

Global Expansion Strategies for Software Firms

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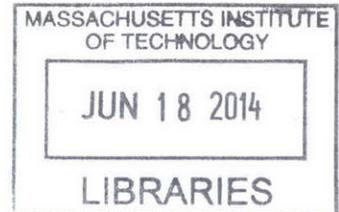
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ABSTRACT

The business competition in the software industry is increasingly becoming a global competition. In this era with a fast-paced innovative environment, strategy plays an important role for managers in software companies in defining its own globalization approach. This thesis discusses the competitive dynamics of a wide variety of product segments in the software industry – IT services, packaged software, Internet services and e-commerce – to illustrate the different nature of the business in the software industry, especially with the focus on globalization. The work first discusses the current global competition in the software industry. The analyses cover the competitive landscape in certain product segments as well as in certain regions. Second, a Global Winner-Takes-All-or-Most framework is introduced to simplify the thought process in determining which business a firm is competing in, what are the implications of global competition and what a firm should think through when it considers international expansion to another country or region. Third, a DAC framework (local demand, accessibility and complementarity) is also introduced to simplify the thought process in determining which countries or regions a firm should focus its resources on, along with the implications of competition and what a firm should think through. Next, three aspects of execution implications – new market expansion, organizational design and leadership - are discussed. These frameworks and findings are backed up with sketches of global software firms to highlight the best practices in the software industry in terms of globalization, with an emphasis on software firms. Finally, a summary of the findings from this research and recommendations are provided for software firms headed for globalization.

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Chapter 1 INTRODUCTION

In the software business world, global expansion has become one of the key managerial agenda items. Some firms view global expansion as an opportunity for organic growth. Other firms view it as a compulsory move to survive the global competition. Despite the fact that many software firms around the world have tried global expansion, most of the well-known global software firms have originated in the United States, such as Google, Microsoft, IBM and Oracle. There are just a few exceptions such as Skype, SAP, Infosys and Rocket Internet that have been successful in building a global software businesses. This is striking considering that there are a significant number of businesses that originated from outside the United States and are established as global players.

On the other hand, the business dynamics of the software industry are very different in the regions of the world. In some of them, global competitors keep more than 90% of local market share, offering high quality technical services that are very difficult to imitate. In others, local competitors are the ones who prevail in the game, even if they frequently present a lower quality than their global counterparts.

The extreme differences between markets such as Japan, Korean, China and Latin America was the key factor that motivated a deeper analysis to find out the root causes. Market size, cultural behavior, level of appreciation for local services, local customization and network effects, among many others, were some possible factors that were in mind when this research began. The main goal in conducting this study was not only to arrive at a logical framework that could explain the described dynamics, but also to generate reasonable recommendations for future local and global players trying to compete in different markets.

It is worthwhile to analyze how global strategies for a software business differ from other businesses, and to provide a framework for redefining global strategies of software firms. Even if each country or region has specific characteristics and behaviors, it is possible to find some common factors that could explain the outcomes of global and local players on their environments. In particular, the different services have certain characteristics that make them more attractive for either local or global competitors, but at the same time, the regions themselves have different cultural approaches and technical development levels. Therefore, the problem and its analysis can be seen as a matrix where services and geographic characteristics interact with each other. This thesis discusses many factors in the issues such as:

- What are the key factors that explain such variable scenarios?
- What are the industry-specific attributes that are driving this phenomenon?
- What are the implications in the ever-increasing global competition in the software industry?

- Which types of businesses (e.g. packaged software, Internet services, IT services and e-commerce) are well-suited for gaining global dominance?
- What are the main opportunities for global and local competitors?
- Is there any general strategy that these different players could follow?
- What strategies can they take in entering new markets?
- What are the organizational structures and knowledge sharing processes that enable these firms to compete in a global scale?
- What are the leadership qualities that are required for leading and managing a globalized software firm?

1.1 WHY SOFTWARE BUSINESS IS IMPORTANT

Marc Andreessen states that “*Software is eating the world*” [Andreessen, 2011]. Now, the largest bookseller in the world is Amazon, the largest video service is Netflix, the largest music company is Apple and the largest telecom company is Skype. Further down the road, Kickstarter and Quirky are disrupting the manufacturing industry and Uber is disrupting taxi industry. Clearly, the software business has become a large industry by itself, but it is more than that – every manager in every business needs to understand the mechanism of the software business to sustain and expand their own businesses.

It is now over 60 years since ENIAC’s first switches were flicked on and the first program ran. In six decades of continuous evolution, the software business has gone from an age of mainframe computers to personal computers, Internet, mobile devices and social networks. In the beginning, businesses considered software as a way to automate processes, contributing to productivity by speeding up what was already being done. But over time, software became recognized not just as an automation tool but more broadly as a strategy for providing products and services not yet offered. The software industry has changed more in the last five years than in the previous twenty. As hardware becomes ubiquitous and commoditized, software is becoming more pervasive and important. In this world, software is constantly expanding its reach into new domains. Sixty years from now, today’s software will look as primitive as ENIAC’s design does to us.

There have been many debates on whether the software business is really different from other businesses. Some observers believe that software’s special characteristics such as malleability, negligible duplication costs and low distribution costs make it unique. The “network effect” that enabled Microsoft Windows to

become dominant and the “ecosystem” that enabled Apple’s mobile products to thrive in their category are clear examples of how the software business is different, to a certain degree, from other businesses.

Another important realization is that the software business has become a global phenomenon. Some businesses dominate the world, whereas some businesses are more or less dominated by local players. It is important for managers to understand the nature of their business from a global standpoint and to define whether their business battles should be fought at a global level or local level. Since the sub-segments in the software industry behave in different manners, it is useful to look into each sub-segments and to define the key driving forces of each segment to better understand its implications.

1.2 WHY GLOBALIZATION IS IMPORTANT FOR SOFTWARE FIRMS

Globalization is changing the competition in the world of software. There are widely different views on how the globalization is changing the competitive landscape.

On one side of the spectrum, Thomas Friedman contends in his book that we are living in a world that is shifting to a “leveled playing field,” where we can move in a frictionless way across geographic space and time in a seemingly flat world. Innovations in information technology such as the personal computer, fiber optic cables and work flow software have resulted in the massive digitalization of information. This has created a plinth where intellectual capital and knowledge-intensive products can be produced, disaggregated, distributed, put back together again and delivered anywhere at any point in time [Friedman, 2005]. This view of the world suggests that more consolidation will happen, and thereby more players will dominate each product segment, with less local firms holding market presence in their home countries.

On the other side of the spectrum, Pankaj Ghemawat contends that the current state of the world is one of semi-globalization. Levels of cross-border integration are generally increasing and, in many instances, setting new records but fall far short of complete integration and will continue to do so for decades [Ghemawat, Redefining Global Strategy, 2001]. He describes how distance still matters in an Internet world and how maintaining realism about cross-border strategies will add value in the face of large cross-border differences. This view of the world suggests that there will still be regional niches in the world where local firms will still be powerful in the near future and that firms headed for globalization need to take this into account.



Figure 1 *The World is Flat* [Friedman, 2005]

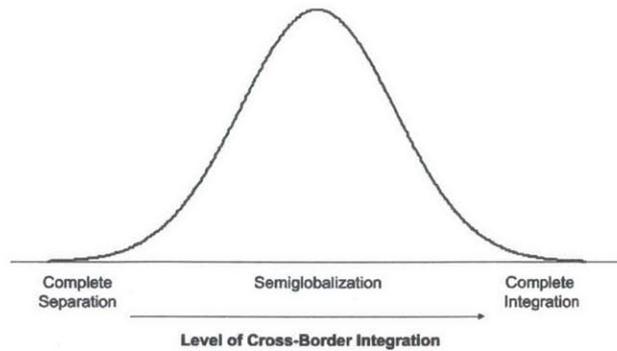


Figure 2 *The World is not Flat* [Ghemawat, *Redefining Global Strategy*, 2001]

An important thing to note is that the conventional globalization strategies were developed in the 1980s-1990s when a large portion of the world's GDP was shared among North America, Western Europe and Japan. However, this standing in the world has changed dramatically over the past 20 years. Now China has surpassed Japan in terms of GDP and other emerging countries such as India, Russia, Brazil, Mexico and the ASEAN region are seen as the growth engines of the world. With the ever-increasing complexity of the global competition and with the management challenges of expanding into multiple countries or regions, there is a need for a structured approach to define how to compete in this new age.

1.3 WHY STRATEGY IS IMPORTANT FOR THE GLOBALIZATION FOR SOFTWARE FIRMS

Competitive intensity is at an all-time high as a result of globalization, technology, fragmented consumer groups and shifting power along the supply/demand chains. But while gaining a competitive advantage is harder than ever, strategy is being pushed off the management agenda. In the software industry, there was a time that the pace of innovation was seen as the dominant key success factor. More recently, many firms believed that their operational excellence was what brought value to their customers, and therefore grew their competitive positioning. These gross assumptions were partially true when the barriers to entry into the software industry was high because the investment costs were high. However, this is an age where any company can launch a business with a single laptop and with one person running the business, using various partner networks including crowd sourcing. The software industry has become a crowded market in which the managers need to define its unique positioning, rather than simply following the others. Furthermore, due to the fast-paced evolution of the industry, firms no longer have the luxury of sticking with their original business idea; they need to keep reconsidering their strategy to survive.

Michael Porter defines strategy in his research [Porter, *What is Strategy?*, 1996] as follows:

1. Strategy is the creation of a unique and valuable position, involving a different set of activities.

2. Strategy requires you to make trade-offs in competing—to choose what not to do. Some competitive activities are incompatible; thus, gains in one area can be achieved only at the expense of another area.
3. Strategy involves creating “fit” among a company’s activities. Fit has to do with the ways a company’s activities interact and reinforce one another.

Strategy is increasingly important for software firms. But more specifically, Michael Cusumano argues that taking strategy as a dynamic view, rather than a static view, is crucial in striving in the era of global competition in software.

“Managers who can turn their products into industry-wide platforms or complements whilst cultivating global ecosystems of innovation, and develop services to make their product businesses more distinctive and resilient, will find themselves better able to survive and thrive in many different conditions.”

[Cusumano, 2010]

1.4 THE OUTLINE OF THIS THESIS

The software industry is an industry with various sub-segments that have widely different dynamics. This thesis will cover a wide variety of product segments in the software industry – IT services, packaged software, Internet services and e-commerce – to illustrate the different nature of the businesses in the software industry.

Chapter 2 reviews the current global competition in the software industry. The analyses cover the competitive landscape in certain product segments as well as in certain regions.

Chapter 3 discusses the attributes that differentiate the competition (global dominant vs. local dominant) for a certain product segment. A Global Winner-Takes-All-or-Most framework is introduced to simplify the thought process in determining which business the firm is competing in, the implications of global competition and how a firm should think it through when it considers international expansion into another country or region.

Chapter 4 explores which countries or regions software firms should enter, given the nature of the product segment they are competing in as defined in Chapter 3. The DAC framework (local demand, accessibility and complementarity) is introduced to simplify the thought process in determining which countries or regions the firm should focus their resources on, as well as the implications of competition and what a firm should think through, given the product segment analysis proposed in Chapter 3.

Chapter 5 discusses the implications for execution in globalization for software firms. Three aspects – new market expansion, organizational design and leadership - are discussed in this chapter.

Chapter 6 presents sketches of globalized software firms to highlight the best practices in the software industry in terms of globalization. An emphasis is given to software firms that have originated outside the U.S. such as Skype, TCS, SAP and LINE. These firms provide valuable insights into how firms born outside the strongest home base for software have structured their strategy and aligned their execution for globalization.

Chapter 7 offers the conclusions of this thesis. The chapter summarizes the findings from the research and provides recommendations for software firms headed for globalization.

Chapter 2 GLOBAL COMPETITION IN THE SOFTWARE INDUSTRY

There are many software firms around the world, but interestingly most of the leading software firms have originated in the United States. The names that come up when you ask someone about a software firm they know include Apple, Google, Facebook, IBM, Microsoft, Amazon or Oracle. All of these firms originated in the U.S., especially on the West Coast. When you look at each product segment of the software industry (packaged software, IT services, Internet services and e-commerce), seven out of the top ten firms are from the U.S. This is an interesting phenomenon as compared to other industries where you can easily spot non-U.S.-based firms in the top 3 (e.g. Apple vs. Samsung, GM vs. Toyota, GE vs. Siemens, etc.). Some might argue that this is a natural consequence that stems from the market size of the home market, but this reasoning does not fully explain the huge dominance that the U.S. firms has over firms from other regions such as Europe or Japan that often have a strong presence in other industries. The number also stands out when compared with other industrial groupings such as the Fortune 500 (190 out of the top 500 are from the U.S.) or the Interbrand Best Global 100 (57 out of the top 100 are from the U.S.) [Interbrand, 2013].



Best Technology Brands

Rank	Brand Name	Brand Value (\$m)	Change in Brand Value
1	Apple	98,316	28%
2	Google	93,291	34%
5	Microsoft	59,546	3%
8	Samsung	39,610	20%
9	Intel	37,257	-5%
13	Cisco	29,053	7%
15	HP	25,843	-1%
18	Oracle	24,088	9%
25	SAP	16,676	7%
52	Facebook	7,732	43%
61	Dell	6,845	-10%
79	Adobe	4,899	8%

Figure 3 10 out of 11 best technology brands are from the U.S. [Interbrand, 2013]

What is the mechanism behind this polarization? What are the industry-specific attributes that are driving this phenomenon? What are the implications in the ever-increasing global competition in the software industry? These are the questions this study attempted to answer.

That is only half of the story. When you look from a global distribution level, you can see that there is a strong gap in how dominant the products/services are that have originated in the United States. For example, Google's search engine is by far the predominant search engine in North America, South America, Western Europe and Oceania, but is less so in Russia and East Asia [Query Click, 2012]. When you look at the market share of messaging apps, you see a similar situation again. U.S.-born Whatsapp and Facebook messenger have strong footholds in Europe, perhaps even stronger than in their home country, whereas they have weak positioning in East Asia [Techcrunch, 2012]. There must be some logic to explain the geographical disparity of these services' strengths.

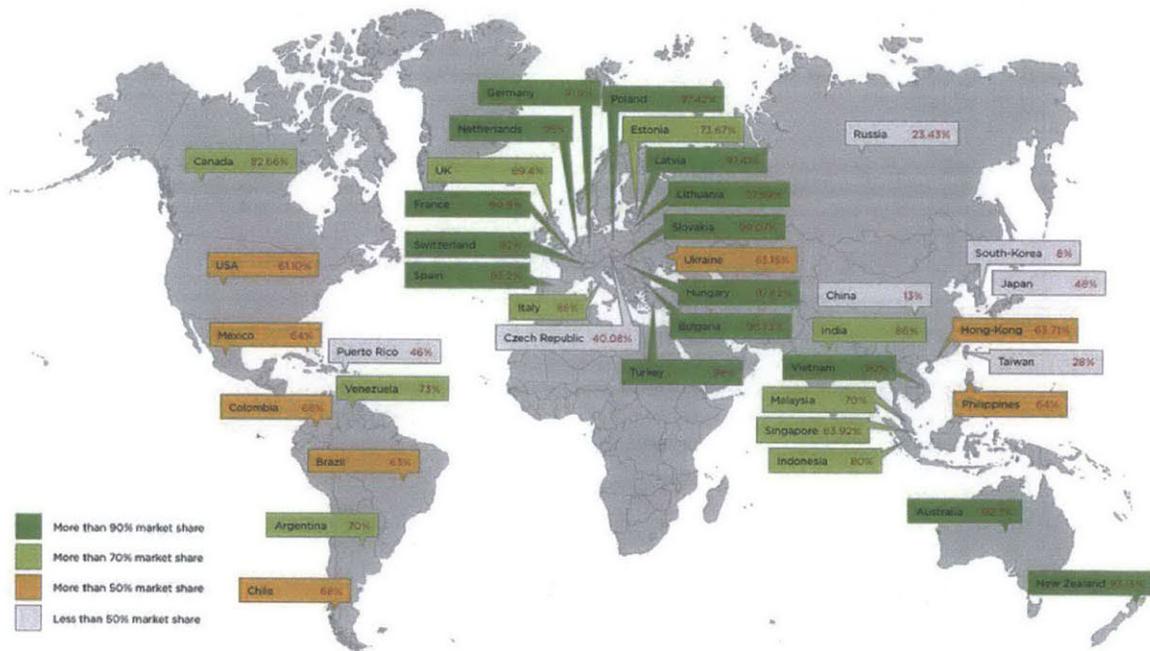


Figure 4 Google's market share in different regions [Query Click, 2012]

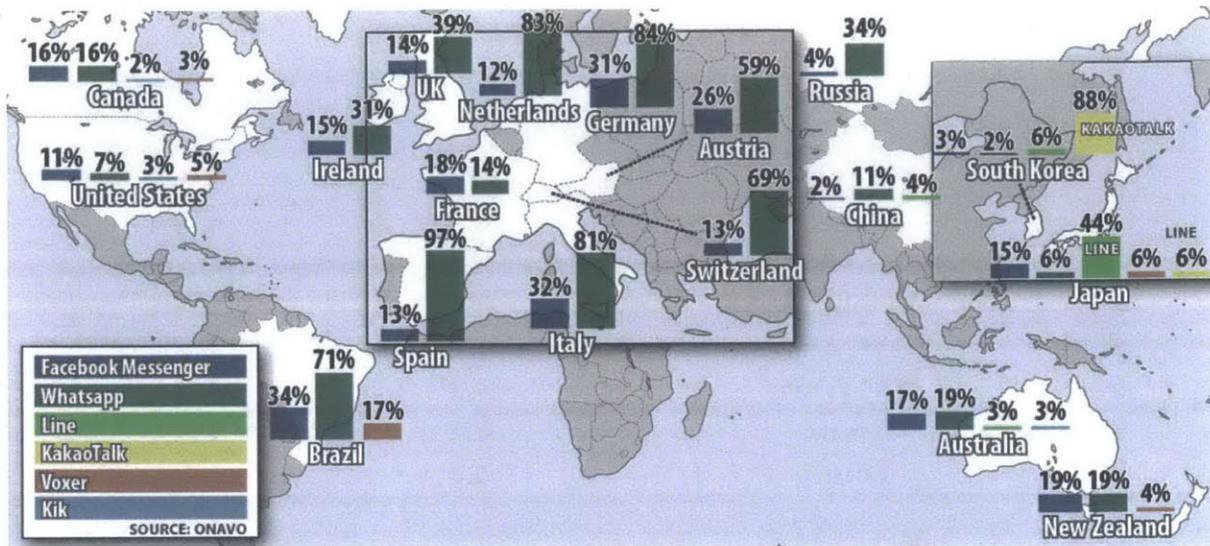


Figure 5 market share of messaging apps in different regions [Techcrunch, 2012]

2.1 MARKET SNAPSHOT WITHIN PRODUCT SEGMENT

In the packaged software product segment, seven out of the top ten firms are from the U.S., including Microsoft and Oracle. In the IT services product segment, seven out of the top ten firms are from the U.S., including IBM, HP and Accenture. When comparing the companies for global penetration, U.S.-based firms dominate the list.

2.1.1 Packaged software

As can be seen from Figure 6 the packaged software product market is a highly oligopolistic one with the top 3 firms controlling a big portion of the market. It is interesting to note that SAP and Amadeus, the two non-U.S. firms represented in the ranking, are players that offer products that have characteristics of cross-border transactions (e.g. dealing with different tax regulations among regions, aggregating the information gathered from multiple regions).

Largest Software Product Firms

Ranking	Company	Revenues (US\$Bn, 2013)	Home Country
1	Microsoft	77.8	USA
2	Oracle	37.1	USA
3	SAP	22.9	Germany
4	Symantec	6.7	USA
5	CA	4.7	USA
6	VMWare	5.2	USA
7	Adobe	4.4	USA
8	Intuit	4.1	USA
9	Amadeus	3.7	Spain
10	Check Point	1.3	Israel

Figure 6 Largest Software Product Firms (data from each firm's IR report)

2.1.2 IT Services

IT services seems to have a rather equal split among the U.S., Europe and Japanese players. This could be attributed to the nature of the business, where local consultation, customization and delivery are highly appreciated, and to its nature that it is a highly labor-intensive market.

Largest IT Services Firms

Ranking	Company	Revenues (US\$B, 2011)	Home Country
1	IBM	60.0	USA
2	HP	35.8	USA
3	Fujitsu	25.4	Japan
4	Accenture	25.3	USA
5	CSC	16.2	USA
6	NTT DATA	13.7	Japan
7	Capgemini	13.4	France
8	Lockeed Martin	13.0	USA
9	Xerox	12.6	USA
10	Oracle	12.1	USA

Figure 7 Largest IT Services Firms [Gartner Report, 2012]

Note that this is solely a comparison in terms of revenue. When you look at it in terms of the numbers, one can see a hugely different landscape. Four firms out of the top 10 in the number of employees are

from India. Many of the top firms have more employees in India than in their home country. This raises two questions: if India has so many software engineers in the region, why aren't Indian software firms seen in other market segments? Why were the Indian firms successful in becoming the top firms specifically in the IT services segment? Chapter 4 answers these questions through examining the success of Tata Consultancy Services (TCS).

Largest Internet Services Firms by number of employees

Ranking	Company	Employees (2011)	Home Country
1	IBM	433,362	USA
2	HP	349,600	USA
3	Hitachi	323,540	Japan
4	Accenture	236,000	USA
5	TCS	198,514	India
6	Cognizant Technology	133,700	India
7	Infosys	130,800	India
8	Lockheed Martin	123,000	USA
9	Wipro	120,000	India
10	Capgemini	119,707	France

Figure 8 Largest Internet Services Firms by number of employees [Gartner Report, 2012]

It is also important to note that the history of IT Services was to serve the local demand of the clients. Since one of the key constraints was in streamlining the communication with the clients' IT department, and since the IT department was located in their home countries, the firms that resided in countries that had large firms in their home countries had a competitive advantage. Now that the competition in several product segments have become global, and that the firms are quickly consolidating on a global level, the IT services firms also need to globalize to meet clients' global needs. For example, NTT DATA, one of the top Japanese IT Services firm is aggressively expanding its footprint through M&A into the U.S., Europe, Latin America and Asia to serve its clients' diversifying needs. Also, another big trend is offshoring to countries such India and China, where the labor costs are significantly lower as compared to the more developed countries. This is creating a situation that many of the top firms are outsourcing to these countries, and Indian players such as TCS, Infosys and Wipro are quickly gaining power in terms of business process outsourcing (BPO) areas.

2.1.3 Internet services

Internet services is another market that is widely dominated by the U.S. firms. The only exceptions are the Chinese firms Baidu and Tencent and Yahoo! Japan, which is a joint venture with the U.S. based Yahoo!

and the Japanese IT conglomerate Softbank. The success of Chinese firms owes heavily to the Chinese government's policy of creating a "Great Wall" of Internet close-door policy in which it was able to slow down the international platform's market penetration in mainland China. This government support added to the large user base in the home country pushed these firms to a level in which they are evaluated at a level comparable to the U.S. firms that operate on a global scale. As for Yahoo! Japan, the firm's success relies heavily on the firm becoming the dominant player in Japan, the third biggest economy in the world, without worrying about the entrance of cash-rich overseas competitors.

