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Article information:

Building balanced scorecard with SWOT analysis, and implementing "Sun Tzu's The Art of Business Management Strategies" on QFD methodology

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Abstract
Conjoining the SWOT matrix with the balanced scorecard (BSC) makes a systematic and holistic strategic management system. The SWOT matrix clearly identifies the critical success factors that can be implemented into the identification of the different aspects toward the balanced scorecard. It is, therefore, a more structural approach in setting up the foundation of the balanced scorecard; instead of simply identifying the "key performance indicators" (KPI) via gut feeling or by brainstorming. The next step of the whole process is to make use of the quality function deployment (QFD) methodology with the balanced scorecard (BSC) attributes identified as the "Whats" on the vertical axis, and the major strategies of "The Art of Business Management" Sun Tzu's as the horizontal "Hows" axis. The relationships are then studied in the body of the QFD matrix. Consideration is then given as to how the model presented can be customised to allow companies using this approach to develop and implement their corporate business strategic plan.

1. Overview

Almost every successful manager understands the importance of offering quality service to gain a distinctive advantage over the competition. After all, gaining an advantage is the key to success and even for the sake of survival. However, many of the so-called organizational strategies that companies depend on are not endurable. Why? These strategies may not be well structured and cannot stand the test of time. Nevertheless, powerful organizational tactics cannot easily be imitated; things like a patented algorithm, exclusive right to a special resource, and brand name recognition.

"If only I knew then what I know now, I would have done things differently". People always make this comment after they have implemented the wrong corporate strategies. Since we live in times of entwining complexity, acceleration, and change, making the right decision is extremely important for strategic planning. It is fair to say that every organization and individuals have their unique set of strengths, weaknesses, opportunities, and threats. It is very important that an organization determines its strengths, weaknesses, opportunities, and threats, as well as the competitions'. By linking the SWOT analysis with the balanced scorecard, an organization can balance its strengths against its competitions' weaknesses, and optimise its opportunities within the market.

Sun Tzu's *The Art of War* is the most famous work on military operations in ancient China and it is also one of the most revered and well-known military texts outside China. Being the oldest military treatise in the world, it becomes one of the greatest cultural legacies of the Chinese nation. The significance of Sun Tzu's works and military statements in influencing military thoughts has seldom been questioned and were used extensively during the Warring States Period in Chinese history. Sun Tzu's philosophy has become part of the collective unconscious of most educated Chinese. These strategies encapsulated in mnemonic phrases; many of them passed into proverbs and are very widely known in the Chinese cultural sphere. In anticipation of the global economy competitions and business and trade wars among countries, the words of Sun Tzu are particularly useful and appropriate for evaluating business management strategies. Sun Tzu's main philosophy in military situations are identified and correlated to actual business environment.

Apparently, relating modern management philosophies and organization behaviours to Sun Tzu's strategies by looking into the philosophies advocated by him and the situation of top management seems to be difficult and unrealistic. It is, however, essential to identify the differences between the ancient and modern times and also between military and business operations before proper management strategies were launched. His strategic planning in waging war in ancient China highlights the strategic management in today's corporations. The objective is to emulate the model set by Sun Tzu, presenting the essences in organising for strategy. Organizations should have their strategic plans constantly reviewed, continuously shaped and positioned in the struggle of continuous competition.

QFD maintains customer ideas and requirements throughout the process that in turn leads to customer satisfaction. A further customer expectation is for the next purchase to be a better product. However, this is identified at no extra cost. When the satisfaction is not achieved, a competitor's product is likely to be chosen. QFD is a powerful technique that enables companies to anticipate and prioritise customer needs in their totality and to incorporate them effectively into the product and service provided for the end-user (Wassermann, 1993).

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2. The SWOT analysis

When implementing a SWOT analysis to devise a set of strategies, the following guidelines should be utilised.

Strengths (Weihrich, 1982)

Determine your organization's strong points. This should be from both your internal and external customers. Do not be humble; be as pragmatic as possible.

- Are there any unique or distinct advantages that makes your organization stand out in the crowd?
- What makes the customers choose your organization over the competition's?
- Are there any products or services in which your competition cannot imitate (now and in the future)?

Weaknesses (Weihrich, 1982)

Determine your organization's weaknesses, not only from your point of view, but also more importantly, from your customers. Although it may be difficult for an organization to acknowledge its weaknesses, it is best to handle the bitter reality without procrastination.

