

CHAPTER 3

SITUATIONAL ANALYSIS OF THE ENGINEERING CONSULTING INDUSTRY

3.1 General Environment Analysis

A general environment analysis is conducted on the property market in Malaysia, for the period from 1999 to 2001. This analysis covers the various sectors in the property market, such as the purpose-built office sector, retail sector and etc. Besides that, the evolution of technology in the engineering consulting business process is analysed, particularly in the design and draughting divisions.

3.1.1 Supply and Demand of Property Market in Malaysia

3.1.1.1 The Property Market in the Year 2001

Malaysia's gross domestic product growth (GDP) is expected to slow to 7.0 percent in 2001 which is down from 2000's 7.5 percent, but stronger than in 1998 and 1999.

A recent poll amongst ten research houses declared an even lower growth figure for 2001 – at 6.3 percent citing reasons such as an expected slowdown in the US economy, softening in global demand for personal computers and uncertainty over foreign investment.

Fund managers and analysts are equally apprehensive particularly after a disappointing show by the KLSE in 2000. The anticipated slowing down in GDP growth for 2001 is seen as a natural progression of the gradual slowdown which was already quite obvious since the second quarter of 2000.

After racking 11.0 percent in the last quarter of 1999 and 11.9 percent in the first quarter in the first 2000, it slid to 8.5 percent the following quarter, 7.5 percent the third quarter, and for the fourth quarter it is estimated to be 5.4 percent.

The property industry is currently steeped in deep depression with no imminent signs of immediate recovery. The extensive overbuilding during those years of prosperity has left the industry saddled with heaps of excess capacity, low occupancies and depressed prices and rents.

3.1.1.2 The Purpose – Built Office Sector

Vacant office space in Kuala Lumpur as at September 2000 (NAPIC's third quarter 2000 report) stood at 1,316,830 square metres (23 percent of existing stock), up 11,864 square metres from Quarter Two's figure of 1,304,966 square metres.

The last time office vacancies hit high was in 1987 with 621,932 square metres. It took approximately five years to correct the imbalance in the sector following the recession period between 1985 to 1987.

The year 2001 may witness further addition of space to the purpose-built office sector which is already riddled with so much overhang. Berjaya Time Square's 97,564 square metres and Capital Square's 56,691 square metres will add another 154,275 square metres to the total stock should they be completed as scheduled.

Combined with the uncertainties in the international environment and continued weak domestic demand and confidence, not much can be expected from this sector. Occupancy levels, capital values and rents in 2001 are not likely to out-perform 2000's statistics.

About the only excitement which can be expected from the sector would be changing demands of tenants occurring from the impact of e-business and the Internet, in terms of space configurations and technology requirements.

3.1.1.3 The Retail Sector

Right up to the 3rd Quarter of 2001, the retail property sector in Kuala Lumpur reported the largest amount of vacant stock – at approximately 295,985 square metres or 79 percent of total stock available.

The new kid on the block is still Mid Valley Megamall, which opened its doors just over a year ago. It has since generated quite a following for itself, aided partly by the fact that there was a clear absence of new competition.

With no new shopping centres in sight at least until the year 2002, Mid Valley Megamall could probably maintain its current level of popularity for a while.

Berjaya Time Square, the size of Megamall, is only scheduled to open its doors around mid-2002. It could be joined by MRCB's Sentral Plaza, Bandaraya Development's Capital Square, and RHB Daewoo's Vision City then – together amounting to 346,744 square metres of new retail space, and possibly Maju Perdana (formerly known as Plaza Potential).

For now, the sector can look forward to an increase in consumer spending as wages rise and inflation remains at a low level. The expanding hyper-market format of retailing will also influence the retail sector in terms of competitiveness and consumer preferences.

Occupancies may gradually creep up even as prices and rents remain stable, with prime well-managed shopping centres enjoying steeper increases than the rest.

3.1.1.4 The Hotel Sector

Five-star hotel accommodation made up 31.3 percent of the total 24,868 hotel rooms in Kuala Lumpur in September 2000. Together with the three-and four-star rooms, the proportion adds up to 18,540 rooms or approximately 75 percent.

Room occupancies generally hover around 60 to 70 percent, with a selected few performing better than the average.

