | 1995 [2002] |
| WONIK QnC | SME | Quartz Ware | 88,489 | 370 | 1 ^D , 2 ^W | □ | 2003 [2003] |
| EO TECHNICS | non-SME | Semiconductor Marker | 273,216 | 576 | 1 ^W | □ | 1989 [2000] |
| NK | SME | High-Pressure Gas Cylinder | 207,894 | 224 | 1 ^D | □ | 1984 [2008] |
| TELECHIPS | SME | Automotive Parts | 75,272 | 262 | 1 ^W | □ | 1999 [2004] |
| HANLA IMS | SME | Level System | 41,393 | 153 | 1 ^D | □ | 1995 [2007] |

Notes: □: KOSPI market; ●: KOSDAQ market; ^D: Domestic market; ^W: World market. Figures in parentheses refer to the year of flotation on the stock exchange. All data are based on their fiscal year 2014.

Source: *The Annual Reports*, each company; Ministry of Trade, Industry and Energy; Small and Medium Business Administration.

For the remainder of this paper, the 11 selected companies, as shown in Table 1, are named “the Korean powerhouses.” These 11 companies are not selected based on Simon’s criteria for hidden champions but rather follow extended criteria based on the findings of our study; therefore, it is quite difficult to define these companies as hidden champions. Using the perspective of the Korean powerhouses in the following sections, this study explores the mechanism for creating a business environment that helps to hold a dominant and unique market position in specific business sectors is embedded in the corporate systems of the Korean powerhouses

by devoting our attention to examining financing structure, financial structure, growth structure, R&D activities, and business structure.

3.1. The high possibility of stable financing led by a self-financing-dominant financing structure

Manifold financing methods are available for companies to raise the funds necessary for managing their business activities, and they have their own unique characteristics and differences in various companies. Further, from a macroeconomic perspective, the various financing methods that companies opt for in order to raise funds may reveal some generalized country-specific features (Miyamoto, 2004). The method of financing used to obtain the necessary funds can be categorized to some degree according to the country or company. However, this does not mean that a specific method of financing and its type is not accompanied by evolution (Kim, 2015a).

Financing methods are roughly classified into self-financing and external financing methods. Self-financing is a method of financing in which some the profits created from the company's business performance are converted into capital when needed, that is, a self-reliance financing method for companies to raise the necessary funds. In contrast, external financing, which can be subdivided into direct financing and indirect financing, is a method of financing in which a company obtains the necessary funds from outside the company in the form of borrowed capital, equity issues, and so on. External financing is ultimately a potential debt-reliance financing method for companies to raise the necessary funds; therefore, fund providers' direct or indirect effect on companies is inevitable, and potential intervention in management by fund providers can be expected.

In light of this, if companies depend more on self-financing than on external financing to obtain the necessary funds, or if companies rely more on funds from internal sources than from external sources, they have a better chance of carrying out business activities on positive lines while firmly maintaining the business directions they seek. In particular, in the case of large enterprises such as the Toyota Group in Japan and the Hyundai Motor Group in Korea, the common trend is that the level of dependence on self-financing is maintained with an overall upward tendency or at a high level (Kim, 2015a).

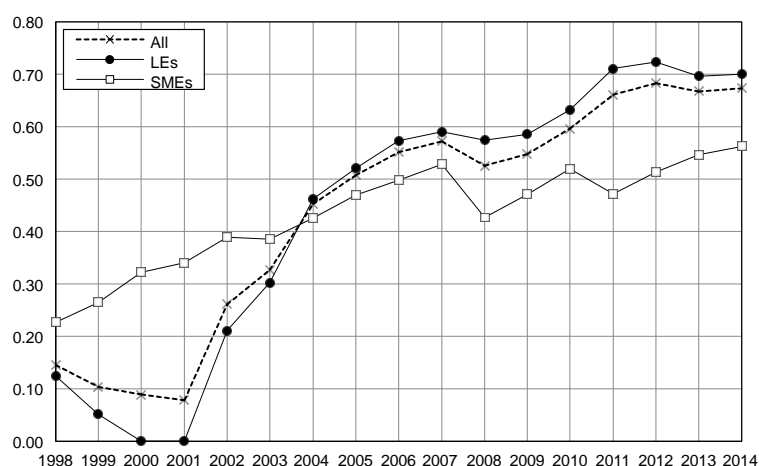


Figure 1. Retained earnings in stockholders' equity

Notes: The data cover the companies in the manufacturing sector. All data are based on their fiscal year.

Source: Computed by the author using data from *Financial Statement Analysis*, for the indicated years, The Bank of Korea.

Judging from this trend, it can be inferred that a financing condition that helps companies to raise the necessary funds more stably from inside the company has been created in companies showing such a trend, rather than in companies not showing such a trend. In contrast, in the case of SMEs in the manufacturing sector, there is a trend for the proportion of retained earnings in stockholders' equity, which can be an internal source of self-financing, to be maintained at lower levels than that of LEs in the manufacturing sector (See Figure 1). What this trend indicates is that the level of dependence on self-financing SMEs can secure is generally lower than the level of dependence on self-financing LEs can secure when they raise the funds necessary for managing their business activities.

However, it is identified that the Korean powerhouses have particular distinguishing features in self-financing that are unlike those of typical SMEs. To understand the Korean powerhouses' financing methods clearly, it is necessary to calculate an index that shows how they actually obtain the funds necessary to manage their business activities every year. This index considers the "financing dependence" of the Korean powerhouses and quantifies their level of dependence on direct financing ($DIRECT_t$), indirect financing ($INDIRECT_t$), and self-financing ($SELF_t$) in year t . Financing dependence is an objective measure that shows the level of dependence on their financing methods, and values of $DIRECT_t$, $INDIRECT_t$, and $SELF_t$ that are closer to 1.000 indicate a stronger dependence on the respective financing method. These values are calculated using data from the Repository of Korea's Corporate Filings Data Analysis, Retrieval and Transfer (DART). From this calculation, the financing structures for the Korean powerhouses can be identified (see Figure 2).

The result of our analysis of the Korean powerhouses' financing methods during the 1998–2014 period shows that a financing condition has been created that allows them to rely most heavily on self-financing in order to raise the funds they need to manage their business activities. Overall, $SELF_t$ remained between 0.545 and 0.620 from 2001 to 2013, without irregular increases or decreases in values, but increased slightly to 0.636 in 2014; $INDIRECT_t$ remained at a constant level around 0.300, without a significant rise or drop during the past eight years; and $DIRECT_t$ decreased drastically until 2008 and remained at a very low level, with a record of 0.105 at the end of December 2014.

