

Chapter 2:

Comparing Network Advantage: Sony versus Samsung

On April 12, 2012, *The New York Times* ran an article “Sony Revises Expected Loss to \$6.4 Billion” examining the reasons for Sony’s poor performance. Several weeks later on April 30, 2012 *The New York Times* published “Samsung Poised to Leave Rivals Behind” where it compared Samsung’s success with the struggles of many Japanese companies, including Sony. Journalists in the second article partially attributed Samsung’s outstanding performance to the superiority of its alliance strategy, especially in dealing with competitors, over Sony’s. Other factors contributed, but we agree with their conclusion about alliance strategy and consider this is a brilliant contemporary example of network advantage. In this chapter, we look beyond the headlines and demonstrate how to apply the first, second, and third degree perspectives to understanding the sources of network advantage by comparing Sony and Samsung.

Between 2008 and 2011, the business press covered how both Samsung and Sony built different alliances to achieve complementarities and compatibilities with their partners. Each company had many alliance partners. During this timeframe, some of Sony’s partnerships included:

<i>Partner</i>	<i>Alliance Objective</i>
Hitachi	<ul style="list-style-type: none">• Manufacture LCD panels for use in Sony Equipment
Toshiba	<ul style="list-style-type: none">• Manufacture LCD panels for use in Sony Equipment
Sharp	<ul style="list-style-type: none">• Manufacture LCD panels for use in Sony Equipment
Google	<ul style="list-style-type: none">• Install Chrome browser in VAIO computers• Develop cloud based products for Android platform

IMAX and Discovery
Communications
(3-party alliance)

- Develop 3D TV platforms

At the same time, some of Samsung's partnerships included:

Partner

Alliance Objective

TCL Corp

- Manufacture LCD panels in China

Infineon

- Manufacture chips in Germany

Korean Telecom and Intel

- Transmit 3D signal over the mobile phone
infrastructure

(3-party alliance)

All of these alliances combined different technologies, resources, and know-how to create new opportunities that could not be pursued by either firm on its own. Yet, we attribute Sony's failure and Samsung's success not to the individual alliances they formed but rather to how they built competitive advantage using their alliance networks.

By shifting the imaginary microscope lens and broadening our field of vision, we can better understand the sources of Samsung's network advantage and Sony's network dis-advantage. To do this, let's consider the alliances and partnerships Samsung and Sony formed between 2008 and 2011 (See Figures 2.1 and 2.2). As shown in Chapter 1, circles represent the companies and the lines between companies signify their alliances, which we also refer to as their ties. We will build the network pictures for the two companies in three stages, initially setting the microscope at the first degree perspective, then expanding to include the second degree perspective, and finally expanding to incorporate the third degree perspective.

--- Insert Figures 2.1 and 2.2 about here---

First Degree Advantage

In Figures 2.1 and 2.2, we see each company's alliances from the first degree perspective. Since we see

only the individual alliances developed by each firm, the network itself is a bit boring: just a circle of alliance partners around the main firm. However, recall that the first degree perspective involves examining the sources of complementarity and compatibility between the firm and its individual partners. Each firm's list of partners reflects its knowledge base which determines its opportunities and constraints for future innovations and strategies. We learn more when we also take into account the main resources that each alliance partner provides for Sony and Samsung.

From Figures 2.1 and 2.2 we see that Sony has 16 alliances and Samsung has 34. Since Sony has nearly half the number of partners, it appears that its history of technological excellence and past successes, such as the Walkman or PlayStation, may have given Sony the confidence to think that it could develop almost everything internally despite the rapidly changing technology industry. Unlike Sony, Samsung developed nearly twice as many partnerships, which shows that Samsung is more likely to collaborate with others. Perhaps Samsung doesn't think it has all the knowledge it needs to make new products. This may be a legacy of the fact that Samsung was late to many markets in the past, and it was always trying to catch up by acquiring knowledge and resources from more experienced alliance partners. Going back to our Roman road network analogy, compared with Samsung, Sony has fewer highways to provide the company with information, cooperation, and power. Therefore, in terms of access to new ideas, Samsung's first degree network advantage is greater than Sony's.

Now let's look at what kinds of alliances the two firms have. This provides information about each firm's priorities and the areas of interest where they may wish to collaborate. It's not obvious from the figures, but when we looked at the rationale or objective behind each alliance we found that both companies formed alliances in two areas: electronics and entertainment. Within each of these two areas, the alliances can be classified into two categories—those developed to manufacture hardware and those developed to make use of content. In Figures 2.1 and 2.2, the content alliances for Sony and Samsung are marked by triangles on the pictures and the hardware alliances are marked by circles. So far, we can see that Sony

has a lot more alliances to make use of content than Samsung, but Samsung has a lot more alliances to make hardware.

Second Degree Advantage

In Figures 2.3 and 2.4, we see Sony's and Samsung's alliance portfolios from the second degree perspective. Now we can see each firm, its alliance partners, and the alliances among its partners. Already we've moved beyond the view most managers consider. Notice how the second degree pictures differ from the first degree pictures. Samsung and Sony both have alliances to partners that are connected to other partners in their alliance portfolios.