Similar to the retail property sector, the period of drought in the supply of new hotel accommodation is likely to end sometime around end-2002 / early 2003. This would be when two stalled projects – Grand Hyatt Duta (514 rooms) and Westin (430 rooms), and two other recently announced ones – Hilton International (513 rooms) and the 4-star Le Meridian (422 rooms) at KL Sentral, are completed.

Until then, hoteliers can expect further improvements in room occupancies along with (hopefully) better rack rates and yields.

3.1.1.5 The Residential Sector

Selangor and Kuala Lumpur contributed the largest amount of incoming supply of residential units at the end of September 2000. Of the total 361,376 units scheduled as new supply for the whole country, both these areas offer a total of 116,015 units or 32.1 percent.

Of this figure, condominiums / apartments carve a whopping 41.40 percent of the incoming supply in the Klang Valley.

In the future though, Johor is expected to contribute the most in housing supply – 222,681 units or 56.5 percent of the total planned supply of 394,304 units in the country. However, the key contributors are from single- and double-storey terraced houses.

Whilst the total volume and value of residential property transactions in the country have been on the rise since 1999, intense competition for the house-buyer's pocket can be expected to prevail throughout 2001, particularly in the condominium / apartment sub-sector in the Klang Valley.

Essentially a buyer's market still, only selective locations and projects will probably witness sales records and price transactions.

3.1.1.6 The Industrial Sector

Terraced industrial units still form the bulk of the total industrial stock in the country – at 62 percent, with the largest concentration seen in Selangor, followed by Johor.

Selangor continues to contribute the most in incoming supply (58 percent from terraced units), whilst the most number of planned units are expected from both Kedah and Johor.

With the explosive growth in e-commerce, and the manner in which it is transforming the corporate supply chain-the network of businesses, suppliers, technologies, and workers that gets products to users, the nature of demand for industrial space is likely to change in the near term. This would imply tremendous adjustments needed in the industrial sector.

3.1.1.7 Great Expectations From Residential Industry

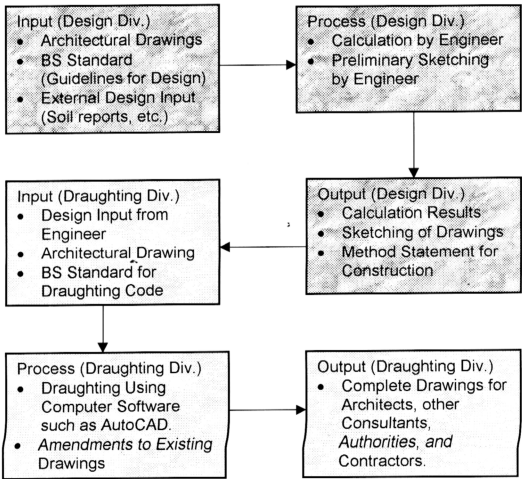
Before the 1998 recession caused by the Asian Economic Crisis in 1997, property transactions in Malaysia were at all time high. It grew from 165,272 transactions in 1990, to 270,538 transactions in 1997, or +63.7 percent for the period (1990-97). The value of those transactions rose from RM 16.61 billion in 1990, to RM 53.13 billion in 1997, or +68.7 percent.

From 1990 to 1997, Malaysia experienced high economic growth and during this time, society grew richer as labour became more expensive. Skilled labour were quickly becoming scarce as the economy grew. A significant portion of society's wealth was channelled into real estate. It was a popular investment vehicle then, as well as a store of value. The Housing Price Index grew at an average of 12.4 percent from 1994 to 1997, indicating a strong demand in the residential property sector. The value of residential property transactions rose from RM 12.65 billion in 1994, to over four years. That was during good times, when the country's economy was experiencing strong growth and consumer demand was high.

3.1.2 Evolution of Technology in the Engineering Consulting Business Process

In the early 1990's, engineering consulting companies in Malaysia realised that the utilisation of information technology will help to increase the efficiency and effectiveness of the business process. Many companies began implementing new business software packages into the companies' systems with one goal in mind. The goal would be to create a more profitable company and to keep up with the technology change in the surrounding environment. They also intended to use it to sustain competitiveness among their competitors in the industry.

Figure 3.1 Business Process in an Engineering Consulting Firm



3.1.2.1 Evolution of Technology in the Design Division

With the technology changes in the design divisions, the work process of engineers was totally revolved. The engineers began utilising computers and software packages to improve their work efficiency and effectiveness. Recently, new software packages have been introduced in the market, for example Staad Pro, Robot 97, TopCad and Orion. These packages are fully integrated design packages which combine the design and draughting module. The CAD package also increases output tremendously.