- Are there any operations or procedures that can be streamlined?
- What and why do your competition operate better than your organization?
- Is there any avoidance that your organization should be aware of?
- Does your competition have a certain market segment conquered?

Opportunities (Weihrich, 1982)

Another major factor is to determine how your organization can continue to grow within the marketplace. After all, opportunities are everywhere, such as changes in technology, government policy, social patterns, and so on.

- Where and what are the attractive opportunities within your marketplace?
- Are there any new emerging trends within the market?
- What does your organization predict in the future that may depict new opportunities?

Threats (Weihrich, 1982)

No one likes to think about threats, but we still have to face them, despite the fact that they are external factors that are out of our control. For example, the recent major economic slump in Asia. It is vital to be prepared and face threats even during turbulent situations.

- What is your competition doing that is suppressing your organizational development?
- Are there any changes in consumer demand, which call for new requirements of your products or services?
- Is the changing technology hurting your organization's position within the marketplace?

2.1 The wizardry of SWOT

The wizardry of SWOT is the matching of specific internal and external factors, which creates a strategic matrix, which makes sense. (Note: The internal factors are within the control of your organization, such as operations, finance, marketing, and in other areas. The external factors are out of your organization's control, such as political and economic factors, technology, competition, and in other areas). The four combinations are called the Maxi-Maxi (Strengths/Opportunities), Maxi-Mini (Strengths/Threats), Mini-Maxi (Weakness/Opportunities), and Mini-Mini (Weaknesses/Threats). (See Figure 1.)

1 *Maxi-Maxi (S/O)*: this combination shows the organization's strengths and opportunities. In essence, an organization should strive to maximise its strengths to capitalise on new opportunities (Weihrich, 1982).
2 *Maxi-Mini (S/T)*: this combination shows the organization's strengths in consideration of threats, e.g. from competitors. In essence, an organization should strive to use its strengths to parry or minimise threats (Weihrich, 1982).
3 *Mini-Maxi (W/O)*: this combination shows the organization's weaknesses in tandem with opportunities. It is an exertion to conquer the organization's weaknesses by making the most out of any new opportunities (Weihrich, 1982).
4 *Mini-Mini (W/T)*: this combination shows the organization's weaknesses by comparison with the current external threats. This is most definitely defensive strategy, to minimise an organization's internal weaknesses and avoid external threats (Weihrich, 1982).

2.2 Collateral insight of SWOT

As mentioned, the wizardry of SWOT is the matching of specific internal and external

Figure 1
SWOT matrix

	Strengths	Weaknesses
Opportunities	S/O	S/T
Threats	W/O	W/T

factors. However, what about the matching items within internal factors and items within external factors. The primary reason is that matching these factors will create strategies that will not make sense. For example, with a combination of strength and weakness (both are internal factors), lets say one of your organization's strengths is "plenty of cash" and one of your weaknesses is "lack of training". Therefore, mixing these two factors together, your management team might simply decide to plan more training for the staff members. The obvious remark for this purposeless strategy will be "so what!" Mainly because you should not train, just for the sake of training. A successful training program must have a specific target in response to external changes. You have to determine your organization's specific needs for training in line with the external and internal factors. In other words, the strategy must have an external factor as a trigger in order for it to be feasible.

3. The balanced scorecard

Professor Robert Kaplan and David Norton developed the balanced scorecard (BSC) in the early 1990s. According to Kaplan and Norton (1996), "the Balanced Scorecard translates an organization's mission and strategy into a comprehensive set of performance measures and provides the framework for strategic measurement and management". Traditionally, most organizations look at their corporate performance by reviewing the financial aspects. However, financial measures alone is not a balanced view of the critical success factors of any organizations, mainly because financial measurements tend to measure the past. Therefore, what if an organization knows what has happened, if there are no explanations of "Why it has happened" (Sanger, 1998).