--- Insert Figures 2.3 and 2.4 about here---

In Figure 2.4, the northeast corner, we see that 12 out of Samsung's 34 partners form four clusters of connected partners:

<i>Partner</i>	<i>Alliance Objective</i>
IBM, SAPAG, ARM Holdings, GLOBAL Foundries Singapore	• Semiconductors
Panasonic, Fujitsu, NTT, NEC	• Chips for Mobiles
Thomson SA, DreamWorks	• 3D Movies
Intel, KT Corp.	• 3D Over Air

Overall, such connected partners are rare in the Samsung alliance portfolio. In the other three corners of Samsung's alliance portfolio, we see that the partners are mostly not connected. In fact, the number of disconnected partners is much greater in Samsung's alliance portfolio than in Sony's alliance portfolio. Therefore, we would say that Sony's portfolio is more integrated than Samsung's, while Samsung's portfolio is closer to a hub-and-spoke configuration.

Many of Sony's alliance partners can also communicate with each other directly, rather than just

through Sony. In Figure 2.3, we see that Sony has three clusters of connected partners:

<i>Partner</i>	<i>Alliance Objective</i>
Hitachi, Toshiba, Sharp, Hon Hai Precision	• LCD Panel Manufacturing
HP	• Manufacture digital data storage tape drives and cartridges
Fox, Vivendi, Warner Music, Baidu	• Content sales
IMAX, Discovery Communications	• 3D Movies

In contrast, many of Samsung's alliance partners communicate only with Samsung, not directly with each other. As a result, Samsung becomes the hub that collects the information generated by each of these partners. Because many of these partnerships are involved in research and development or they generate technological information as a side effect of production, Samsung receives technology-related information through its alliance portfolio. By using this new information and its own research, it can build a stronger knowledge base for future products.

Now, let's combine our understanding of the connections between Sony's and Samsung's alliance partners with our understanding of why they formed these alliances. On the alliance portfolio pictures shown in Figures 2.3 and 2.4, we've also written the rationale for each of the two companies' major alliances.

Figure 2.3 shows that the majority of Sony's hardware alliances focus on making LCD panels which is a strategically important technology for the company. Sony is highly involved in producing LCD panel products both in large-screen formats, meaning televisions and computer monitors, and small-screen formats such as mobile phones and tablets. On the other hand, as shown in Figure 2.4, Samsung's alliances have many different purposes such as semiconductors, LED, chips for mobiles, 3D movies, 3D over air, LCD, and 4G—involving both current products and technologies that may be used in future

products.

If we look at the right-hand side of Sony's portfolio in Figure 2.3, we see an alliance of multiple partners that Sony works with on content sales in Asia: Vivendi, Warner, Fox and Baidu. To provide online social networking services in the U.S., Sony also works with Vivendi (Universal), Warner, and Fox (as the owner of MySpace). At the southwest corner of the portfolio picture, we see that Sony also works together with IMAX and Discovery Communications to distribute 3D movie content. Sony has some content alliances with firms such as Gameshastra or Tudou Holdings, but these firms don't work with its other partners.

As shown in Figure 2.4, Samsung's alliance partners cover a broad range of technologies, but what they have in common is that Samsung has a strategic stake. Clearly, there is value for Samsung in getting access to technological knowledge and making sure that this access is unique to itself, not shared with other firms. The hub-and-spoke configuration ensures that each piece of technological knowledge is shared only with the partner who co-develops it and not with third parties.

Compared with Sony, Samsung spreads its business across many more different technologies, product lines, and partners. This allows Samsung greater access to new information which it can use to build knowledge. For example, in Figure 2.4 we see alliances illustrating some of these learning opportunities:

<i>Partner</i>	<i>Alliance Objective</i>
Uni-Pixel	<ul style="list-style-type: none"> • next generation technologies (LCD and LED screens)
Universal Display Corporation	
TCL Corporation and Suzhou Industrial Park in China (3-way alliance)	
Juniper	<ul style="list-style-type: none"> • mobile security technologies
Intel	<ul style="list-style-type: none"> • mobile security technologies
Technicolor (owned by Thomson) and DreamWorks (3-way alliance)	<ul style="list-style-type: none"> • equipment for 3D movies

Similar to the pivotal position of Londinium (see Introduction), Samsung benefits more than Sony from being on the intersection of more highways among otherwise unconnected partners. Samsung is able to extract more “toll charges” or second degree network advantage from its partners in the form of better access to information or better ability to learn quickly from them.

Using the Second Degree Perspective to Predict the Future

These alliance portfolio pictures represent not only snapshots of past decisions to collaborate; they can also be used to predict where each company’s future innovations will come from. Based on the pictures of these two companies’ alliance portfolios, Sony will probably continue improving its LCD panels and perhaps find new ways of selling its content through 3D movies (IMAX/Discovery alliance) or online distribution channels (Tudou Holdings in China). It will also be able to lower the costs of its PCs by manufacturing them in cheaper locations and perhaps will be able to develop new games for its consoles. Because of the integrated nature of its alliances, most of the innovation from Sony’s collaboration on LCD panels with Hitachi, Sharp, Hon Hai, and Toshiba is likely to be incremental. Sony’s best chance for breakthrough innovation will come from combining LCD knowledge with PC manufacturing, gaming, and Internet TV.

Because Samsung has a hub-and-spoke portfolio, it has a much wider space for technological innovation. It can combine solutions from R&D on memory chips (alliance with Hynix Semiconductor) with solutions on mobile security (alliance with Juniper Networks) as well as combine ideas on how to stream TV broadcast to mobile devices (alliance with Telstra) with an understanding of how to transmit 3D High Definition Images over the air (alliance with KT and Intel). On top of that, Samsung can neutralize Sony’s advantage in manufacturing LCD panels via an individual alliance with TCL Corp and make footholds into Sony’s content market through its three-way alliance with DreamWorks Animation and Technicolor (Thomson).