As an example, the design of a 2-storey building with the CAD package requires about 2 working days only, compared to the previous one-week design requirement. Moreover, with this package, any additional amendments can be completed easily and quickly. It is just a click of a 'mouse' away for minor amendments.

Therefore, it can be summarised that the technology change in the design division, has not only improved the design efficiency and effectiveness, it has also improved the timeliness and made it more user-friendly. However, most of these CAD packages are costly, which would require high cost investment. Nevertheless, in the long-run, the utilisation of these CAD packages will be more beneficial.

3.1.2.2 Evolution of Technology in the Draughting Division

The early 1990s was a revolutionary time for the draughting process with the introduction of AutoCAD by Autodesk Inc. AutoCAD is a computer draughting package that assists the draughtsperson to draw their drawings on the computer, rather than directly drawing it on tracing papers. Due to the nature of the draughting process which requires a large working space and a long time when done manually, AutoCAD changed the draughting process to make it more efficient.

With AutoCAD, the working space of the draughtsperson is reduced to the minimal space to accommodate a computer table only. Since amendments in the drawings is the most time consuming process in the draughting process, the use of AutoCAD enables the amendments to be made easily and timely. Moreover, consulting firms would not require large storage space to store the drawings, because the drawings can be stored in digital format using storage devices such as CDR or ZipDisk, which have high storage capacity. This will be advantageous to companies as the firms can save office rental space and also drawing papers, which are quite costly.

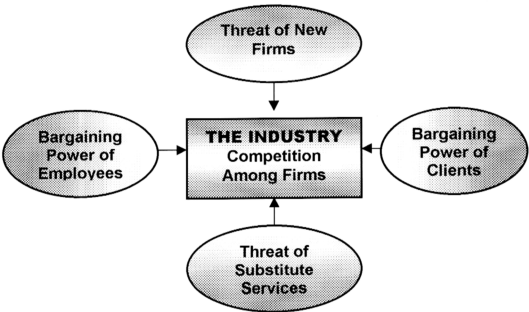
3.1.2.3 Summary

Information technology has had a great impact on the business processes of an engineering consulting firm. It provides a more efficient and effective process which would minimise the time and effort required. The main disadvantage of IT is the high implementation cost. However, in the long-run, it promises a large cost savings and profits to the management.

3.2 Engineering Consulting Industry Analysis

Michael Porter’s Five Forces Model is used to analyse the forces which shape the industry competition within the engineering consulting industry.

Figure 3.2 Forces Governing Competition in an Industry



Source : Adapted from Stoner, J.A.F., Freeman, R.E. and Gilbert, R.G. Jr. (1995), *Management*, Englewood Cliffs, New Jersey : Prentice Hall (Pg. 275)

3.2.1

Competition Among Engineering Consulting Firms

The extent of rivalry among competitors is determined very much by the degree of mutual dependency or interaction among competitors and the likelihood of this setting off retaliatory strategic moves between them. Engineering consulting firms' services are so ordinary that it is facing stiff competition. For instance, there are some 664 engineering consulting firms in Malaysia. Minconsult Sdn. Bhd. is one of the large and comprehensive engineering consulting firms. It would face competition from numerous other large and comprehensive engineering consulting firms that provide a relatively similar array of disciplines, such as Ranhill Bersekutu, HSSI and many more.

Competition could also be derived from foreign competitors. Some large scale projects, in which local consultants do not have the experience, or which are financed by foreign countries, would utilise foreign consultants as the main consultants. The local consulting firms would only play a supporting role.

Besides these large companies, there are also many medium- and small-sized companies that provide services in lesser disciplines and are more specialised, are competitors to companies such as Ghazali & Associates Sdn. Bhd. Over the years, as the smaller players expand and gain more experience and acquire better process capabilities through joint-ventures and technology transfer, they tend to compete with the bigger players for the bigger projects, and this further intensifies the rivalry in this industry.

Therefore, the competition in this industry is intense due to the lack of differentiation of services and large group of competitors. Although there is very keen competition, the industry as a whole is still attractive because of the tremendous growth potential in the Asia-Pacific region.