The balanced scorecard is based on four key perspectives; they are the financial goals – "How will we look to our stake holders?" customer perspective – "How must we look to our customers?" internal processes – "What internal processes must we excel at?" and learning and growth – "How can the organization learn and improve?" (Sanger, 1998). The concept of the balanced scorecard is very similar to the "Theory Y" approach which was developed by McGregor in 1960. McGregor's "Theory X" discussed that the traditional management system assumes that "the average human being has an inherent dislike of work and will avoid it if he can" (Dinesh and Palmer, 1998). McGregor's "Theory Y" assumes the opposite in human nature and stated that "the average person finds work as natural as play or rest". Based on "Theory Y", McGregor concluded, "An employee, if directly involved in the goal

setting process, can be relied upon for self-control. Therefore, productivity can best be improved by clarifying strategically aligned goals." (Dinesh and Palmer, 1998). Almost 40 years later, Kaplan and Norton's balanced scorecard is also based on goal conformity as a means of improving performance (Dinesh and Palmer, 1998). In linking Kaplan and Norton's balanced scorecard with McGregor's "Theory Y", one must note that "Theory Y" deals with individual performance, and the "balanced scorecard" deals with corporate performance. However, the linkage of the two performance measurement tools makes sense, mainly because corporate performance is merely an accumulation of individual performance. What makes the balanced scorecard stand out is that it is a holistic performance management system which is geared towards defining performance measures and communicating objectives and vision to the organization (Roest, 1997).

3.1 Critique of the balanced scorecard
McAdam and O'Neill (1999) reviewed the balanced scorecard based on their framework of total quality management (TQM) and the main critiques are as follow:
- "*TQM is strategically linked to business goals*". Despite the fact that Kaplan and Norton outlined four perspectives (financial, customer, internal processes, and learning and growth) as the key elements of organizational strategies that must be measured, the BSC remains a means of effectively measuring strategy rather than a means of deciding strategy (McAdam and O'Neill, 1999). This is the main reason that this researcher feels that the SWOT analysis serves as a great "stepping stone" to build the key performance indicators (KPI) of the BSC.
- "*Customer understanding and satisfaction is vital*". The BSC does a great job in strengthening the link between customer improvement initiatives and the organization's strategy. However, the BSC does not indicate how new customers and markets can be identified (McAdam and O'Neill, 1999). This researcher feels that the BSC's major weakness is the lack of "hows", by linking the BSC to the quality function deployment (QFD), the entire "hows" can be identified.

4. The link between SWOT analysis and the balanced scorecard

Kaplan and Norton indicated that the first step of the actual implementation of the balanced scorecard is to clarify the company vision and strategy (Kaplan and Norton, 1996). This researcher feels that by first implementing the SWOT analysis, to develop

a set of strategies that makes sense, will serve as a stepping stone towards the actual implementation of the balanced scorecard. The balanced scorecard widely applied in corporate performance management can be easily extended to strategic planning of a country or a city. Table I is an example of using this method in setting strategies for the Hong Kong Special Administration Region (HKSAR).

5. Critique of quality function deployment (QFD) methodology

The earliest use of QFD can be traced back to the Kobe shipyard, Mitsubishi Heavy Industries Ltd., of Japan in 1972. In the 1990s, there were many successful examples from various industries (Halbleib *et al.*, 1993; Erikkson *et al.*, 1993; Hauser *et al.*, 1988; Stubbs *et al.*, 1994) using the QFD quality tool extensively. Their results were encouraging and impressive.

QFD is an engineering method for converting customer demands into quality characteristics and for developing product design by systematically deploying the relationships of customer demands and product characteristics. The QFD methodology is broken into numerous analytical steps, most of which are documented as charts. It is a three-step process: quality design, detailed design and