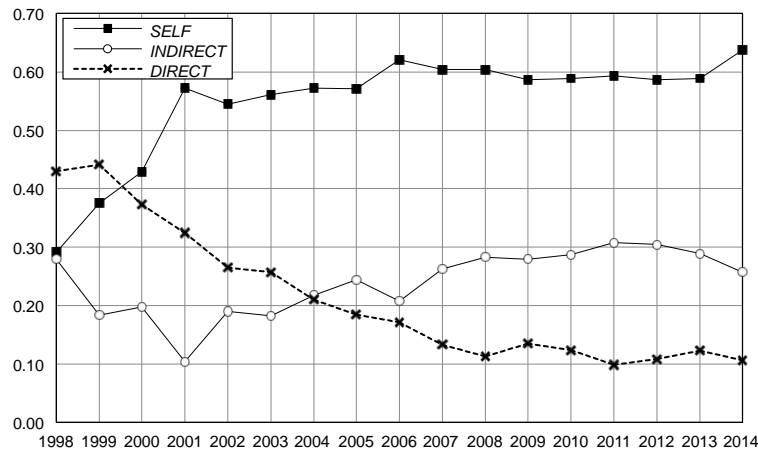


Figure 2. Financing dependence of the Korean powerhouses

Notes: The source of financing in the Korean powerhouses in the year t ($SOURCE_t$), their level of dependence on indirect financing in the year t ($INDIRECT_t$), that on direct financing in the year t ($DIRECT_t$), and that on self-financing in the year t ($SELF_t$) is computed using the following equations:

$$SOURCE_t = \sum_{i=1}^N STD_t + \sum_{i=1}^N LTD_t + \sum_{i=1}^N FCD_t + \sum_{i=1}^N CSC_t + \sum_{i=1}^N PCS_t + \sum_{i=1}^N CB_t + \sum_{i=1}^N CP_t + \sum_{i=1}^N TES_t$$

$$INDIRECT_t = (\sum_{i=1}^N STD_t + \sum_{i=1}^N LTD_t + \sum_{i=1}^N FCD_t) / SOURCE_t$$

$$DIRECT_t = (\sum_{i=1}^N CSC_t + \sum_{i=1}^N PCS_t + \sum_{i=1}^N CB_t + \sum_{i=1}^N CP_t) / SOURCE_t$$

$$SELF_t = \sum_{i=1}^N TES_t / SOURCE_t$$

Where STD_t represents the short-term debt in the year t ; LTD_t is the long-term debt in the year t ; FCD_t is the foreign currency debt in the year t ; CSC_t is the capital stock (common) in the year t ; PCS_t is the preferred capital stock in the year t ; CB_t is the corporate bond in the year t ; CP_t is the commercial paper in the year t ; and TES_t represents the total earned surplus in the year t . All data are based on their fiscal year.

Source: Computed by the author.

Of course, the level of dependence on self-financing does not mean that the Korean powerhouses are actually spending all the funds from their retained internal sources on the self-financing method to manage their business activities every year. However, a high level of dependence on self-financing can be construed as meaning that the Korean powerhouses hold a large amount of retained earnings, which can be an internal source of self-financing, in all the funds from internal and external sources they can secure every year to manage their business activities. Ultimately, retained earnings refer to the part of their possessed funds not derived from external funds; therefore, there is relatively less risk to companies when they obtain the necessary funds through internal funds, compared to when they obtain the necessary funds through external funds that inevitably involve various risks. To put it another way, from the companies' point of view, their high level of dependence on self-financing means that a stable financing method through funds from internal sources has been secured. Therefore, it can be said that in the Korean powerhouses whose level of dependence on self-financing is quite high, an environment that helps them to stably raise the funds necessary for managing their business activities through self-financing has been created so that they have a better chance of carrying out business activities along positive lines while firmly maintaining the business directions they seek. This can act as a factor that has a positive effect on other structures (or sectors) that comprise their corporate systems.

3.2. Evolution towards (maintenance of) non-debt-dependent financial structure

As of 2014, the debt ratio of Korean companies categorized into the manufacturing industry was 89.24 percent.^{vi} Their debt ratio was recorded at 303.02 percent in 1998, but it has gradually decreased every year since then. As shown in Figure 3, their debt ratio has shown a gradual decreasing tendency each year regardless of the size of the company, and the changes in debt ratio have been relatively stable since the mid-2000s. However, the debt ratio data of manufacturing companies show one notable feature: the debt ratios of SMEs were generally far higher than those of LEs for most of the year. As of 2014, the debt ratios of SMEs and LEs were 155.44 percent and 73.41 percent, respectively, and there was a widening gap between SMEs and LEs. Through such debt ratio data, it can be inferred that Korean SMEs in the manufacturing sector have a strong tendency to manage their businesses by depending more heavily on debt for any reason than do Korean LEs in the manufacturing sector.

If the tendency to manage the company depending heavily on debt is stronger in SMEs than in LEs, then it is conceivable that the Korean powerhouses—which are categorized as small or middle-standing enterprises—should have a similar tendency to the typical Korean SMEs. This is not only an argument regarding the tendency to manage the company, but also an argument on how what level of structural stability and soundness in the financial aspect has been practically secured in the company. Therefore, in order to approach such an argument clearly, it is necessary to compare the Korean powerhouses with other companies in the same industry having a similar business scale, rather than comparing them with typical LEs. This would be a much more persuasive comparison.

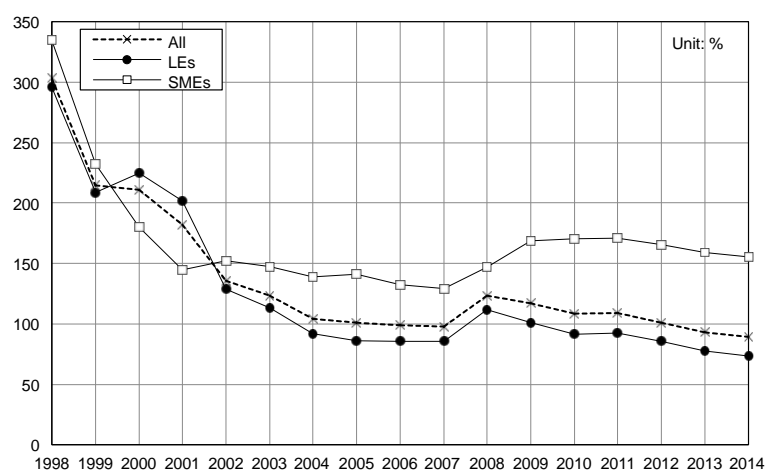


Figure 3. Debt ratio by company size

Notes: The data cover the companies in the manufacturing sector. All data are based on their fiscal year.

Source: *Financial Statement Analysis*, for the indicated years, The Bank of Korea.

Thus, we focus on uncovering the financial features of the Korean powerhouses by comparing them with other companies in the same industry having a similar business scale. To do so, the debt ratio (DR) and total borrowings and bonds payable to total assets (TBTA) of the Korean powerhouses are calculated and analyzed (see Figure 4). The result of our analysis shows that, interestingly, the Korean powerhouses have maintained for a long time (or are gradually evolving towards) at least one feature among the following three:

- (i) The levels of both DR and TBTA are lower than those in other companies in the same industry [D&B-safe type]

- (ii) The level of DR is lower than that in other companies in the same industry [D-safe type]
- (iii) The level of TBTA is lower than that in other companies in the same industry [B-safe type]

Seven companies are categorized as the D&B-safe type: five of them have maintained feature (i) for a long time, and the other two companies are gradually evolving towards such a feature. Three companies are classified as the D-safe type: two of them have maintained feature (ii) for a long time, and one company continues to evolve towards this feature. One out of 11 companies is categorized as the B-safe type, maintaining feature (iii) for quite a long time.

In summary, our analysis of the financial structure revealed that the Korean powerhouses have common ground, a “non-debt-dependent financial structure,” which they have maintained for a long time or are gradually evolving towards. More than half of the Korean powerhouses have maintained lower levels of both DR and TBTA than other companies in the same industry, and for the rest of the Korean powerhouses, at least one of these has been at a lower level than in other companies in the same industry. Such a result needs to be highlighted because the non-debt-dependent financial structure of the Korean powerhouses is actually difficult for Korean SMEs to maintain. In general, in the case of LEs, it is likely that a solid management structure, huge capital, and rapidly accumulating funds from internal sources will become positive factors that help them to reduce the level of dependence on debt or loans for managing their business activities.