3.2.2

Threat of New Engineering Consulting Firms

The number of new entrants into this industry will depend on the barriers to entry. The entry barriers to the engineering consulting industry are relatively low. Therefore, potential of new entrants will be great as the capital requirement to set up an engineering consulting firm and the switching costs are relatively low. The capital requirement to set up a firm is quite low as it only needs to finance the fixed cost, such as office-space rental and equipment cost (computers, plotter and printer). Then, there is the varying cost, for instance the staff salary. This would vary depending on the number of employees. However, a new company would generally have very minimal and the basic number of employees, which would make the payroll quite affordable.

On the other hand, the switching cost is considered low because, if a company is unable to provide services in a particular discipline, for instance structural design, it could easily switch its concentration to other services such as project management services with the same fixed costs and employees. For example, Ghazali & Associates is one of the new firms established during the economy crisis.

However, for foreign firms, there are more barriers of entry. These are in terms of protective legislation. Most developing countries have laws and legislation to protect the local industry from foreign competition. These will normally result in the preferential treatment in favour of indigenous firms. Some even go to the extent of barring foreign firms altogether in the local competitive bid. Import duties are also commonly imposed on imported equipment and material. There are also non-tariff barriers, which include technical and administrative requirements for the execution of projects.

On the other hand, during the economic slowdown, the bargaining power of employees is low. This is because the demand for their services reduces as the firms would be facing difficulties obtaining projects or would be having a minimal number of projects to handle. Therefore, they would require lesser number of employees. In consequence, the bargaining power of employees would depend on the economic and business condition at a particular time.

3.2.5 Threat of Substitute Engineering Consulting Services

There are indeed a number of services that are substitutes for engineering consulting firms. For instance, instead of rendering the services of an engineering consulting firm, the clients could procure these services from turnkey contractors which would provide the design, construction and management services, developers or even freelance consultants. All of these services have their own strengths and weaknesses.

For example, freelance consultants may not be able to cope with the clients' request especially if the project is of a large scale. Even turnkey contractors might eventually procure the services of engineering consulting firms for the design aspects. Therefore, substitute services are not a great threat to this industry as eventually engineering consulting firms provide the most comprehensive and reliable services. Thus, this concept does not really apply in the strict sense in this industry. Each service is unique and built according to the specifications to suit the client's requirements.

3.3 Internal Environment Analysis of Engineering Consulting Firms

3.3.1 Financial Audit of Minconsult Sdn. Bhd.

The financial audit is only carried out for Minconsult Sdn. Bhd. This is because Ghazali & Associates Sdn. Bhd. has only been in existence for about a year, hence the full set of accounts is not available.

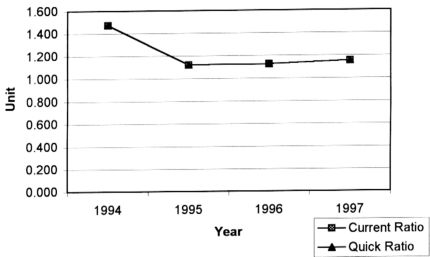
Minconsult's yearly turnover and net profit is more than RM25 million and RM1 million respectively, for the period between 1994 to 1997. Although we could not obtain data for the company during and after the economy crisis, we noticed that similar sized companies, such as Ranhill Consulting Sdn. Bhd. and EEC Sdn. Bhd. were making losses during the period between 2000 and 2001. It is an indicator that the engineering consulting industry had shrunk after the economic crisis.

The calculations for the financial ratios are as attached in Appendix B.

Table 3.1 Liquidity Ratios

LIQUIDITY RATIOS	1994	1995	1996	1997
Current Ratio	1.474	1.119	1.124	1.153
Quick Ratio	1.474	1.119	1.124	1.153

Figure 3.3 Liquidity Ratios



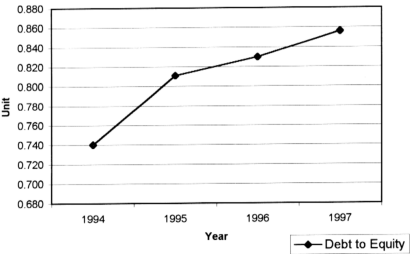
Liquidity ratios such as the current ratio and quick ratio attempt to assess whether Minconsult Sdn. Bhd. is maintaining an appropriate level of liquidity. In essence, its ability to pay its liabilities as and when they fall due and its financial adaptability and more generally on the effectiveness with which its working capital are being managed.

