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**CULTIVATING INNOVATIVE, HIGH - TECHNOLOGY
ENTERPRISES: INSIGHTS FROM THE ASIAN EXPERIENCE**

BY

Professor John Milton-Smith
School of Management,
Curtin University of Technology,
GPO Box U1987, Perth,
Western Australia 6845.

Tel:++61-8-9266 1136 Fax: ++61-8-9266 7897

Email: Milton-SmithJ@cbs.curtin.edu.au

Abstract

The aim of this paper is to examine the performance of the technopreneurship phenomenon in Asia and to explore whether the Asian Crisis of 1997-98 and its aftermath offer any useful insights into the context, behaviour and practices of Asian SMEs, which might provide a more general understanding of the conditions in which high technology entrepreneurs are likely to flourish.

Following a detailed study of 40 SMEs, it is concluded that lack of technopreneurship in most parts of Asia can be attributed to the widespread absence of Strategic Management perspectives, attitudes and skills, especially in the performance of business leadership roles. This is largely due to social and cultural factors, rather than to more specific infrastructural weaknesses such as the lack of technological know-how, technology transfer facilities or support systems for training and encouraging technopreneurs. It is also argued that Asian governments, by focussing narrowly on technological innovation and entrepreneurship, have failed to sufficiently support entrepreneurial opportunities in the fast-growing services sector.

Introduction

There was a widespread view during the 1990s that technological entrepreneurship in Asia had lagged behind Europe and the United States, as opposed to the more traditional areas in which Asian family businesses have excelled such as property development, retailing and trade. This perception persisted notwithstanding considerable hype, urging and funding initiatives by governments in the region.

The invention of the word ‘technopreneur’ – probably in Singapore – was a reflection of just how strong this concern was. It was widely adopted and demonstrated the blinkered, knee-jerk reaction of governments and universities in the region attempting to meet the challenge of the so-called ‘New Economy’.¹ There was a widely-shared assumption that the revolution in information technology required the invention of a completely new business paradigm. The role of a technopreneur was (and is) seen as some one who brings together research talent, venture capital, new business concepts and management skill to create commercially successful technological innovations or, alternatively, to effectively leverage innovations through the application of technology. In Asia generally there was a special sense of urgency about the need to redirect entrepreneurial instinct and effort into technological ventures instead of the more traditional areas of entrepreneurship such as retail, trading and property investment activity.

The case of Singapore provides an interesting case study because the Singapore Government has invested heavily in trying to cultivate technopreneurs. However, the research indicates that, in the current environment, very few Singaporean entrepreneurs are likely to develop long term visions, design original business models or conduct radical experiments in any area in which the government plays an active role. The strategic leadership provided by the extremely dominant Singapore Government over many years has had the effect of stunting leadership in the private sector and reducing it to a stewardship role.

As with the various government incentive schemes, and with very few exceptions, the proliferation of science and technology parks in the Asian region has also failed to cultivate a new breed of technopreneurs. Most parks are dominated by government enterprises and multinational corporations. However, after reviewing the performance of regional science and technology parks around the Asian region, it is concluded that, subject to certain essential conditions, they can still be an excellent breeding ground for technopreneurs. However, it is essential that they be located and managed so as to create distinct technology clusters, holistic communities of related knowledge workers, and cultures which encourage experimentation, crossing boundaries and collaboration. Even given appropriate resources and facilities, unless the parks are then strongly integrated into the day-to-day work of the neighbouring universities, research institutes and business activities, they will almost certainly fail. In short, science and technology parks need to be strategically managed if they are to achieve their long-term objectives.

Given that the term ‘technopreneur’ now enjoys wide international currency, it is important to review and redefine its meaning in terms, not of the narrow, theoretical assumptions of its originators, but rather of the practical reality of how added value and competitive advantage are actually created in the market-place. Indeed, the technology bias is a major and unnecessary limitation and fails to acknowledge the ability of individuals, companies and countries to generate wealth in the global economy through a much wider variety of innovative and value-adding activities. Accordingly, in the research design and data analysis of this paper, the term ‘technopreneur’ is used broadly as a proxy for SMEs which are innovative, expansionist, and committed to creating added value through a wide variety of strategies such as going international, entering into partnerships, applying intellectual

property, developing new systems and processes, exploiting specialised knowledge and know-how and building a strong brand image.