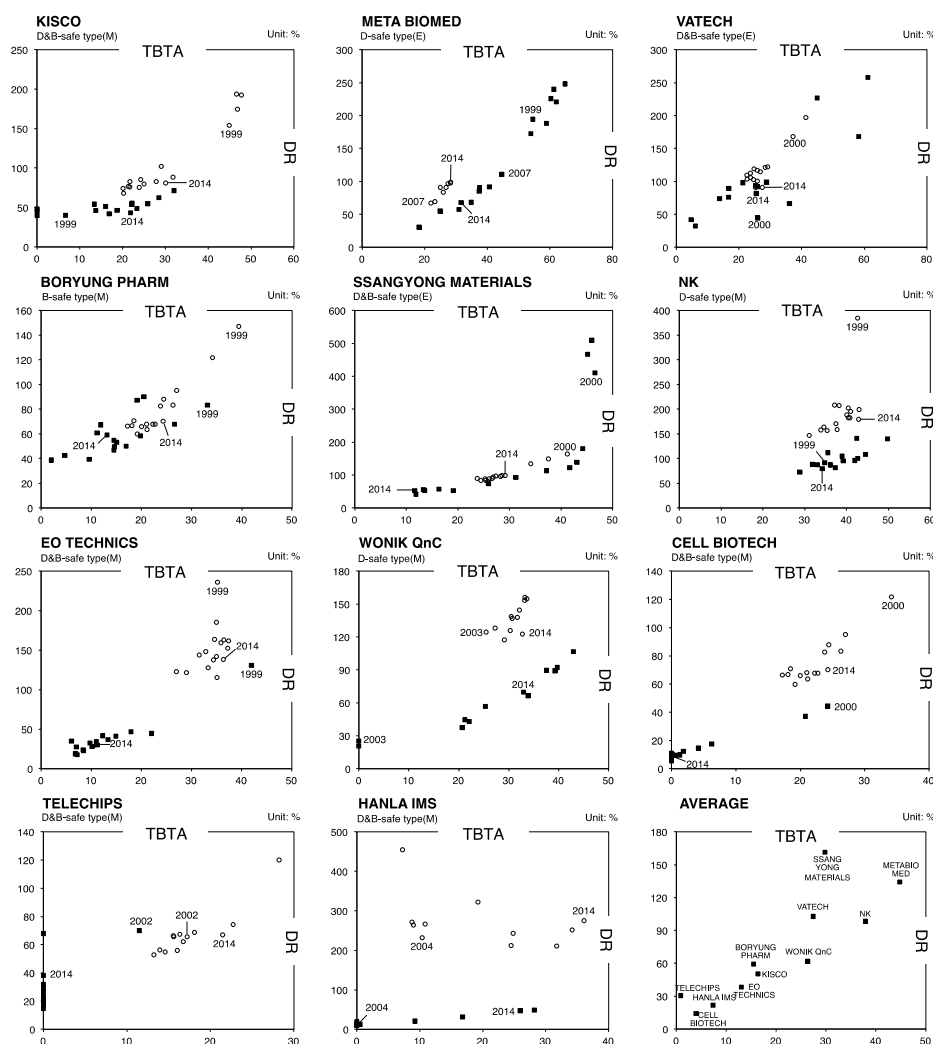


Figure 4. Levels of DR and TBTA: The Korean powerhouses vs. other companies in the same field

Notes: ■: The Korean powerhouses; ○: Other companies in the same field; (M): Maintenance; (E): Evolution. All data are based on their fiscal year.

$$TBTA_t = (Total\ borrowings\ and\ bonds\ payable_t / Total\ assets_t) \times 100$$

$$DR_t = (Total\ liabilities_t / Stockholders'\ equity_t) \times 100$$

Source: Computed by the author using data from the Annual Reports, for the indicated years, each company; Financial Statement Analysis, for the indicated years, The Bank of Korea.

However, in contrast, in the case of SMEs, such factors have not been relatively sufficient, so that SMEs' level of dependence on debt or loans for managing their business activities is even higher than that of LEs in general. Therefore, it is highly likely that SMEs maintain a relatively unhealthy (or unstable) financial structure in comparison with LEs. Nevertheless, the Korean powerhouses, unlike the typical SMEs, have maintained a non-debt-dependent financial structure, which could be part of their corporate system with a healthy financial structure, and could also be a "strong LE-tested financial structure" that is difficult for typical SMEs to maintain. As a result, such a structural feature allows the Korean powerhouses to create an environment that helps them to stably manage their business activities; therefore, they have a better chance of carrying out business activities along positive lines while firmly maintaining the business directions they seek. This can act as a factor that has a positive effect on other structures (or sectors) that comprise their corporate systems.

3.3. The propensity for non-debt-led growth

The growth of a company can be defined from various perspectives. An external expansion of business scale proceeding from enlargement of the company's business activities can be one way to define the growth of the company; an internal expansion of business scale led by sales increase or profit increase can be another. There are various ways to define the growth of the company, but they all have one thing in common: in the end, the key factors that affect not only external growth but also the internal growth of the company bear a strong relation to the source of funds that leads the company's growth. To put it plainly, the company is able to promote continuous investment activity for its growth on the premise that a source of investment funds for its business is prepared; it is also able to increase its sales and profits on the assumption that a source of funds for boosting its production is supported. Therefore, in discussing the growth of a company, it is essential to understand the relation between the growth of the company and the source of funds that promote its growth. In particular, in the case of Korean SMEs that show a high level of dependence on funds from external sources, it would be more reasonable to focus on the relation between their debt ratio and their growth.

Woo & Choi (2015) attempt to examine the factors that affect the capital structure of growth companies by focusing on 933 KOSPI-listed companies and 1,413 KOSDAQ-listed companies during the 1992–2013 period, which provides evidence that the higher the growth of a company, the higher its debt ratio, in both KOSPI-listed companies and KOSDAQ-listed companies. In expanding the results of their analysis, one can infer that in the case of Korean companies, there seems to be a positive correlation between the growth of a company and its debt ratio, so that the trend is that higher their debt ratio (the more their debt ratio increases), the higher their growth (the more their growth increases), and the lower their debt ratio (the more their debt ratio decreases), the lower their growth (the more their growth decreases).

However, the Korean powerhouses are expected to show quite different trends, from the above trends. In order to validate whether there is a positive correlation between the growth of the Korean powerhouses and their debt ratios, we attempt to focus on examining two things: the relation between their sales growth and their debt ratios, and the relation between their operating profit growth and their debt ratios. A very interesting finding results from the analysis, as shown in Figure 5.

If the Korean powerhouses show a definite positive correlation between their growth and their debt ratios, their debt ratios should increase compared to the previous year when the year-on-year rate of sales growth (or the year-on-year rate of operating profit growth) shows a positive value; their debt ratios should decrease compared to the previous year when the year-on-year rate of sales growth (or the year-on-year rate of operating profit growth) shows a negative value. To put it another way, if there is a definite positive correlation between their growth and their debt ratios, then most of the coordinate values in scatter charts [A] and [B] of Figure 5 should be distributed in quadrants I or III.