Samsung’s alliance with Universal Display Corp (UDC) gives you an example of an alliance that provides

second degree advantage based on the hub-and-spoke configuration. This alliance was created to develop active matrix organic light-emitting diode materials used in next generation displays. UDC doesn't know what Samsung is learning about displays from the alliance it developed with Nanosys to use nano technology in screens and batteries. Nor does UDC know what Samsung is learning from its alliance with Uni-Pixel to manufacture optical shutters also to be used in screens. And none of these partners knows what Samsung is learning in its three-way alliance with TCL Corp and Suzhou Industrial Park created to manufacture screens. These alliances provide Samsung with access to new types of thinking, information, and solutions.

It's clear that Samsung is more than just a television and chip maker, but rather a company that develops cutting edge products by combining technologies from different domains. Samsung's current profit driver is the Galaxy series of tablets and mobile phones, but we might expect to see some form of 3D HD portable devices hitting the market very soon. These might be incorporated into automobile electronics through its alliance with Kia Motors. Overall, since Samsung's alliance portfolio has more unconnected partners than Sony's portfolio, we expect to see more breakthrough innovations from Samsung in the foreseeable future.

Third Degree Advantage

Figures 2.5 and 2.6 show the alliance portfolios of Sony and Samsung from the third degree perspective. Now, in addition to the ties with and among the partners of each firm (second degree perspective), we can also see the broader network of ties each firm's partners have to other partners in the industry and possibly in other industries. This third degree perspective shows that the firm's overall ties matter because they help the others to judge the firm's status. As we will discuss more fully in Chapter 6, a firm's status is the perceived level of leadership and influence it has in its industry. The more connected a firm is to well-respected firms, the higher its status. Well-respected firms are usually the well-connected firms, like the city of Londinium was in Roman Britannia. The result is a self-fulfilling prophecy where the well-

connected firms find it easier to get new alliance partners, and those who lack connections have difficulty getting any. It may seem that firms need to find only high status partners. However, in the turbulent industries where innovation is highly uncertain but vital to survival, firms also need to collaborate with low status partners because these low status partners are usually the sources of innovation.

--- Insert Figures 2.5 and 2.6 about here---

Figure 2.5 shows the third degree perspective on Sony's network. The size of each oval represents the status of each firm, which is driven not only by their direct relationships but also by the relationships their partners have with their own partners. To make the picture easier to read, we did not show all of Sony's partners' ties. This picture shows that most of Sony's partners in hardware, such as Hitachi, Sharp, or Toshiba, have higher status than Sony. As a result, they depend less on Sony than Sony depends on them. Recall that Sony bets its future in hardware manufacturing on collaboration with these firms in the area of LCD displays. But alliances with Sony represent a small part of the networks of these higher status partners. In negotiating with these partners, Sony doesn't have the bargaining power, nor does it have many alternative sources to turn to for its supply of hardware. Additionally, since Sony doesn't have lower status partners in its hardware manufacturing network, Sony doesn't have access to innovative ideas on how to make hardware.

Take a look at Figure 2.6. You'll see that Samsung's key partners—IBM and Intel—have high but equal status to Samsung. These partners depend on Samsung as much as Samsung depends on them. NEC commands high status because it has many alliances with high status partners. However, high status does not always guarantee success. The alliance formed between NEC, NTT, and Samsung to develop semiconductors for smart phones actually failed three months after its announcement, and many observers cited slow decision making at NEC and NTT for this failure. Looking at our picture it becomes clear that NEC and NTT were involved in so many alliances that it was probably difficult for them to devote time and effort to the alliance with Samsung.

In hardware, Samsung also has low status partners such as Nanosys or Uni-Pixel, which depend more on Samsung than Samsung depends on them. Ultimately, ties to firms like IBM or Intel allow Samsung to collaborate with equal and high status partners and signal its influence to the rest of the industry. Its ties to firms like Nanosys or Uni-Pixel allow Samsung to bring ideas from the periphery of hardware development which will make Samsung more innovative.

Looking Inside the Circles

A firm's internal management and organizational structure can have a big impact on whether the firm maximizes network advantage. If we opened the circles that represent Sony and Samsung on our maps and looked inside at their internal organization and business processes, we would see that these companies are managed very differently.¹ These differences matter for the firms' ability to achieve network advantage. Sony and Samsung are similar in that they both have a product-based organizational structure, but the similarity ends there.

To continue with our Roman road network analogy, Londinium benefited from an internal street network planned for easy internal movement of goods and people. Samsung also had this kind of internal structure which allowed the information, cooperation, and power received from alliance partners to easily travel inside Samsung. In contrast, Sony had many high walls between its departments with very few access gates, so the information, cooperation, and power received from alliance partners got stuck inside its organization.

Sony: Divisions Rule

Let's take a look at Sony's internal management and organizational structure. In 2007, Sony had two content businesses—Sony Music Entertainment and Sony Pictures Entertainment—which were completely independent corporations with limited supervision from the company's headquarters.

The rest of Sony's organization consisted of nine hardware divisions including:

¹ Chang, S.J. 2008. Sony vs. Samsung: The Inside Story of the Electronics Giants' Battle for Global Supremacy. Wiley, Singapore.