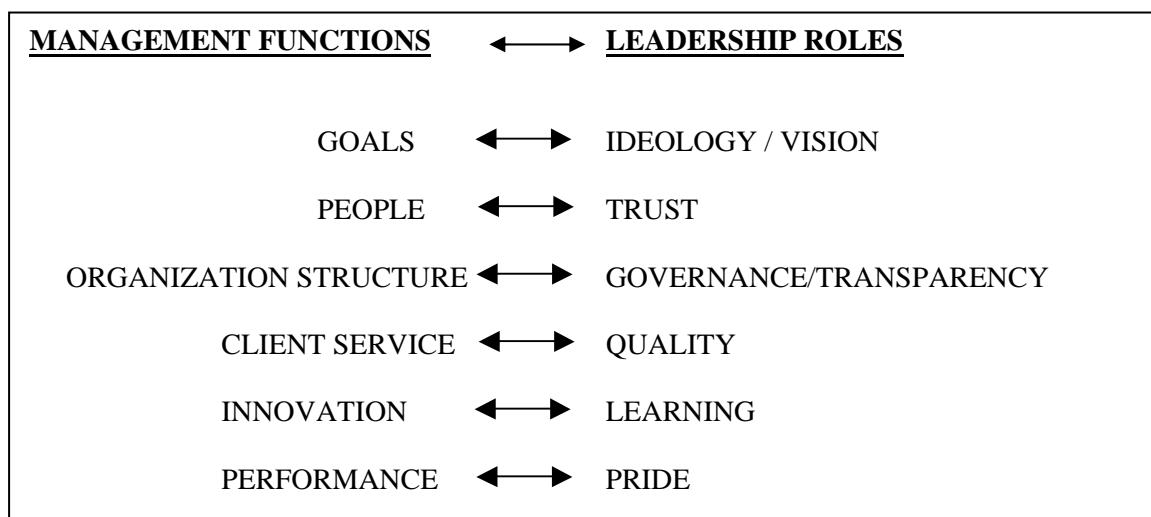
The Research Design and Main Findings

As a starting point, it is useful to note that Deloitte Touche Tohmatsu's (DTT) 2001 list of the world's 200 fastest growing companies includes only two Asia-Pacific firms. Another survey, this one conducted by Andersen Consulting on management responses to the Asian Crisis, has shown that most Asian companies have adopted defensive strategies such as cost cutting, staff retrenchment, postponing new investments, portfolio rationalisation and debt restructuring. By contrast, a very small number of big companies, including Jollibee Foods (Philippines), Siam Cement (Thailand) and Singapore Airlines maintained their established commitment to Strategic Management or, what Kotler and Kartajaya have termed 'the sustainable marketing enterprise (SME) model'.² Overall, the Crisis does not appear to have led to significant changes in the way SMEs in Asia operate. Organizational and management learning is particularly slow in Asia, much slower than in other parts of the world. According to a recent PricewaterhouseCoopers (PWC) survey of CEO's, only 47% are prepared to describe their companies as 'very transparent' and the great majority continue to acknowledge that corporate governance and transparency issues – the cornerstone building blocks of Strategic Management – are still major barriers to attracting foreign capital and investment.³

Following on from the DTT, Andersen and PWC surveys, the author's research has not only confirmed the general thrust of the earlier findings but also shed more light on underlying problems and possible longer-term solutions. The main research tool was 'The Culture Alternative', an instrument developed by the author over the past decade to help organizations adopt a Strategic Management approach. The model is framed around six pairs of interrelated management functions and leadership roles (see exhibit 1). For example, whereas setting 'goals' is defined as a standard management function, the ability to convert goals into an inspiring, widely shared 'ideology', and into the basis for building a strong corporate 'brand' in the marketplace, is still quite rare among even senior managers. Nevertheless, this has become an essential core competency, leadership challenge and senior management responsibility for organizations seeking to build a sustainable source of competitive advantage in what has already become a global marketplace

EXHIBIT I

THE STRATEGIC MANAGEMENT MODEL



As a Strategic Management diagnostic tool, 'The Culture Alternative' both facilitates and monitors organizational learning. It takes an integrated approach to key issues of strategy, structure, culture and addresses critical questions such as: How is strategic intelligence gathered, reviewed and acted upon? To what extent is benchmarking undertaken? Is there a strong commitment to staff development and continuous improvement? What mechanisms are in place to facilitate the flow and exchange of information? How is innovation managed? When the instrument is administered regularly – on an annual basis, for example, - it highlights the extent to which managers have successfully addressed the gaps and weaknesses identified in the previous audit, exposes the main areas of future leadership challenge and also helps assess the current leadership capabilities of the organization. The major elements of the new leadership paradigm are summarised in Exhibit 2.