Table I
The SWOT matrix of Hong Kong with attributes of the balanced scorecard

	Strengths	Weaknesses
	S1 – Good legal system	W1 – Inexperienced executive council
	S2 – Good tele-communication/ infrastructure	W2 – Weakening English standard
	S3 – Huge reserve	W3 – Lack of natural resource
	S4 – Quality/efficient civil servant	W4 – US $ Peg
	S5 – Stable currency	W5 – Weakening manufacture base
	S6 – Hard working quality people	W6 – High operating costs
Opportunities O1 – Spring board to China O2 – Unstable Asian politic O3 – Support from China O4 – Birth of EURO O5 – 50th anniversary of China	Maxi-maxi (strengths/opportunities) (F) S1S2O1 – Promote commerce activity (F) S1S2O2 – Attract foreign/ Chinese investment/tourism (F) S1S2S3O4 – Asian joint currency (F) S1S2O3 – Intensify financial service (currency window) (C) S1O1 – Advisory role to China (C) S3O1O3 – Co-operation with China to develop hi-technology (C) S1S2O5 – Promote tourism. (L) S4O1O3 – Cross-training with Chinese government	Mini-maxi (weaknesses/ opportunities) (F) W3W5O2 – Financial/service focus (F) W4O4 – Diversify governmental investment (I) W1O1 – Restructure executive council (L) W2O3 – Multiple languages policy
Threats T1 – Inrush of immigrant T2 – From neighbouring countries T3 – Millennium bugs (Y2K) T4 – Pollution of water from China T5 – China opening up to the world Market T6 – Declining world economy	Maxi-mini (strengths/threats) (C) S3T4 – Promote environmental protection concept to China. (C) S1S2T6 – Media businesses. (I) S1T1 – Review immigration law/ co-operation with related Chinese authorities (I) S3S4T2 – Improve quality image of Hong Kong. (I) S3S4T3 – Y2k promotion campaign (L) S3T1 – Build new schools for immigrants (L) S3S6T5 – Bilingual education	Mini-mini (weaknesses/threats) (C) W3T5 – Develop a natural resource link between Hong Kong and China (C) W5T1T5 – Develop Chinese medicine research centre (I) W3T1 – Review tax policy and social welfare policy (L) W2T5T6 – Improve English education standard

Notes: F = Financial perspective, C = Customer perspective, I = Internal process perspective, L = Learning and growth perspective

process deployment. It is the development of an operating mechanism to transform customers' expectations into specific design and manufacturing requirements (Straker, 1995).

QFD employs mathematical analysis using a series of matrices, which depend on functional relationships, to arrive at the highest level of quality in producing a product. Through the analyses of the various relationships of functional components, one is able to quantify quality and establish priorities. It is also commonly known as a process that provides structure to the development cycle and helps an organization plan for the effective use of the other technical tools to support and complement each other and address priority issues. It can pinpoint the areas of customer concern where the specialised tools can have benefit. Actually, QFD is not just a tool but also a planning process.

> QFD is defined by Dr Yoji Akao as: Converting the customers' demands into quality characteristics' and developing a design quality for the finished product by systematically deploying the relationships between the demands and the characteristics, starting with the quality of each functional component and extending the deployment to the quality of each part and process. The overall quality of the product will be formed through this network of relationships (Mallon *et al.*, 1993):.

QFD integrates matrices and charts into a system to realise customer requirements, functions, quality requirements, parts definition, break-through methods and manufacturing methods. QFD uses matrices to identify and prioritise elements relating to intersecting concepts of customer requirement or quality characteristics, quality requirement/cost, function/reliability, and so forth.

QFD also shows all the information to the project that helps the organization set the target or determines the priority of action needed to be taken. In addition, the matrix compares the product or service with other competitive products or services so that the organization can make improvements in the previous stage of design. The main goal of QFD is to increase customers' satisfaction by improving their own quality and by exciting the customer through innovation.

QFD helps an organization plan for effective application of its quality tools by directing the application toward issues of importance to customers. Organizations should use the QFD process as one of their principal planning tools in their TQM effort.

The selection of priority items for increased customer satisfaction provides a company with a distinct product focus. The customer requirements that are currently

satisfactory to customers can be handled using existing procedures and processes. In addition, the QFD process causes the company to focus on customer requirements that for which the products are not currently competitive. This effective application tool should be combined with TQM.

In the management aspects, QFD also helps:
- Identify and prioritise customer needs obtained from every possible source.
- Analyse the details of design and process improvement meeting the needs of engineers.
- Stimulate continuous improvement.
- Encourage communication and build teamwork within an organization.
- Reduce lead-time, optimise engineering resources and improve quality.
- Build partnerships with customers' participation.

6. The link between the balanced scorecard and quality function deployment

Traditionally companies have operated on the basis of management by results, which is a behavioural science. Typical management will establish objectives. Then the objectives will be evaluated by measuring the performance and the results; that is objective management. The top management is only interested in the end of quality improvement, the results only. The methods, systems or resources needed to achieve results are usually left to the ingenuity of the middle management or engineers. Policy management, therefore, is a strategy to ensure results by focusing on the means as opposed to measuring performance after the fact (Sullivan, 1988). Policy management will take the form of a business plan to overlay existing systems and transform management focus from results to the means of achieving the results. Policy management is structured as a method to achieve company business or policy objectives. The means to achieve becomes the primary focus and results measure only how well policy management was carried out (Sullivan, 1988). Organizations can apply QFD as a strategic planning tool (Maddux *et al.*, 1991).