However, as the result clearly shows, about half of the coordinate values are distributed in quadrants II or IV. Coordinate values distributed in quadrants II or IV represent either (1) the period of each year that shows a decrease in debt ratio compared to the previous year even though the year-on-year rate of sales growth (or the year-on-year rate of operating profit growth) shows a positive value, or (2) the period of each year that shows an increase in debt ratio compared to the previous year even though the year-on-year rate of sales growth (or the year-on-year rate of operating profit growth) shows a negative value. Such distributions of coordinate values indicate that there is also a negative correlation between the growth of the Korean powerhouses and their debt ratios. Thus, it is difficult to

conclude that the Korean powerhouses have the propensity for non-debt-led growth, unlike KOSPI-listed companies or KOSDAQ-listed companies, which have partially shown the propensity for non-debt-led growth.

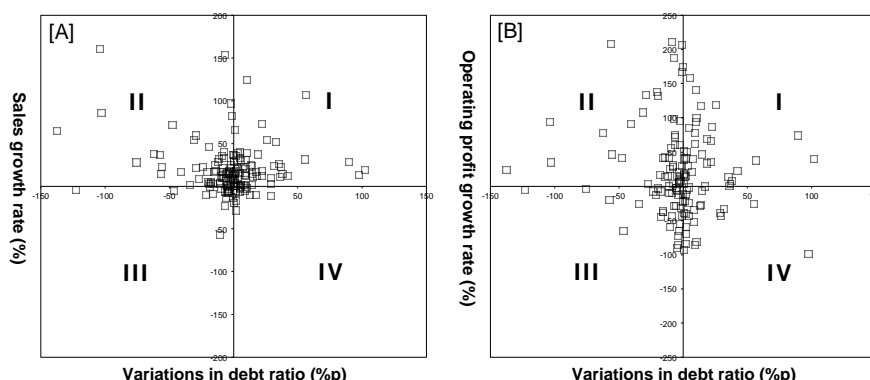


Figure 5. Correlation between debt and growth: The Korean powerhouses

Notes: $Variations\ in\ debt\ ratio = Debt\ ratio_t - Debt\ ratio_{t-1}$. Two samples $[(-329, 9); (-5, 751)]$ in chart [A] and seven samples $[(6, 302); (33, 17476); (-20, 468); (-329, 31); (-1, 805); (-5, 787); (3, 3064)]$ in chart [B] are not shown. Fiscal years that showed negative sales growth or negative operating profit are excluded from the calculation. All data are based on the fiscal year after floating the business on a stock market.

Source: Computed by the author using data from Repository of Korea's Corporate Filings Data Analysis, Retrieval and Transfer (DART).

The growth of a company is greatly affected by debt, which cannot be construed as purely positive. In principle, company debt proceeds from funds from external sources; therefore, the more the growth of the company is significantly affected by external factors, the more it will be strongly dependent on climate changes in external factors. From a larger perspective, there is a strong possibility that the growth of a company depending on a huge amount of debt in itself can act as a factor that hampers the stable growth of the company. Thus, it can be highly expected that companies with the propensity for debt-led growth will be exposed to a relatively less stable growth environment than are other companies that have the propensity for non-debt-led growth. Therefore, it can be inferred that the Korean powerhouses show growth regardless of the increase of their debt ratios, so that they are able to have a favorable environment for stable growth in the long-term. Further, as such a growth environment is being embedded in the corporate systems of the Korean power houses, they have a better chance of carrying out their business activities along positive lines while firmly maintaining the business directions they seek. This can act as a factor that has a positive effect on other structures (or sectors) that comprise their corporate systems.

3.4. A high level of concentration on research and development activities and a dominant market position

Research and development (R&D) activities are among the factors that affect the growth of a company and can be a “stepping-stone” for the company, leading to continuous and long-term growth. It would be somewhat difficult for a company to achieve measurable growth within a short period of time only by leaning on its R&D activities, but a company can attempt to expand its long-term growth potential through continuous R&D activities for its products. The effect of R&D activities on products and the consequences of R&D activities for the company cannot be fully guaranteed, as they have not been shown to be effective within a short period of time, and further continuous efforts and a large monetary investment are needed. Therefore, the company cannot easily create a business

environment that allows it to undertake its best endeavors for R&D activities even when the company is fully aware of the importance of the R&D activities. However, as is quite clear, R&D activities are directly connected to securing the potential competitiveness of a company, and so the company needs to concentrate a large part of its capability on R&D activities, not only to hold a dominant and unique market position in business sectors on which it focuses but also to maintain its position for the long term.

However, there is no clear consensus on how great a level of R&D activities a company needs to concentrate on. Further, supportive and persuasive evidence for the standard is not enough. Moreover, the level of concentration on R&D activities is very diverse depending on the industry in which each company is engaged. High-technology companies producing electronic equipment, medical machines, semiconductors, and so on, which have both a comparatively fast-paced product life cycle and short product life, will have a much higher level of concentration and investment in R&D activities in order to more often develop existing products into new and advanced products than will other companies. Thus, in order to understand clearly the level of concentration on R&D activities in a company, comparing its level with that in other companies in the same industry rather than in different industries would provide a much more persuasive comparison. Based on such a perspective, we assign great importance to a high level of concentration on R&D activities—which is one of the key factors that allows the Korean powerhouses to hold the number one position in the global market—and attempt to analyze how great a level of R&D activities the Korean powerhouses actually concentrate on. We do so while focusing on the following two factors: the R&D intensity of the Korean powerhouses, that is, the level of their expenditure on R&D activities in total sales, and the amount of R&D expenditure that they actually pay for R&D activities. Based on these two factors, we attempt to compare the Korean powerhouses with other companies in the same industry having a similar employment scale and a similar business scale, as shown in Figure 6. The results of our analysis show that the Korean powerhouses have maintained for a long time (or are gradually evolving towards) at least one of the following two features:

- (i) Both the level of R&D intensity and the amount of R&D expenditure are higher than those in other companies in the same industry [I&E-strong type]
- (ii) The level of R&D intensity is higher than that in other companies in the same industry [I-strong type]

Seven companies are categorized as the I&E-strong type: five of them have maintained feature (i) for a long time, and the other two have shown this feature since 2013. Three companies are classified as the I-strong type and have maintained feature (ii) for a long time. Exceptionally, one out of 11 companies is categorized as neither the I&E-strong type nor the I-strong type, but there is a clear trend that the levels of both R&D intensity and amount of R&D expenditure have gradually been increasing over a long period of time.

In summary, our analysis of the level of concentration on R&D activities revealed that the Korean powerhouses have a feature in common: they have maintained a much higher level of concentration on R&D activities for their continuous growth for a long time, compared to other companies in the same industry, or they are gradually raising their level. More than half of the Korean powerhouses are maintaining both R&D intensity and R&D expenditure at a higher level than other companies in the same industry, and the rest show a much higher level of R&D intensity than other companies in the same industry, as shown in Figure 6. In expanding the results of our analysis, it can be inferred that the Korean powerhouses' concentration on R&D activities at a high level means a constant

attempt to expand the possibilities of continuous and stable growth. Further, expanding their growth potential indicates that they have a better chance of holding a more dominant market position than other companies. Of course, a company cannot easily secure the number one position in the global market by focusing only on R&D activities at a high level. However, as in the case of the Korean powerhouses holding a more dominant market position than other companies in the same industry, if a favorable environment for a company to concentrate its capability on R&D activities at a high level is gradually created or is sustained, the company is more likely to secure strong competitive technologies and items; therefore, the company has a better chance of surviving in a competitive market than do other companies. Additionally, if a business environment that helps a company to carry out its business activities along positive lines while firmly maintaining the business directions it seeks is prepared, then the company has a much better chance of concentrating on R&D activities at a higher level.