Largest Internet Services Firms

Ranking	Company	Market Value (US\$B, 2012)	Home Country
1	Apple	373.0	USA
2	Google	177.0	USA
3	Amazon	108.0	USA
4	Facebook	77.0	USA
5	Baidu	46.0	China
6	eBay	42.0	USA
7	Tencent	41.0	China
8	Priceline.com	24.0	USA
9	Yahoo!	20.0	USA
10	Yahoo! Japan	20.0	Japan

Figure 9 Largest Internet Services Firms by market value [KPCB, 2012]

2.1.4 E-commerce

E-commerce is a market that is least dominated by the U.S. firms. Only five firms make it to the top 6 e-commerce firms. Amazon is by far the largest player in the field, thanks to its strategy of entering focused markets such as the U.S., Japan, China, UK, Germany and Spain that have strong e-commerce demand. These numbers suggest that the revenue volume comes from these large markets. That said, it is also true that the local players are enjoying its share from the strong positioning in their respective countries. Otto, Alibaba, JD.com, Rakuten and Mercado Libre are regarded as influential software firms in their own country.

Largest e-commerce Firms

Ranking	Company	Revenues (US\$B, 2013)	Home Country
1	Amazon	74.5	USA
2	Apple	18.3	USA
3	Otto GmbH	16.1	Germany
4	eBay	16.0	USA
5	JD.com	9.6	China
6	Alibaba	7.5	China
7	Rakuten	4.6	Japan
8	Netflix	4.3	USA
9	Groupon	2.5	USA
10	Airbnb	1.7	USA

Figure 10 Largest e-commerce Firms (data from each firm's IR report)

2.2 MARKET SNAPSHOT WITHIN REGIONS

Competition in Internet services varies among regions and among the types of services as illustrated in Figure 11. This study surveyed whether each service type and country/countries fell within a global player dominant area. This means that the global platform companies such as Google, Amazon.com or Facebook have the largest market share in the area, whereas local player dominant means that the local platform companies have the largest market share. For instance, many services in the Spanish-speaking LATAM countries are global player dominant, while many services in Korea are local player dominant and countries such as Brazil and Japan sit in the middle. There is also a big difference among services. For example, portals, online auctions and e-commerce are local player dominant across all countries that were surveyed, whereas cloud storage and personal SNS service are global player dominant in all markets (except China where political power comes into play).

At a high level, the pattern of international competition differs markedly from product to product. At one end of the spectrum, the competition seems to be a global one where the giant multinationals deliver universally-accepted products to the whole world and compete for dominance. At the other end of the spectrum, the competition seems to take place on a country-by-country basis. Some players are multinational companies, but there seems to be a limited correlation between how much market power they possess in one country with how well that firm performs in another region. It seems as though there is global player dominance when the network effect is valid in the local market, a single unified service is well-accepted in the local market and investment in the local market is minimal. Conversely, there seems to be local player dominance when the network effect of products/contents from other markets is not valid

in the local market, the unified service is not attractive for the local consumers and there is a strong need for local investment and/or partnership.

It is true that there are various factors that make or break a successful company in a microscopic view such as management caliber, business strategy and volume of investment. However, it is interesting to analyze these examples and understand what are the key underlying success factors driving the results. It is important to keep this analysis at a high level to understand the big picture of the competition within each region and across regions, but to also provide examples to facilitate the explanation of the larger framework. The differences in detail are discussed in the following chapters.

		Countries					
		China	Korea	Japan	Brazil	LATAM(Spanish)	UK
Product Segment	Online auction	Alibaba	Auction	Yahoo auction	Mercado Libre	Mercado Libre	Diversified
	E-commerce	Alibaba	G-Market	Rakuten	Americanas.com	Mercado Libre	Amazon.com
	Daily deals	Alibaba	Ticket Monster	Ponpare	Peixe Urbano	Groupon	Groupon
	Music	Baidu	melon, Naver, Bug	Recochoku	Sonora	Apple	Apple
	eBook retail	?	Yes24	?	Amazon.com	Amazon.com	Amazon.com
	Portal	Baidu	Naver	Yahoo! Japan	UOL/MSN/Terra	Terra	Yahoo
	Chat	WeChat	Kakao Talk	LINE	MSN MESSENGER	?	?
	Search	Baidu	Naver	Yahoo! Japan	Google	Google	Google
	Video streaming	Youku	Youtube	niconico	Youtube	Youtube	Youtube
	SNS (professional)	?	LinkNow	Wantedly	LinkedIn	LinkedIn	LinkedIn
	SNS (personal)	Tencent	Facebook	Facebook	Facebook	Facebook	Facebook
	Cloud storage	?	Dropbox	Dropbox	?	Dropbox	Dropbox

Figure 11 Example of the dominant player in each region in each product segment

When you compare the figures of the top firms, whether it is international revenue, profit or market value, U.S.-based firms are by far the leaders of the markets. What is more interesting is that when you look at the dominant players in each country, U.S.-based firms have a home-field advantage in the U.S. and enjoy a strong standing in Spanish-speaking Latin American markets. However, they suffer immensely in Asian countries such as China and Korea, and to a lesser extent in Japan. This section discusses the different characteristics for the markets in Japan, South Korea, Spanish-speaking Latin America and Brazil.

2.2.1 Characteristic of market – Japan

The Internet and mobile services market in Japan is characterized by three factors: high Internet penetration rate, high mobile phone penetration rate, and high average revenue per user (ARPU). 79.1% of the total population use the Internet [Ministry of Internal Affairs and Communications, 2013]; the penetration rate of mobile phones is about 108% [Ministry of Internal Affairs and Communications, 2013]; and it is estimated that in 2014 more than 50% of mobile phones users have smartphones. From

these statistics, one can conclude that the Japanese market is big enough for service providers to grow and keep their businesses with sufficient earnings, so they usually try to build their businesses by first focusing on the domestic Japanese market. Both the business volume and the language and cultural difference in Japan basically require service providers to localize their services to fit well with Japanese customers. So some global platform players have succeeded in entering the Japanese market very well, but some local platform players have succeeded in creating entry barriers to global platform players. The following points describe relevant characteristics of the Japanese market.

High Internet penetration rate: about 80 % of the people are using the Internet in their private lives and/or offices, which means more than 100 million people (80% of total population of 130 million) have access to the Internet. This figure is large enough for service providers to grow within the market, so they tend to focus on creating localized services to earn sufficient sales and mostly don't intend to globalize their services. This figure is also good for global platform players and many of them have been trying to enter the market. For example, Amazon, Facebook, YouTube and Twitter are very successful in Japan. However, LinkedIn, Groupon, and iTunes are not. An analysis of why they succeeded or not is presented later in this chapter.

High mobile phone penetration rate: After 1997, the penetration rate of mobile phones in Japan expanded and people have gotten used to utilizing mobile phones in their personal and public lives. After a great mobile service, i-mode, was released by NTT Docomo in 1997, many varieties of mobile web services and content have been flourished and people have learned how to use and consume those services via mobile phones. With the well-trained and sophisticated customer base, rapidly growing use of smartphones is now capturing business opportunities in this mature market.

Cultural uniqueness and the preference for local preference: in general, Japanese people prefer manufactured products made in Japan such as cars, stereos and TVs. However, they show respect for those products produced by Apple, BMW and Louis Vuitton and don't care about nationalities in web services. They love products and services that give the users new experiences and satisfaction. In the younger generation, more and more people are getting used to using mobile phones, the Internet, and SMS as usual things. Thus, Japan is one of the most cultivated countries in the world in terms of web literacy.

Therefore, local and global platform players have equal opportunities to be successful in the Japanese market if their services are good enough for the customers.

2.2.2 Characteristic of market – South Korea

In most IT service categories, local players are dominant in Korea. Many leading American platforms entered this country but in most cases failed to have as much success as in the U.S. As previously noted, Korea is the only country where Google has below a 10% market share. Groupon started its business in Korea two years ago and currently has only a 10% market share, while other two local leaders – Ticket Monster and Coopang - have 40% and 30% respectively. In e-commerce, Amazon has not introduced its online retail service in Korea and is just preparing to start its e-book content distribution. As Korea is a small market (50 million people), it is not worth it for Amazon to build up its logistics with a large investment. From that reason, two local e-commerce services, G-market and Auction, are dominant.

There are reasons why local Internet services are more popular than global leader services in Korea:

High mobile and internet penetration rate: The Korean infrastructure for Internet and mobile business is the best in the world. The average Internet speed is 14 megabytes per second [Statistica, 2013], twice faster than in the US. Mobile penetration at 91% is also number one in the world [WebsiteOptimization.com, 2010]. Such a good infrastructure enabled advanced local Internet services to emerge in this country. Cyworld was introduced earlier than Facebook and various social network services became popular in Korea ahead of the US. As Internet speed is fast, Korean people spend much time in searching for information from the Internet. High mobile penetration is also acting to nurture local businesses. KakaoTalk, the most successful multi-platform texting app in Korea, got started by using the address book on mobile phones similar to how Zynga first used the Facebook platform. When a young Korean entrepreneur founds a start-up, at least 70% of the ideas are related to the Internet and/or mobile business.

Unique culture and the preference for local products: Another reason why global players have a hard time in Korea is the unique culture. Korea has largely consisted of a single people, Koreans, for thousands of years and not many immigrants live in this country. In such a high context culture, people usually communicate implicitly rather than explicitly, and this culture makes non-Korean content business difficult to succeed. Korean people also tend to prefer local brands. Hyundai has an 80% market share in the automotive market, and Samsung and LG have 45% market shares each in consumer electronics goods. People believe they are obligated to help Korean firms by using their products and such firms will thereby make the country better off. Integrating with that Korea's Internet business infrastructure is outstanding, global Internet services are not likely to be successful in this market.

2.2.3 Characteristic of market – Spanish-speaking Latin America

The Latin American Internet services market is certainly an interesting one. Without considering Brazil (where the culture, size and dynamics are quite different from the Spanish speaking countries), the Latin American market offers a potential size of 219 million people. Despite the size, in almost all Internet services types, global competitors dominate local ones. Furthermore in a few categories, there is not even one local competitor. What would be reasons for this clear global player advantage? With a deeper analysis, one can identify the following factors to explain this reality for Internet services.

Low appreciation for local products: in general, Latin American culture has a negative association with local products. In their minds, a local product probably will have a lower quality than an international one. Therefore for global competitors, it is not difficult to enter into Latin American local markets and quickly gain a dominant position. As an example for daily deals services, before 2010 the region had several local players. During 2010, Groupon acquired ClanDescuento (Chilean competitor) and quickly started an expansion to the rest of the continent. Even if Groupon entered the region with a broader and appealing offer, the truth is that the Groupon brand name was also a key factor in its success.

Underdeveloped software/tech industry: in Latin America, the tech industry is still incipient with small entrepreneurship positions in Argentina, Chile, Brazil and Mexico (not considering the Brazilian market in this analysis). Overall, the region doesn't have important research and innovation centers, nor companies that could drive major innovations. Therefore, only a small number of innovative products are launched every year, which doesn't allow the region to compete against global players. Moreover, this small tech activity makes Latin America businesses unprepared to react in case a new international player enters into the local market.

Small individual markets: even though Latin America, as a unified region, has a population of 219 million [Tendencias Digitales, 2012], its local individual markets are quite small and their cultures have with important differences from each other. The small population makes it quite difficult for an individual entrepreneur to succeed with a new product. At the same time, the cultural differences create difficulties in introducing a new local product into a foreign regional market.

Appeal of U.S./Western culture: U.S. culture has a strong influence in the Latin American region. In particular, Mexico and Central American countries, because of their short distance to the U.S., share many of the same habits and products appreciation. This factor, combined with low appreciation for local products, make the local culture feel attraction for U.S. Internet services, leaving only a small space for local players to compete.

Therefore, the Latin American local players have only small options to success locally and even more difficulties when trying to expand to other Latin American countries.

2.2.4 Characteristic of market – Brazil

Because of its large size and cultural differences, Brazil deserves a separate analysis from the rest of Latin America. The country has a population of 200+ millions and Internet access of 38% [Tendencias Digitales, 2012]. Despite its proximity to important Spanish speaking countries, its population has quite a different culture, which is translated into different language, customer behavior and preferences. Brazil has strong local competitors and global players entering the market as well, with dynamics aligned with those of a more developed industry. The following are some key factors that explain the differences with the rest of Latin America.

Importance of size: Brazil's large size makes it interesting for both local and global competitors to enter into the market and fight for a dominant position. Small marginal revenues, if multiplied by the number of potential local customers, create attractive businesses. At the same time, its size brings a significant mass of software engineers and tech professionals who can contribute to the local offers.

Island in Latin America: since Brazil is the only non-Spanish speaking country in Latin America, it has been constrained to develop high localized industries by itself. That factor has certainly shaped Brazil's culture and local appreciation for localized products, which generates an advantage for local competitors.

Developed tech industry: because of its size and culture, Brazil has to some extent developed its high-tech industry, mainly concentrated in Campinas, the Brazilian Silicon Valley. This position attracts new developments and generates local strong players.

One example of a strong local competitor is Peixe Urbano, the local competitor for Groupon in Brazil. It was the first company to introduce daily deals in Latin America (March 2010). It has a strong localization, both in products and functions offered. Since it arrived first into the market, it has also made it very difficult for global competitors to enter and gain market share.

Chapter 3 **PRODUCT SEGMENT ANALYSIS**

As discussed in the previous chapter, not all software-driven businesses are dominated globally by a single firm, nor are they controlled by U.S.-based firms. Quite interestingly, there are specific sub-segments that are particularly favorable for the global firms, whereas some sub-segments seem to be favorable for the local players. In addition, some regions are dominated by global players while some regions are dominated by local players, and some others fall in the middle. What is the mechanism behind this? How can one differentiate between a market that is favorable for a global player and less favorable for a local player, and vice versa? These are critical questions to answer for firms in deciding which product segment to focus on, and in deciding which countries or regions to target for expansion.

This chapter discusses the key attributes in defining a global-dominant market vs. a local-dominant market. It explores conventional global competition frameworks and tries to expand the discussion into a more thorough understanding.

3.1 PRODUCT SEGMENT-LEVEL FRAMEWORK - GLOBAL WTAoM FRAMEWORK

A conceptual structure called the Global Winner Takes All or Most (WTAoM) framework is introduced here to assess the level of dominance that is likely to occur on a global basis for a specific product segment. The implication is that the market will be shared among a few global giants in a highly global WTAoM product segment, and therefore there is little space left for local players to compete in unless there is a situation that permits imperfect competition (e.g. government regulation). Conversely, the market will be shared among the players that are able to scale quickly in each of the respective geographies in a less global WTAoM product segment. These product segments will be a favorable battlefield for local players and local entrepreneurs, utilizing their local knowledge and networks.

The framework consists of four main aspects: a) global network effect, b) economies of scale and scope, c) little local adaptation and d) home base advantage. Below is a short definition of each aspect:

Global network effect: The extent to which the user base in one region works as an advantage in acquiring and retaining a new user base in another region.

Economies of scale and scope: The extent to which the revenue stream from multiple regions flows into its competitive advantage as a whole and the extent in which the operation in multiple regions benefits the firm's competitive advantage.

Little local adaptation: The extent to which a single product or products can be applied across multiple regions. In other words, the extent in which the product or products is universal.

Home base advantage: The extent to which the firm originated in a certain country or region is advantageous in creating and/or maintaining its competitive advantage.

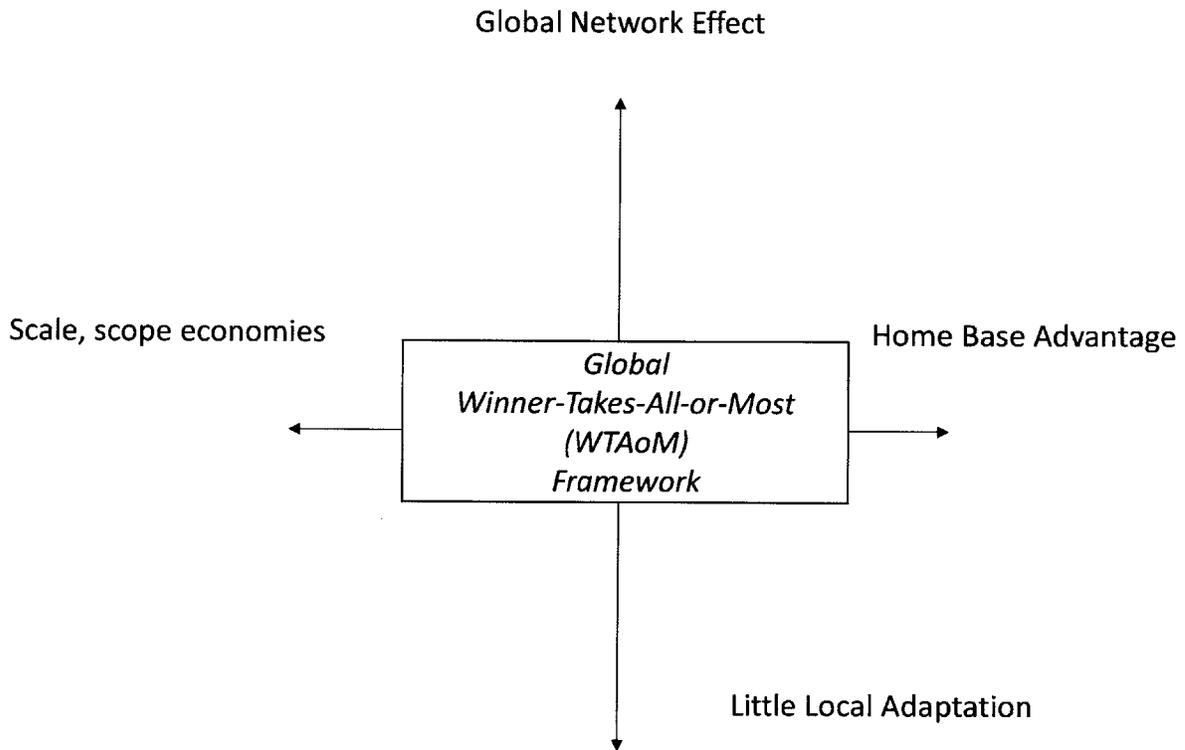


Figure 12 Global Winner-Takes-All-or-Most Framework

Figure 12 is a graphic representation of the Global WTAoM framework. The larger the area of the diamond, the more the market is dominated by global leaders. Conversely, the smaller the area of the diamond, the more the market is shared among local players. Each of the metrics is discussed in the following sub-sections of the chapter.

3.1.1 Global Network Effect - “Winner Takes All or Most”

In the software industry, the winner takes all or most, and therefore there are very few winners. This is generally true if there are:

- Strong network effects between the platform and complements (direct or indirect).

- Little differentiation among competing platforms with few niche opportunities or ways to be distinctive among competitors.
- Multi-homing is rare because it is difficult or costly for users, app developers or other players to use more than one platform as their “home” (i.e. forces them to choose).

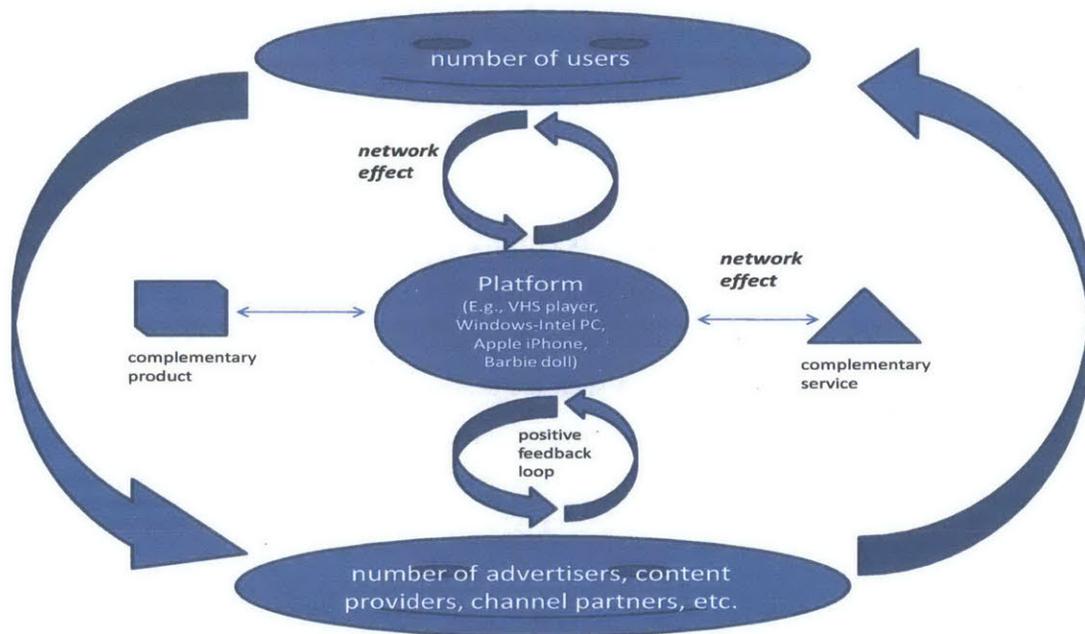


Figure 13 Platform Diagram [Cusumano, 2010]

Since this is a dynamic loop, once the right mix of the core product, critical mass of users, critical mass of partners/ key stakeholders, complementary products and complementary services are in place, the system reinforces itself. A larger user base adds more value to the platform, and more value of the platform attracts more users. Also, more advertisers, content providers, channel partners, etc. add more value to the platform, and more value of the platform attracts third parties to the platform. So in essence, the platform acts as its own ecosystem, which grows by itself once it has the right ingredients in place.

This dynamic system makes it extremely difficult for firms with similar offerings to compete with a superior platform, even if they have a better product or have superior funding to spend on marketing. A search engine is one example where the Google network effect became an entry barrier for new entrants. Microsoft attempted to tilt the market with its Bing technology, pouring money into advertising and with a marginally superior algorithm, but they were not able to gain much market share.

The question is whether this network effect in a certain region carry over to another region. This is defined as a global network effect. If the global network effect is weak, then the business will only dominate in a specific region. In this case, there is room for a winner in each local market. Local software firms or entrepreneurs may attempt to copy a successful business model started in the US west coast and executed in their local market to gain local dominance. On the other hand, if the global network effect is strong, then the business will be dominated globally, or semi-globally excluding specific regions with specific considerations, by global giants. In this case, copying a successful business model and applying it to a local market is not a good strategy. The first-mover advantage will be overtaken by the global giants in a foreseeable future.

Therefore, it is extremely important for business leaders in the software industry to understand where their product/ business stands in global network effect. Successful global player-run services and platforms tend to make good use of the global network effect, whereas less successful ones tend to make less use of it. When there is a strong global network effect, the competitive landscape moves towards the WTAoM model in a global sense. Services such as Facebook or Gmail have this kind of tendency. On the other hand, if the global network effect is limited the WTAoM phenomenon becomes inclined to local competition in which the local players have a chance at taking the throne. Services such as portals or daily deals are relevant examples.

The global network effect of the US-based companies may have a stronger impact on markets that are geographically close (i.e. Canada, Mexico), speak the same or similar language (i.e. UK, Australia) and have people moving between countries. On the other hand, services such as daily deals or portals have a weak global network effect in that these services are basically produced and consumed locally.

3.1.2 Economies of Scale and Economies of Scope

3.1.2.1 Importance of economies of scale

This leads to the situation where the larger the firm's addressable market, the more the firm is willing to spend on research and development or on acquiring promising technology. The more investment the firm can make, the better chances they have in winning the competition. This is a virtual loop for the big firms in the market, because they have the ability to create or acquire innovative products, iterate based on customer feedback and continuously stay on top of the game. For the new entrants and challengers, this is a vicious loop where the firms have to work with less capital investment and arguably weaker talents but are faced with cut-throat competition from the big competitors.