Quality function deployment (QFD) is a unique and powerful quality assurance tool that is designed to ensure the voice of both the internal and external customers is clearly heard and followed in the development of a product or service (Pitman, 1996). The heart of QFD is its matrix called the "house of quality" (HOQ). It is made up of two main parts, the "Whats" and the "Hows". When using QFD, the most important tasks are to define and understand the "Whats" – the

needs of the customers and to define the "Hows" to meet the customers' needs. (Tan, 1998).

The BSC serves as a powerful tool to define the "Whats" within QFD. However, it does not indicate the "Hows". Therefore, this researcher feels that by linking up the BSC with QFD, will make a more holistic strategic management system.

7. Using Sun Tzu's *The Art of War* to develop the "Hows" of QFD as business management strategies

This section presents the 13 books of Sun Tzu's *The Art of War*, the principal philosophies and the related strategies in business management environments. The main themes of the 13 chapters of Sun Tzu's

Table II

Sun Tzu's The Art of Business Management Strategies columns:
1. Planning of Strategies, Estimation & Leadership
2. Resources & Competitive Actions
3. Competitive Strategy & Wisdom
4. Positioning & Targeting, Strengths & Weaknesses Estimation
5. Opportunity, Timing & Management Structure
6. Control of Market Situations & Climate
7. Management of Conflict & Avoid Confrontation
8. Flexibility & Adaptability
9. Observing & Manoeuvring
10. Competitive Situations & Causes of Failure
11. Competitive Conditions and Offensive Strategy, Alliance & Vision
12. Destroying & Decision
13. Intelligence and Information

Whats (Hows)	1	2	3	4	5	6	7	8	9	10	11	12	13	Score	Percentage %	Sub-total
F = Financial Perspective																
(F) S1S2O1 — Promote Commerce activity.	3	9	9	1	3	9	0	1	1	0	0	0	0	36	2.8%	
(F) S1S2O2 — Attract foreign / Chinese Investment / Tourism.	9	9	9	1	3	3	0	9	3	1	3	0	0	56	4.3%	
(F) S1S2S3O4 — Asian Joint Currency.	9	9	1	0	9	3	0	9	3	1	3	0	9	56	4.3%	
(F) S1S2O3 — Intensify Financial Service (Currency Window).	9	9	9	3	1	9	0	3	3	0	9	1	1	58	4.4%	
(F) W3W5O2 — Financial / Service Focus.	9	9	9	1	9	9	0	9	3	0	3	3	0	66	5.1%	
(F) W4O4 — Diversify Governmental Investment	9	9	9	1	9	9	0	9	3	1	3	1	0	63	4.8%	26%
C = Customer Perspective																
(C) S1O1 — Advisory role to China.	9	9	9	9	9	9	0	9	9	3	9	1	0	86	6.5%	
(C) S3O1O3 — Co-operation with China to Develop Hi-Technology.	9	9	9	3	9	9	0	9	3	1	9	0	0	70	5.4%	
(C) S1S2O5 — Promote Tourism.	9	9	9	3	3	9	0	9	1	3	9	1	0	71	5.4%	
(C) S3T4 — Promote Environmental Protection Concept to China.	9	3	9	0	3	3	0	3	1	1	9	0	0	49	3.8%	
(C) S1S2T6 — Media Businesses.	9	9	9	3	1	9	0	3	1	1	9	0	0	62	4.8%	
(C) W3T5 — Develop a natural resource link between Hong Kong and China.	9	9	9	3	1	9	0	3	3	0	9	0	0	62	4.8%	
(C) W5T1T5 — Develop Chinese medicine research centre.	9	9	9	9	1	9	0	3	3	0	9	0	0	61	4.7%	35%
I = Internal Process Perspective																
(I) W1O1 — Restructure Executive Council.	3	1	1	9	9	0	3	9	0	9	1	0	0	45	3.4%	
(I) S1T1 — Review Immigration Law / Co-operation with related Chinese Authorities.	9	9	9	3	1	9	0	1	0	1	9	0	9	57	4.4%	
(I) S3S4T2 — Improve Quality Image of Hong Kong.	0	0	3	1	1	1	0	3	0	0	0	0	0	33	2.5%	
(I) S3S4T3 — Y2k Promotion Campaign.	0	0	0	3	9	1	0	9	9	9	0	0	0	45	3.4%	
(I) W3T1 — Review tax policy and social welfare policy.	9	9	9	9	9	9	9	9	9	9	0	0	0	63	4.8%	19%
L = Learning and Growth Perspective																
(L) W2O3 — Multiple Languages Policy.	9	9	9	3	1	1	9	9	1	1	1	0	1	54	4.1%	
(L) S3T1 — Build new schools for immigrants.	3	9	3	3	9	9	3	9	9	3	3	0	0	63	4.8%	
(L) S3S5T5 — Bilingual Education.	1	9	9	9	1	1	0	9	9	3	3	0	0	57	4.4%	
(L) S4O1O3 — Cross-Training with Chinese Government	9	9	9	9	9	9	9	9	9	0	9	0	3	93	7.1%	20%
	157	149	140	106	123	129	42	152	103	49	116	7	32	1305		
Percentage %	12.0%	11.4%	10.7%	8.1%	9.4%	9.9%	3.2%	11.6%	7.9%	3.8%	8.9%	0.5%	2.5%			
Priority	1	3	4	8	6	5	11	2	9	10	7	13	12			