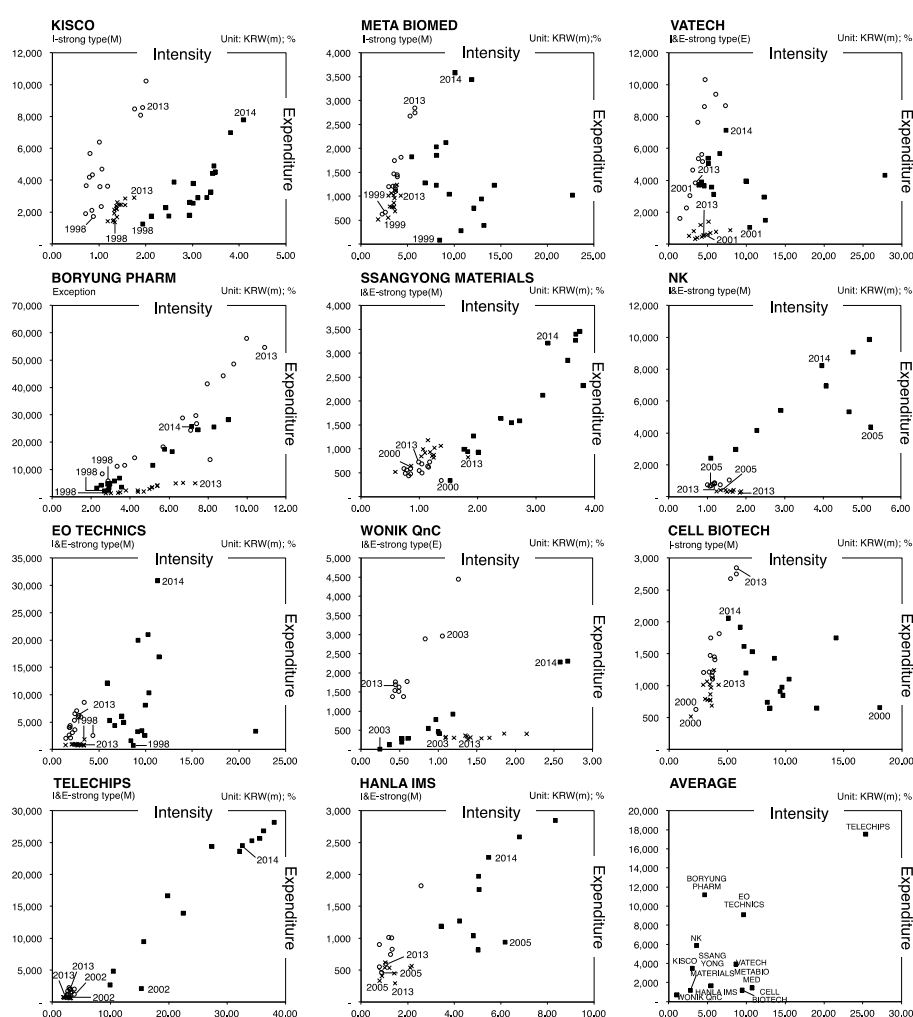


Figure 6. R&D intensity and R&D expenditure: The Korean powerhouses vs. other companies in the same field

Notes: ■: The Korean powerhouses; ○: Other companies in the same field (by size of employees); ×: Other companies in the same field (by type of business enterprise); (M): Maintenance; (E): Evolution. R&D intensity is computed by the author using the following equation:

$$R\&D\ intensity_t = R\&D\ expenditure_t / Total\ sales_t$$

All data are based on their fiscal year.

Source: The Annual Reports, for the indicated years, each company; Ministry of Education, Science and Technology, Survey of Research and Development in Korea, for the indicated years.

3.5. Specific sector-specialized business structure and concentration on the global market with no spatial boundary

While the Korean powerhouses hold the number one position in the domestic market or the overseas market, it is very difficult for a company to achieve the number one market position in a specific business sector over numerous competitors, and it is most likely only be possible once continual endeavors and many continuous investment activities are undertaken. Companies have held a dominant market position in specific business sectors, which can be construed as the outcome of their strategic choice about which market should be focused on to supply the products developed based on their accumulated and differentiated technologies. In general, the financial capacity and management ability companies accumulate is not mature enough in the initial stage of their foundation, and so there is a high possibility for them to be faced with difficult situations in many different spheres. Thus, companies that have not secured a competitive price or superior technology for their products show a tendency to carry forward their business centered around market information in easily accessible areas. However, as the companies have matured in many different spheres and their business scales have gradually expanded, they have started to diversify the supply market step by step and to concentrate their capability on the overseas market in order to find new purchasing demand. In other words, it is a very general trend that the companies attempt to find a way to make inroads in the domestic market first, and after getting their business on track, they ponder ways to gradually diversify into the overseas market.

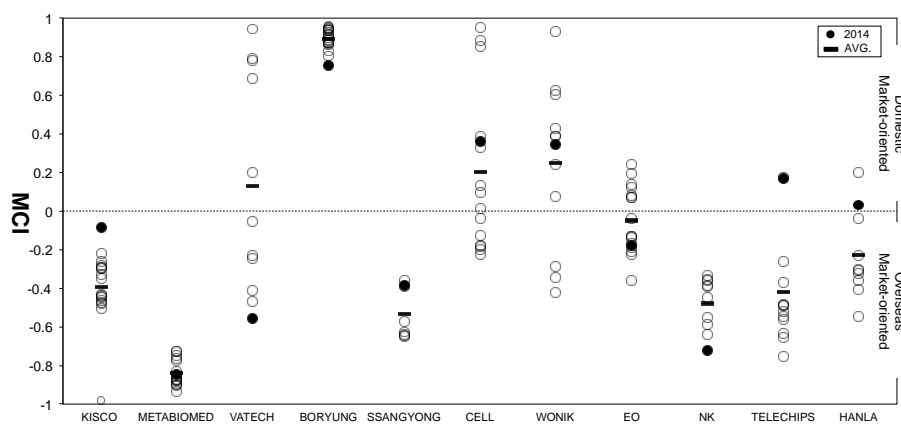


Figure 7. Market concentration index

Notes: Market Concentration Index (MCI_t) = (Domestic sales_t – Amount of exports_t) / (Domestic sales_t + Amount of exports_t). $0 < MCI_t \leq 1.0$: Domestic Market-oriented; $-1.0 \leq MCI_t < 0$: Overseas Market-oriented. All data are based on their fiscal year.

Source: Computed by the author using data from the financial Reports, for the indicated years, each company.

However, this general trend cannot be seen in all the Korean powerhouses (11 companies). To understand clearly the tendency of market concentration in the Korean powerhouses, we calculate an index that can be used to assess whether they focus on the domestic or overseas market. This index considers the market concentration index (MCI), and is calculated based on the data provided in each of the Korean powerhouses' financial reports regarding sales figures in the domestic market and the amount of exports (see Figure 7). The MCI is an objective measure that shows the level of market concentration, and an MCI score that approaches

1.000 indicates a stronger domestic market-oriented type, while a score approaching –1.000 indicates a stronger overseas market-oriented type.

Our calculation shows that the Korean powerhouses have nothing in common in terms of the tendency of market concentration; they display various tendencies in their market concentration. However, by looking in detail at the changes in their MCI scores, one finds that they can actually be classified into two different groups. Five companies categorized as “Group I” have maintained a certain level of MCI score for a long time. In contrast, six companies are classified as “Group II,” showing a gradual change in their MCI scores.