The consequence of this mechanism is that the firms that already have scale will continuously expand their competitive advantage in both market share and in product offerings, and the smaller firms are

forced into niche markets for survival. Cloud computing is a typical product segment where economies of scale matter.

3.1.2.2 Importance of economies of scope

Another important implication is the economies of scope. When the business that the firm is in asks for cross-border synergies, global penetration becomes an important factor of competitive advantage. One example is SAP, which deals with the issue of simplifying the enterprise resource planning for large multinational firms. Clients prefer ERP systems that are compliant to the different tax systems in the multiple regions that they operate in. SAP was one of the first movers in multinational compliance of ERP systems, and thus became the leading player in the field.

Economies of scope is increasingly becoming one of the key agenda for IT services firms. Due to the recent global expansion and consolidation in client companies, it is becoming more important for IT services firms to offer "one stop shop" capability to maintain their competitive advantage over IBM. With this trend in mind, top firms such as NTT DATA and Cap Gemini are accelerating their global expansion.

Figure 14 is a drawing that Jeff Bezos, founder and CEO of Amazon, made when thinking about the business model for Amazon.com. This is a good example of how economies of scale and economies of scope can create a virtual loop for a business.

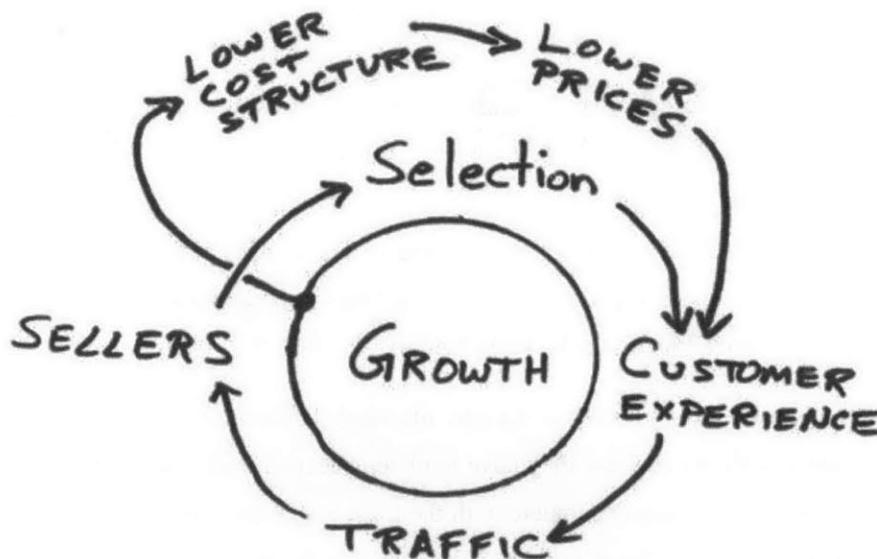


Figure 14 Bezos napkin diagram

3.1.1 Little Local Adaptation

The extent in which a single product or products can be applied across multiple regions is key. In other words, it is the extent to which the product is universal. As a critical success factor, it deals with the issue of how to provide the same or comparable service in each country. This illustrates the extent in which the product offering in a certain region conveys without major revision or customization a fit into another region.

If the product segment requires little local adaptation, the firm can push out a single product to a wide area of the world. If this is true, all you need is a local marketing and/or sales team plus a local technical support team to scale the product in a new region. If the product segment requires more local adaptation, the firm needs to set up capabilities beyond this. It may involve a local operation team, a business development team, or even a local product development team. This can require a large capital investment when entering a new market.

There is also the whole complexity of a business determining how much budget to allocate for each region vs. investing in the core product in its mainland. Furthermore, there is a classic challenge of streamlining the communication between the teams residing in multiple regions and between functions. These tensions often create slow execution and extensive bureaucracy that undermine the corporate culture that has created its competitive advantage in the early days. After weighing the pros and cons, it might even be the case that the firm is better off by not expanding globally at all. Therefore, understanding the level of local adaptation is crucial in formulating the global strategy.

The core capability for services such as e-commerce and daily deals is the logistics and fulfillment features that need to be implemented in each country. Since the logistics services offered by third parties do not offer point-of-sales settlement or a resend feature, e-commerce companies need to build their own infrastructure if they want to stay ahead of the competition. This is a huge investment and it is not always easy for global companies to set a priority for investing hugely on an infrastructure in a foreign country (although Amazon has done this in Japan and in China).

Another important consideration is partnering with the local stakeholders. For example, iTunes is struggling in Japan and Korea because they have not been successful in closing the best deals with the local content owners. Apple cannot compete with the local platforms with only partial music contents sold on its online music store. This is probably one of the main reasons that Brazil has such a different characteristic compared to the rest of Latin America, because of its strong local stakeholders and competitive landscape.

Finally, the functional and cultural aspects need to be addressed. This is probably the main reason that Korea and Japan are very different from Latin America or even Europe. Korean and Japanese languages are very different from English as compared to other Latin languages. Since this difference is significant, search engines need different algorithms and the search results are easier to read when organized in a different way. Thus far, the functional and cultural aspects of the service are very important features of differentiation.

3.1.2 Home Base Advantage – the “Diamond Cluster”

It is no secret that the firms that start in a privileged ecosystem has a better chance in taking their strengths to a global competition. Marc Andreessen, a famous venture capitalist answered in an interview:

“It's not an accident that many of the biggest recent technology companies—including Google, Amazon, eBay and more—are American companies. Our combination of great research universities, a pro-risk business culture, deep pools of innovation-seeking equity capital and reliable business and contract law is unprecedented and unparalleled in the world.” [Andreessen, 2011]

Michael Porter pointed out in his book “The Competitive Advantage of Nations” that firms founded or headquartered in the right place have vastly increased odds of global success [Porter, Competitive Advantage of Nations, 1998]. Firms from a privileged nation or region, coined as “diamond clusters,” were able to create and sustain competitive advantage under fierce competition with international competitors. He argued that the factor inputs such as labor, natural resources and financial capital have become less and less valuable in an increasingly global economy. He contended that firms gain competitive advantage where their home bases:

- Allow and support the most rapid accumulation of specialized assets and skills;
- Afford better ongoing information and insight into product and process needs;
- Enable owners, managers and employees to support intense commitment and sustained investment; and
- Stimulate and prod firms to upgrade and widen their advantages over time.

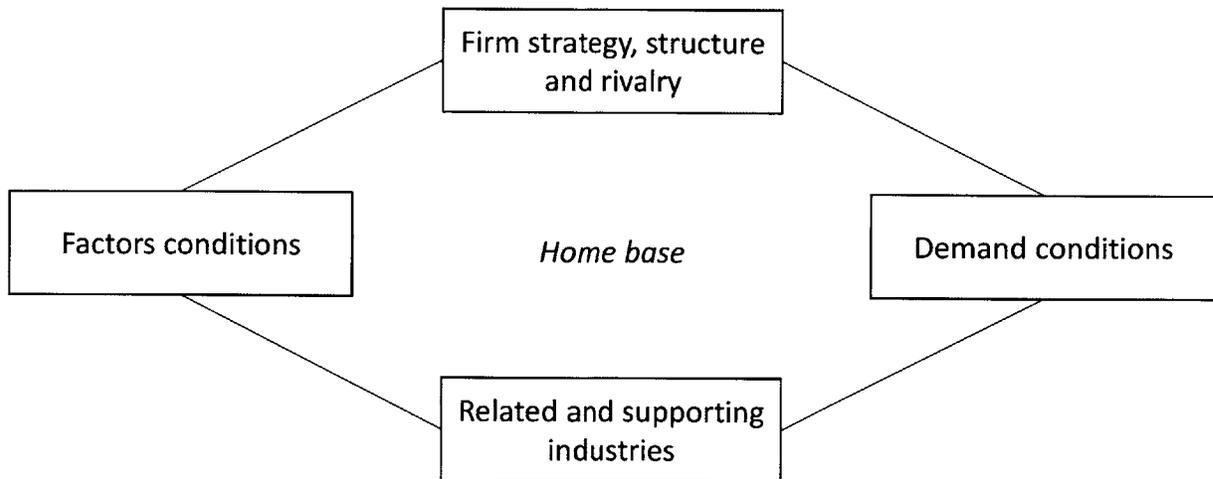


Figure 15 Home base advantage [Porter, *Competitive Advantage of Nations*, 1998]

He also added that the “diamond” is a mutually reinforcing system. The effect of one determinant is contingent on the state of others. Silicon Valley is a typical “diamond cluster.” Described next are the attributes of the US market that enable such a huge advantage for software companies.

Microsoft is a good example of where the strong home base was converted into a global advantage. It were successful in becoming the leading OS provider in the U.S., thanks to the strategic alliances it was able to make with IBM, Intel and PC manufacturers. With this advantage in the value chain, it was able to quickly build a near-monopoly situation in the U.S. in terms of PC operating systems. Many businesses around the world needed to communicate with the U.S.-based companies, and because economies of scale made it increasingly difficult for local OS providers such as NEC in Japan to compete in pricing, Microsoft was able to take over the competitive OS market on a global scale.

Determinants	Sub elements	U.S.
Factor Conditions	<ul style="list-style-type: none"> • Human resources • Physical resources • Knowledge resources • Capital resources • Infrastructure 	<ul style="list-style-type: none"> • Higher education in Computer Science serves as a good source of engineers (e.g. MIT, Carnegie Melon, Caltec, etc.) • English language and high wage attracts talents from all over the world • Abundant Risk Capital (e.g. centralization of VC/PEs)
Demand Conditions	<ul style="list-style-type: none"> • Size of home demand • Number of independent buyers • Rate of growth of home demand 	<ul style="list-style-type: none"> • Domestic market with over 3 million in population with top-level GDP per capita and high internet penetration rate

	<ul style="list-style-type: none"> • Internationalization of domestic demand 	<ul style="list-style-type: none"> • Relatively homogeneous market • Low language, cultural barrier to other key markets (e.g. Canada, UK, Australia) • Geographical proximity to other large markets (e.g. Mexico, Latin America)
Related and Supporting Industries	<ul style="list-style-type: none"> • Competitive advantage in supplier industries • Competitive advantage in related industries 	<ul style="list-style-type: none"> • Huge advertisement market • Storage products, programming tools, consulting services, etc.
Firm Strategy, Structure and Rivalry	<ul style="list-style-type: none"> • Goals of firms • Goals of individuals • The influence of national prestige/priority on goals • The importance of sustained commitment • Domestic rivalry 	<ul style="list-style-type: none"> • Internal rivalry among the big players based in the West Coast • “Software as a business” widely accepted

Figure 16 Attributes of the Home base advantage [Porter, *Competitive Advantage of Nations*, 1998]

SAP in Germany is another good example where it took advantage of the home base advantage. It made use of the country’s position as the regional headquarters for many businesses in Europe, which required firms to manage the enterprise resource planning across pan-Europe. With this challenge, the multinational firms were looking for a viable solution where they consulted with IT services and software firms in the region. SAP was one of the many firms that saw the opportunity, but it was able to move quickly to build the dominant design for the market. Originating in France, PeopleSoft was a company that enjoyed the home base advantage in a similar vein before it was acquired by Oracle in 2005.

3.2 IMPLICATIONS OF GLOBAL WTAoM FOR EACH PRODUCT SEGMENT

The next sub-sections describe the implications of the Global WTAoM framework applied to some software product segments.

3.2.1 IT Services

IT services is a field where a global WTAoM is less prominent. Since the business is usually run on a client project basis, the global network effect is limited. There is a global network effect when a firm is working on a project for a multinational firm that requires IT services support across multiple regions.

The scale and scope of economy is relatively high, given that these projects consume up to 1,000 engineers on a single project. They also need to continuously upgrade their capabilities as the technology evolves, and therefore needs the capacity for training, management and application of best practices, which requires capital-intensive investments.

There is a substantial need for local adaptation, especially because it requires sales and technical support teams in the vicinity of the client. Because of the nature of the business, IT services firms need to communicate continuously with the clients at their clients' locations, and therefore need to keep the team on the ground, sometimes even within clients' offices.

Also, the home base advantage is relatively high in a sense that this requires raw engineering talents. Countries such as US and India are advantageous in this sense. Also, countries such as Germany, France, UK and Japan also are advantageous to a lesser extent in the sense that they have strong local demand.

Given the relatively weak global WTAoM, the product segment seems to be less consolidated in a global sense. In Japan, IBM is the fifth largest in terms of market share, lagging behind Fujitsu, NTT DATA, NEC and Hitachi. In Western Europe, companies such as Capgemini, T-Systems and Logica have strong presence in their home bases. In India, TCS, Infosys and Wipro outperform IBM.

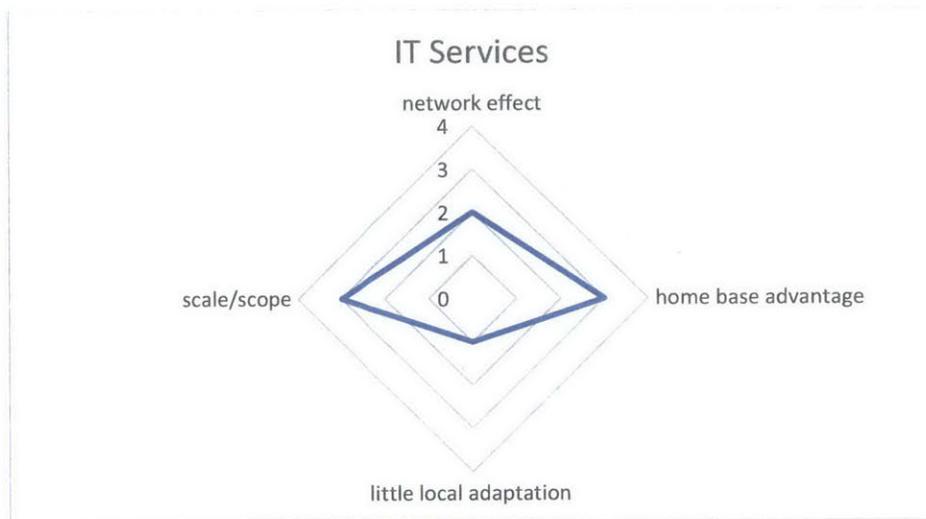


Figure 17 Global WTAoM Framework for IT Services segment

3.2.2 Packaged software

Packaged software is a product segment where the global WTAoM effect is strong, given that interoperability is a key consideration for this market. Employers ask their employees to use Microsoft Office for word processing or working with spreadsheets so that the documents are processed without unanticipated technical issues. Similarly, companies using an Oracle database product tend to use Oracle products wherever it is applicable. The same goes with SAP.

This network effect is reinforced by the complementary products and services that are offered in the market. Because many IT services firms are trained to use Oracle products, they often create plug-ins for Oracle and train their engineers to use these products. This makes a dynamic reinforcing loop, which makes it especially difficult for other competing firms or products to replace the market leaders.

There are also substantial economies of scale and scope. The major upgrades of these products require high R&D costs, which takes a few years and hundreds of high-quality engineers to put in all of their time to create, and which takes a few years to distribute. This is a costly product cycle and this requires enough market volume to justify.

Packaged software also tends to have little local adaptation. This is because the software tends to be generic, in which it is localized through limited tailoring by IT services firms or in-house engineers.

There is a strong home base advantage in that the access to information to other products, client needs and the disruptive innovation is an advantage. Being in the US west coast is advantageous in this sense.

It is interesting to note that there are major packaged software firms that originate from outside the U.S., such as SAP, Amadeus and Kaspersky Labs. They have products that take advantage of their home base but also can be applied on a global level.

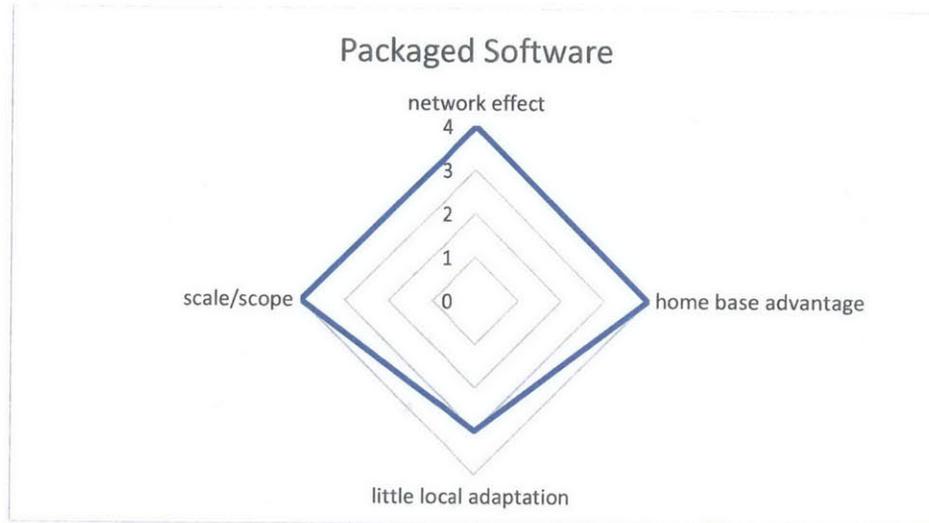


Figure 18 Global WTAoM Framework for Packaged Services segment

3.2.3 Internet services

Internet services is an area that has various sub-segments that vary significantly in term of global WTAoM. Messaging apps is an area that has a middle level global WTAoM. The global network effect is strong. It is like a facsimile business, where the platform's value increases as the number of users increases. Since users travel across multiple regions, and many users have friends residing in another country, there is a strong network effect.

The caveat is that users tend to multi-home, or in other words, use multiple messaging apps at the same time. Therefore, if you are a Japanese living in Boston, you might be using Line to communicate with your friends in Japan while you use Whatsapp to message with your friends in the U.S. This undermines the global network effect.

Economies of scale and scope are relatively strong. Since the cost of acquiring one more user to the platform is almost zero, the more users you attract the more cost efficient you become. There is also a significant degree of learning that is involved in fine-tuning the user experience, which becomes easier when you have a larger user base and therefore more user interaction databases to deal with. That said, since the service itself is relatively simple and requires a middle-level volume of investment, economies of scale and scope will not deter entry altogether.

There are mid-level local adaptations required for this service. This relates to the cultural differences of low context in the U.S. and western Europe vs. the high context in east Asian countries. U.S. and western European users are used to communicating in a direct manner, sending short texts. However, east Asian users tend to communicate in an indirect way, and love using stickers for their messages to convey their emotions. This is one of the reasons that messaging apps such as Whatsapp and Viber are not very successful in Asian countries, despite their early entry in the region.

The home base advantage for messaging apps is limited, in that the function provided is relatively simple and does not require hard-to-find talent or specific partners to get started. It can be initiated in any country with limited resources and a limited network. The implication here is that the messaging app that is originated in any region can easily expand into another region, but not always as a market leader. There will be an ongoing rivalry between firms that come from various home bases.

A good example is the messaging app war that is taking place in Indonesia. It has a huge population and a strong “messaging culture,” which makes it a favorable market for international messaging app companies to enter. Companies like Facebook (U.S.), WeChat (China), LINE (South Korea/Japan) and Kakao Talk (South Korea) are pouring in marketing budget via TV ads as well as online and offline ads to capture the leading position in the country. The competition is a level playing field for all players, despite that Facebook by far has the most users globally, and Kakao Talk the least. The strategies of LINE are discussed in chapter 4.

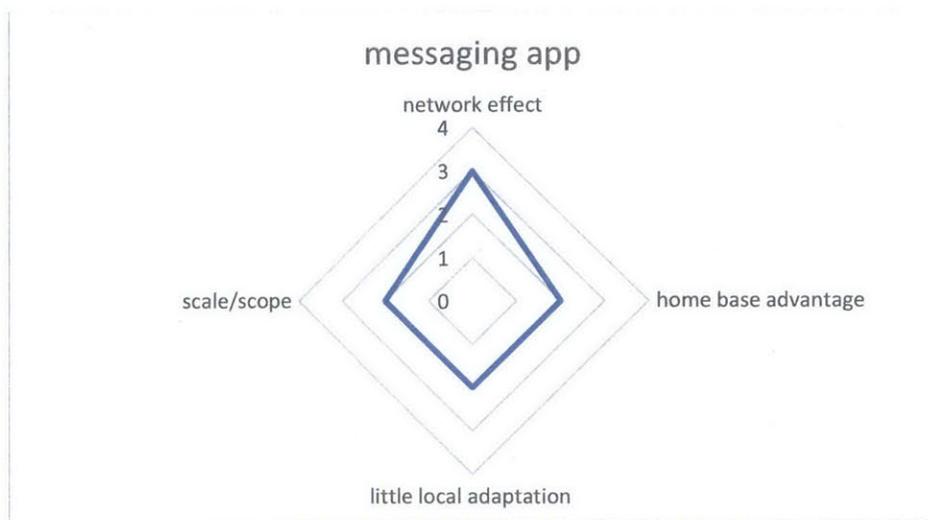


Figure 19 Global WTAoM framework for messaging app segment

News portals is an area that has a middle level global WTAoM.

3.2.4 E-commerce

E-commerce is a field where the global WTAoM is less prominent, especially for physical goods. Global network effect is also less evident. Consumers buy goods and services on a local level and do not worry about economic and/or diversified service offerings in another country. There are cases, however, such as Amazon's AmazonGlobal and eBay's Global Shipping Program that takes a stab at attracting customers in one country to buy goods sold in another country. Still, the purchasing behavior for physical goods remains at a local level and therefore is not a major impact on the business model.

Economies of scale and scope involved in e-commerce for physical goods is high. The main economic factors come from the cost of goods sold and the efficiency of inventory management, the efficiency of logistics that deals with how many goods can be delivered by a single truck driver in a certain day. The more purchases you get, the higher chance that the location of one delivery is near the next delivery. This means that it takes less time to deliver a single package, and therefore lower delivery cost is involved in a single delivery. This is why the e-commerce business is a highly consolidated business, because once economies of scale is achieved in a certain place, it becomes extremely challenging for new entrants to match with a same cost.

This business requires a lot of local adaptation. Executives at eBay mentioned that to gain a strong foothold in Russia, they needed to attract home-grown content, localize sites, introduce new payment instruments, conduct language support and close partnerships with local players [Kucera, 2013].

The home base advantage is questionable for e-commerce. The superiority of software itself is only a fraction of the business model and therefore of competitive advantage. Having strong demand and/or sophisticated customers in one region does not create an advantage for penetrating another region.

With this nature of the business in mind, it is understandable that Amazon has only been able to enter ten countries to date. It struggles in China, coming in fourth place in terms of gross sales, and is second in Japan. Its absence in Mexico is proof that the competitive advantage in one country does not readily result in a competitive advantage in a neighboring market.