EXHIBIT 2

UNPACKING THE NEW LEADERSHIP PARADIGM

IDEOLOGY

- Pathfinding, communicating a vision, committing to an ambitious goal, inspiring, energising stakeholders, providing direction, creating a distinctive corporate 'brand'

TRUST

- Aligning people, addressing concerns, explaining, communicating openly, reciprocating, being consistent, building partnerships, keeping promises

QUALITY

- Identifying benchmarks, listening, searching, making tough choices, setting high standards, building teams, designing decision-making processes, committing to continuous improvement

LEARNING

- Designing systems, leveraging technology, scanning the environment gathering information, interpreting data, reviewing performance, developing competencies, constructing models and prototypes

GOVERNANCE

- Emphasising role clarity, making people accountable, committing to ethical principles, ensuring transparency, managing partnerships, addressing risk factors, designing reporting systems

PRIDE

- Valuing people, upholding ethical standards, creating a sense of collective ownership, motivating people, celebrating achievement, being socially responsible

The research was conducted between 1998 and 2001. Data was obtained from personal interviews, desk research and a questionnaire survey. It covers 40 firms, including 31 high-performing Chinese SMEs, scattered around Asia. They include nine from Singapore, five from each of Malaysia, China and Japan, three from each of Taiwan, Thailand and Hong Kong; two from each of South Korea, Indonesia and the Philippines; and one from Vietnam. The results are compared with previous surveys conducted with public and private sector organizations in Australia during the last 12 years. The main conclusion is that Asian organizations, and especially SMEs, have significantly weaker strategic frameworks than their Western counterparts, even those that regard themselves as 'technopreneurial' in the broadest sense of the term. Although there are several notable areas of relative strength, which probably reflect some well-entrenched Asian cultural traditions – in domains such as service, performance and company pride – vision, goal clarity, innovation, organizational

learning and governance are major problem areas for Asian enterprises by international standards, and especially SMEs.

From the interviews conducted for this study, there is no sense of the old strategic assumptions being seriously challenged or debated. It is difficult to find evidence of new organizational processes or management systems. Strategic planning, scenario building, competitor analysis, information management and systematic branding policies continue to be greatly under-utilised tools in the Asian SME sector. Neither from the survey nor from the interviews did evidence emerge of managers who now see the need to create a new vision or a stronger learning culture within their organizations. There has been no sign of special task forces being established to analyse changing industry structures, explore new markets, develop new products, or even monitor the competitive environment.

By contrast, Bangalore in India and Hsinchu in Taiwan provide compelling evidence that, although it is unusual and difficult, it is certainly not impossible for developing countries to produce highly innovative, world-class companies in cutting edge industries. In both cases the critical success factors would appear to be, first, the existence of a rich and diverse cluster of institutions specializing in research, development and commercialisation within certain related industries and, second, at the organizational level, the presence of highly experienced strategic managers and directors with the ambition and drive to become market leaders.

Chinese SMEs

In beginning to explore the reasons for their strategic weakness, it must be stressed that generational change within traditional Overseas Chinese SMEs – still the dominant model in many Asian countries – has been slow. Even younger family members with international qualifications appear to have had only marginal influence on management practices. From the responses to the survey, it becomes clear that Overseas Chinese enterprises themselves are still not major sources of business learning, knowledge creation or corporate renewal. Instead, the primary source of tacit strategic knowledge is the *guanxi* network of the owner-manager rather than the processes, systems, competencies and relationships of the business organization itself.

Many Chinese owner-managers interviewed in the survey are finding it hard to change their ways. Because of their authoritarian and secretive style, it is not easy for them to work with the younger generation of Western educated managers. Indeed, centralised and secretive decision-making makes it difficult for family controlled conglomerates to innovate, recruit new talent or expand. Despite the Asian Crisis, most Chinese owner-managers continue to make decisions in isolation from their staff and to foster a 'yes-man culture'. Surrounded by nervous, insecure sycophants, they rely on trusted associates and their own networks for advice. Similarly, as Redding and others have pointed out, the lingering residue of Confucian values also means that Chinese family enterprises are suspicious of government and outsiders generally, therefore tending to avoid getting involved in businesses where there is significant state interest.⁴