Note: Predictive quality of Performance Measure:
Strong - 9, Medium - 3, Weak - 1, None - 0

(Table 2) Use of Quality Function Deployment (QFD) Methodology in Balanced Scorecard and Sun Tzu The Art of Business Management in Strategic Planning

are the major sayings of each of the chapters. Their equivalent business management strategies are derived and developed for their applicability in business competitive situations.

The 13 business management strategies form the criteria base of the future evaluation of the business management strategies using QFD methodology which will help the senior managers identify, prioritise, and rectify their positions and situations quickly. The 13 chapters in Krause's *Sun Tzu: The Art of War for Executives* (Krause, 1996) were modified to become the *Sun Tzu's The Art of Business Management*. The Appendix shows the major business management strategies derived.

By examining the principles upheld by Sun Tzu, one can get some beneficial insights in strategic management within the world of business. The *Art of War* by Sun Tzu consists of 13 chapters and they were applied in a management context by the authors as follows (Lee *et al.*, 1997; 1998):
1 Planning – planning of strategies, estimation and leadership.
2 Competitive actions – resources and competitive actions.
3 Competitive strategy – competitive strategy and wisdom.
4 Positioning – positioning and targeting, strengths and weaknesses estimation.
5 Opportunity and timing – opportunity, timing and management structure.
6 Control – control of market situations and climate.
7 Managing direct conflict – management of conflict and avoid confrontation.
8 Flexibility – flexibility and adaptability.
9 Maneuvering – observing.
10 Types of competitive situations and causes of failure.
11 Competitive conditions and offensive strategy – alliance and vision.
12 Destroying reputation.
13 Gathering intelligence – information.

By using the above 13 strategies of Sun Tzu's philosophies, it is felt that it can be implemented as the foundation of the "Hows" within QFD.

8. Conclusion

There are two main stages of development within the proposed systematic and holistic strategic management system. The first part is to conjoin the SWOT analysis with the BSC. The SWOT is implemented to develop the key performance indicators (KPI) with the four main perspectives of the balanced scorecard. The second part is to make use of the QFD methodology with the BSC's KPIs identified as the "Whats" and the major strategies of Sun Tzu's philosophies as the "Hows" within QFD (see Table II). This

system can be customised for both profit and non-profit organizations to develop holistic organizational strategic plans.

QFD has been successfully applied in quality management strategic planning. As a quality management strategic planning tool, QFD is efficient and effective in prioritising the weakness of an organization that the organization should take action for improvement. It prioritises the importance of the activities in the organization that have much more concern for customers' satisfaction.

Having understood the Sun Tzu's philosophies, it is essential to identify how and in what ways these philosophies could be applied in business strategies. People in the organization have to face all kinds of competition. Competitors may come within the organizational constituents as well as individual constituents. Winning or losing in battle is very much based on how effectively they manipulate the perceptions and opinions of constituents. Those who have the most accurate and up-to-date information will win. Information will help in the analysis process and decision making. The wisdom for the traditional competition can equally be applied in information competition.