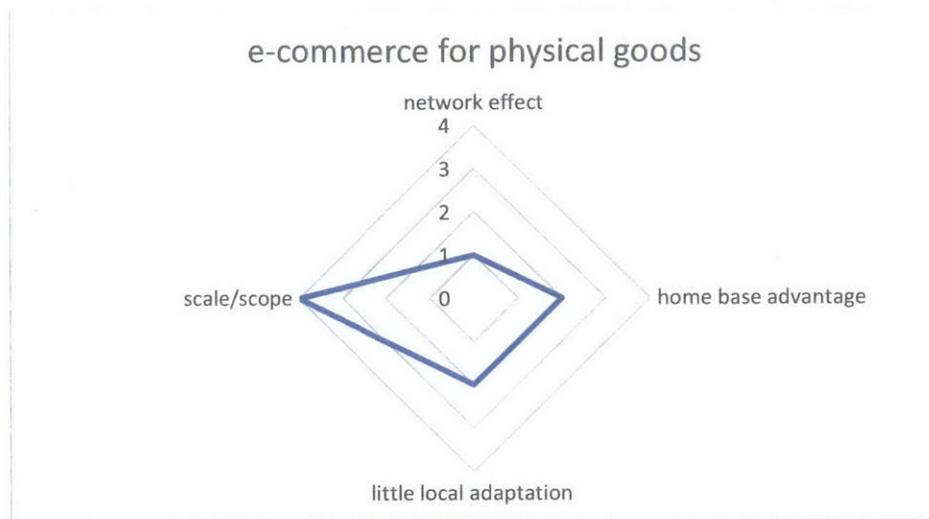


Figure 20 Global WTAoM framework for e-commerce for physical goods

Alternatively for e-commerce in non-physical goods, such as design or coding provided through 99Designs, Freelancer and oDesk, the situation is much different. Because these services are not bound to local distribution, it does have a significant amount of global network effect. There are also strong economies of scale and scope, given that this is a marketplace business model where addressing a wider seller population across multiple regions adds value to the platform, and attracting wider buyer population adds value to the platform. Also, this requires little local adaptation in terms of the main platform itself.

One thing that may need addressing is the marketing function to gain recognition from the buyers and sellers in each region. There is a relatively strong home base advantage for the U.S., given the high demand for outsourcing in the region. Outsourcing has been a common practice for a long time, given its high liquidation in human capital, and firms are more receptive to hiring outside services on an ad-hoc basis as compared to other large economies such as western European countries or Japan.

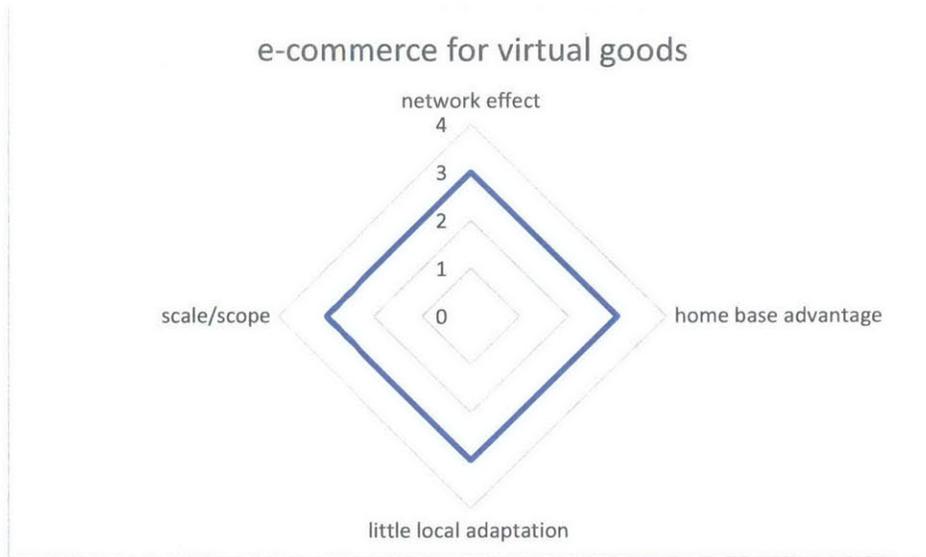


Figure 21 Global WTAoM framework for e-commerce for virtual goods

Chapter 4 MARKET-LEVEL ANALYSIS

As briefly noted in the previous chapter, Global Winner-Takes-All-or-Most (WTAoM) shapes the landscape of the product segments in the software industry at a global level. The competitive nature of a product segment has a strong influence on how a firm should compete in the international market. This chapter explores how a firm should consider whether its strategy is relevant for international expansion, and if so, which markets to enter.

4.1 DAC FRAMEWORK

Internationalization offers companies the opportunity to leverage home-based capabilities in foreign markets. It challenges firms to exploit the new market opportunities and then enhance and renew their competitive advantages through global strategic initiatives. However, firms need to understand that what leads to success in their home market will not necessarily guarantee success in another country. Furthermore, a success in one foreign market will not guarantee success in another country. Firms envisioning international expansion need to answer crucial questions such as: Does the firm's capabilities have a competitive advantage in another country? If so, which country or countries are more relevant? Which country should be entered first?

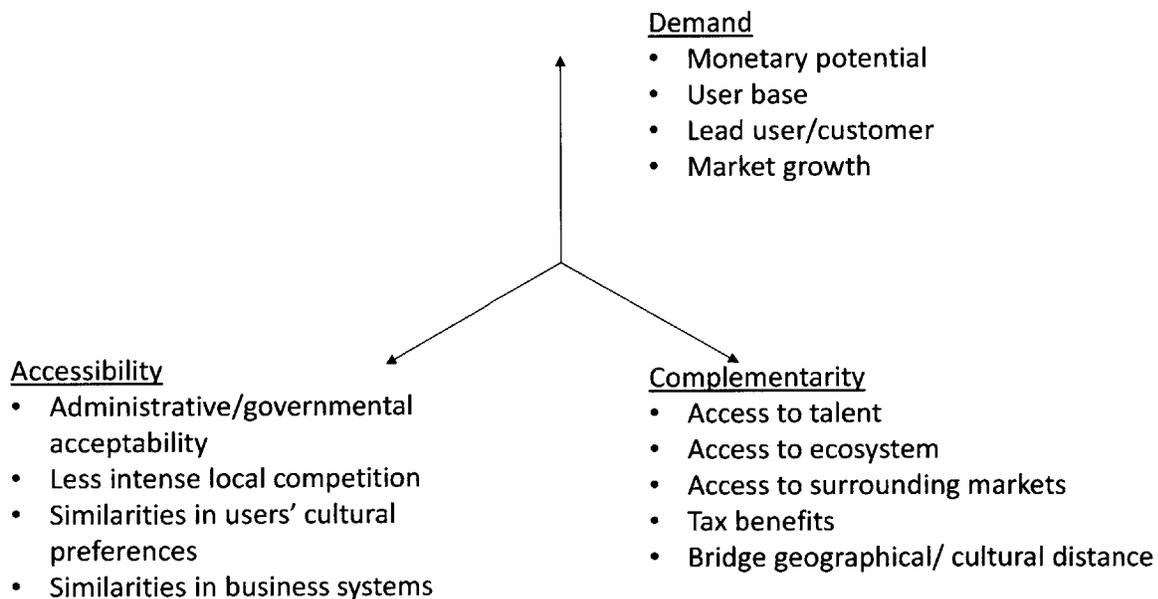


Figure 22 DAC framework

To answer these questions, the DAC framework is introduced. This framework is an acronym for three broad components of the attractiveness of a certain region or country: demand, accessibility, and complementarity. These three components often intertwine; for example, it is hard to imagine countries being close on accessibility unless they are also close on relevancy. Still, it is useful to distinguish between the three components because they have different bases, and partly as a result, present very different challenges and opportunities.

The idea of going beyond physical distance in thinking about cross-border strategy is not new. Furthermore, considering the cultural and business differences has been proposed in conventional literature many times. But the DAC framework takes a much broader view of distance, especially in view of the nature of the software business. In essence, it is of crucial importance for software firms to understand which country/region to enter, and which markets to prioritize with the limited resources and time available.

4.1.1 Local Demand

The extent of the local market demand is important for software firms because it is an indicator of how much revenue can be made in a certain market. This factor is important for any business that is seeking international expansion, but this is very important for software firms because of the nature of the industry that allows for only small numbers of winners.

The size of the local demand is important for firms competing in the global dominant product segment because grabbing the markets with high potential will positively affect their financial status and thereby enable them to invest more on their core products to gain a competitive edge against the global competitors. The size of the local demand is also important because it is also an indicator of opportunities offered to local players. Late entry and/or slow penetration can serve as an opportunity for local firms to take advantage and to scale quickly; this might incur a competitive threat to the firms in the long-run. The overarching approach for these firms is to focus on the large markets first, and to become the "go-to" firm in the specific product segment on a global scale.

The size of the local demand is also important for firms competing in the local dominant product segment, because this serves as a proxy for defining whether the business in a certain region can be profitable as a local business. Given that the nature of the competition in this product segment will be highly local, and the battlefield will be scattered all over the world, the key question is to ask whether the size of the local market demand financially allows a firm to enter the local market and make a profit.

There are several ways to assess the local demand of a given country/region. The metric to use differs with each product segment.

4.1.1.1 Market size

One of the most common metrics to use is the gross domestic product (GDP) of the country or region. GDP serves as a proxy for assessing the economic influence it has in the global competition. This metric becomes especially handy for firms competing in the global dominant product segment seeking to prioritize the markets to enter. Note that the emerging countries such as China, Brazil, India and Russia are already in the top tier markets as of today, and are expected to expand more in the coming years. This is a clear indicator that software firms cannot work with the conventional management style of focusing solely on three-polar model; North America, Western Europe and Japan.

Rank	Country/Region	GDP (US\$Bn)
1	United States	17,528
2	China	10,028
3	Japan	4,846
4	Germany	3,876
5	France	2,886
6	United Kingdom	2,828
7	Brazil	2,216
8	Italy	2,171
9	Russia	2,092
10	India	1,996
11	Canada	1,769
12	Australia	1,436
13	Spain	1,415
14	South Korea	1,308
15	Mexico	1,288
16	Indonesia	859
17	Netherlands	838
18	Saudi Arabia	773
19	Turkey	767
20	Switzerland	694

Figure 23 GDP of Top 20 Economies [International Monetary Fund, 2014]

Microsoft is a prominent example of such a firm that followed this rationale. They entered Japan - the second largest economy in the world at the time - in 1978 as its first international office, followed by France, Germany, the UK and Australia in 1983. By the time that Microsoft came out with the game-changing Windows 95 operating system, they were already present in the six biggest markets for operating systems. The wide reach in these markets enabled Microsoft to penetrate with its new product rapidly throughout these core markets, and thereby created the global network effect and the economies of

scale that fueled the dominant positioning of the firm in the global competition. Their move into emerging markets such as China and India came in 1999, as the GDP in these markets was on the rise.

4.1.1.2 Number of potential users

Another metric often used is the number of Internet users by country. For product segments that particularly benefit from more eyeballs such as the social media, the number of users in a particular region is what matters the most. For instance, Facebook opened its first Asian offices in India and Japan in 2010. They also opened a new office in Moscow, Russia in 2012. Again, this indicates that the conventional G7 framework is not the right way to the globalization strategy in the internet world.

Rank	Country/Region	Internet Users (Mn)
1	China	641
2	United States	279
3	India	243
4	Japan	109
5	Brazil	107
6	Russia	84
7	Germany	71
8	Nigeria	67
9	United Kingdom	57
10	France	55
11	Mexico	50
12	Indonesia	42
13	Egypt	40
14	Vietnam	39
15	Philippines	39
16	Italy	36
17	Turkey	35
18	Spain	35
19	Canada	33
20	Poland	25

Figure 24 Internet Users by Country [internet live stats, 2014]

4.1.1.3 Other metrics

There are other relevant metrics that can be used such as the retail index for e-commerce firms or the market size of servers for packaged software. Specific metrics such as the market size of the travel industry can be used for travel e-commerce sites.

4.1.2 Accessibility

Another important pillar for consideration is the accessibility of each market. A large market demand by itself does not justify an expansion into a country or region since market characteristics are different in each country and region. Therefore the decision on whether to enter a certain market, how much resources to allocate and how to enter rely deeply on how accessible the market is for the specific firm. If the market is less accessible, this may mean that the firm may see more competition from the local firms, and thereby secure less market share with the same capital spending. This may also mean that the firm needs to spend more on the overhead costs dealing with government or local partners, thereby undermining the profitability. In a worst case, this might even mean that the company has to start off in a challenger position in a winner-takes-most product segment, which yields a cautionary signal for the firm.

The following subsections discuss how the factors in accessibility can influence the competitive positioning for software firms headed for international expansion.

4.1.2.1 Administrative/ governmental acceptability

Administrative and governmental acceptability is perhaps one of the most significant factors that influence the environment of the competition. Intervention from the government will arguably slow down the process of local adaptation and the local penetration of a product. The cost of dealing with administrative communication and negotiation is a burden for new entrants in both initial and running costs. These costs can add up quickly to an extent that it deters new entrants altogether in a certain product segment. For firms that do decide to enter the market, they will need deep pockets to start off, and will have a cost disadvantage from the local competitors. One can note Google's struggles in countries such as China, Russia and Iran where the search engine's ability is restricted in one way or another. This is also seen extensively in social media growth, where China, Russia and India have their own dominant social media.

The notion is that the market demand needs to be discounted by the extent of administrative and governmental acceptability. Software firms will likely struggle in less acceptable countries and regions and should expect to gain lower market share than otherwise with the same money spent. In other words, they will have to spend more to gain the dominant position in the less acceptable markets.

The administrative and governmental acceptability can be measured with various indicators. The economic freedom index (EFI) [The Heritage Foundation, 2014] is one example of the metrics that can be incorporated. EFI value of lower than 60 raises cautionary signals to firms that are anticipating expansion into these markets.

Rank	Country/Region	GDP (US\$Bn)	Economic Freedom Index	EFI Rank
1	United States	17,528	76.0	10
2	China	10,028	51.9	136
3	Japan	4,846	71.8	24
4	Germany	3,876	72.8	19
5	France	2,886	64.1	62
6	United Kingdom	2,828	74.8	14
7	Brazil	2,216	57.7	100
8	Italy	2,171	60.6	82
9	Russia	2,092	51.1	139
10	India	1,996	55.2	119
11	Canada	1,769	79.4	6
12	Australia	1,436	82.6	3
13	Spain	1,415	68.0	46
14	South Korea	1,308	70.3	34
15	Mexico	1,288	67.0	50
16	Indonesia	859	64.1	62
17	Netherlands	838	62.9	69
18	Saudi Arabia	773	60.6	83
19	Turkey	767	62.9	69
20	Switzerland	694	81.0	5

Figure 25 Economic Freedom Index of Top 20 Economies [International Monetary Fund, 2014] [The Heritage Foundation, 2014]

4.1.2.2 Local competition

The intensity of local competition is another factor that flows into the accessibility. Facing more competition in the country or region means lower accessibility. This is more apparent in a local dominant product segment where winning the local competition is of prime importance. Local competition includes the local incumbents in the industry that have comparable or transferable expertise for the target product segment. Local competition also includes the local entrepreneurs that may attempt to replicate the model in a local context. If there is strong local competition, other factors such as the aforementioned administrative and governmental acceptability may become life-or-death issues for remaining in the game.

4.1.2.3 Similarities in the business systems

Similarities in the business systems is another factor that influences the accessibility. This is the case of setting up the value chain in the new country or region. For firms that offer universal products, the business system differences do not matter much. For instance, a business system required for Google or

Facebook may include advertisement agencies, small and medium sized businesses and local value-added resellers in the region. These players are reasonably accessible in various parts of the world, except in special situations where a few conglomerates hold strong bargaining power. For a firm that requires setting up a business system in the local market, the relevancy becomes an issue (e.g. B2B software, e-commerce). For example, a business system required for Amazon may include setting up a local fulfillment center, local delivery operations and a local supply chain. The existence of suppliers, third parties, etc. that are partners in one region will alleviate the barrier of setting up a whole new business system in a new region.

4.1.2.4 Similarities in users' cultural preferences

Culture plays an important role in assessing the accessibility of a new market. This includes the attributes such as linguistic context, cultural/national identity and country-specific quality associates. This is especially true for Internet services that are targeted to individual consumers. Aesthetics play an important role in defining the user experience of the product. For instance, a messaging app has local winners in different parts of the world; WhatsApp in Western Europe, WeChat in China, LINE in Japan and Kakao Talk in Korea. Even for a simple app like one for messaging, there are subtle cultural differences that influence the adoption of one product from another.

Western European countries tend to communicate in a direct manner, often related as low context. Texts, headlines and to-the-point communication is preferred. Therefore, apps like WhatsApp that has a simple interface to type and send messages is preferable. On the other side of the spectrum, East Asian countries tend to communicate in an indirect manner, often related as high context. In this culture, communicating through emoji, emoticons and stickers are as important as the text itself. This is a culture where communicating emotion is valued and reading between the lines is also important. Conveying emotion through text is a creative task, and therefore the use of stickers is a much more efficient approach.

WeChat, Kakao Talk and LINE took advantage of this cultural difference and changed their user interface to accommodate for this difference. As a result, despite the fact that the nature of the product segment is global dominant, these East Asian firms were able to create local dominance in their respective home bases.

Inglehart et al. [Inglehart et al, 2010] defines cultural distance as the degree to which shared norms and values between people in one country differ from those in another country. This is one measurement that can be used. For example, a Japanese software firm can compare the country's distance from Japan and from the U.S. to figure out whether they would have a better chance of outperforming the U.S.-based firm in the specific country.

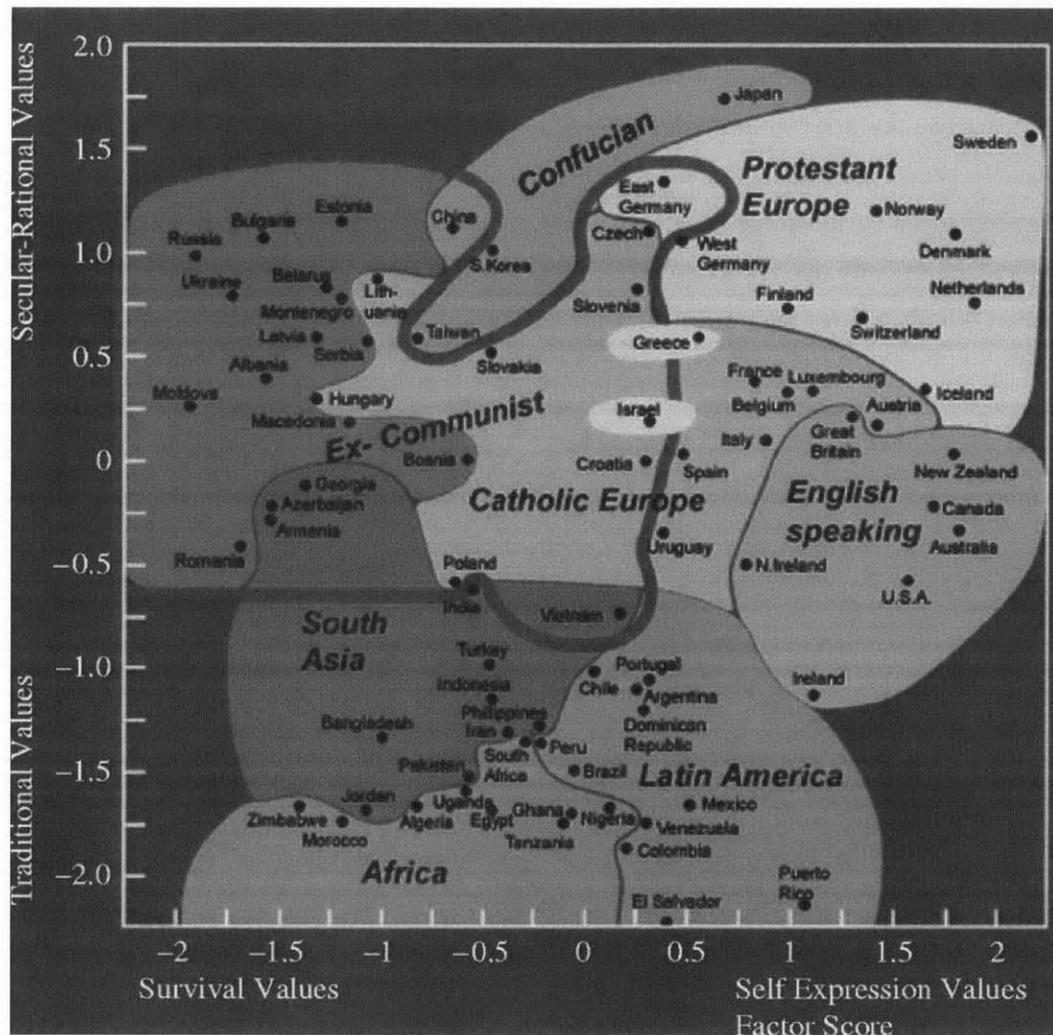


Figure 26 Inglehart–Welzel Cultural Map of the World [Inglehart et al, 2010]

4.1.2.5 Geographical distance/time zone difference

A final factor for accessibility is the geographical distance and time zone difference. In this Internet world, people can work collectively with colleagues and partners from around the world. However, distance still matters. The intensity of communication diminishes in accordance to geographical distance. There will be less business trips with each other. In a different time zone, there will be less real-time conversations such as phone calls or chat. This indicates that the further out you go from your home base, you need to set up autonomous or semi-autonomous teams that execute the day-to-day activities without step-by-step guidance. For a firm competing in a global dominant product segment, this means that limited functions that are essential for local adaptation should be allocated to a local level. For a firm competing in a local

dominant market, this means that full functions should be built at a local level, which can operate semi-autonomously in a local context. This adds difficulty to the organizational design as well as to the leadership model. This is discussed further in Chapter 5.

4.1.3 Complementarity

Firms do not always enter new markets with the intention of making profit from that certain country or region. Some firms choose to set up offices in cities such as Dublin, Luxembourg, Singapore and Bangalore with the intention of extending their capabilities for competition in the home base or in surrounding markets. In other words, firms enter new markets for the complementarity to their existing business.

Don Lessard et al. refer to the competencies the company might be able to tap and develop in a particular country. Firms may expand internationally to access assets or develop capabilities that they do not possess at home. It is critical to determine whether a firm can enhance its overall capabilities by actively engaging in a particular location [Lessard, Lucea, Vives, 2013]. They discuss the market for expansion with the CAT framework, described as complementary, appropriable and transferable. CAT tests whether entering a new market will serve as a stepping stone for entering yet another market, and whether it will serve as a learning opportunity to upgrade products, skill sets and/or capabilities.

Further, Doz, Santos and Williamson argue that companies typically followed a sequential path from strength in the home market to global leadership in exploiting the virtuous cycle of advantage and innovation in a home base cluster, as explained as the “1-2-3” steps to internationalization [Yves L. Doz, 2001]. The idea is to use the competitive lead gained through winning in the home base and to sequentially expand internationally. The aim of strategy is to leverage their homegrown advantages on an international scale. To achieve sales growth, they begin by selling in nearby countries where cultural, economic and geographic distances are similar to their home market. This is based on the assumption that since the target markets are similar enough to the home market, it is possible to enter new markets without significantly changing specifications. The aim here is to maximize revenue and minimize costs on a global scale, and thereby retain competitiveness in the domestic market.