To put it another way, the Korean powerhouses are categorized as companies that tend to focus strongly on a specific market for a long period of time, or companies that focus on a variety of markets (see Figure 8). However, except for one company, all the Korean powerhouses have in common that the aforementioned trend—that companies attempt to find a way to make inroads in the domestic market first, and after getting their business on track, they ponder ways to gradually diversify into the overseas market—is not clear. There are companies that focus on the overseas market first and gradually increase their effort to make headway into the domestic market, and there are companies that concentrate on both the domestic market and the overseas market at a similar level from the beginning.

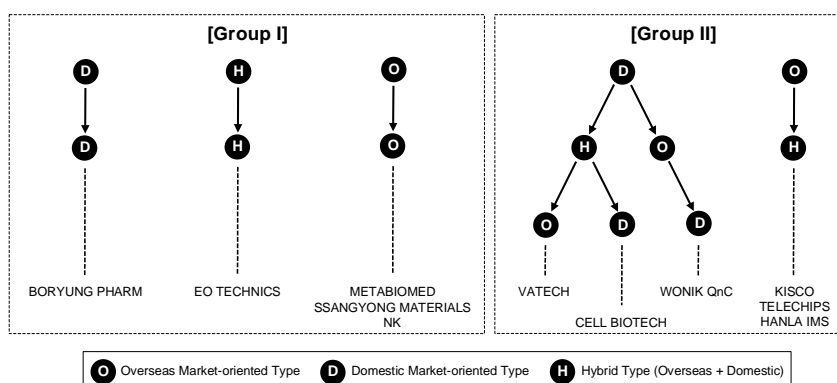


Figure 8. *Types of market concentration*

Source: Constructed by the author.

Further, there are also companies that ponder ways to diversify their customers from the domestic market to the overseas market and then concentrate on the domestic market again. Thus, the Korean powerhouses show various tendencies of market concentration, which indicates that they are well provided with conditions and environments that help them to focus on the markets wherever there are in demand. Therefore, the changes in the market direction on which each Korean powerhouse focuses are diverse. In other words, it can be inferred that the Korean powerhouses are not attempting to change the market on which they need to focus in a particular direction as time goes on, but rather they do not distinguish between the domestic market and the overseas market at the beginning and concentrate on the global market with no spatial boundary.

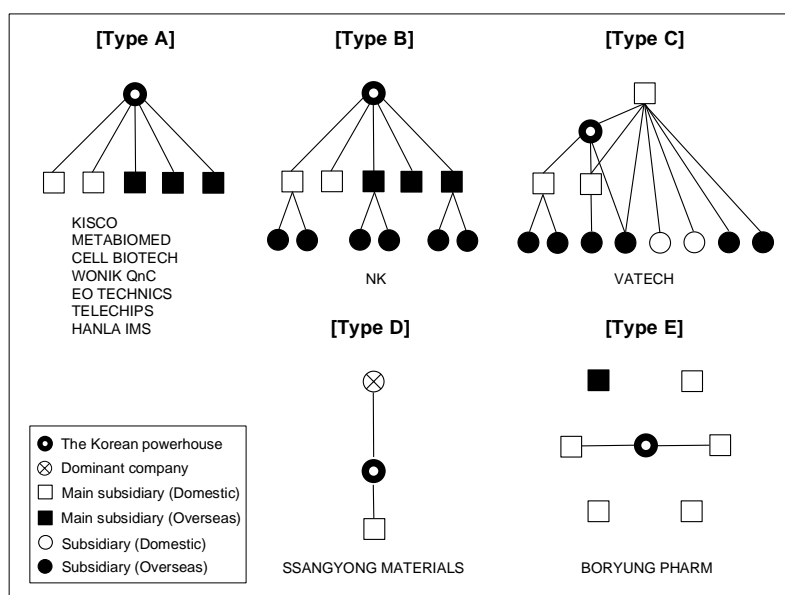


Figure 9. Business structures of the Korean powerhouses

Source: Constructed by the author.

One of the core reasons that the Korean powerhouses concentrate on the global market from the beginning, rather than carrying forward the supply market diversification from the domestic market to the overseas market, is that they have a “specific sector-specialized business structure,” which makes it advantageous for them to be a specialized company in a specific business sector. The business structure of the Korean powerhouses can be classified into five different groups, as shown in Figure 9. However, except for one company, whose business structure is categorized as Type E, the business structures of the rest of the Korean powerhouses are, in effect, identical, which is a specific sector-specialized business structure. The business structure, Type A, which seven companies have, is based on the capital relation with a parent company (a Korean powerhouse) and domestic and/or overseas subsidiary companies in the same (or similar) business sector with the parent company. Both Type B and Type C business structures, which can be classified as more advanced and robust than Type A, are organized based on a capital relation with three main subjects: a parent company, domestic and/or overseas subsidiary companies that have a capital relation with their parent company, and their domestic and/or overseas subsidiary companies in the same (or similar) business sector. One distinctive difference from Type B is that the Type C business structure is strongly based on a holding company system.^{vii} The Type D business structure, which involves a dominant company not in the same business sector with a Korean powerhouse, a subsidiary company in the same business sector with a Korean powerhouse, and a Korean powerhouse in a capital relation, is described as a structure in which the Korean powerhouse has an effect on its subsidiary company but is influenced by its dominant company at the same time.

In summary, Types A, B, C, and D show a structural feature in common, in that the Korean powerhouses are connected with their main subsidiary companies (and main subsidiary companies’ subsidiary companies) in the same (or similar) business sector, based on a capital relation. Therefore, it can be said that four types of business structure are defined as a specific sector-specialized business structure that is advantageous for the Korean powerhouses as specialized companies in a specific business sector. However, Type E can be classified as a different type of

business structure that is structurally different from a specific sector-specialized business structure. In Type E, most subsidiary companies are engaged in totally different business sectors from their Korean powerhouses, and some subsidiary companies that have a capital relation with a Korean powerhouse are also in different business sectors. Therefore, it can be said that a business structure with such structural organization is closer to an overall business structure, which is advantageous for diversifying one's business sector.

The fact that all Korean powerhouses, excluding one company with an overall business structure, have maintained a specific sector-specialized business structure needs to be highlighted. In particular, it is noteworthy that there is a slight difference in the type of business structure each Korean powerhouse has, but it is ultimately a business structure directly or indirectly connecting a Korean powerhouse and its subsidiary companies engaged in the same (or similar) business sector. This specific sector-specialized business structure, which is advantageous for focusing the capabilities of both a Korean powerhouse and its subsidiary companies on the same business sector, makes a Korean powerhouse specialize in one specific business sector more so than its rival companies. In a specific sector-specialized business structure, the Korean powerhouses as parent companies do not attempt to expand the business sector of their subsidiary companies to various business sectors, but rather within the boundary of the business sector on which they are focusing; therefore, in the long view, they have a better chance of specializing in the business sector where they already have advantages and strengths. Further, it is highly likely that a stable environment, which allows them to concentrate their capability on any market (i.e., domestic or overseas market) regardless of market conditions, is maintained, as the Korean powerhouses have a better chance of specializing in a specific business sector.

4. The structural mechanism of the Korean powerhouses

In this paper, we devote our attention to uncovering structural differences and features of the Korean powerhouses, compared to other companies in the same industry, by examining their five structures or sectors (i.e., financing structure, financial structure, growth structure, R&D activities, and business structure). Each structure is independent from the others, functioning as a single structure, which is a key factor in their corporate systems. However, looking at the big picture, it can be seen that each structure is actually interlinked as a cogwheel so that each structure influences (or is influenced by) each other. Of course, the various structures comprising the Korean powerhouses' corporate systems are also interlinked with each other, and their corporate systems are affected by these various interlinked structures.