- TV
- Video
- Audio
- Digital Imaging
- VAIO
- Semiconductors
- Core Components
- Connect
- Business and Professional

During the 1990s and 2000s, a series of reorganizations shifted a lot of authority and accountability to individual divisions from Sony's headquarters. Individual divisions were compensated for their performance based on division-level income statements and balance sheets, which encouraged short-term efficiencies at the expense of reducing long-term investments. These divisions also had to incur their own research and development costs because the centralized R&D function (including managing alliances) was shifted to them. These changes discouraged divisions from making investments that would benefit other divisions. Before the restructuring, R&D was done at the group level and it produced radically new products for Sony such as the Walkman and the PlayStation. In contrast, division-level R&D focused on producing new products and managing alliances only for individual divisions. Since the 1990s, this combined narrow focus on short-term efficiencies and shifting of R&D to the division level might have prevented Sony from introducing radically new products.

An even a bigger chasm existed between the hardware and content businesses. Not only were they operated from different continents, but also the interests of the hardware and content businesses often diverged. For example, illegal music sharing, which started in the 1990s, was a disaster for the content division, but it encouraged people to buy more powerful hardware, which was a boon for the hardware division. Sony failed to build on Apple's business model for a number reasons, most notably because Sony's content business felt that music could not be given away at a low price; yet this strategy formed the core of Apple's success.

As a result, information sharing across Sony's two major silos—hardware and content, as well as inside the hardware division itself—was very low. Consequently, the company's executives could not

understand how they could leverage the alliances of both divisions to achieve network advantage. The information, cooperation, and power that hardware alliances could have provided were also not leveraged by the content division, and vice-versa. By the time the different divisions were forced to cooperate and extensively share information from alliances, Sony had lost its lead in two crucial categories: televisions and portable music devices. Competitors had beat Sony in the race to flat-panel displays and digital music players like the iPod.²

Clearly, its organizational structure and conflicting incentives made it difficult for Sony to create synergies across different functional units. Headquarters could also have done more to help the firm achieve network advantage. For example, they could have promoted more cooperation and resource sharing between divisions as well as greater transfer of alliance learning across divisions. The company did not have a well-functioning and centralized alliance management function that could have trained executives to extract value from collaborations. Additionally, the company was not very good at looking outside to begin with. And headquarters did nothing to correct this problem.

Samsung: Strong Center Connects Divisions

Samsung also had a divisional structure, but the nature of communication between the different divisions was different. Employees at Samsung are fiercely loyal to the organization as a whole. Unlike Sony's divisions, business units in Samsung don't report separate balance sheets and income statements. All business units report to the Office of Secretaries, which was formerly called Group Strategic Planning Office. This HQ-level body oversees all major financial, strategic, public relations, and HR decisions. Because of the intervention of this coordinating body, divisions within Samsung are able to share resources and to create synergies.

In order to ensure cooperation across divisions, Samsung also runs cross-business teams. One example is the Digital Solutions Team, which develops digital convergence or network products. Even

² <http://www.nytimes.com/2012/04/15/technology/how-sony-fell-behind-in-the-tech-parade.html>

though divisions compete with each other, they often provide mutual assistance. For example, when the memory business experienced huge losses, it was supported by the home appliances and telecommunications divisions. Business units also closely collaborate when they develop new products. Ultimately, better information sharing and internal coordination across business units helps Samsung to transfer the knowledge and resources which they obtain across different alliances with different partners.

Comparing Network Advantage: Sony vs. Samsung

In Figure 2.7, we've provided a summary of the Sony vs. Samsung comparison. Seen from a first-degree perspective, they are similar except for Samsung's greater willingness to collaborate with partners. Seen from a second-degree perspective, the greater integration of the Sony portfolio is clear, and it has consequences for its innovation opportunities and network advantage. Finally, Samsung has a greater span of status in its partners, and none of its close collaborators have greater status than it does.

--- Insert Figure 2.7 about here---

Going Forward...

Now that you have experienced the differences between the first, second, and third degree perspectives on network advantage and have seen the need for internal coordination to realize network advantage, let's examine each of these perspectives in detail. In the next several chapters, we introduce tools you can use to evaluate and enhance your firm's first, second, and third degree network advantage.

Chapter Highlights

- Even firms that are similar at the first degree perspective, like Sony and Samsung, can have widely differing network advantage because their alliance portfolios are different from the second and third degree perspective.
- At the second degree perspective, the Samsung and Sony alliance portfolios are different because

Samsung has more unconnected “spokes” in its hub-and-spoke portfolio, while Sony’s portfolio is much more integrated. The hub-and-spoke configuration of Samsung has helped it make more break-through innovations, while Sony has been left making incremental improvements.

- At the third degree perspective, Sony and Samsung’s networks are also different because Sony’s main hardware partners have higher status than Sony, and they don’t depend on Sony as much as Sony depends on them. Samsung has partners with high (but equal) status to Samsung as well as low status partners from which it can draw innovative ideas. This too leaves Samsung better poised to make break-through innovations than Sony.
- Internally, Sony’s internal organization didn’t encourage different divisions to collaborate and share information from their alliances. Samsung’s divisions share a lot of information which allows it to transfer information, knowledge, and resources across its different alliances. Like Samsung’s alliance portfolio, its internal organization is geared toward break-through innovations.