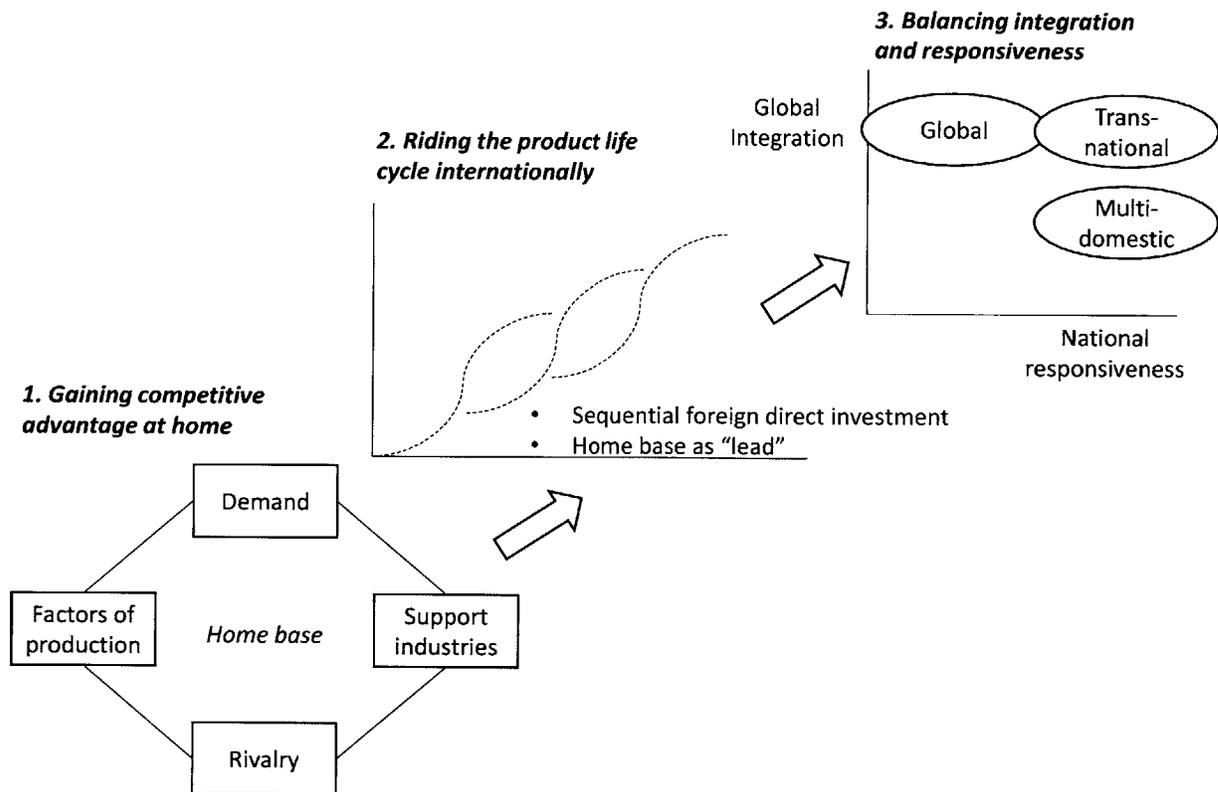


Figure 27 1-2-3” Steps to Internationalization [Doz, Santos, Williamson, 2001]

One example is TCS, headquartered in India, opening offices in the U.S. to acquire new capabilities. Their main intention was to send engineers over to the U.S. to learn state-of-the-art methodologies involved in software development and thereby upgrading its competency in IT outsourcing. Another example is Skype, originally from the Nordic region, setting up a sales and marketing office in London to gain access to risk capital and to the markets worldwide. Recently, various Internet services firms such as Google, Facebook and Twitter set up Asian headquarters in Singapore, not for the sake of exploiting the local market (the market population is merely 5 million, too small for a global giant to target), but for the sake of building complementary capabilities in attracting regional talents, gaining access to regional partners and learning about the surrounding markets while enjoying an English-speaking environment.

4.1.3.1 Access to Talents, Partners and Knowledge

Access to talents, partners and knowledge is an important factor for firms headed for global expansion. These are the building blocks for constructing and sustaining a competitive product offering, and therefore are an essential element for success in a Winner-Takes-All competitive environment. The move

into these markets is an attempt to gain the flavor of the home base advantage that other competitors enjoy.

For example, several U.S. based software firms have R&D centers in Bangalore, Tel Aviv and Moscow to access the best talent in software development. With the country's superior computer science education and with the ability to attract the best talent to the industry, these countries are the "go-to" place for great talent. For non-U.S. based firms, Silicon Valley is the place to gain access to talent that has extensive experience in product development. Baidu, Tencent and Rakuten are firms that are now present in Silicon Valley.

In a similar yet different vein, several firms opened offices in India for access to quality engineers for a relatively low salary. IBM, for example, has almost 150,000 employees based in India, which is nearly one third of its total employee base globally [Wikipedia, 2014]. A typical engineering salary in Bangalore is said to be around one third of what one would need to pay in the U.S. for a comparable job quality. Since IT services is a labor-intensive product segment and is one where the cost of engineers directly affects the pricing and profit margin, IT services firms need to be present in India to keep up with the price competition with Indian firms such as TCS, Infosys and Wipro.

Another motive for expansion is to gain access to the vibrant ecosystem centered in certain cities. A prominent example is Silicon Valley for its access to venture capitalists, alliance partners, acquisition targets and potential competitors.

4.1.3.2 Access to Surrounding Markets

Access to surrounding markets is one of the main factors to consider when entering a new market. For example, several software firms set up Asian headquarters in Singapore when attempting global expansion into Asia. Software firms such as Google, Microsoft, IBM, Apple and Rakuten have their Asia headquarters in Singapore. With the ease of setting up and managing the business in the proximity markets, Singapore serves as a stepping stone for software firms in reaching out to multiple local markets while maintaining their operational efficiency. Singapore offers easy access to the large markets in China, Japan and Australia, but also offers access to the emerging markets in China, India and Southeast Asia (e.g. Indonesia, Philippines, Thailand and Malaysia). Singapore is attractive in a sense that the business can be run in English, while they have access to talent that is originally from the target markets. The close geographic proximity also makes it easy for managers based in Singapore to hold face-to-face meetings in the surrounding markets as needed. Dublin and Luxembourg similarly serve as stepping stones for global expansion into Western Europe.

4.1.3.3 Tax Benefits

Many firms choose to open up new offices in countries or cities that offer a favorable tax benefit. The monetary benefits of tax savings could be a potential competitive advantage when competing on price, or when the firm is investing for scale. Dublin, Luxembourg and Singapore are a few examples of locations that offer favorable tax rates, and therefore attract firms to set up a regional headquarters in those cities.

4.2 IMPLICATIONS OF DAC FRAMEWORK

4.2.1 IT Services

For the IT services product segment, demand is the key driving force for international expansion. The nature of the product segment is largely driven by local dominance, and therefore it makes more sense for firms to enter markets with high local demand. With this reasoning, U.S., China, Japan and the western European countries such as Germany, France and the United Kingdom are natural targets for expansion. One of the key driving forces that is shifting the nature of the competition is global one-stop procurement. This is becoming increasingly important in the acceleration of international expansion that their key clients are engaging in recent years. These clients require IT infrastructure that is integrated across the world, and that can be customized to the local needs as needed. Firms with subsidiaries in a wide range of countries such as IBM and Accenture have competitive advantage over the local competitors. Firms such as Fujitsu, NTT Data and Cap Gemini that were once the dominant players in their home bases are faced with the challenge of expanding their capabilities to the regions where their key clients reside.

Accessibility to market remains a secondary reason for deciding which countries or regions to enter. Although accessibility may affect the profitability of the business in the short and long runs, IT services firms are destined to move into new regions to reinforce their business in the home base and to gain competitive advantage in the middle of global competition.

Complementarity in terms of acquiring cost advantage is becoming one of the key considerations for these firms. Another driving force is the global outsourcing model that was widely introduced by the Indian firms such as TCS, Infosys and Wipro. With the strong demand for cost reduction that happened with the recession, firms are faced with the challenge of reducing their costs comparative to the Indian competitors while maintaining their competency in aligning with the local qualities. Firms are expanding their engineering headcount in India as a complementary source of cheap yet high quality engineering capacity.

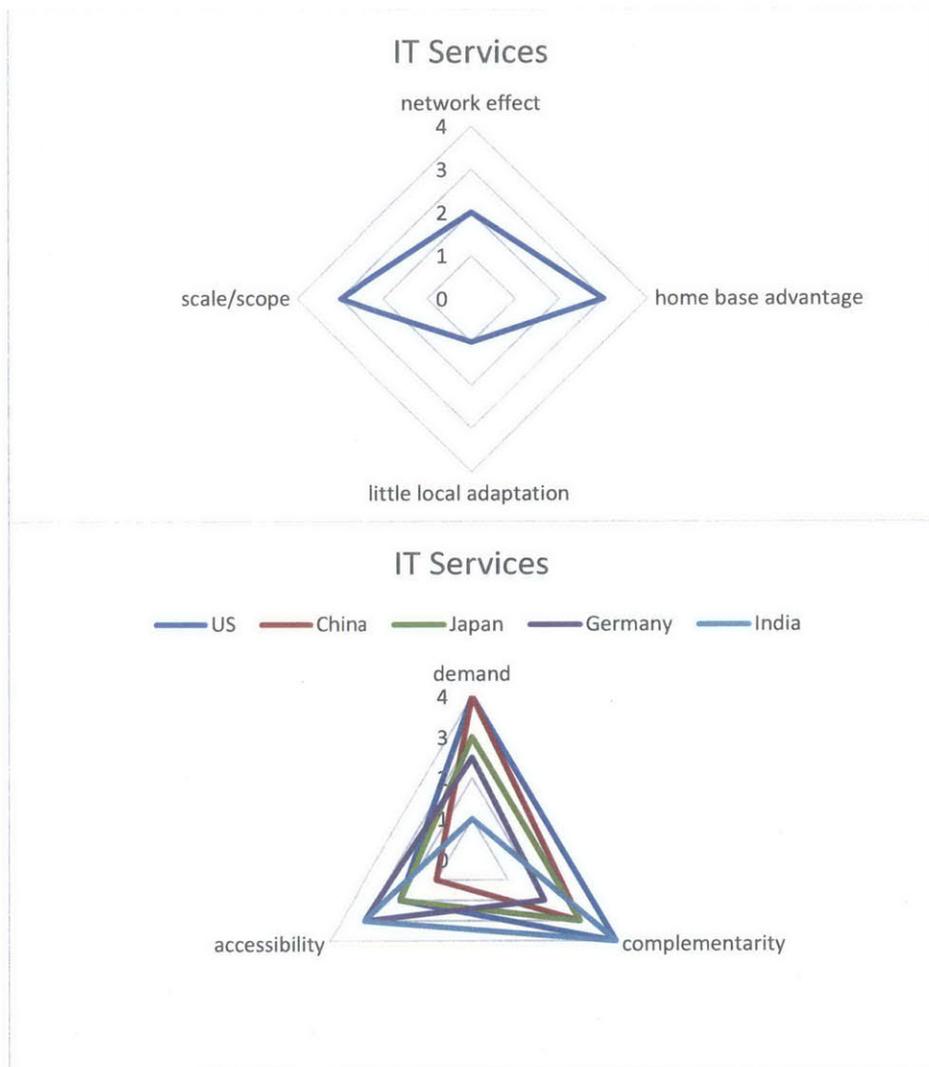


Figure 28 DAC framework for IT Services in selected countries

4.2.2 Packaged Software

As discussed in Chapter 2, packaged software is a product segment that is widely global dominant. The implication is that the nature of the business is a land grab. Gaining the global network effect and scale/scope of economy are the essential pieces of the globalization strategy. Also, they do not need to do as much local adaptation as compared to other product segments. This results in the rationale to move into new countries and regions with the highest demand. This coincides with Microsoft entering Japan, Germany, France, UK and Australia in rank order, which was pretty much in line with the gross GDP ranking of the time.

Accessibility for the product segment tend to be low for these services, given its nature that the packaged software does not directly deal with user/client sensitive information that can be of direct threat to the software administration. Firms do need to figure out the local business system that deals with finding local value-added resellers in the region to help out with the installation, training and support. Many firms such as Microsoft, Oracle and SAP tackled this issue by starting local training programs to educate and attract local talent in the region.

Complementarity are at mid-range. Since the nature of the business is to push out universal products worldwide, they benefit by having local managers that act as “sensors” in understanding the local requirements so that they can incorporate the learning into their core product offering. There is an appetite for entering new markets for tax purposes and for regional consolidation, but this factor remains a secondary reason for entering a new market.

One consideration for managers is that packaged software firms have a tendency to shift from a product-centric model to a service centric model [Cusumano, 2004]. When this shift occurs, firms need to reconsider the whole globalization strategy so that they are in line with the nature of the business.

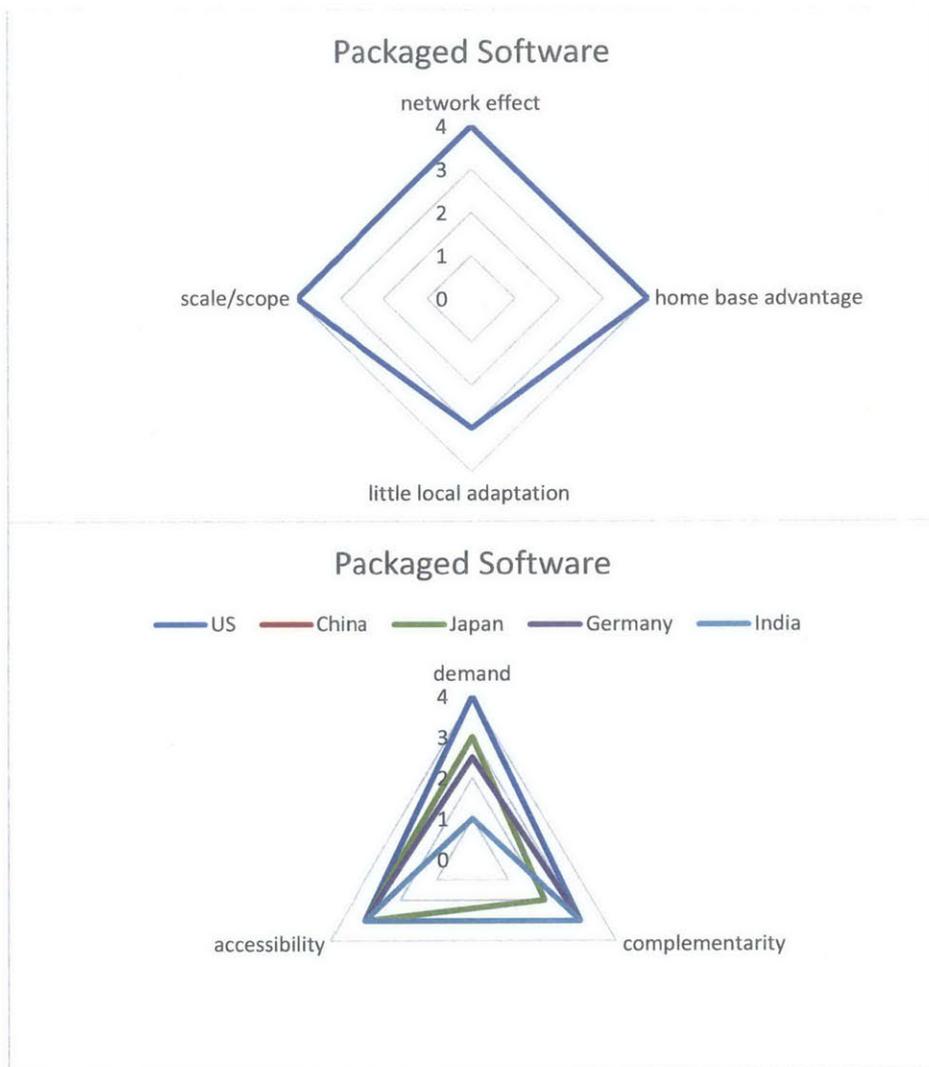


Figure 29 DAC framework for Packaged Software in selected countries

4.2.3 Internet Services

For Internet services firms, accessibility can become a major roadblock. The government regime can greatly hinder the firm’s competitive positioning in certain countries. Google and Facebook have suffered a great deal in China from the strong censorship push by the Chinese government, which made it difficult for these firms to out-compete the local competitors such as Baidu and Tencent. Russia is a similar example where Yandex is the local dominant player in the search engine market. Internet services firms need to closely assess the probabilities of success in countries with strong censorship, including countries such as China, Russia and Iran.

Another type of accessibility issue is in setting up the local business system. New portals, for example, are a typical example of a service that faces difficulties in setting up local operations. The value chain for

creating a local service includes attracting content providers, advertisement agencies and small and medium sized businesses that want to use the portal as a platform. These capabilities come from business developmental strengths in each region, which are often gained through local autonomy.

The third type of accessibility is the users' cultural preference as discussed earlier. The firms need to assess the degree of similarities in terms of user preference to the service that they are considering to push out. If the local context in a new country is widely different from their home base or another country that they are successful in, firms will need to consider whether they would like to diversify their offering to better accommodate the local needs, to accept the position as a niche player, or to dismiss the idea of entering the new country or region altogether.

Apart from the accessibility issue, the key driving force for Internet services firm tends to be the local demand. For a product segment that is widely global dominant, it makes sense for firms to focus their resources on entering the large markets first and becoming the top service in each of the respective markets. The size of the markets significantly vary across the type of service, to an extent that there may be very little demand in the markets with large GDP.

Complementarity plays an important role for Internet services firms because the nature of the business is to offer the best value for the money spent on these platforms. Google, for example, set up an office in Dublin to look across markets in Europe and Latin America as the first international office. Latin America is further away from Dublin than it is from Silicon Valley, and therefore is a strategic move to gain the tax benefits.

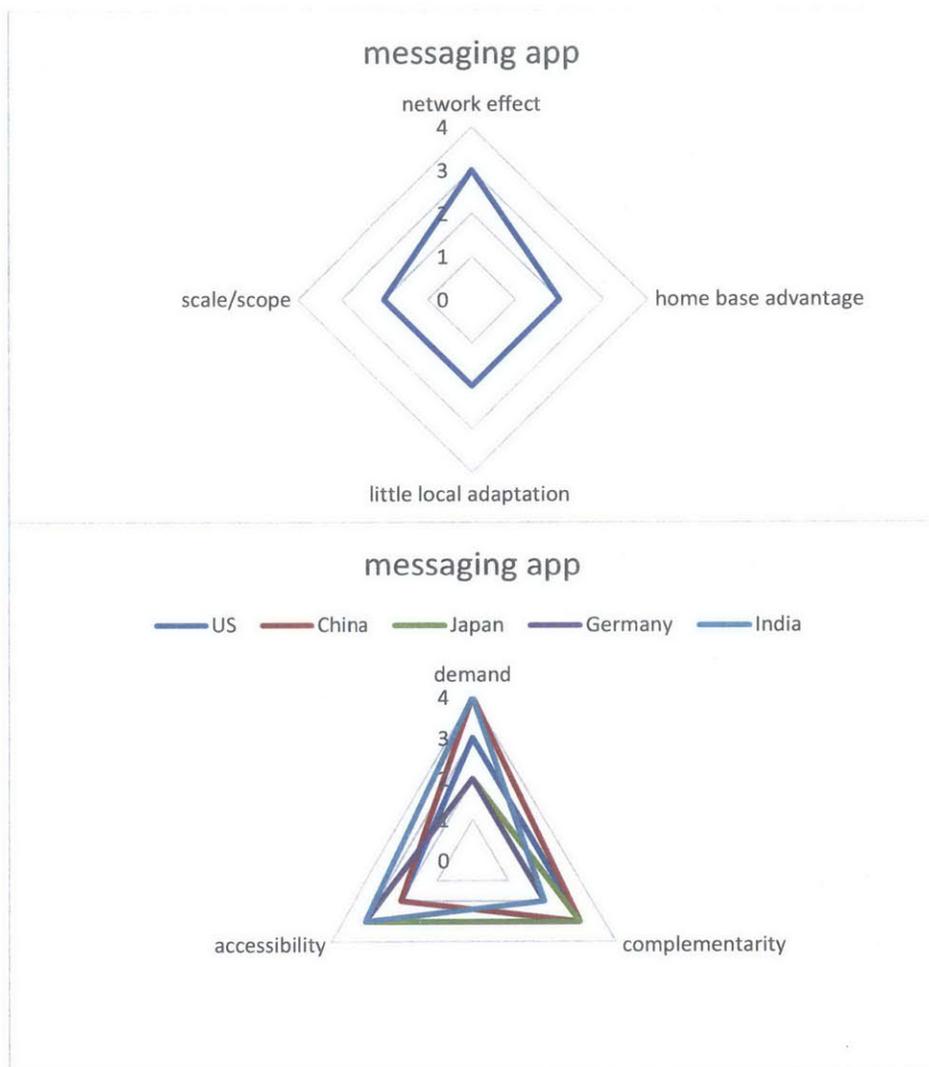


Figure 30 DAC framework for messaging app in selected countries

4.2.4 E-commerce

E-commerce is a product segment that is more or less a local dominant product segment. That is, the player that first gains economies of scale and scope wins the local dominance. With this in mind, the question for the e-commerce firms is to ask whether they can win in the local context and to make a profit if they win in the local context. With this in mind, the decision criteria for firms will be to define whether the demand for each market will be enough to justify the downside of the accessibility issue in setting up the local operation. Amazon.com, for example, only has local fulfillment centers in seven countries: the U.S., Japan, China, Germany, France, UK and Canada. Rakuten has been more aggressive in global expansion, holding offices in 13 countries and regions: Japan, U.S., Canada, Brazil, UK, France, Spain, Germany, Austria, Taiwan, Thailand, Indonesia and Malaysia. Rocket Internet is more aggressive in

global expansion, holding operations in over 50 countries and regions. Scaling in each country requires vast investment as compared to other product segments because it requires setting up local operations, so how far the company wants to diversify its operation around the world depends on how much they can allow the autonomy in the region and allocate their resources to the local operations.

Accessibility remains a constraint in going into a "green field" market as Rocket Internet proved. However, going into a market where the local competitors have learned the game proves difficult, because the nature of the business is highly local dominant.

Complementarity remain a secondary factor for e-commerce, given that e-commerce remains widely a local phenomenon. The extent of utilizing the arbitrage benefits from a remote location tend to be limited.

Although e-commerce is a local dominant model, some e-commerce firms are trying to pull in other product offerings to somehow utilize the global network effect and economies of scope. Amazon, for example, has been investing in platforms such as Kindle and Amazon Appstore to lure users to the Amazon store so that they can summit in the global competition. Rakuten is following these footsteps by acquiring Kobo, an e-book platform and Viki, a video streaming platform.