The current ratios and quick ratios for the three years, indicate the firm's ability to meet its short-term cash obligations or current liabilities out of its current assets. For every current liability of RM 1.00, there is approximately RM 1.10 of current assets. The decline in liquidity indicates that the company's corporate performance for 1995 to 1997 was poor compared to the year 1994. However, although there had been a decline, this had been from a very safe base, in which the current assets are still able to cover the current liabilities at a factor of more than 1. The company also does not require any financial support from loans or issuance of more shares.

Table 3.2 Solvency Ratio

SOLVENCY RATIO	1994	1995	1996	1997
Interest Coverage	Nil	Nil	Nil	Nil
Debt to Equity	0.740	0.811	0.830	0.856

Figure 3.4 Solvency Ratio



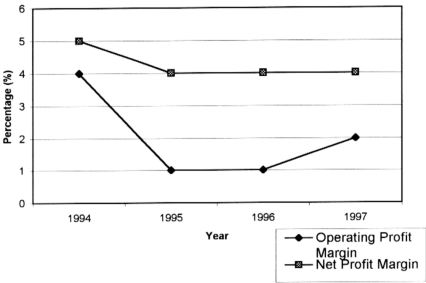
We are unable to derive the interest coverage ratio since there was no interest expense in the company's financial report.

As for the debt to equity ratio, it shows the relative claims of creditors and equity holders against the assets of the company. If the firm were to have financial difficulties and perhaps go bankrupt and sell off its assets, it would have to realise on average of not more than 70 sen for every ringgit of assets in order to fully pay its creditors. This indicates that the company's financial risk is moderate but still in the safe position to pay off its creditors.

Table 3.3 Profit

PROFITABILITY RATIO	1994	1995	1996	1997
Gross Margin (%)	Nil	Nil	Nil	Nil
Operating Profit Margin (%)	4	1	1	2
Net Profit Margin (%)	5	4	4	4

Figure 3.5 Profit



Profitability ratios attempt to indicate how well the firm did, given the level of risk and types of risk it actually assumed during the year. In general, the higher the profitability percentage, the better the aspect of the corporate performance to which the ratio relates.

Gross profit margin is concerned with the sharp end of the company's activities and reflects the competitive pressures faced by the company, its market positioning and the effectiveness with which the management is controlling prime costs. However, the Registrar of Companies Malaysia did not have the gross profit record of Minconsult, hence the gross margin could not be analysed.

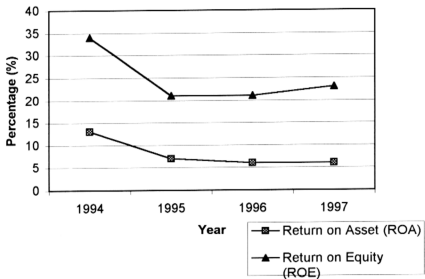
In terms of operation profit margin, the obvious change was the sharp decline for the year 1995. We can summarise that there has been a decline in Minconsult's performance over the years. Since Minconsult is in the service industry, therefore the operating profit margin is relatively low compared to other industries. The relatively low profit margin is also associated with the low risk business Minconsult is in. A high turnover but low profit margin also indicates that the employees in Minconsult are highly paid for their service.

The performance of Minconsult in terms of net profit has been quite consistent. The net profit margin percentage is potentially very helpful in the prediction of future profits, when combined with a sales forecast. In this case, it means the forecast of number of projects Minconsult is expected to secure.

Table 3.4 Profitability Ratio

PROFITABILITY RATIO	1994	1995	1996	1997
Return on Assets (ROA)	13%	7%	6%	6%
Return of Equity (ROE)	34%	21%	21%	23%

Figure 3.6 Profitability Ratio



ROA is derived by using only net income without expense since interest expense was not reported in the company's financial report. ROA measures the effectiveness with which the total assets available to the management have been deployed, irrespective of how those resources has been financed.