Figure 2.1:
Sony's Alliances, First Degree Perspective

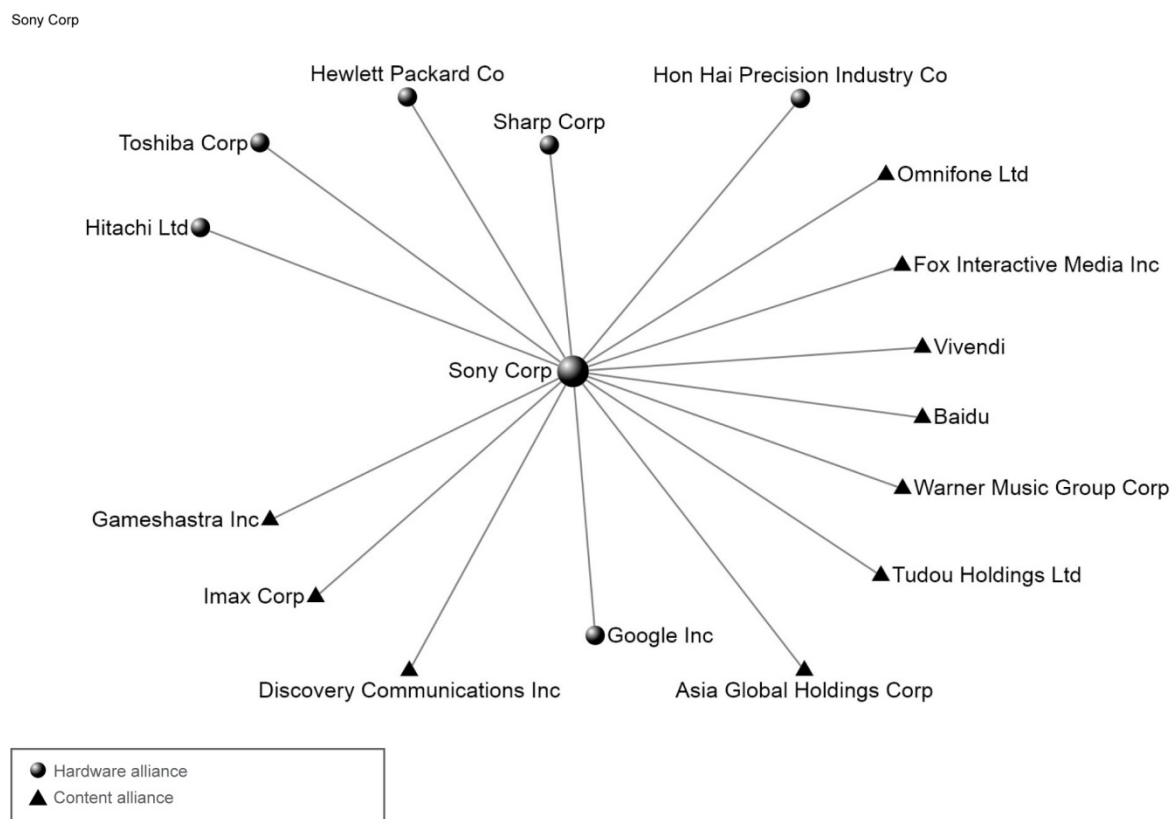


Figure 2.2:

Samsung's Alliances, First Degree Perspective

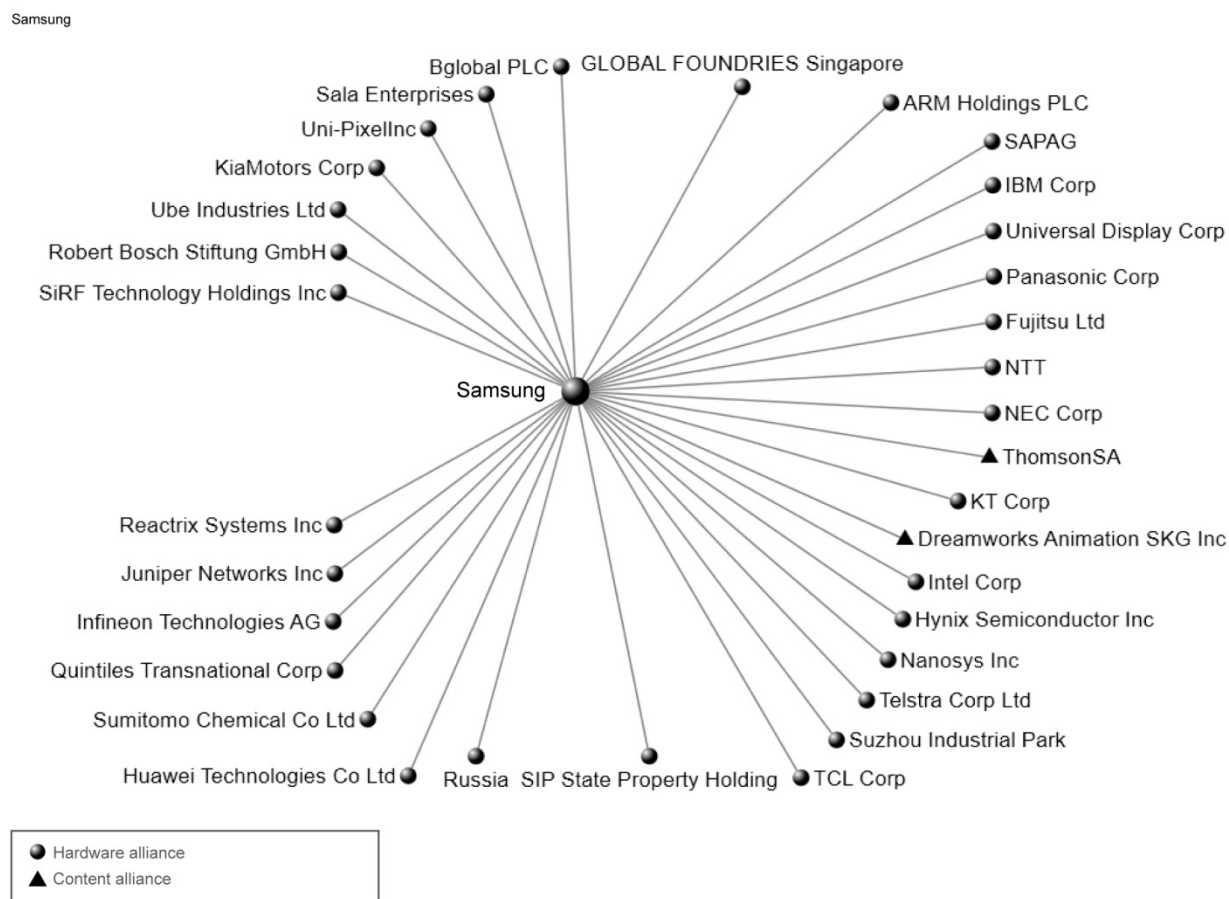


Figure 2.3:
Sony's Alliance Portfolio, Second Degree Perspective

Sony Corp 2nd degree

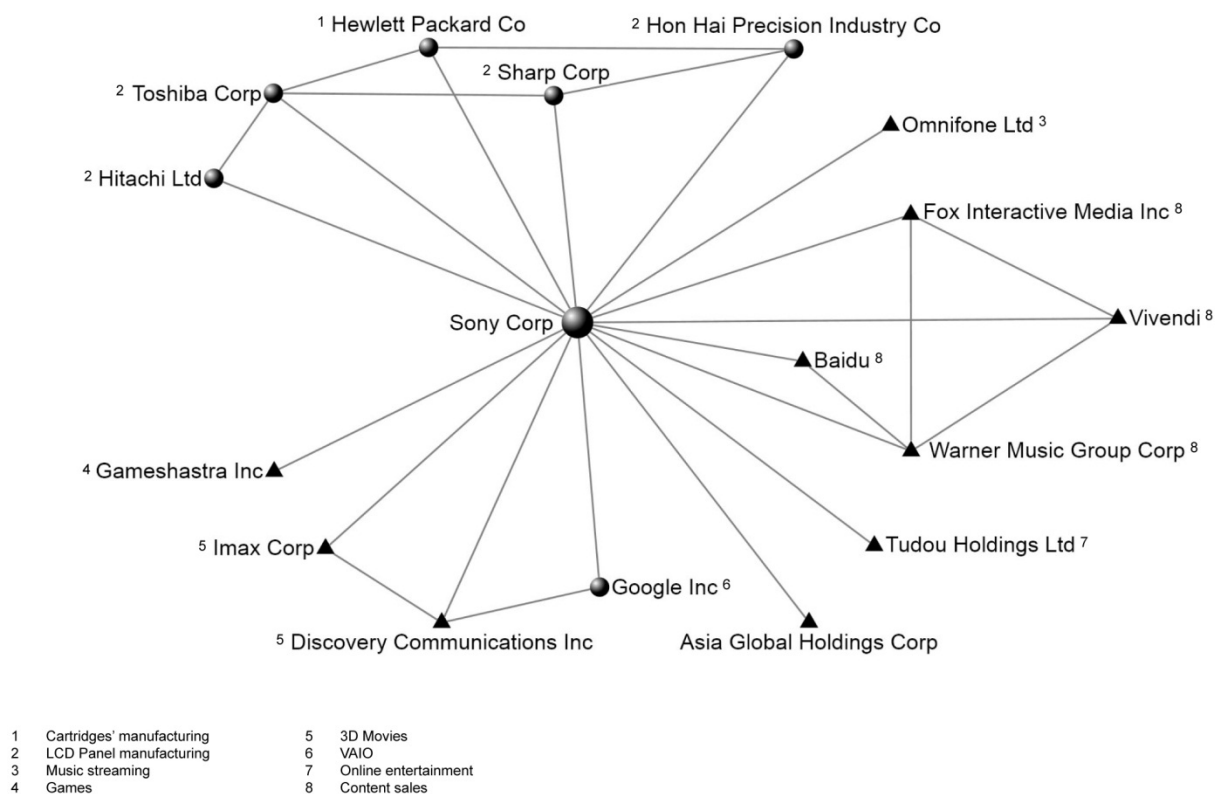


Figure 2.4:
Samsung's Alliance Portfolio, Second Degree Perspective

Samsung

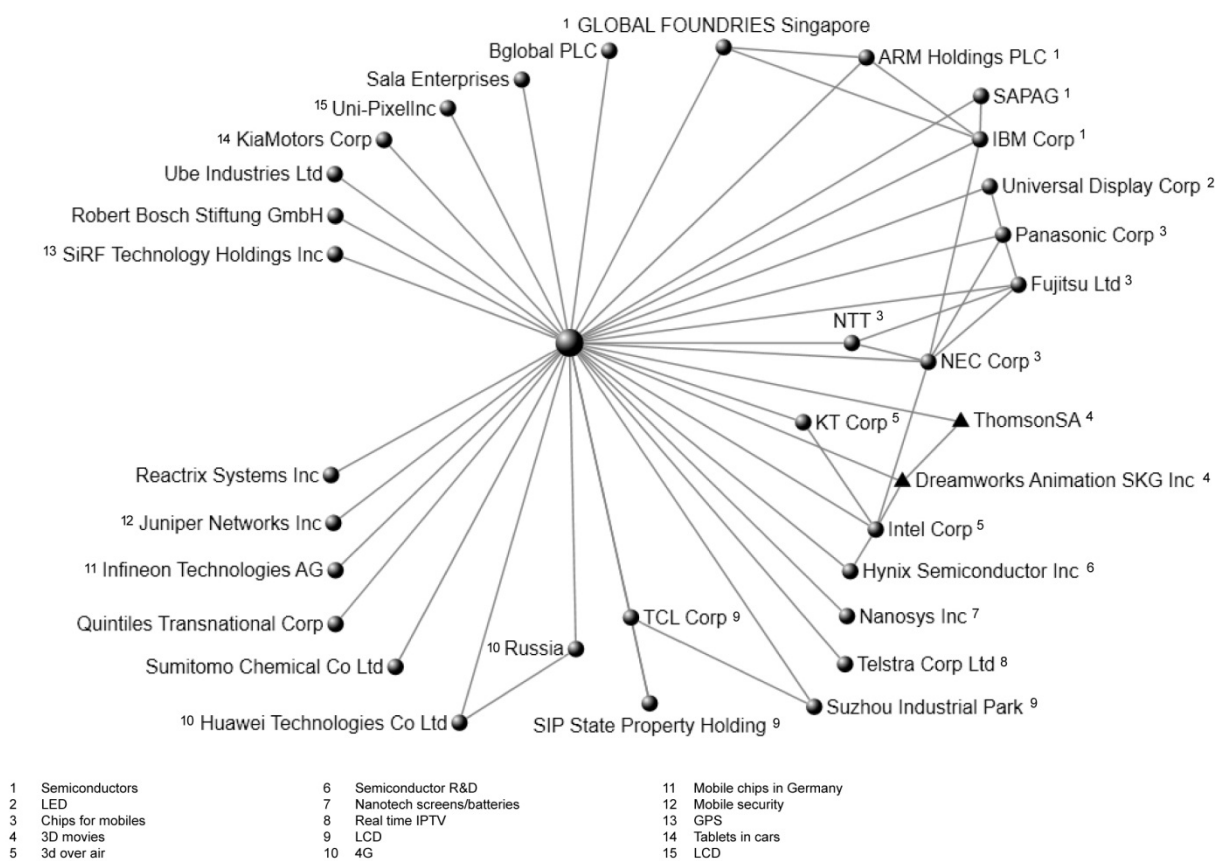


Figure 2.5:
Sony's Alliance Network, Third Degree Perspective

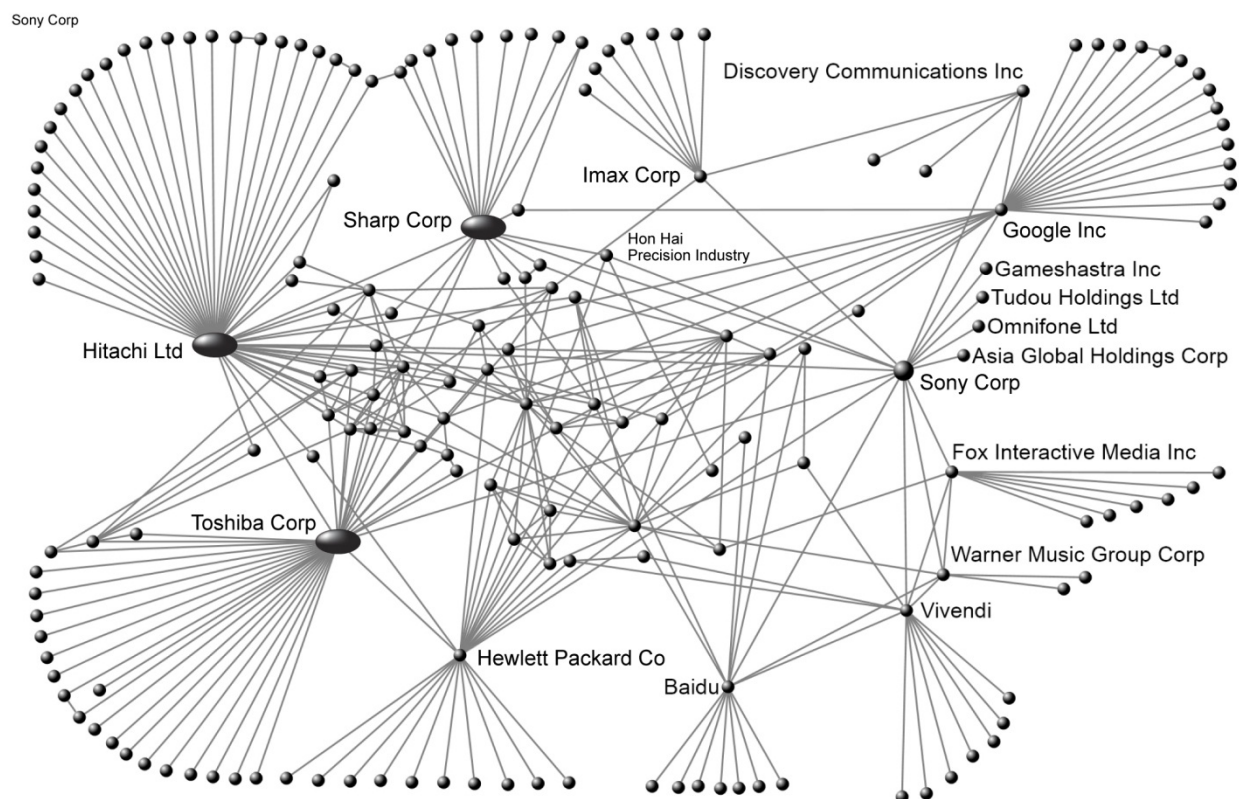


Figure 2.6:

Samsung's Alliance Network, Third Degree Perspective

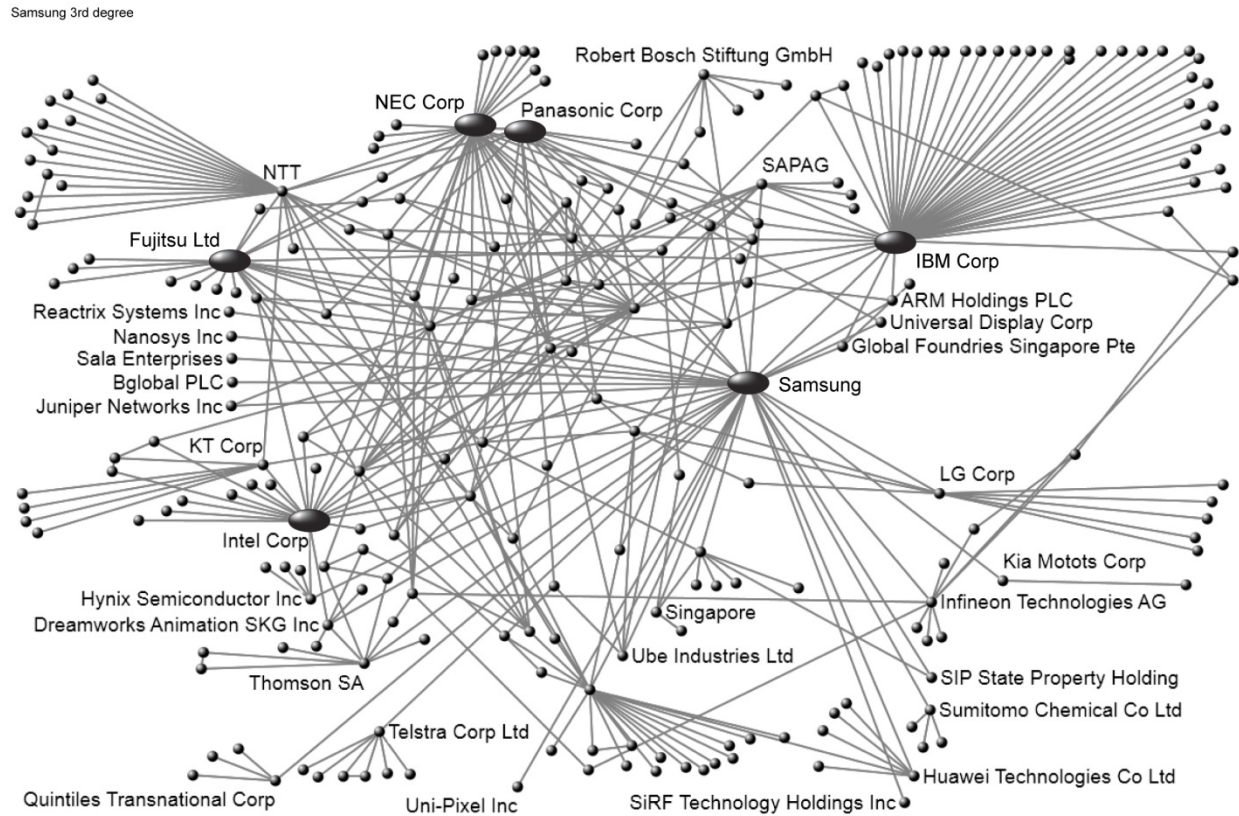


Figure 2.7:**Sony vs. Samsung Network Advantage Comparison**

	Sony	Samsung
<u>First Degree Perspective:</u>		
Complementary and compatible partners	Yes	Yes
Number of Partners	16	34
Willingness to collaborate	Lower	Higher
<u>Second Degree Perspective:</u>		
Portfolio Configuration	Hybrid, but close to an integrated	Hybrid, but close to hub and spoke
Unconnected partners	Only 6 out of 16 partners (37.5%)	22 out of 34 partners (65%)
	Fewer than Samsung	More than Sony
Connected Partners	10 partners in 3 clusters (62.5%)	12 partners in 4 clusters (35%)
Innovation Opportunities	Incremental innovation potential in hardware due to large clusters of integrated partners	Breakthrough innovation potential in a wide variety of areas
	Radical innovation potential across content and hardware due to unconnected partners	
<u>Third Degree Perspective:</u>		
High Status Partners	Sony's main hardware partners have higher status than Sony, so Sony depends more on them than they do on Sony	Samsung has more relationships with equal status partners, no partners have much higher status than Samsung
Low Status Partners	Sony lacks low status partners in the rapidly changing hardware industry to draw ideas from	Samsung has more low status partners in the hardware to draw innovative ideas from
	In content, Sony has a few low status partners and smaller status differences that may allow greater collaboration	
<u>Internal Organization:</u>	Organizational structure featured independent divisions and conflicting incentives which discouraged information sharing across divisions	All divisions report to strong central Office of Secretaries
	No centralized alliance management function	Office of Secretaries connects divisions and promotes sharing information through cross-business teams (e.g. Digital Solutions Team)
	Internal organization didn't encourage different divisions to collaborate and share information from different alliances.	Internal organization allows transfer of information, knowledge, and resources across its different alliances.