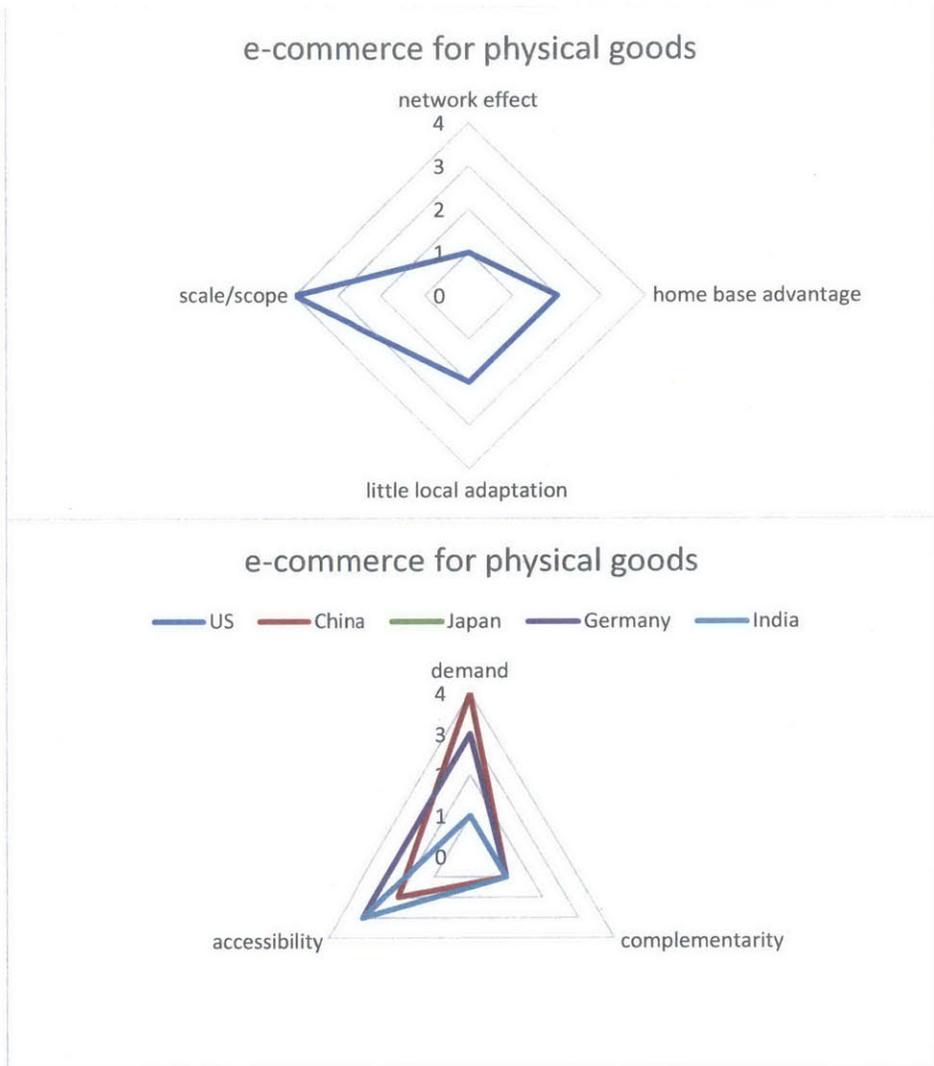


Figure 31 DAC framework for e-commerce in physical goods in selected countries

Chapter 5 MANAGING GLOBAL SOFTWARE FIRMS

Chapter 3 discussed how the nature of the product segment has a strong influence on the nature of the global competition, and therefore on the globalization strategy of the firm. Chapter 4 explored how the country-level similarities and differences influence how and where firms should target when they attempt to expand internationally. This chapter examines how firms should execute international expansion, and how they should manage the expanded firms. First, a firm needs to figure out how to expand into a new market or markets. Second, a firm needs to figure out how to structure the organization so as to allow the business in each region to prosper while maintaining economies of scale and economies of scope that are essential for exploiting the competitive advantage. Finally, a firm needs to figure out how to lead a multinational organization in a way that is universal in a way but is also distinctive for the firm.

5.1 NEW MARKET EXPANSION

After defining which markets to enter with which business, the next decision a firm needs to make is how it will enter the market. A firm typically has three choices: make, partner or buy.

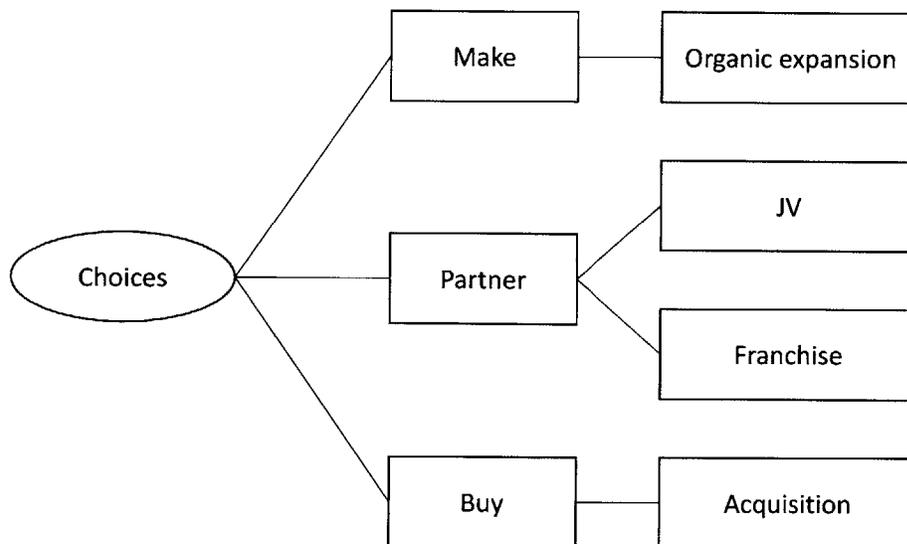


Figure 32 Strategic Choices for new market expansion

Firms may choose to enter the market by make, i.e. organic expansion, in which they choose to send over a management team to hire local staff and to build a local operation from scratch. This is a powerful

approach when the firm has good knowledge of the new market and has the luxury of investing its capital as well as time on the new market expansion when viewed from a strategic perspective. This is often the case for Internet services firms, which take a universal product built in their home country and delivers it to international clients through its local sale and marketing team. One example is IBM that chose to set up mini-IBMs in each country despite its high investment cost. Its reasoning was that each local market needs a highly trained full-operation team to deliver an IBM quality service to its clients. It expanded at a time when IBM still had the luxury of taking the time to set up the local operation and still be ahead of the game. A recent example is Rocket Internet, a firm that has been successful in organic expansion. It hires a region general manager who is young, smart and talented, and also hires a mercenary force in a matter of weeks to spearhead the rapid growth in the local market.

Another way to enter the market is through partnership. This can come through creating a joint venture with a local firm or through a franchise agreement. This expansion strategy comes in handy when the firm does not have enough knowledge or capability to expand into the new region and to excel while they anticipate aggressive competition in the local market. The franchise model makes more sense if the heterogeneity of customer needs is low and the product/service can be made routine and/or modular. In this case, the firm can provide a clear set of guidelines to the local firm to simply execute in its respective market. This is often the case for packaged software and software as a service (SaaS) products, where the firm has a single universal product that can be offered to customers worldwide, but requires a local sales, marketing and/or technical support team to distribute the products in an effective way. Yahoo! is a classic example where Softbank created a JV with Yahoo! to set up Yahoo! Japan for the Japanese market. Portals require cultural fine-tuning of contents selection and presentation, local content acquisition and setting up local business systems including the advertisement model, all of which requires extensive local knowledge and expertise. Yahoo!'s strategy of relying on Softbank's local expertise carried it a long ways in becoming the leading portal in a significantly different country culture.

The final mode of entry is through buy, i.e. acquisition, which is essentially an alternative variation of organic expansion. In essence, the decision to acquire a firm in the region is a decision to own the business in the local region. The only difference is that it is an attempt to acquire the local knowledge, talent and capabilities that is already set up in the region. This become handy when there is a local copycat entrepreneur that has already started exploring the same business model in the country. Groupon's acquisition of German startup CityDeal is a good example. Another example is NTT DATA in Japan, which is quickly expanding its global footprint through its global merger and acquisition spree. The rationale behind this is that the firm needs to quickly build a global distribution model to retain its current customer base, but also to acquire economies of scale and scope required to remain in the rapidly

consolidating industry. They acknowledge that the post-merger integration is a headache for managers and retaining top talents is not easy, but they still believe that buying time through acquisition is a better approach.

Ease with which product/service can be routinized and/or modularized	Low	Amenable to JV model : Firm can lend technology, guidelines, training tools while relying on partners' initiative and local knowledge
	High	Amenable to franchise model : Firms can establish a clear rule book and ensure consistency of brand and experience
		Amenable to organic expansion or acquiring : Locations to be run by local managers who tailor to local needs using modular instructions
	Low	High
	Heterogeneity of customer needs	

Figure 33 Matrix of customer needs and the product characteristics

5.2 ORGANIZATIONAL STRUCTURE

5.2.1 Organizational design frameworks

Aligning the organizational design with the firm's overall globalization strategy is important. A firm needs the right structure to execute its mission and strategy in an efficient and less-friction manner. Organizational design matters to global software firms, especially because innovation happens rapidly and firms need to be on top of the innovation to stay in the game. How can firms structure their organization so that the firm can maintain its technological advantage while accommodating regional, local or specific market segments?

Organizational design is also important because communication costs are high in a globally dispersed organization. Despite the technology advancement of video conferencing, emails, messaging apps and the

like, aligning a multidisciplinary team in multiple locations is still an ongoing challenge. The natural tension between the marketing and sales team vs. the product and engineering team is a typical issue that software firms face, even when they only run on a single-market basis.

Maintaining the technological advantage of its core product while maintaining economies of scale and scope are essential for retaining competitive advantage on a global scale. At the same time, the agility of adaptation and execution in its respective markets is also important in swaying away the local copycats from chipping away on its market share. This creates a tension between centralization and local autonomy. This can be reworded as global integration vs. local responsiveness. This raises the question of what functions to centralize vs. which ones to run locally. But it is not a simple tradeoff question. The organization can be set up to best enable the firm to ease the complexity of running the business.

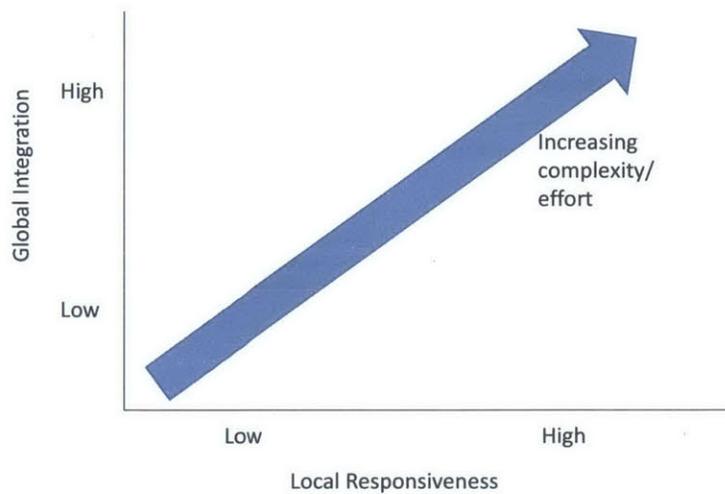


Figure 34 Local responsiveness and global integration matrix [Bartlett Goshal, 2002]



Figure 35 Local responsiveness and global integration matrix [Bartlett Ghosal, 2002]

Bartlett and Ghoshal introduces a model that is a classic representation of the organizational design adopted by multinational firms in the 1980s through the 1990s. They argue that the choice of a specific strategic model should be made through an evaluation of, which forces pushes the MNC towards global integration, global differentiation or both. The strategic choice should ideally fit the pressures of the environment, where MNCs should try to build the strategic capabilities wanted by e.g. consumers [Bartlett Ghosal, 2002].

Global Strategy (High pressure for integration - low pressure for differentiation)

This strategy is heavily based on scale economies. The subsidiaries of the MNC are rather weak and a full value chain will only exist at home. The subsidiaries are tightly coupled to the home organization, and are heavily dependent on resources and know-how from the home organization. Innovation and development will be created at home, and later diffused to remaining subsidiaries.

International Strategy (Low pressure for integration - low pressure for differentiation)

This strategy is based on home country expertise. The majority of the value chain will be maintained at the headquarter. The control of technologies used for e.g. production and general management systems will be structured and developed at home. The development of knowledge and innovation will stream from the home organization to the subsidiaries.

Multidomestic Strategy (Low pressure for integration - high pressure for differentiation)

This strategy is based on responsiveness to local market demands. The structure of the MNC will be a portfolio of rather autonomous national companies containing their entire value chain. The innovation and knowledge developed at these national companies will most likely stay there, and will most likely not be dispersed to other companies within the MNC.

Transnational Strategy (High pressure for integration - High pressure for differentiation)

This strategy tries to maximize both responsiveness and integration, where knowledge and innovation is sought developed and dispersed within the entire network. The MNC is regarded as a network, and each subsidiary is given responsibility compared to its capabilities and strategic mission. The MNC is controlled by the movement of people within the MNC that may facilitate the mutual development and dispersion of innovation and knowledge.

In the software industry, most of the successful globalization cases come from the two cases – the global strategy and the multidomestic strategy. The global strategy is in the similar veins with the global-dominant strategy, whereas the multidomestic strategy is similar to local-dominant strategy.

This leads to a discussion using a conventional framework in organizational design – How can firms take benefit of economies of scale and scope? How can firms maximize the local responsiveness? On a high level, there are five main categories of organizational design as described below. Each has its strengths and weaknesses. Furthermore, each organizational design fits better to a certain business model than to others.

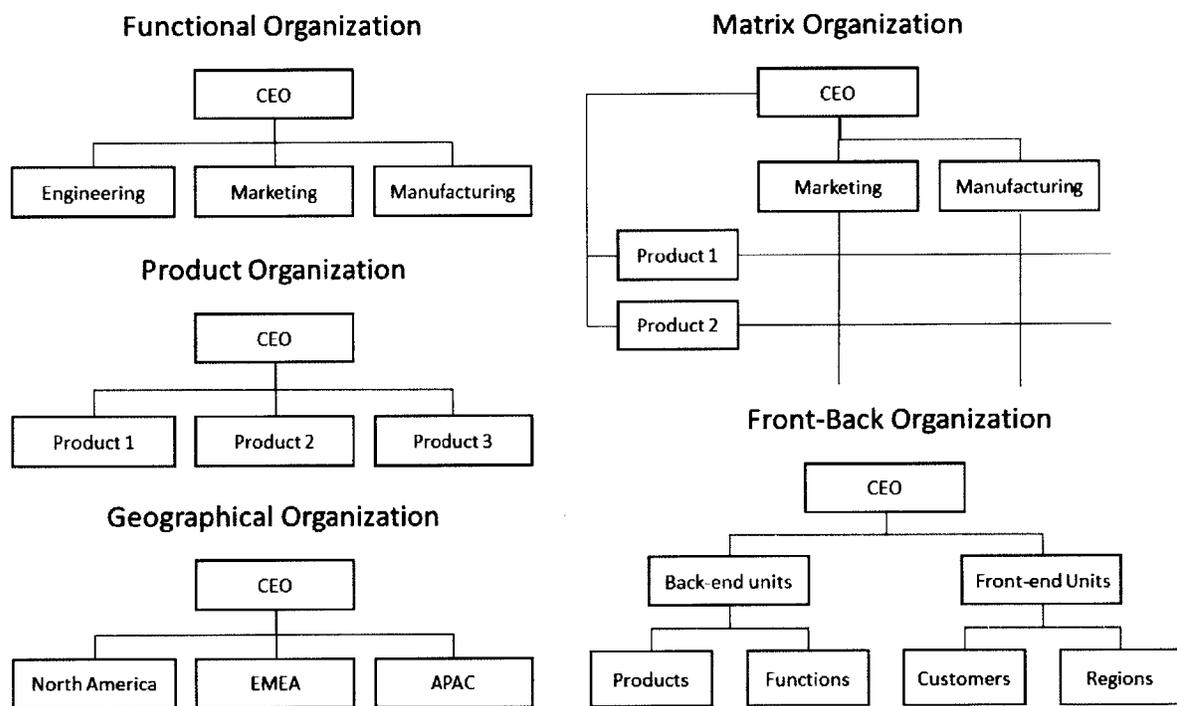


Figure 36 Five main organizational structures

Structure	Strengths	Weaknesses
Functional	<ul style="list-style-type: none"> • Economies of scale within functional departments • In-depth knowledge and skill development • Enables organization to accomplish functional goals • Best with only one or a few products 	<ul style="list-style-type: none"> • Slow response time to environmental changes. Less innovation • May cause decisions to pile on top, hierarchy overload • Poor horizontal coordination among departments • Restricted view of organizational goals
Divisional (Product,	<ul style="list-style-type: none"> • Suited to fast change and innovation in unstable environment 	<ul style="list-style-type: none"> • Eliminates economies of scale in functional departments

Geography, Customer, Market)	<ul style="list-style-type: none"> • Higher client satisfaction because product responsibility and contact points are clear • Easier to adapt to differences in products, regions, clients • Decentralizes decision-making 	<ul style="list-style-type: none"> • Duplication of resources and poor coordination across divisions • Less in-depth competence and technical specialization • Integration and standardization across divisions (products, regions, etc.) more difficult
Matrix	<ul style="list-style-type: none"> • Achieves coordination to meet dual demands • Flexible sharing of human resources across divisions • Suited to complex decisions and rapidly changing environments • Opportunity for both functional and divisional skill development 	<ul style="list-style-type: none"> • Dual authority can be frustrating and confusing • Participants need good interpersonal skills and extensive training • Time-consuming: frequent meetings and conflict resolution sessions • Requires great effort to maintain power balance
Front-back	<ul style="list-style-type: none"> • An alternative way (in addition to Matrix) to optimize on multiple dimensions at once (e.g., products, functions, customers, regions) • Often suited to large, complex organizations 	<ul style="list-style-type: none"> • Very complex to manage (needs top-down management from CEO and Executive Committee combined with lateral coordination throughout organization)

Figure 37 Strengths/weaknesses of each organizational structure

Adapted from Robert Duncan, “What is the right organizational structure? Decision tree analysis provides the answer,” *Organizational Dynamics* (Winter 1979), p. 429; and Richard L. Daft, *Essentials of Organization Theory & Design* (Cincinnati, OH: South-Western), 2001, pp. 42-47.

5.2.2 Implications for IT services firms

IT services firms are mostly organized in a divisional structure, usually tailored to a geographical division. This is a result of their need for accommodating customer needs, in which accommodating customers often means dealing on a geographical basis. Since optimizing customer satisfaction is the key success driver for this business, the divisional structure is best suited. For example IBM had its “mini IBM” in each country, operating more or less independently from each other for a long time. IBM Japan was run as a different entity, mainly consisting of local talents building software in Japan.

The caveat for this approach is that dealing with duplicated resources becomes challenging. For example, with the rise of BPO in India, IBM Japan did not need as many engineers in Japan anymore. But when it needed to shift its resources to India, it needed to layoff the workforce in Japan, and to do so, it had to send a German CEO over to Japan to execute this restructuring.

Another challenge is that customers are quickly shifting gears to a global organization. This means that IT services firms are required to offer a globally-integrated offering to key customers. With this in mind, the geographic structure is not the optimal structure for them to operate in. But can IT services firms shift towards a customer driven division on a global scale? The question is not easy to answer.

IBM seems to be shifting gears toward a front-back organization, where it manages the client-facing roles in the front organization, and handles the backend/R&D initiatives on a global centralized manner. This is a challenge in leadership, since it requires more coordination as well as centralized decision-making to facilitate the conflicting issues that are raised from the front team and the back team. These environmental changes can be an opportunity for firms such as TCS and Infosys that have been operating as client division organizations to expand their market share.

5.2.3 Implications for Packaged Software firms

Packaged software firms generally start off with a functional structure and evolve into a front-back structure. Because their competitive advantage rests in their core products and because this requires some concentrated R&D spending, they need to centralize investment in the product teams. They also need to maintain in-depth knowledge and skill development to continuously update their core products in the fast-changing technological landscape. The challenge for these firms is that they need economies of scale to fuel the surging R&D spending to maintain its product advantage. To do so, they expand into multiple regions, mainly in terms of marketing, sales and technical support. They are often faced with strong demand for local customization or add-on features to tailor to specific needs.

Because there is a tendency for the packaged software business to shift from product-based to service-based offerings [Cusumano, 2004], firms are often forced to upgrade their local teams to account for these local requirements. When the size of the local team expands in scale, a firm needs to change its organizational structure to a front-back structure so that the local teams can operate efficiently in their respective countries. This creates tension within the firm in dealing with internal bureaucracy and politics, often undermining new initiatives.

Growing pains like these offer local players some room to take advantage and offer local customization offerings to local clients. However, this does not necessarily enable the local customizers to leapfrog the global packaged software firms because economies of scale is just not enough to justify the R&D spending to compete with the global leaders. Therefore, the level of consolidation is often steep for packaged software firms on a global scale. Once a firm becomes a global leader, it stays a global leader until the market is disrupted by new technology. The opportunity for a local entrepreneur is two-fold: one is to stay as a local niche, or to wait until the next disruptive innovation comes along.

5.2.4 Implications for Internet Services Firms

Internet services firms are generally operated in a functional structure, where engineers are revered as the kings of the firm. This is because the competitive advantage of the firm rests on one or a few core products (e.g. search for Google, social network for Facebook), and this requires in-depth knowledge and skill sets to be exercised and updated at all times. The weakness of this organizational structure is that (with some controversy on this point) it creates less innovation. Since there is less coordination between the product/ engineering team and the sales/ marketing team, the organization as a whole is slower at accommodating new market needs that spring out from customer/client interactions. The consequence of having less innovation is that the firm's resources are directed towards milking the legacy innovations while they sell. This also results in a situation where the firm offers a universal product offering to multiple regions with minimal customization such as language support or adjusted wording. This is a risky situation, considering the fact that the pace of innovation in this space is extremely fast.

To mitigate this weakness, firms heavily shop smaller firms to acquire its latest innovation. Google, for example, acquired over 100 companies during the last 14 years. The services added through acquisition included Android, YouTube, Gmail and AdWords. Facebook seems to be following the same path in acquiring Instagram, WhatsApp, Gowalla and Friend.ly. With this satiation, there are opportunities for local entrepreneurs to start a service that tailors to local needs if it offers enough differentiation from the universal products that Internet giants offer, and are able to scale enough to survive in the global niche.

5.2.5 Implications for e-commerce firms

E-commerce firms are by far structured in a divisional structure within a geographical region. This is the consequence given that an e-commerce firm is equally a logistics firm and a software firm, if not more. Logistics is by nature divided into each region, and there are very few economies of scale or scope associated across regions, and therefore is best delivered locally. The business system is also different in each region, including the suppliers and channel partners, and therefore requires local decisions to be made quickly. Finally, local tastes are widely different in each region, which makes it suitable for local managers to iterate on product-market fit. With this reasoning, it is plausible that Amazon has been picky in entering new countries, only covering ten countries so far.

It is also understandable that the Samwer brothers from Germany have been successful in scaling faster in Europe with its Groupon clone than the original. They were able to iterate more quickly than Groupon and to accommodate the local tastes more quickly with its autonomy. With this in mind, e-commerce will be a promising field for local entrepreneurs in copying, enhancing and scaling a business idea that has been tested in another region. For firms expecting to make a foothold in multiple regions, this means that

they need to expand into multiple regions in a way that provides local autonomy that is equivalent to operating on its own. Joint ventures or franchises would be an option as well.

5.3 GLOBAL LEADERSHIP

Having a well thought-out strategy is not enough to excel in the complex and severe competitive software industry. This is especially the case for software firms that are operating on a global basis, or anticipating global expansion. It is equally important to have leaders with the right capabilities to run the global business, make critical decisions, implement change and reinforce the vision and mission of the firm. Although leadership is not a clear-cut topic, there are basic qualities that managers of globalized firms should have in common in building and running a globalized software firm. These basic capabilities are presented in this chapter.

The 4 Capabilities Leadership Framework [Ancona, 2005], developed by four MIT Sloan faculty members, is one of several conventional frameworks that offer a guideline for understanding the capabilities that are required for a global manager in an age of uncertainty. The following subsections will use the four capabilities of sense-making, relating, visioning and inventing as a foundation and expand on what is required for a global manager in a software firm.



Figure 38 Sloan's Four Capability Leadership Model [Ancona, 2005]

5.3.1 Sense-making

Sense-making is the ability or attempt to make sense of an ambiguous situation. More exactly, sense-making is the process of creating situational awareness and understanding in situations of high complexity or uncertainty to make decisions. It is a motivated, continuous effort to understand

connections (which can be among people, places or events) to anticipate their trajectories and act effectively.

Sense-making becomes especially important when managers are dealing with businesses beyond their home base. Each market is different and there are often uncertainties that are involved. Furthermore, every business in a different market needs adaptation. This sounds easy, but difficult to handle in real life.