As mentioned in the introduction, the Korean powerhouses have a feature in common: they have held dominants and unique market positions in specific business sectors despite not being large business groups with favorable conditions in many different spheres. Various factors allow the Korean powerhouses to hold dominant and unique market positions in the business sectors on which they focus, but this study calls attention to the environments that provide a better chance of carrying out business activities along positive lines while firmly maintaining the business directions the Korean powerhouses seek as a key factor. The structural mechanism for creating such environments begins with their financing structure.

As revealed by an analysis of the financing structure of the Korean powerhouses, they are more dependent on the self-financing method to obtain the necessary funds for managing their business activities, rather than the external financing method (direct financing and indirect financing). In general, the more a

company depends on self-financing, the relatively less the company relies on external financing; therefore, this lightens the burden of various risks that are inevitable consequences when the company is dependent on obtaining the necessary funds from external sources. Moreover, once the company lowers the level of dependence on external funds and raises that on internal funds, the level of external subjects' direct or indirect effect on the company—which inevitably stems from funding offered by outsiders—is reduced. That is, if the financing structure of the company evolves towards a self-financing-dominant financing structure, the influence of external factors that can affect the company is weakened due to the weakening of the company's level of dependence on funds from external sources. Therefore, from the company's point of view, it has a better chance of securing a more stable financing environment. As such a stable financing environment is strongly embedded in the company, the company is able to deviate from the influence of external subjects on its business activities; therefore, it has a better chance of carrying out its business activities along positive lines while firmly maintaining the business directions the company seeks.

As the Korean powerhouses are able to rely on an internal source for self-financing at a higher level, their level of dependence on funds from external sources is relatively decreased. This can be construed as meaning that the tendency to depend heavily on debt or loans to manage their business activities is weaker. Thus, the Korean powerhouses tend towards lower dependence on debt or loans due to a high level of dependence on self-financing. And as a result, it can be inferred that their financial structure is likely to gradually evolve towards a non-debt-dependent financial structure, or to maintain this structure for a long time. Further, by building such a financial structure, the Korean powerhouses have a better chance of carrying out their business activities along positive lines while firmly maintaining the business directions they seek, in an environment that helps them to stably manage their business activities.

Moreover, the Korean powerhouses—which have established a stable financing environment led by a self-financing-dominant financing structure—are able to deviate from the corporate growth environment where variations in debt ratio are linked. To put it in another way, it is possible for the Korean powerhouses to evolve towards (or maintain) a non-debt-led growth structure, as a corporate growth environment that is not led by debt, and to which an increase in debt is irrelevant, is being created. In companies that have established such a growth environment, corporate growth is less likely to be influenced by external factors such as debt or loans; therefore, it can be inferred that it creates an advantage for the long-term and stable growth of the company. Eventually, the Korean powerhouses—through the stable growth environment embedded in their corporate system—have a better chance of carrying out their business activities along positive lines while firmly maintaining the business directions they seek.

The aforementioned three structures (i.e., the self-financing-dominant financing structure, the non-debt-dependent financial structure, and the non-debt-led growth structure) provide strong possibilities and a stable environment for the Korean powerhouses, allowing them to carry out their business activities along positive lines while firmly maintaining the business directions they seek. This increases the possibility of the Korean powerhouses' concentrating on R&D activities at a high level. Thus, they are able to concentrate on their R&D activities at a high level under a stable business environment in which the business activities they are planning can be secured, which indicates that they can continue expanding their sustained and long-term growth potential through development of strong competitive items and securing differentiated technologies. Eventually, the stable growth of the Korean powerhouses based on market competitiveness supported by

their products with the accumulation of differentiated technologies gives them a better chance of survival in various markets in competition with rival companies and provides a definite opportunity for them to concentrate a large part of their capability on the global market with no spatial boundary at the beginning. Therefore, they have a better chance of holding a more dominant market position than other companies in the same industry and maintaining their market position for the long term.

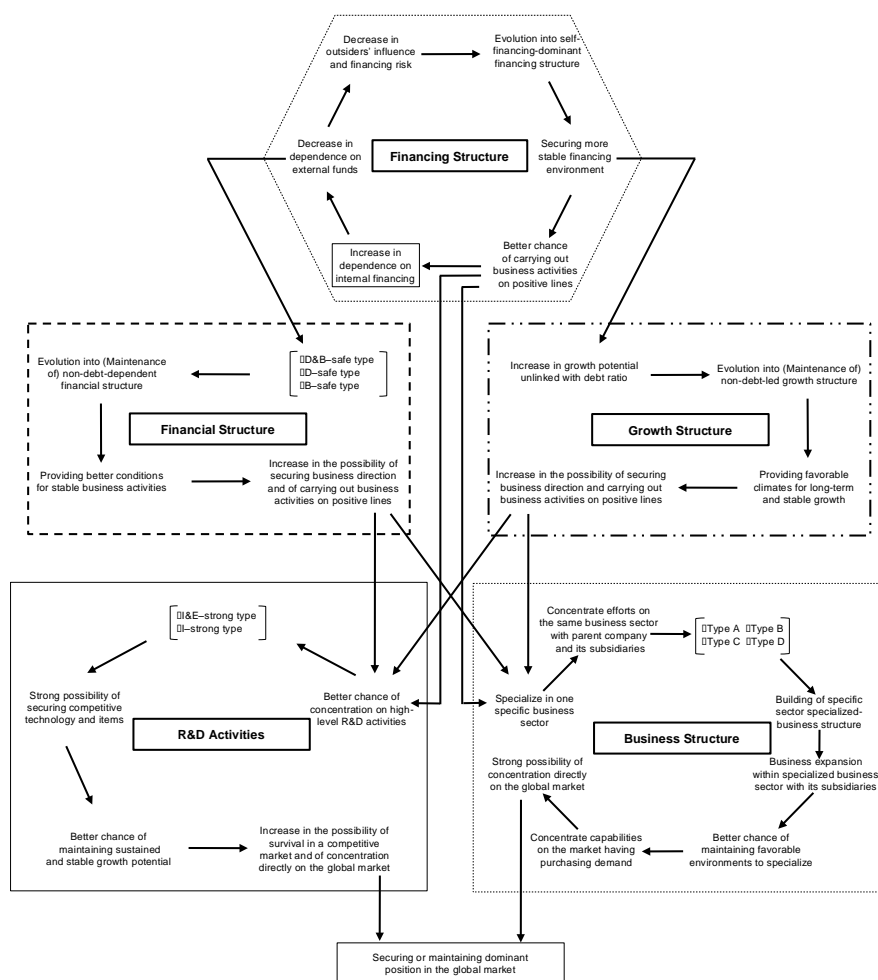


Figure 10. Structural mechanism of the Korean powerhouses

Source: Constructed by the author.

Furthermore, a stable business environment—which can be directly or indirectly provided by the aforementioned three structures—and a business-friendly corporate environment—which helps the Korean powerhouses to carry out the business activities they seek along positive lines with support from these three structures—also leads to expanding the possibilities of the Korean powerhouses being specialized in the business sector on which they are focusing. Each Korean powerhouse as a parent company has maintained a specific sector-specialized business structure that is advantageous to focusing on the capabilities of both the Korean powerhouse and its main subsidiary companies (and its main subsidiary companies' subsidiary companies) in the same business sector; therefore, a favorable condition and environment that allows the Korean powerhouses to specialize more in one specific business sector than their rival companies is being

created. Based on such a business structure, the Korean powerhouses are able to gradually increase the possibility of being specialized in specific business sectors in the long term by expanding the business sectors of their subsidiary companies within the boundary of the business sectors on which the Korean powerhouses are focusing. Thus, it is possible for the Korean powerhouses—which focus on specific business sectors and are specialized in those sector—to occupy dominant market positions by securing the conditions and environment to help them concentrate their capabilities on the markets wherever there is demand without distinction between domestic and overseas market.