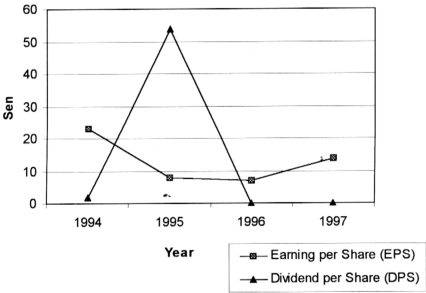
ROA of Minconsult indicates a decline of 6% in the year 1995 as compared to 1994. Generally, the ROA for the three years appears to be at a low level, indicating the low efficiency and effectiveness achieved by the management with the assets available to them. This ratio is sometimes referred to as the master ratio. In this case, it is a prime indicator that overall corporate performance for Minconsult had declined in the year 1995, and maintained at the low level to the year 1997. Without comparative figures from other similar businesses and the engineering consulting industry, it is not possible to comment on the financial performance of Minconsult.

ROE provides a measure of how effective management has deployed its resources in pursuit of the profit objective. There appears to have been a decline in the return on equity capital which Minconsult is achieving. In the four years, the return appears to be rather low reflecting ineffectiveness of management to generate return with their funds they have invested to the company, because Minconsult shareholders are the top management team.

Table 3.5 Investment Performance

MARKET VALUE RATIOS	1994	1995	1996	1997
Earning per Share (EPS)	23 sen	8 sen	7 sen	14 sen
Dividend per Share (DPS)	2 sen	54 sen	0 sen	0 sen

Figure 3.7 Investment Performance



Since Minconsult is not listed in the KLSE, we can only analyse the earning per share and dividend pay-out for the investment performance of Minconsult.

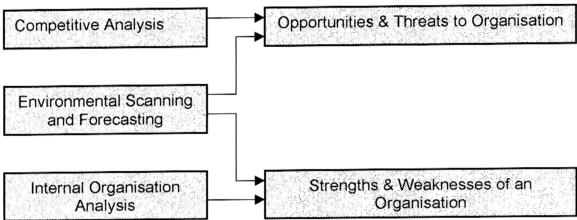
EPS ratio measures the potential benefit the shareholders derive from the profitability of the company in which they have invested. As such, it is a key indicator of corporate performance from a shareholder's perspective. In the case of Minconsult, it indicates the performance of the management, which is also the owner of the company. EPS for Minconsult decreased in the year 1995 but increased in 1997. This indicates that, with regards to the shareholders, the overall financial performance of Minconsult was bad in 1995 and 1996 to quite an extent. Although the EPS is relatively low, it is maintained at a positive value which indicates that the company is still gaining profit.

In the year 1995, Minconsult paid out quite a high amount of dividend as compared to the other years. Although dividend yield is the acid test of corporate financial performance from an investor's point of view, it provides a direct measure of the return on investment in the shares of the company. In the case of Minconsult which is not listed in KLSE and the management team is controlled by the shareholders themselves, decision on dividend pay-out may be due to the unknown corporate strategy of Minconsult. We are not able to relate the dividend pay-out with profitability of the company.

The financial ratios calculated for the Minconsult provide a useful structure for the interpretation of information contained in the financial statements. However, it must be noted that they do not and cannot provide a complete system for the assessment of the performance of Minconsult. This is because the ratios are based on previous statements, therefore the relationships may not continue due to unexpected turn of events in the economy, or probably a sudden change of policy by the management or government

3.3.2 Identification Of Firm's Strengths and Weaknesses and Environment Opportunities And Threats (SWOT Analysis)

Figure 3.8 Identifying Strengths, Weaknesses, Opportunities and Threats (SWOT)



3.3.2.1 Minconsult Sdn. Bhd.

Potential Internal Strengths

1. Accumulated experience and expertise of more than a quarter century of engineering consulting
2. Successful involvement in an array of large projects in Malaysia
3. Capacity to provide comprehensive consulting services under one roof
4. Experienced engineers of managerial levels with an average of 17 years of experience per manager
5. Highly qualified professional staff
6. Capacity to engage foreign specialist at a short notice
7. Engineering experience in countries outside Malaysia
8. Wide, international connections and membership of large number of professional organisations and associations

9. Well-equipped scientific / engineering library
10. Computer resources and comprehensive software library
11. Pioneering spirit and its legacy of innovations
12. Management team that is fully committed to Total Quality Management (TQM)

Potential Internal Weaknesses

1. Poor compensation policy
2. Human resource-related problems, such as high staff turnover rate, absenteeism and lack of motivation
3. Lost of knowledge-based in future employees due to high staff turnover rate
4. Lack of strategic staff training programme
5. Employees resistance to change towards changes in corporate culture
6. Discreet marketing, promotion and advertising in a highly competitive market
7. Insufficient service differentiation

Potential External Opportunities

1. Global market opportunities, for example infrastructure contractors are securing projects in countries such as India. Currently, the top 5 construction companies in Malaysia, such as Road Builders, IJM, Bumi Highway and Gamuda have secured projects with the Indian government, worth RM 1 billion each. Therefore, we can see many consulting firms working with these local contractors to handle these projects. These consulting firms are not providing their services directly to the global market, but indirectly providing their services to the local contractors to enter the global market.