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Appendix. "Sun Tzu's The Art of Business Management Strategies"

Strategy 1 – Planning of strategies, estimation and leadership:
- Understand the actual situation; decide on the plan of actions.
- Analyse and compare both parties' conditions, both favourable and unfavourable.
- Business is very much related to tactics and strategic planning.
- Right information and proper preparation will help business making a success.

Strategy 2 – Resources and competitive actions:
- Make a good and realistic estimation on the actual expenses before entering into business.
- Speed and quick decision help in business.
- Organization structure should be clear and effective.

Strategy 3 – Competitive strategy and wisdom:
- Understand strategy helps to win competition.
- Use wisdom and best strategy instead of aggressive tactics for success.
- Understand the situation and act flexibly.
- Decisions should be taken at appropriate company level – more delegation of responsibility.

Strategy 4 – Positioning and targeting, strengths and weaknesses estimation:
- Strengthen the internal before competition.
- Attack right to the target and defence keeps top secret.
- Beware of business and situation changes; never be content at the present position.
- Careful planning of the whole situation would enable the business under control.

Strategy 5 – Opportunity, timing and management structure:
- Good organization helps to define responsibilities.
- Business tactics require flexible managing policy.
- Move quickly to explore business opportunities.

- Offer some advantages and trap by strategy.
- Right person gets the right job.

Strategy 6 – Control of market situations and climate:
- Keep ahead of competition through innovations.
- Know the competitors but not allowing them to know you that enabling you to concentrate effectively.
- If one over-diversify, the business can easily be challenged. Concentrate your effort when you are strong.
- Even though the competition is keen, the competition can still win by better understanding of the market requirement and prove successful.
- Change constantly according to the changing needs of market situation.
- Business tactics never remain constant and should take any form.

Strategy 7 – Management of conflict and avoidance of confrontation:
- Business competition is most difficult when confronting competition head-on.
- There is not only disadvantage but also danger in competing for a favourable position.
- Know the potential partner well before entering into join venture.
- Motivate your people for a common goal through good communication.
- Strengthen the organization and plan business strategies.

Strategy 8 – Flexibility and adaptability:
- Consider both favourable and unfavourable factors in business.
- Fatal weakness of management should be understood.

Strategy 9 – Observing and manoeuvring:
- Take the best approach during difficult market condition and stay away from difficult situations.
- Get away from dangerous situation as quickly as possible.
- Observe competitors' position and plan strategy accordingly would have better reaction.
- Wait until the situation clear before re-entering into market competition. Good and accurate decision makes proper investment in business.
- Thoroughly understand the market situation to avoid potential problem and identify pitfall.
- When a competitor has low morale, it means their leadership is poor. Prestige and authority of senior management are both essential.
- If everyone do what they should do diligently, both the management and

workforce will benefit and trust each other and have good relationship.

Strategy 10 – Competitive situations and causes of failure:
- Gain advantages over the competition when they are unprepared.
- A good manager takes the business advantage without taking personal fame and gain and admitting failure without shirking responsibility.
- Treat your employees as your family and they will share your vision.
- A skill manager reallocates his resources without loosing his direction and purpose.

Strategy 11 – Competitive conditions and offensive strategy, alliance and vision:
- Market situation can be different according to the way business conducted.
- By making market alliance, stronger market control and strategy will be obtained.
- Never attack your competitor when your resources are not focused.
- Skilled managers would advance when it was to their advantages and halt when situations were unfavourable.
- Aware of business situation and react speedily and use innovative approaches.
- Align the workforce to the vision of the company.
- Company who does not understand the intention of potential partner cannot form alliance with them.

Strategy 12 – Destroying and decision:
- Key to success is recognising good opportunities.
- Always stay ahead of your competitors.
- Remain flexible and adapt accordance to the changing situations.
- Build on achievement. Never sit on the present situation and continuous keep on innovation.
- A simple mistake could ruin the whole business.

Strategy 13 – Intelligence and information:
- Ignorant of the competitor's situations is danger that may lead to waste of resources.
- Achieve extraordinary accomplishments by good management of people who clearly understand the market situation.
- Use many ways of gathering information from the market.
- Information gathering is always possible.
- Detail information of the market is essential.
- Recognise and try to recruit talented people to work for your company.
- Recognise talented people's achievement in your company to achieve great task.