The trading and transactional bias of the Overseas Chinese family businesses has continued to prevail following the crisis. The owner-managers continue to rely on the old *guanxi* networks, juggling assets, seeking out alternative investment prospects and simply riding out the storm.⁵ When the turbulence subsides, notwithstanding a modified business profile, it will be business as usual. The owner-managers will continue to focus on their old established networks, exploring possibilities, nurturing projects but keeping the employees very much in the dark. So-called 'Asian capitalism' still largely prevails, especially among SMEs, which makes it difficult to reform corporate governance practices or introduce a higher level of Strategic Management.⁶

This finding is at odds with Zutshi's conclusion that 'Chinese entrepreneurs have been successful in learning, adapting and moving up the technology ladder more efficiently than the entrepreneurs from many other developing countries' and that they are 'integrating the traditional culture with a global world view'.⁷ Zutshi acknowledges that research into Chinese business and management practice is very limited, which is true, but based on the small sample of the current study under discussion, it is difficult to share his optimism. The subjects of this survey were generally worldly, sophisticated and well-networked but, in varying degrees, they all expressed unease about investing in "invisible" assets which are not easily tradeable, transferable, or controllable and which could be exposed to political or bureaucratic interference.

The Leadership Challenge Ahead: A Strategic Management Perspective

This study has identified the lack of leadership skills and lack of strategic awareness as major contributing factors in the failure of regional SMEs to become strongly-branded international leaders in technology-related industries. Significant change will depend heavily upon a much greater investment in leadership and management development for SME owner/managers in areas such as business vision, core values and competitive strategy; innovation and learning; leveraging relationships with science parks and universities; and skilfully managing alliances, partnerships and networks. The discussion which follows is designed to provide a basic framework for such initiatives.

Successful leadership is all about inspiring people, developing new business models, focussing goals, defining values, creating added value and managing change. Today's organizations are in a constant state of change and the effective management of continuous change requires a very particular kind of organizational culture. As a starting point, all the stakeholders need to actively participate in anticipating, conceiving, responding to and implementing change. People's values, priorities, expectations and competencies are the essential determinants of successful organizational change – plans, policies and proclamations are just the beginning. Getting the right balance between continuity and change, creating coherence and commitment in situations where turbulence and uncertainty rule, learning from the past and foreseeing the future – tomorrow's strategic managers will have to be adept at helping people live with paradox and contradiction. Asian SME owner-managers of the future will need to be much more adept in Human Resource Management, crossing cultural boundaries, creating teams based on greater diversity and winning the confidence and trust of a much wider group of stakeholders.⁸

Given the speed of technological change, and the competitiveness of the global market, business leadership is the increasingly important ingredient in corporate success and survival. Managing lean, efficient organizations is not enough; simply responding to customer needs and catching up with competitors is not a winning formula. Grasping and shaping the future is what counts in the competitive stakes of the twenty-first century. Asian CEOs must focus on innovation as well as business efficiency. The role of the leader is to interpret market complexity, identify new competitive space, encourage creative people to experiment, develop unique business models, and mobilise the company's resources to make it happen (see Exhibit 2).

Vision, Values and Strategy

During the coming decade, there will be unprecedented opportunities for a new generation of Asian technopreneurs and entrepreneurial SME owner-managers to take advantage of globalisation. However, this will only happen if they have the foresight and skill to invent

businesses which capitalise on emerging paradigm shifts, the analytical sophistication to identify and capture new market niches, the courage to lead organizations with a commitment to continuous innovation and the personal credibility to build a corporate brand which commands both respect and added value in the market place.

In a global economy there is already unlimited scope for individual entrepreneurs to invent and brand new business models and open up markets based upon middle-class and aspiring middle-class consumers in every part of the world. The following examples include both visionary founders and second-generation business executives with the foresight to build an international enterprise around a simple but innovative marketing concept:

- Howard Schultz
 - Extending the Italian coffee bar culture into a network of nearly 5000 stores worldwide in less than 20 years
- Andy Grove, Intel
 - PCs are more important than TVs
- Anita Roddick, The Body Shop
 - Ethically and environmentally sensitive cosmetics and personal care products
- Michael Dell, Dell Computers
 - Direct-to-customer business model of selling and servicing computers