2. Research & Development to improve its knowledge-base and innovations. The Malaysian government also plays an important role in assisting R&D in consulting firms. An example of this is JPS (Jabatan Pengaliran dan Saliran) which has been collaborating with a few local consultants to produce the Malaysian new system of drainage. This plays an important role in urban drainage system because the British Standard is not practical for the Malaysian climate. Therefore, they are collaborating to produce the Malaysian Standard.
3. Technology transfer derived from globalisation
4. Related service-diversification to attract and promote new clients
5. Strategic alliance through acquisitions, joint ventures and partnerships to establish global and local presence. An example of a joint venture is between H.S. Liao Sdn. Bhd. and Sinclair Knight Merz, which is an Australian Company employing 3000 people world wide, and involved in the development of a chain of petrol retail service stations. Besides that, there are a few international firms that have come into Malaysia. An example of this is Ove Arup, which was established in the United Kingdom, and had come into Malaysia as Arup Perunding Sdn. Bhd.

Potential External Threats

1. High inherent business risk, including changes in general economic and business conditions
2. Competitors undercutting each other
3. Risk of investing in projects abroad in terms of foreign exchange losses and political risk
4. Changes in the local authorities' guidelines governing the industry
5. Over-diversification may lead to workload and resources pressure on the management
6. Low entry barriers for potential new entrants and low switching costs
7. Service easily substitutable by competitors
8. High bargaining power of clients
9. High bargaining power of employees
10. Intense rivalry from domestic and foreign competitors

3.3.2.2 Ghazali & Associates Sdn. Bhd.

Potential Internal Strengths

1. Directors with vast experience in the consulting field, formally employed in Ranhill Bersekutu Bhd. (One of Malaysia Largest Civil & Structural Consulting Firm listed in KLSE)
2. Small number of employees that is sufficient to accommodate current jobs
3. Most of the staffs were also trained in Ranhill Bersekutu, therefore there is an established and pleasant working environment
4. Good communication between employees, since the company is small and most of the employees will be able to communicate directly to each other
5. Cutting edge software to assist in the design such as 'Orion' (Integrated structural design software that can reduce conventional design time by 80%)
6. Wide association with industry technical expertise due to existing contact with various firms

Potential Internal Weaknesses

1. The company was only recently established in January 2001, therefore it is still in the introduction stage
2. Lack of technical skills and experience in handling big projects
3. Since the firm is small, it does not have the ability to handle big projects
4. High employee turnover rate besides the former Ranhill staffs who have been working together for a few years. Generally, new employee will stay in the company for an average of 3 months
5. Lack of design software to assist in the business process. Since most of the design software are very expensive, the firm can only purchase a limited number

6. Lack of confidence and trust by employees in the company, since it is relatively new
7. Engineers have to do various administration work including printing, typing, photocopying and filing
8. Currently no performance evaluation for the engineers, therefore lack of competition and motivation
9. The company has secured a number of government jobs, that will enable it to sustain for only a few years
10. Insufficient service differentiation

Potential External Opportunities

1. Directors have good contact and association with the industry, hence enabling them to secure jobs for the company. Since a consulting firm cannot market its service, it has to depend on the contacts of the key personnel in the company to secure contracts. Although technical ability play an important role, the project can still be sub-contracted out after securing the project.
2. Due to the current economy slowdown in the construction industry, small firms will be able to compete more effectively with their low operating cost
3. Only small projects have been carried out due to the economy downturn and the firm just has the right capacity to handle these projects
4. Quality Certification through MS ISO 9001

Potential External Threats

1. With an unpredictable future in the property and construction industry, the firm's future is also unpredictable
2. The firm is small and might not have the competitive advantages against large firms
3. High competition between engineering consulting firms because of the scarcity of projects in the market
4. High bargaining power from the clients demanding lower consultation fees