Several corporate executives mentioned in this study that they struggle in dealing with the reports they hear from the country managers. The country managers often report to them about the local difficulties they are facing day to day, that they are behind schedule and that they need more investment to meet their goal. When this happens, several of them had a hard time understanding what was happening on the ground. Is the reasoning valid at all, or is it just an excuse for bad management? What questions can I ask to validate this? How can I fix this situation?

There are several examples of sense-making capabilities in the Sloan framework that are required for leaders in managing a global organization.

Curiosity: the interest and sensibility for other countries, cultures, geographies and what is happening in different parts of the world.

Comprehension: the ability to articulate the understanding of individual stimuli in words, metaphors or stories to try to capture and communicate critical elements of what you understand.

Integration: the ability to integrate information from all sources to develop a well-informed, diverse perspective that can be used to optimize performance.

Composure: the ability to reserve judgment on a specific situation or person – not simply applying your existing frameworks and overlaying them on the situation.

Mental modeling: ability to embrace new experience as a learning opportunity to understand diverse values and to go beyond personal biases.

5.3.2 Relating

The core capability of relating centers on a leader's ability to connect and build trusting relationships with a diverse set of people. In the fast-paced innovative environment of the software industry, firms need to be responsive. To be responsive, a firm needs to bring together multidisciplinary teams of specialists that are experts in their respective fields to work collectively. This is especially true when entering new markets. Teaming up with a Sherpa is a good idea when you are trying to climb the Himalayas, but in this case, you can't get their full buy-in solely from money. It requires the communication capacity to

emphasize and sympathize, and it also requires the communication capacity to influence others to support your initiative.

There are also a few examples of relating capabilities in the Sloan framework that are required for leaders in managing a global organization.

Champion diversity: the belief that multidisciplinary teams, when run well, can achieve what cannot be achieved by a homogeneous team.

Inquiry: the ability to listen and understand what others are thinking and feeling.

Advocacy: the ability to take a stand and trying to influence others of its merits while also being open to alternative views.

Connecting: the ability to build collaborative relationships with others that have diverse backgrounds, goals and motivations, and to create coalitions for change.

Self-awareness: the awareness of personal strengths, weaknesses, biases, and how your action can influence others.

5.3.3 Visioning

Visioning is a term used frequently in the realm of leadership where it is often thought that setting vision is universally common. Vision is what sets the firm's direction across multiple cultures and regions. It serves as the guiding principle on why the business is meaningful, and what should be done while navigating through uncertainties. A team without a clear vision is like navigating the Atlantic Ocean without a compass; the chances are that you will get your ship in distress very quickly.

There are some examples of visioning capabilities in the Sloan framework that are required for leaders in managing a global organization.

Forward-looking: the ability to anticipate customer needs, competitors and inflection points to make sense of the big picture.

Pragmatism: the humbleness of "know the enemy and know yourself."

Strategic-thinking: the ability to intuitively and analytically determine which game to play in and how.

Commitment: the ability to make bold and ambitious decisions with limited information.

Framing: the ability to effectively emphasize the sense of meaning about their work.

5.3.4 Inventing

Inventing entails creating the processes and structures needed to make the vision a reality. It involves implementing the steps needed to achieve the vision of the future. A team without strong execution will end up in smoke, regardless of other factors. The consequence is that they will be outplayed by local players or other multinational firms in their local market, and thereby miss the bus. To execute efficiently, the leaders need to understand how to creatively lay out the internal structures, processes and incentives so as to enable the team to make the best of their individual and collective talents.

Next are a few examples of inventing capabilities in the Sloan framework that are required for leaders in managing a global organization.

Organizational design: the ability to structure the organization in a way that enables the team to adapt effectively to local demand while maintaining efficiency.

Setting metrics: the ability to set tangible and measurable metrics to incentivize the team to execute in accordance with the underlying missions and goals.

Linking: the ability to mobilize the learning and capability from one region to another so as to take advantage of the global operation by grouping people together, organizing their internal interaction and linking across different groups.

Exploit leverage: the ability to grasp the inflection point in which the firm can leverage its positioning.

Leading change: the ability to create and lead change that happens through technological disruption, competitive landscape changes, changes in market phases and the firm's strategy.

These four capabilities of sense-making, relating, visioning and inventing are complementary. Without inventing, visions may remain dreams that never get realized. Inventing without a clear sense of the current situation and where you want to go can result in chaos. People want to know that they are operating with an accurate map of reality, not one that is outdated or based on wishful thinking. They also want to know that they are working for something that is important. Finally, while visions and new structures can result in great activity, without a base of people who are committed to working together towards the goal, any success may be short-lived.

Furthermore, leaders in a global setting cannot excel with only one or two competencies. They need a balance of all four to truly build and manage a global organization. Leaders in business settings, especially in a global setting, need to cycle through them on an ongoing basis.

Chapter 6 SKETCHES ON GLOBAL SOFTWARE FIRMS

Chapter 3 discussed the key attributes that defines the market as global-dominant market vs. a local-dominant market. Chapter 4 explored what makes a business favorable for international expansion as well as which countries make a favorable market to enter. Chapter 5 examined how the firms that envision international expansion should best deal with the complexity involved in expanding its business to a global business. This chapter will review four non-U.S. companies that have been successful in expanding globally and discuss what they have done well. It will compare the successful U.S. and non-U.S. firms in relation to the strategic, cultural and geographic view to draw a line between the different approaches to highlight how non-U.S. firms, although lacking a home base advantage, has been particularly successful in attaining their positions in the software industry.

6.1.1 TCS

Tata Consultancy Services Limited (TCS) is perhaps one of the prominent examples of software firms that took advantage of the abundant engineering resources that are unevenly distributed around the world.

Tata Consultancy Services Limited (TCS) is a multinational information technology service, consulting and business solutions company headquartered in India. TCS operates in 50 countries and is the largest Indian company by market capitalization and the largest India-based IT services company by 2013 revenues (US\$ 13.44 Bn). It is also Asia's largest standalone software company.

TCS was established in 1968 as a division of Tata Sons Limited. TCS Ltd. was incorporated as a separate entity in January 1995. Its initial projects involved punch card operations to automate clients' data processing. They soon targeted export markets, winning the company's first foreign client in 1974 and building a joint venture with U.S. computer-maker Burroughs Corporation. Their major service at the time was sending engineers overseas to work under the direction of client management. In the late 1980s, TCS began accelerating its shift to offshore development. TCS's Deputy Chairman F.C. Kohli articulated early on that India can become the superpower in the software world.

“Many years ago, there was an industrial revolution; we missed it for reasons beyond our control. Today there is a new revolution – a revolution in information technology, which requires neither mechanical bias nor mechanical temperament. Primarily it requires the ability to think clearly. This we have in abundance. We have the opportunity to participate in this revolution on an equal basis; we have an opportunity, even, to assume leadership in this revolution. If we miss this opportunity, those who follow us will not forgive us for our tardiness and negligence.”

India has become the “software factory” of the world in recent years with an estimated market share of 65% for offshore IT Services and 46% for offshore BPO. This comes from the home base advantage of India with the following qualities:

Abundant resource of high quality engineers: IIT and other Indian technical schools are annually producing over 103,000 English-speaking computer science graduates, exceeding the number graduating from U.S. universities by at least 20,000 per year [NASSCOM, 2005].

Cheaper wage level as compared to the clients’ home country: The wages in the region was around 1/3 of the level compared to U.S. standards. Since the software development is labor-intensive business with personnel-related costs accounting for 70-80% of total costs [Ghemawat, 2008], there is an estimated 25-50% savings for IT Services work offshored to India [NASSCOM, 2005].

Ability to modularize/partition developmental activities: The maturation of the IT Services practice plays an important role in this shift. As the industry matured, a range of standards, tools and methodologies provided a set of building blocks for more efficient development of IT systems. In parallel, the processes for delivery also became systematized (e.g. CMMI). Now, many activities in the software development process can be partitioned and performed by people located in different places.

In hindsight, it almost seems logical that Indian firms such as TCS were positioned as the software factory of the world, thanks to its strong home base advantage. However, the question still remains in how they got there.

TCS posted a representative in New York office in 1979. TCS focused on sending consultants to selected jobs where they could be exposed to new technologies and then brought home to teach others, an approach TCS management referred to as “bootstrapping” and continued to apply in the 1990s. By the time TCS arrived in the U.S. and Europe, these economies had amassed immense portfolios of custom software that needed further customization and integration. As enterprises purchased new and faster computers, the need to migrate existing software from old platforms to new platforms went largely unmet. TCS quickly decided to invest in software migration and project management technologies that would automate substantial segments of software migration projects. The strong selling point for TCS was to migrate the legacy software into a new one, rather than adding patches to the existing software. This was done through a utilization of the cheap labor force, but also through the IT management skills that the Indian engineers acquired through the “bootstrapping” experience.

TCS was able to catch the big opportunities such as the Y2K problem, the burst of the Internet bubble and the Sarbanes-Oxley Compliance wave, which all happened during the late 1990s to mid-2000s. This was

a period when firms in the U.S., Western Europe and Japan all needed abundant resource that could rebuild its IT infrastructure efficiently and economically. By that time, TCS had the muscles to hire in best talents, build internal education system and deliver a quality output in a competitive pricing. TCS had moved on to automation. They created testing tools, compilers and reusable codes that were created in India to support these activities in each domestic markets.

Furthermore, TCS delivered its services via what the company called the Global Network Delivery Model, which enable the company to service a customer's requirement through a combination of nearshore, regional, and global delivery centers and provide superior value by effectively addressing regulatory, language, and time zone requirements. Near-shore centers such as Phoenix and New Jersey in the United States provided customers convenient access to TCS with staff available in the customer's own time zone and familiar with the customer's culture and local business environment. Near-shore centers were typically smaller centers and were used mainly for analyzing client requirements at the beginning of a project and supporting implementation of new systems. Regional centers such as Hungary for Europe and Uruguay for the Americas served both local and global customers. They offered in-demand capabilities and language and cultural sensitivity. Global delivery centers (India and over time China) provided highly efficient offshore service to clients requiring either large scale or deep technical expertise not available elsewhere. Geographic breadth improved TCS's ability to serve global clients, and eased clients' fears of outsourcing entirely to a remote country.

IBM launched an aggressive expansion plan to grow its workforce in India in the mid-2000s in reaction to the surging Indian competitors. However, by this time, TCS, Infosys and Wipro have gone down the learning curve and arguably have sustainable advantage over IBM in terms of creating a quality product for competitive pricing. With the whole ecosystem established in India, it is increasingly difficult for firms to compete with Indian firms such as TCS in the future.

Their approach can be characterized as follows.

Using home base advantage: utilized abundant source of quality English-speaking engineers.

Complementarity entrance to strategic locations: set up offices in the U.S., Hungary and Uruguay to offset the distance and the time zone differences.

Knowledge-sharing led from headquarter: consolidation and capsulation of knowledge were led by top executives as a key stepping stone for moving up the value chain.

Global partnership: partnerships with channel partners such as retailers and hardware vendors as a means of free marketing.

Their approach provides insights into how a software firm that is from a remote region can upgrade its capabilities through bold strategic moves.

6.1.2 SAP

SAP is a company that took the disruption that occurred in the change in international management practice and became the dominant player in the ERP packaged software segment through a first-mover advantage.

SAP is the global leader in the ERP (enterprise resource planning) package software. The firm ranks third in the global packaged software product segment after Microsoft and Oracle. It is arguably the most well-known non-U.S. software firm today. It has over 66,000 employees in over fifty countries, with more than 35,000 customers in 120 countries.

SAP was founded in 1972 by five former IBM software engineers in a small town outside Frankfurt, Germany. SAP initially developed about a dozen back-office software packages designed to meet different enterprise functions. Such application packages were later referred to as enterprise resource planning (ERP) systems in the software market. Because companies in each industry have slightly different ways of treating these functions, most enterprise software companies have to offer extensive customization services or offer partnership to do the tailoring. SAP, on the other hand, decided to offer various specialized versions of products tailored to various vertical segments. Many large businesses were changed by this new breed of software that seamlessly integrated all the vital information flowing through companies.

In 1973, SAP launched its first major product, R/1, an instantaneous accounting transactions processing system. At the end of 1980, 50 of the 100 largest industrial companies in Germany were SAP customers. Relying on word of mouth filtering through the overseas branches of its German customers, SAP soon began selling its software outside Europe. With corporate giants like Dow Chemical and Bayer already running R/2, SAP could rely on the fear of obsolescence of its customers' rivals to sell its software to the major competitors in each industry. Among the large corporations who began to adopt R/2 were Dupont, General Mills, Goodyear Tire and Rubber, Heinz, and Shell Oil, as well as 80 of the 100 largest companies in Germany, such as Hoechst, Daimler Benz, and BASF. SAP was nicely located in Germany, where several European headquarters for MNCs were based. In 1984, SAP opened an international office in Switzerland to expand to the whole European market.

After five years in development, R/3 had been launched in 1992. R/3's release coincided with a growing trend toward corporate downsizing in the U.S. As a result, by the mid-1990s SAP had traveled from the

relative anonymity of 1992 to the business applications vendor of choice for nine of the ten largest U.S. corporations, one-third of the Fortune 500 and seven of the ten largest Business Week Global 1000. Major corporations as Apple, Chevron, Colgate-Palmolive, Digital Equipment, and Polaroid were jumping on the R/3 bandwagon, and by September 1995 SAP could claim over 1,100 installations of R/3 for companies with \$1 billion or more. By this time, North American sales accounted for one-third of all revenues; and the Asia-Pacific market was expected to reach the same level by the year 2000. With two-thirds of all sales revenues now coming from its foreign subsidiaries, in 1996 SAP relocated most of its marketing operation to Pennsylvania. Between 1992 and 1996, it opened subsidiaries in South Africa, Malaysia, Japan, the Czech Republic, Russia, mainland China, and Mexico among others, and was making R/3 available in 14 foreign languages including Russian, Mandarin Chinese, and Thai.

The early success of SAP came from its superior product offering that was more horizontally integrated as compared to their competitors such as Oracle, PeopleSoft, JD Edwards and Baan. They were fortunate to be located in Germany, where several world-class manufacturers have their global headquarters. SAP was able to take benefit of this home base in working closely with these clients in polishing up their core product. One of the key factor that led to SAP's success globally was its focus on packaged software – they fought with the temptation to offer fully customized offering to key clients. Because they maintained this clear focus, they were able to expand its offering to other markets in the world when the time came. SAP has maintained this focus throughout the growth, spending over 13% of its total revenue in R&D.

Another key factor of SAP's success is partnership. SAP has the industry's largest network of software solution providers, value-added resellers, distributors and service partners, totaling around 2,400 certified partners. SAP partners include Arthur Andersen (currently known as Accenture) and Price Waterhouse (currently IBM GBS). These accounting firms acted as value-added resellers providing consultation, customization and delivery at a local level. Another important partnership was with Microsoft, to make SAP software integratable with Windows NT. SAP has also developed an independent sales and support force through value-added resellers who assume responsibility for the licensing, implementation and support of SAP solutions. These partnerships allow SAP to focus on updating its core product offering, while their partners provide the local responsiveness required to win at a local level. This also creates a strong network effect, where SAP is center of the gravity in a huge ecosystem that reinforces itself over time. By the time that competitors such as Oracle and Baan caught up in terms of product offering, SAP already had a dynamic system around them that made it extremely difficult for competitors to outcompete. It took only 4 years for SAP to reach this point, which is remarkable achievement.

Their approach can be characterized as follows.

Strong focus on core product: attracting sophisticated first users to polish-up core product.

Early entry into large markets and quick penetration: entry into the U.S. market accompanied with the market penetration within four-year timeframe took competitors by surprise and enabled SAP to pick the low-hanging fruits.

Complementarity entrance to strategic locations: set up offices in Switzerland and the U.S. to fuel international expansion

Global partnership: partnerships with channel partners such as value-added resellers and platform leaders to create an ecosystem.

Their approach provides insights into how a packaged software firm originated outside of the U.S. can summit on their advanced product offering and create a global-dominant business.

6.1.3 Skype

Skype is perhaps the best example of a non-U.S. firm that became a truly global internet service.

Skype is a peer-to-peer VoIP (voice over Internet protocol) application that can be used for free phone calls and is available globally. Skype was founded in 2003 by Niklas Zennstrom and Janus Friis in Denmark, Sweden and Estonia. Skype is an interesting example where a software product that was launched in a non-U.S. region had been designed for the global market from day 1 with the intention of becoming a platform leader. Skype entered the market at the right time with the right technology. They entered when broadband Internet connections became available to the world, and where there was an opportunity to disrupt the market by creating a new technology.

Skype seemed to understand the nature of the business as a platform from the outset. It acknowledged the strong global network effect in the business, which would bring value to the platform by expanding to multiple countries. Its founders also understood that attracting complementers such as headset manufacturers and value-added resellers in selected countries with large domestic market that would add value to the platform. And because the product was scoped in a way that it did not require extensive localization, the service was able to be provided globally. Skype had attracted 54 million registered users around the world within 2 years in service, and had grown to account for 20% of international long distance calling minutes by 2010.

One of the main reasons that Skype was able to gain market acceptance was because it took the home base advantage that was available for them in the peer-to-peer product segment. Skype entered the VoIP market by using the technology they created through Kazaa, a peer-to-peer file sharing application, a

technology very similar to Napster, which was shut down in 2001 when it ran into legal difficulties over copyright infringement. Governments such as the United States, UK, Germany and Japan were all against the copyright infringement and therefore were not the right markets to nurture the technology required for Skype. What makes the Nordic countries different is that it is arguably forgiving to copyright infringements, given its remote location from major content distributors residing in the U.S., eastern Europe and east Asia. This is rooted in the Nordic culture of sharing, as one of Skype's first employees puts it:

“This trend consisted of a particular flavor of tech innovation, what I call 'equitable technologies.' These are technologies that level social, technological, and commercial playing fields by decentralizing control and redistributing it to individuals. The businesses built on this innovation were articulated in many forms and industries but at their core operated on these same principles of distributed decentralization.”

[Srinivasan, 2012]

The forgivingness to peer-to-peer sharing culture and government regime, coupled with one of the most network-connected internet infrastructure in the world made it a great home base for Skype to take the new product segment that was opening up with the technology advancement.

Skype's business model was straightforward. The company attracted users to its free basic service in large part through word-of-mouth; through the end of 2005, Skype had spent nothing on marketing. Following eBay's acquisition of Skype, marketing efforts were stepped up; Skype purchased text and banner ads and operated an affiliate program. Skype's service was especially attractive to consumers with large long-distance phone bills. In the U.S., 57% of households made more than one hour of long-distance calls per month, and 15% made international calls. Due to Skype's peer-to-peer architecture, basic service incurred almost no variable costs. Users' PCs were used to route calls, so Skype did not need a large number of centralized servers. Likewise, users provided bandwidth for calls through their own Internet connections. Skype earned revenue from the fraction of basic service users—as of late 2005, about 5%—that upgraded to SkypeOut, SkypeIn, or other premium services.

Skype's initial success cannot be attributed solely to technology – far from it. Actually, there were competing products such as Net2Phone that had superior technology and was the first mover but was not able to penetrate the market as quickly as Skype. One of the main reasons that Skype was successful was because it had the strategy to become the platform leader in a global scale and was consistent in its product strategy, marketing and partnership development. When they knew that the product was good for global expansion, they pivoted their focus to business development and marketing. They set up a PR office in London to complement their reach to the media partners. Their global recognition rocketed when

they went on media such as Fortune, BBC and Economists. With this marketing success, they were able to pull in local partners such as Radioshack in the U.S., PCHome Online in Taiwan, TOM Online in China, and Philips in Europe.

After they have expanded to the large markets and have become the favorite product in the product segment, it has become near-impossible for 800-pound gorillas to out-compete. By the time Google entered the market with Google Talk, Skype had 84 million cumulative downloads and 29 million registered users worldwide. The firm was acquired by eBay in September 2005 for an estimated amount of USD \$2.6 billion, and eventually to Microsoft in 2010. Skype offers a classic example of a software firm that started off from a non-U.S. country and went global from the outset.

Their approach can be characterized as follows.

Using home base advantage: launched a compelling product using peer-to-peer technology while other markets were still debating on its legal consideration.

Superior user experience: clean user interface and clean voice quality, underpinned by a superior point-to-point technology.

Universal product: only requires translation of website and menu.

Free but not free: initial usage is free but also offers premium plans for business users and “Skype-out” features for calling a mobile phone via Skype.

Global partnership: partnerships with channel partners such as retailers and hardware vendors as a means of free marketing.

Their approach provides insights into how local entrepreneurs, often with less cash in hand compared to the giants from the U.S. west coast, may attempt to establish itself as a global dominant platform player.

6.1.4 Rocket Internet

Rocket Internet is perhaps one of the best examples of a software firm that built its business through a deep understanding of multidomestic strategy.

Rocket Internet is one of the world's largest e-commerce-focused venture capital firms and startup incubators founded in 2007 by the Samwer brothers in Berlin, Germany. Rocket Internet operates in more than 50 countries and has more than 75 ventures in its portfolio such as the e-commerce retail companies Zalando in Germany, Jabong.com in India, Lamoda.ru in Russia and The Iconic and Zanutti in Australia; the global food delivery platform foodpanda/hellofood; the global property listings site Lamudi; as well

as Lamudi.pk, Carmudi, Kaymu.pk, easytaxi.com.pk, Azmalo.pk and Daraz.pk in Pakistan. Rocket Internet's various companies created more than 20,000 jobs worldwide [Wikipedia, 2014].

It built high-growth companies acquired by eBay, Groupon and News Corporation. Their first attempt was to clone eBay for the German market, in which they were later able to sell the company to eBay for USD \$43 million after just 100 days in business. They were also able to sell off a Groupon copycat CityDeal to Groupon in exchange for a 10% ownership stake in Groupon worth USD \$126 million. Previous ventures also included Wimdu that profited by USD \$90 million [Wikipedia, 2014]. The company's business model is to identify successful Internet ventures from other countries (often the United States) and replicate them in predominantly emerging markets.

The company is run by the Samwer brothers – Marc, Alexander and Oliver – who are notoriously known as the “clone” kings who simply copy existing high-growth Internet companies, from Airbnb to Pinterest, often selling the businesses back to the people who originated the idea. Their strategy is to take a proven business model to a new region before the market is ripe, penetrate the market and thereby create an entry barrier with a low cost of capital. Alexander stated in one interview with Wired:

“We are builders of companies, we are not innovators... Someone else is the architect and we are the builders.” Oliver said "My advantage is never that I'm the first," he said. "Never. My advantage is that we just build faster and better in more instances than anyone else."

The company is triggering a lot of discussion around whether taking someone else's innovation to another market is regarded as a bad thing, and whether it is ethically correct for an Internet company to not seek innovation. While these are interesting discussions, this study focused more on the strategic aspects of their business, especially in light to how they have managed to expand their business to multiple continents in a few years. It is apparent that the Samwers understand the notion of platform leadership and winner-takes-all. This is a phrase that is posted on their corporate website to explain about themselves.