While there will be always be opportunities for innovation coming from laboratories, demographics, pressures for process improvement and popular fashion, the most significant source in a global economy arises from rapid changes and disruptions to industry structure and the competitive environment. Some of the recent paradigm shifts that have created, and are still creating new entrepreneurial business opportunities on an international scale include:

- Expiry of patents on top-selling drugs and greater involvement of Government in healthcare
- Technological convergence and new alliances in communications, consumer electronics, computing and entertainment
- Dispersal of control from the centre to the market edge in key technology-based industries such as computers, energy and telephone systems
- Rapid growth of franchising as an expansion strategy in a wide range of industries

There are also enormous entrepreneurial opportunities for niche players at the local, national and regional levels. Many multinationals are in the process of reinventing themselves in order to achieve a better balance between global efficiency and local responsiveness. Accordingly, sophisticated entrepreneurs have an unprecedented opportunity to distribute, supply, represent, partner and market on behalf of big corporations. Furthermore, as part of this process, there is an exponential growth of licensing and franchising opportunities for small entrepreneurs wishing to shelter under the protection of an established brand name and proven products. Indeed, one of biggest emerging entrepreneurial growth markets is to supply people in the less developed countries with reputable, relatively cheap, simple to-use products.

While vision and strategy are important, systematic implementation is equally critical and challenging. The leadership philosophies of CEOs of successful innovative organizations highlight the central importance of an HR strategy which brings together highly creative people with widely divergent backgrounds, and then encourages them to experiment, build prototypes and take measured risks. The implementation of such a strategy will include extensive use of project teams, job rotation, spin-offs, strategic alliances and imaginative incentive schemes.

Following the scandals which have recently rocked Corporate America, with reverberations upon business environments around the world, there has been a renewed recognition of just how delicate and important confidence and trust are in the efficient working of capitalist economies. Given the current crisis of confidence, there is now great urgency for SME owner-managers, in particular, to identify critical success factors and to manage them strategically.¹¹ In doing so, they will need to recognise the significant differences in the moral dilemmas and business confidence considerations confronting SMEs as opposed to large corporations. Quite apart from the special ethical dilemmas associated with the practice of *guanxi* in Chinese business cultures, there is growing evidence that 'entrepreneurial settings offer more opportunities for cognitive dissonance than do hierarchical settings'.¹²

All types of organizations – not just companies – are being forced to redefine and refocus their businesses, in order to create new sources of value, different bases for competitive advantage, and greater capacity for innovation. Inevitably, this requires them to re-construct processes, redesign systems, rethink the scope of their activity and re-build core competencies. In the course of re-conceptualising the enterprise, the spotlight inevitably falls upon key relationships - with suppliers, distributors and customers, upon organizational structures, logistics networks and the roles of the managers in coordinating these relationships. Furthermore, in order to fully capture and convey the benefits of these arrangements, managers are recognising the need for new strategies for generating and leveraging brand equity. The brand and its logo become the warrant and the symbol for much more customised consumer benefits created by the value chain, and ideally, they take on a life of their own so that they are seen to be much more than the sum of the parts. Brands are an increasingly important part of the individual's self image and vocabulary for social definition.

Innovation & Learning

Innovation must be seen much less in terms of an occasional product breakthrough and as a reaction to the current competitive environment and much more as a continuous pattern of strategic behaviour characterising every aspect of the firm's operations. Drawing upon the bitter experience of the Asian Crisis, there is no more important business leadership role or skill than the ability to facilitate organizational learning as the precondition for developing competitive advantage based on innovation. During the crisis, many would-be technopreneurs allowed themselves to be seduced by the potential of new technology without paying sufficient attention to designing a business strategy for creating value and generating profits. This was certainly the case with the Internet and, as Michael Porter has pointed out, the so-called 'new economy' is not really so new. It is much more 'like an old economy that has access to a new technology'. In most cases, the Internet has not replaced the traditional sources of competitive advantage.¹³ Powerful brands, unique products, superior quality and excellent service will continue to be the major sources of business success. However, as Porter rightly argues, 'strategies that integrate the Internet and traditional competitive advantages and ways of competing should win in many industries'. His point applies to technology more generally. Indeed, the organizational ability to continuously find ways of integrating various elements, activities and technologies is at the core of a competitive strategy based on innovation.