In summary, it can be concluded that the Korean powerhouses have a structural mechanism in their corporate systems, as shown in Figure 10. The main point we would like to emphasize is that the five structures (or sectors) are actually interlocked as a single “cogwheel,” but they ultimately act as one huge “machine” while affecting (or being influenced by) each other. Consequentially, the entire corporate system of a Korean powerhouse functions through the independent operation of various structures connected as a single machine. Further, a favorable condition and environment that allows the Korean powerhouses to secure a strong element of competition, such as the preoccupation of a dominant market position, is being created while their corporate systems evolve to be distinct from other companies’ corporate systems.^{viii}

5. Conclusion

In the late 1990s, the Korean government suffered an unprecedented financial crisis and began looking for new alternatives to its large enterprise-based and export-oriented growth strategy, as there was an element of doubt about this growth strategy. As a part of their comprehensive strategy, the government has attempted to actively prospect for small or middle-standing enterprises with high growth potential, and has given significant support to them through a diverse range of channels. Further, in order to promote these enterprises as those that can secure a strong element of competition in the global market, the government has put a lot of effort into fostering so-called “Korean hidden champions” until recently.

This study examined various factors that support the 11 Korean powerhouses to secure dominant market positions in specific business sectors, and that create a business environment to maintain their market position. Further, we described how they have achieved high levels of self-reliance and unmatched competitiveness in the global market despite not being large business groups. To do so, we devoted our attention to examining five structures (i.e., financing structure, financial structure, growth structure, R&D activities, and business structure) that comprise each of the 11 companies’ corporate systems, and focused on uncovering the structural mechanism that allows them to maintain their dominance. The results of this study can be summarized as follows:

First, the self-financing-dominant financing structure, with its inherent stability, has been gradually established or maintained in their corporate systems, as the Korean powerhouses are more dependent on the self-financing method to obtain the funds necessary to manage their business activities, rather than the external financing method.

Second, the Korean powerhouses tend to have a lower dependence on debt or loans to manage their business activities as the self-financing-dominant financing structure has been gradually established, and, as a result, their financial structure is likely to evolve towards the non-debt-dependent financial structure, or to maintain this structure.

Third, as the Korean powerhouses are able to deviate from a corporate growth environment in which variations in debt are linked owing to the establishment of a self-financing-dominant financing structure and a non-debt-dependent financial structure, their growth structure is likely to evolve towards a non-debt-led growth structure, or to maintain this structure.

Fourth, the stable business environment provided by the aforementioned three structures supports the Korean powerhouses in concentrating on their R&D activities at a high level. This allows the Korean powerhouses to specialize in the business sectors on which they are focusing.

Finally, as the five structures discussed in this study act as a single “machine,” a favorable environment that allows the Korean powerhouses to secure and maintain dominant positions in the global market is created.

This study took a special interest in the 11 Korean powerhouses whose common ground is their occupation of dominant and unique market positions in specific business sectors despite not being large business groups. We examined the structural aspects of their corporate systems by uncovering key factors that allow for their success, based not on a business management perspective but on an economic perspective. To do this, we analyzed the characteristics of companies with growth potential as classified by the Korean government’s current criteria, deciding on 11 companies (i.e., the Korean powerhouses) discussed in this study. These were chosen from among the 30 companies selected for the 2015 World-Class 300 & Global Specialized Enterprise Cultivation Project.

Recent study on Korean hidden champions has not been conducted using various perspectives and methodologies, and is not being expanded in either quantity or quality. In light of this, this study is different from previous studies, in that, based on a new perspective, we focused on uncovering a structural mechanism embedded in the corporate systems of the Korean powerhouses. The results of this study provide a “stepping stone” for other standards and grounds to define Korean hidden champions.

The concept of hidden champions in many previous studies is discussed in accordance with each researcher’s own perspective, and it has been newly redefined in some studies. However, most studies basically adopt three criteria for hidden champions as introduced by Simon (1990). Of course, it is undeniable that the theoretical concept of the Korean powerhouses in this study is basically based on Simon’s concept of hidden champions to a certain extent. However, through structural analysis of the Korean powerhouses, this study found that there is common ground on the various structures (or sectors) that comprise their corporate systems, and we consider this study to provide vital clues for extending an argument regarding hidden champions from a new perspective. Therefore, we would like to extend the concept of Korean hidden champions based on the various results of our analysis to propose the following six criteria useful to redefining them as Korean powerhouses:

- (i) Number one in the global market (either the domestic market or the overseas market)
- (ii) Higher level of dependence on self-financing than that on external financing
- (iii) Low level of dependence on debt (below the norm in the industry)
- (iv) Growth structure to which an increase in debt is irrelevant
- (v) High level of concentration on research and development activities (above the norm in the industry)
- (vi) Business structure with a better chance of specializing in a specific business sector

Nevertheless, there are limitations or other constraints in generalizing all companies with growth potential as the Korean powerhouses based on the above proposed standards alone. In this study, the subject of analysis is limited to just 11 companies; therefore, it may be difficult to expand and generalize the findings here to an argument regarding the concept of hidden champions despite discussing the various structural features of these companies. However, this study attempted to explore criteria that can be applied to extend the concept of hidden champions by focusing on structural features that have been mostly overlooked in previous studies; in addition, we attempted to propose various standards for defining the Korean powerhouses. Therefore, to support the findings of this study, we need to extend its scope to other various structures—including not only the aforementioned five structures, but also other structures (or sectors) that also comprise corporate systems. Furthermore, we acknowledge that by undertaking analyses of the correlations among various structures and an extended analysis of their features, we will expand the body of research in this area and strengthen the arguments made here.

Notes

ⁱ Dabla-Norris et al. (2015) mentions a trickle-down effect from a pessimistic point of view, and the Organization for Economic Cooperation and Development has pointed out the following: “Exports, produced primarily by large firms affiliated with the business groups known as *chaebols*, are not having the same trickle-down impact as before on domestic demand and employment” (OECD, 2015, p. 1).

ⁱⁱ Source: Korean Statistical Information Service, *Mining and Manufacturing Survey*.

ⁱⁱⁱ For the remainder of this paper, the term “global market” means the domestic or overseas market.

^{iv} See Article 2 of *Framework Act on SMEs* and Article 3 of *Enforcement Decree of the Act*.

^v See Article 2 of *the Special Act on Facilitating Growth and Strengthening Competitiveness of Middle-Standing Enterprise*.

^{vi} The United States: 129.4% in 2014 (source: *Quarterly Financial Report*, U.S. Department of Commerce); Japan: 120.7% in 2014 (source: Ministry of Finance, Financial Statements Statistics of Corporations); Germany: 221.3% in 2012 (source: Deutsche Bundesbank, Extrapolated results from financial statements of German enterprises).

^{vii} “A holding company is characterized by its ownership of securities (generally common stock) of other companies for the purpose of influencing the management of those subsidiary companies, rather than for investment or other purposes” (Smith, 2003, p. 146-147).

^{viii} See Kim (2013; 2014; 2015b) for discussion of the evolving diversity of corporate systems based on the perspective of various structures.

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