3.3.3 Core Competencies Analysis of Companies

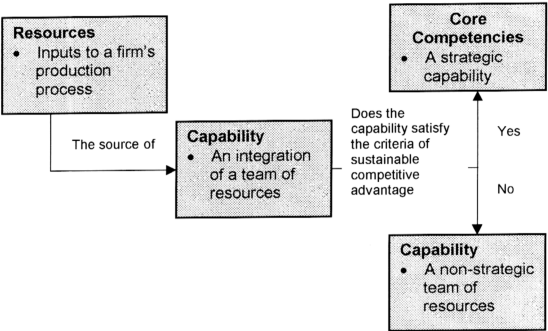
Capabilities that are valuable, rare, costly to imitate and non-substitutable are strategic capabilities and a source of competitive advantage. Capabilities failing to satisfy these criteria are not core competencies. A sustained competitive advantage is achieved only when competitors have tried, without success, to duplicate the benefits of a firm’s strategy or when competitors lack the confidence to attempt imitation.

A Core Competencies Analysis is conducted on the two engineering consulting firms under study to evaluate their capabilities, and hence their ability to achieve sustainable competitive advantage.

Table 3.6 Four Criteria for Determining Strategic Capabilities

Valuable Capabilities	<ul style="list-style-type: none">• Help a firm neutralise threats or exploit opportunities
Rare Capabilities	<ul style="list-style-type: none">• Are not possessed by many others
Costly to Imitate Capabilities	<ul style="list-style-type: none">• <i>Historical</i> : A unique and a valuable organisational culture or brand name• <i>Ambiguous cause</i> : The causes and uses of a competence are unclear• <i>Social complexity</i> : Interpersonal relationships, trust and friendship among managers, suppliers and customers
Non-Substitutable Capabilities	<ul style="list-style-type: none">• No strategic equivalent

Figure 3.9 Core Competence as a Strategic Capability



Source : Adapted from Hitt, M.A., Ireland, R.D. and Hoskisson, R.E. (1999), *Strategic Management : Competitive and Globalization*, Cincinnati, Ohio : South – Western College publishing (Pg. 98 – 99)

3.3.3.1

Minconsult Sdn. Bhd. : Outcomes from Combinations of the Criteria for Sustainable Competitive Advantage

Capability	Valuable	Rare	Costly to imitate	Non-substitutable	Competitive Consequence	Performance Implications
Experience and expertise	Yes	Yes	Yes	Yes	Sustainable competitive advantage	Above – average returns
Involvement in many large projects	Yes	Yes	Yes	Yes	Sustainable competitive advantage	Above – average returns
Comprehensive consulting service	Yes	Yes	Yes	Yes	Sustainable competitive advantage	Above – average returns
Experienced engineers at managerial level	Yes	No	Yes	No	Competitive parity	Average returns
Qualified professional staff	Yes	No	Yes	No	Competitive parity	Average returns
Capacity to engage foreign specialist	Yes	No	Yes	No	Competitive parity	Average returns
International experience	Yes	Yes	Yes	Yes	Sustainable competitive advantage	Above – average returns
International connections and memberships	Yes	No	Yes	No	Competitive parity	Average returns
Well – equipped scientific / engineering library	Yes	Yes	Yes	No	Temporary competitive advantage	Above – average returns to average returns
Computer resources	Yes	No	Yes	No	Competitive parity	Average returns
Pioneering spirit and legacy of innovations	Yes	Yes	Yes	Yes	Sustainable competitive advantage	Above – average returns
Commitment to total quality management	Yes	No	No	Yes	Competitive parity	Average returns

3.3.3.2 Ghazali & Associates Sdn. Bhd. : Outcomes from Combinations of the Criteria for Sustainable Competitive Advantage

Capability	Valuable	Rare	Costly to imitate	Non-substitutable	Competitive Consequence	Performance Implications
Experienced directors	Yes	Yes	Yes	Yes	Sustainable competitive advantage	Above – average returns
Maximised human resources abilities	Yes	No	No	No	Competitive parity	Average returns
Experienced employees	Yes	No	Yes	No	Competitive Parity	Average returns
Efficient communication	Yes	Yes	Yes	Yes	Sustainable competitive advantage	Above – average returns
Competent software packages	Yes	No	Yes	No	Competitive parity	Average returns
Wide association	Yes	Yes	Yes	Yes	Sustainable competitive advantage	Above – average returns