“Rocket Internet is the world's largest Internet incubator. Our team has been building online companies since 1999 and has created over 100 market leading companies in 50+ countries, dozens of which have been exited successfully. Since 2007, our team operates under the name of Rocket Internet... We want to be selfless and pragmatic and have no time for politics. We value intelligence more than experience. We believe that anything is possible. We move as fast as we can and take risks. We like to get and give autonomy and responsibility. We are flexible and tolerant towards ambiguity and uncertainty. And above all: we are always looking for great people.” [Rocket Internet Website, 2014]

They understand that e-commerce is a product segment that has relatively low global network effect and requires high localized service. They also anticipate that the business is highly dominant in nature at a local level. With this understanding in mind, they view the business as a land grab – to enter new markets while there is less competition, and to scale as quickly as possible so that they create an entry barrier to the global leaders as well as the local entrepreneurs. They understand that the international coordination can become a major obstacle in adapting to new markets, and therefore do not put emphasis on maintaining communication to have the same level of service for each country. Rather, they give autonomy to each country general manager and allow them to do what is right for each region. The model has been particularly successful in Europe and South East Asia, where there are many markets that speak different languages, have a relatively short talent pool and have little risk capital to fund these initiatives.

Their approach can be characterized as follows.

Replication model: take a best practice from one region to another region.

Local autonomy: the local staff has the autonomy to learn and execute on whatever it takes to fit the local needs.

Bringing in young bright talent: strong inclination to MBAs, ex-consultants and ex-investment bankers.

Aggressive marketing spend: backed with abundant funding, they are able to outspend the local entrepreneurs.

Early exit: view their business as a “builder,” not as a “operator.”

Their approach provides insights into how local entrepreneurs, often with less cash in hand compared to the giants from the U.S. west coast, may attempt to expand into international markets through adopting decentralized lean operation model.

Chapter 7 CONCLUSION

This thesis has discussed the key attributes that define the global-dominant market vs. a local-dominant market, what makes a business favorable for international expansion, which countries make favorable markets to enter, how the firms that envision international expansion should best deal with the complexity involved in expanding to a global business, and examples of software firms that were effective in achieving the globalization of their respective software businesses. This chapter brings together the lessons learned from each chapter and provides managers that work in the software industry with guidelines for thinking through the globalization strategy of their respective software businesses.

7.1 GLOBALIZATION STRATEGY GUIDELINE

Herein are some guidelines for managers working in the software industry when considering a globalization strategy. The WTAoM framework is a useful tool for both managers in large firms and also for entrepreneurs. For example, if you are in a strategic corporate division of a large multinational company, you can analyze local dominant players' strategies and competitive advantages by using the framework and can get hints for creating an entry strategy to the market currently dominated by local players. If you are a serious entrepreneur in a local market, you can use the framework to protect your local market from global platform players, create the right platform, and keep entry barriers high enough so that the 800-pound global gorillas cannot come in afterwards.

- 1) Define the firm or product segment that they are competing in.
- 2) Determine the nature of the competition in the product segment using the Global Winner-Takes-All-or-Most Framework (i.e. global dominant vs. local dominant).
- 3) Decide which countries or regions to enter and/or focus resources using the DAC Framework (i.e. Demand vs. Accessibility vs. Complementarity).
- 4) Streamline the execution with the nature of the product segment and the countries or regions to focus on (i.e. new market expansion, organizational design and global leadership).
- 5) Go through the globalization strategy and assess its viability.
- 6) Revisit the globalization strategy and iterate on a routine basis.

The remainder of this section discusses each process topic in detail.

7.1.1 Define the firm or product segment that they are competing in

The first step of the process is to define the firm's or product's segment. This requires a thoughtful debate on the firm's vision, mission and goals as well as the capabilities that the firm has. This may not be as easy as it sounds, given the fast-paced evolution that the whole industry is going through. The nature of the firm changes over time, and it is very likely that the firm is competing in a different product segment than they were five years ago. Misunderstanding the product segment will make the further analysis irrelevant, and therefore this is an essential step in thinking through the globalization strategy.

7.1.2 Determine the nature of the competition in the product segment using the Global Winner-Takes-All-or-Most Framework

The next step is to determine the nature of the competition within the product segment using the Global Winner-Takes-All-or-Most Framework. A common pitfall that local players make is in replicating a global dominant product in their home country. These replication products may prove popular for a few years while the global players focus their attention on their home base, but soon they will be taken over by the global dominant players very quickly. Another common pitfall is for firms competing in a local dominant product segment to export its product to another country. This will often result in losing in the local battlefield against local incumbents or local entrepreneurs that are able to learn the trick and adapt to the local requirements quickly. Managers need to understand the nature of the product segment so as to best understand whether they should expand globally at all, and whether global expansion is a requirement for their business. Global Winner-Takes-All-or-Most Framework will help managers think through the driving factors of the competition in their respective product segments.

7.1.3 Decide which countries or regions to enter and/or focus resources using the DAC Framework

Once the nature of the product segment is assessed, managers need to consider which countries or regions to enter and focus their limited resources. The important aspect of this step is to discuss why the firm is trying to expand globally. Is the motivation to take benefit of the local demand, or is it because the new market is readily accessible, or is it because the firm is seeking to complement its capabilities through the international expansion? The reality is that many software firms are actually better off when they focus their resources and attention on their home country that they know well and have the capabilities to succeed in.

After closely reexamining the benefits and the risks of globalization, managers are well-informed to conduct an analysis of which countries or regions to enter using the DAC framework as previously

discussed. Note that the criteria of which country or market is favorable depends deeply on the nature of the product segment (global dominant vs. local dominant), and on the capabilities of the firm itself.

7.1.4 Streamline the execution with the nature of the product segment and the countries or regions to focus

Once the strategy aspect is set, managers need to streamline the execution with the strategy. When it comes to executing strategy, the old saying that “the devil is in the details” holds true for many companies. It is estimated that more than 60% of strategies are not successfully implemented. A well-thought-out strategy is a "pie in the sky" without a bold execution. Even worse, a mismatch in strategy and execution may end up confusing employees, partners and potential clients/customers by sending out the wrong signals. Therefore, thinking through the execution with a good understanding of the strategy and aligning it is an indispensable piece of the globalization strategy.

This thesis discussed three elements of execution: new market expansion, organizational design and global leadership. These elements are especially relevant in executing the globalization strategy. However, there are also other important aspects of execution that should not be dismissed. These include setting the right metrics, reinventing the communication processes and building the corporate culture to best accommodate these change initiatives.

7.1.5 Go through the globalization strategy and assess its viability

Once the whole scope of the globalization strategy is thought through, managers need to assess how viable the strategy is in terms of the competition in the short term as well as the long term. By this time, managers should have a clear picture of the plan in terms of what order of investment would be required, how much impact it would have on changing the organizational structure and the management style, and who they would be competing against. With this big picture, managers need to rationally consider whether the plan is viable, actionable and true to their vision.

If the overall globalization strategy is in good shape, the next step would be to take a deep dive into the execution plans, which may consist of compiling go-to-market strategies, leading reorganizational initiatives, hiring managers or reaching out to potential partners.

If the overall globalization strategy is not in good shape, managers will need to go through the guidelines from the beginning. This may include pivoting to a new product segment, reconsidering the complementary aspects for expansion and taking a multiple-step approach or reconsidering the time horizon of the globalization initiative. This includes hoping that the industry, market or competition

would change over time in their favor (although not doing anything in this fast-paced industry can lead to destructive consequences).

7.1.6 Revisit the globalization strategy and iterate on a routine basis

Organizations that are most effective at implementation over time continually revisit their strategic plans, viewing their strategies as anchors to what they can achieve. While implementing the strategy in years two, three, four or five, it is a good idea to repeat all of the steps that have been described. This is especially true for a globalization strategy for software firms for several reasons.

First, the industry reinvents itself constantly. The software industry is a young industry that has been only around for six decades, with new technologies disrupting the nature of the industry. Internet, mobile, social media and crowd sourcing are just a few examples of these continuous disruptions. Managers need to be constantly aware of the evolution of the industry to be able to assess the opportunities and threats that can have a huge impact on the well-being of the firm.

Second, the competitive landscape is evolving over time. There are constantly new entrants that arise from nowhere and act as game-changers. Google, Skype, SAP and TCS are good examples of the many disruptors of the industry. Large global firms are constantly seeking opportunities for expanding their reach to new product segments and thereby reinforce the ecosystem. Google, Microsoft, Facebook and Oracle are famous for their aggressive M&A activities and their abilities in entering new avenues. Managers need to be on the lookout for these competitors and to think through whether their strategy is still valid in the new competitive landscape.

Finally, a firm's capabilities also evolve over time. Firms can choose to enter a new market to gain complementary capabilities to improve their competencies. A firm may also choose to diversify or pivot their product offering so as to reinforce its positioning or to gain a strong foothold in a niche market. Furthermore, the nature of the business may evolve over time. One example is the packaged software firms shifting from a pure product company to a services company or a hybrid company. When these changes occur, managers need to reconsider their overall strategy so as to make the best out of their capabilities.

7.2 STRATEGIC ADVICE FOR GLOBAL PLATFORM PLAYER

When new products are hyped in the U.S., there are always several local entrepreneurs that replicate the business idea and implement it in their local markets. Global platform players tend to start off with market penetration in the U.S., where a big portion of their engineering power is dedicated for the U.S.

market. Therefore it is not always easy to keep up with the high pace of innovation in each local market. Tailoring for each local market from an early stage is challenging for global players in that this always runs the risk of creating spaghetti code and causes distraction of managerial attention.

Weighing these considerations, global platform players may consider the following strategies:

- 1) Compete in the global dominant product segment.
- 2) Focus on their core product through a centralized R&D.
- 3) Take a functional organizational structure and centralize its activities to gain economies of scale and nurture in-depth knowledge/skill development.
- 4) Enter selective markets with high demand.
- 5) Set up regional offices with sales and marketing functions.
- 6) Enter the market through strategic alliances with local players or defer the entrance and consider M&A with successful local players.
- 7) Seek expansion into complementary markets to reinforce capabilities.

7.3 STRATEGIC ADVICE FOR LOCAL PLAYERS

Every firm essentially starts off as a local firm. With the limited resources and the capabilities that the local players possess, firms need to understand how to position themselves so as to keep the 800-pound gorillas firms offshore. Replicating a business idea from Silicon Valley can be a good way to kick-start the business for local entrepreneurs, but this has to be done with careful consideration on which product segment to replicate. Playing in a global dominant product segment can end up as wasted energy and resources. Local firms also need to also consider that the global platform players can also replicate your home-grown ideas and scale them at a global level. In this case, having an innovative idea or world-class product is not enough. The firm's capabilities and capacity accompanied with the right strategy and leadership are needed to compete with the global platform players.

Weighing these considerations, local players may consider the following strategies:

- 1) Compete in the local dominant product segment.
- 2) Take a geographical organizational structure and adapt to the local context quickly.
- 3) Build local capability quickly to deter entry.

- 4) Enter selective markets that are accessible yet have sufficient demand.
- 5) Set up regional offices with full functions and an emphasis on local autonomy.
- 6) Enter the market through organic expansion or through acquisition.
- 7) Seek for niche opportunities to become a global dominant player.

7.4 STRATEGIC ADVICE FOR JAPANESE SOFTWARE FIRMS

Japanese software firms clearly lack presence in the world of global competition. Despite numerous past attempts that were made for international expansion, very few companies are widely known in the United States. Even within Japan, the major software firms tend to be a foreign company. The only exception is in the IT services sector with Fujitsu, NTT Data, NEC and Hitachi sharing the pie along with IBM, and in the e-commerce sector with Rakuten sharing the pie with Amazon Japan. There are various reasons for why this has happened, but the lack of strategy is arguably one of the key reasons that Japanese software firms are struggling.

7.4.1 Why International expansion is important for Japanese firms

Japanese software market is a saturated market. GDP growth has hit the ceiling. Firms with a local dominant position in one product segment are seeking for horizontal expansion into other product segments within Japan so as to maintain its growth. But the market is already overcrowded with several firms offering similar products, and the intensified competition is causing a price war that is dragging the profit margins down. Also, firms are losing its efficiency due to too much diversification, and this also is undermining the overall competitiveness. International expansion is seen as a solution for overcoming the shrinking demand and for decreasing internal competition that is affecting the profit level.

International expansion has become a new trend for Japanese software firms, with companies such as Rakuten, DeNA, Gree, Fujitsu, NTT DATA and LINE. Several overseas M&A deals have been closed, and several new offices have been opened in the past five years. Smaller firms also ventured overseas. However, Japanese software industry still awaits for a winning example for international expansion to shed light on the positive impacts of globalization.

7.4.2 Situation of the Japanese software industry

When comparing the revenue volume between the top Japanese firms to the top global firms, top Japanese firms are a magnitude smaller than the top global firms except in the IT services product segment. This can be evinced by the fact that 78% of the revenue coming solely from the IT services product segment [IT job Gate, 2014]. The Japanese software industry is a skewed industry.

Players in the packaged software industry are premature and lack capabilities to compete with global firms, although the product segment is global dominant at large. Perhaps the best example is Zuken, a CAD software firm that has approximately 30% of overseas revenue within the \$231 million total revenue [Zuken , 2014]. Apart from Zuken, other firms’ overseas revenue remains below a few percent of its total revenue.

The internet services product segment is also premature. Yahoo! Japan is the king of the market, but still is a magnitude smaller than the global dominant firms. Their business domains remain in local dominant product segments such as news portal, online commerce for local goods, local content aggregation and online gaming. Internet services offered in Japan tend to be a localized version of what is offered in the U.S. Firms such as DeNA, Gree and Cyber Agent have ventured into international expansion with the hypothesis that the services fine-tuned for sophisticated Japanese consumers will have traction elsewhere. But their attempts so far have been unsuccessful.

E-commerce product segment is relatively healthy, given that the nature of the product segment is local dominant. With the strong financial situation, Rakuten is heading for global expansion into Asia, North America and Europe through aggressive M&A initiative, but its globalization strategy remains unproved.

	Japanese firm		Global firm	
	Firm	Revenue (US\$Bn)	Firm	Revenue (US\$Bn)
IT Services	Fujitsu	77.8	IBM	99.7
Packaged Software	Obic	0.5	SAP	22.8
Internet Service	Yahoo! Japan	3.6	Google	59.8
e-commerce	Rakuten	4.6	Amazon.com	74.4

Figure 39 Comparison between top Japanese firm and top Global firm in terms of revenue volume

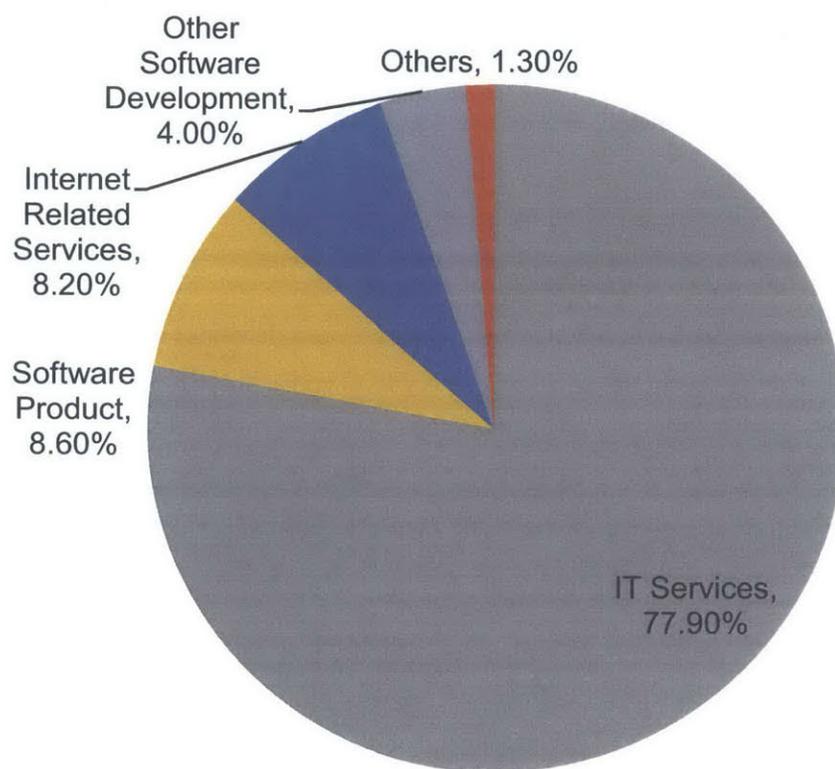


Figure 40 Revenue Breakdown of Japanese software industry

7.4.3 Reasons for the lack of globalized software firms

There are several theories explaining why there are very little success stories of globalization in the Japanese software industry. The key arguments are as follows:

Lack of governmental support: governmental intervention is hindering Japanese software firms from trying out new technology.

Skewed industry structure: strong industry-wide influence from NTT is hindering innovation and disruption of the industry.

Cultural/societal preference: Japanese respect the status quo and therefore tend to dismiss entrepreneurship as risky.

Language and culture barrier: Japan's language and culture is unique from the rest of the world and therefore the product created in Japan cannot be transferred readily to another country or region.

Lack of risk capital: VC funding in Japan is merely 1/24 of the U.S., too little to support global expansion for software firm.

Lack of engineering talent: very little fraction of the software engineers have formal computer science education, and usage of English is additional barrier.

Lack of entrepreneurs: the number of entrepreneurs in Japan is less than 1/100 as compared to the U.S.

There are some truths in all these arguments, but do not explain why there has not been a single success case in globalization. As mentioned in the previous chapter, firms such as SAP, Skype and Rocket Internet were able to overcome the disadvantages and become a global player in their respective fields.

Some argue that this is the result of inferior product creation, the lack of creativity and the lack of engineering capability. However, this is clearly not true. Historically, there have been several products created in Japan that were comparatively superior to what was offered in other parts of the world. Tron was the state-of-the-art operating software for embedded systems. Ruby was born in Japan. P2P software sharing service Winny was a comparable product to Kazaa, which later evolved into Skype. Social network service mixi was created earlier than Facebook with arguably better technology at the outset. Japan led the world in the introduction of mobile internet and mobile payment through i-Mode and Osaif-keitai. Japan does have the creativity, technology and engineering capabilities to create a cutting-edge product.

Some argue that the lack of entrepreneurship is the core issues. Although I do agree that encouraging entrepreneurship in Japan would help in creating a born-in-Japan global software firm, this does not solve the underlying problem. This has some truths as well – the more darts you throw the more likely you are to hit the bull’s eye.

I attribute this as the lack of business mindset that is required to thrive in the software business, in creating a platform that wraps itself around an ecosystem that will evolve over time as a self-reinforcing loop. I attribute this to the lack of understanding to the business strategy in defining the distinctive positioning that is required to focus on what to do and what not to do. I attribute this to the managerial capabilities in preparing, leading and transforming the firm through the growth. Michael Porter wrote in his article [Porter, What is Strategy?, 1996] as follows:

“Japanese companies rarely developed distinct strategic positions... Most Japanese companies imitate and emulate one another. All rivals offer most if not all product varieties, features, and services; they employ all channels and match one another’s’ plant configurations... But as the gap in operational effectiveness narrows, Japanese companies are increasingly caught in a trap of their own making. If they are to escape the mutually destructive battles now ravaging their performance, Japanese companies will have to learn strategy.”

To back up Porter’s argument, a survey of Japanese employees [Fujitsu Research Institute, 2013] revealed that only a portion of the employees know about the important concepts of the software business. This is a striking fact, and a situation that needs to be dealt with if the Japanese software firms want to survive in the accelerating globalization of the software industry.

The Japanese software industry, often referred to as the “software factory” [Cusumano, 2004], has its deep roots in the IT services product segment and has a strong emphasis on product quality.

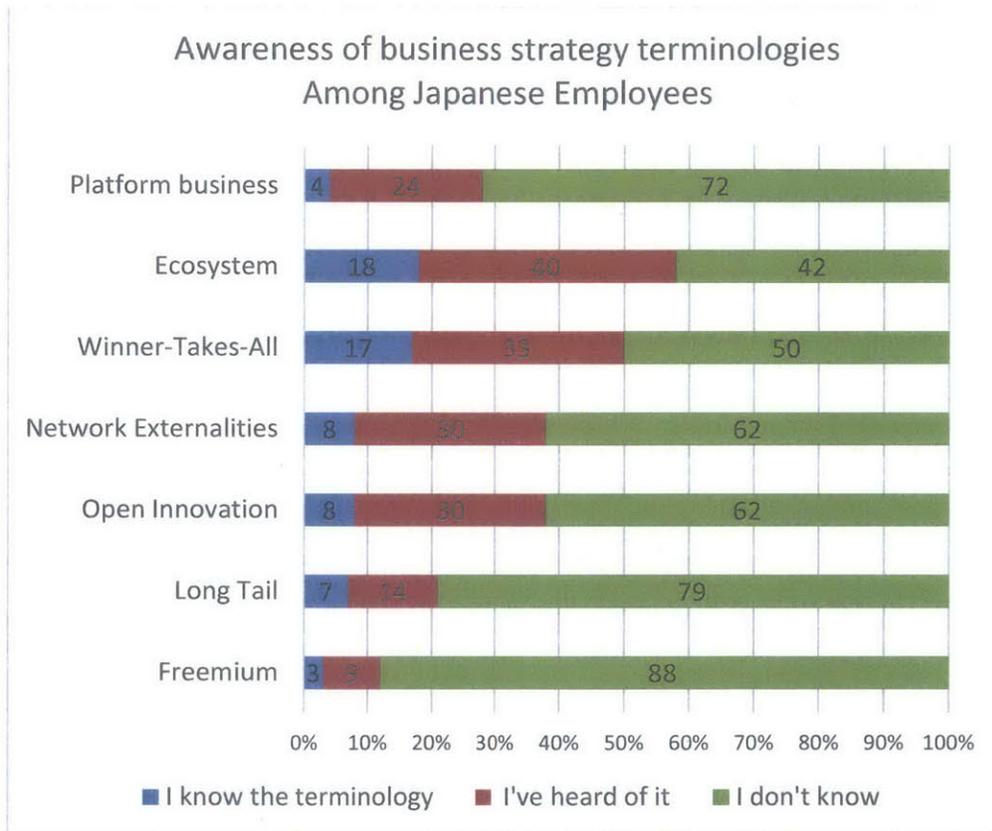


Figure 41 Survey on Awareness of business strategy terminologies [Fujitsu Research Institute, 2013]

Japanese software industry needs managerial talents that can articulate the business dynamics of the software business from a global perspective and define the overall globalization strategy, and to lead the firm with bold execution in accordance to its strategy.

7.5 SUMMARY

This research concludes that one can analyze the situation and dynamics of the product segments and the market segments of the software industry and obtain strategic insights by using the Global Winner-Takes-

All-or-Most framework. The author believes this framework is a useful tool for managers in large firms and also entrepreneurs in startups. For example, if you are in a strategic corporate division of a large multinational company, you can analyze local dominant players' strategies and competitive advantages by using this framework and extract hints for creating an entry strategy to the market currently dominated by local players. If you are an entrepreneur, you can use this framework to protect your local market from global platform players, create a right platform, and keep entry barriers high enough.

Furthermore, managers can analyze the product-market fit and the viability of the expansion into a new country or region through the DAC framework. The author believes that the decision of choosing which country or region to enter or compete in is no less significant to deciding which product segment to compete in. Expanding into a more accessible market can be a core source of differentiation in the global competition.

Lastly, aligning all aspects of execution with the overarching globalization strategy is fundamentally crucial for thriving in the fast-paced competition in the software industry. Strategy speaks about what to do, and what not to do, and execution speaks about how. Both strategy and execution needs to be aligned to be a successful business. This requires a candid view about the current organizational structure, leadership capabilities and how the business can be expanded to a new country or region. The author believes that many firms are better off staying in their home country as a local dominant player if the corporate structure and capabilities are not suited for globalization. It is beneficial for managers to come back to the question of "why globalization?" before implementing the globalization strategy.

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