There is now a considerable body of research, including a celebrated recent study by Christensen at Harvard, which demonstrates that it is virtually impossible to manage both mainstream business activities and sustained innovation from within the same organizational unit.¹⁴ Successful technopreneurs and organizations which develop competitive advantage around innovation typically have a special innovation group which:

- Is close to and strongly supported by the CEO

- Does not compete with projects in the mainstream organizations for resources
- Is constantly developing networks and partnerships and specialises in building links between academia, government and industry
- Operates as a laboratory for bringing ideas and stimuli together from a wide variety of sources to create an environment which is rich in forward thinking and development planning
- Encourages the creation of alliances and partnerships.

In short, the strategic management of innovation requires a CEO very different from the typical Asian entrepreneur. It demands a leader who directly oversees the process, who is prepared to coordinate project teams and who is prepared to create and protect a special innovation budget. When innovation initiatives are forced to co-exist with mainstream operations, the pressure of the day-to-day business imperatives inevitably takes precedence in terms of executive priorities, time commitment and budget allocation.

At the same time, however, it is vital that organizations in no way depreciate or abandon 'the capabilities, organizational structures and decision-making processes that have made them successful in the mainstreams markets'. Continuity and change, core business and innovation, leadership and management, must be addressed simultaneously, continuously and given equal weight. Similarly, innovation should not be conceived narrowly in terms of products; innovation is needed in every area of the organization including customer service, partnerships and even business models. Just as innovation has become the major source of competitive advantage, so strategic partnerships are the key to establishing and maintaining an innovation edge by creating a constant flow of new ideas, organizational learning and market development opportunities. The specific benefits of strategic partnerships include:¹⁵

- Helping the organization to gather relevant market industry and technological intelligence and to learn how to compete more successfully
- Identifying innovative business opportunities at the earliest possible stage
- Complementing core competency by strengthening skill capabilities and accessing a wider range of strategic resources
- Enabling the organization to customise its products and services by building long-term relationships
- Combining and sharing intellectual property and know-how
- Accessing new customers and larger markets
- Reducing risk by spreading investment, increasing expertise and limiting exposure
- Creating economies of scale by avoiding duplication, sharing resources and exploiting critical mass
- Identifying innovative business opportunities at the earliest possible stage
- Enhancing the organization's image, reputation and brand

Successful business leaders and technopreneurs use their professional networks to identify opportunities and potential partners. They keep up-to-date with the relevant literature and regularly attend conferences and workshops in their areas of interest.

A Business Networking Approach

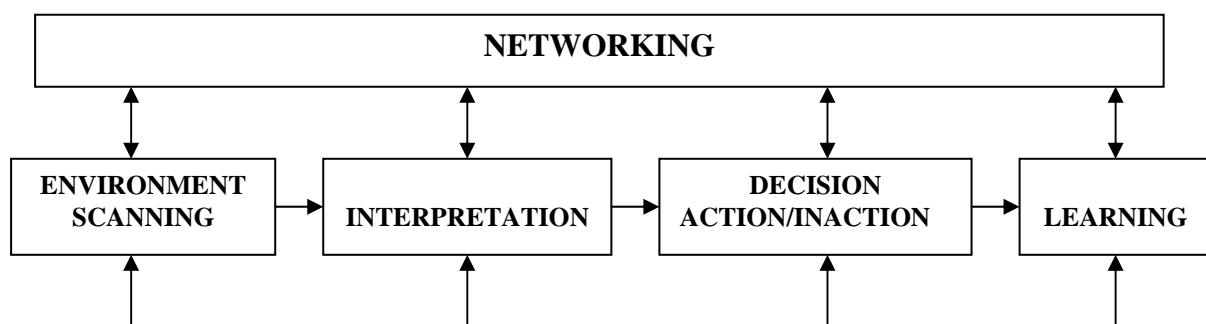
In the New Economy, knowledge pools and networks will increasingly become the underpinning resource capability which helps identify and sustain partnerships and stimulate and produce innovation. The concluding section of the paper will outline a networking model for an innovative learning organization. Strategically managed organizations of the twenty-first century will be open, interactive and continuously networking. Learning will not be a systematic linear exercise; it will be a messy, dynamic process. New information and

emerging concepts will be constantly challenging the status quo and SME managers will need to be extremely resourceful and innovative in designing systems to create, support and leverage their learning networks.

Globalisation and the enormous business opportunities in Asia make it mandatory for all managers to have highly developed information seeking, business diplomacy and networking skills. These skills are extremely urgent for Western managers working in Asia. It is a region of great diversity, complexity, spread and change. Western managers must learn to appreciate the inevitable business premium, which a specialised, informed understanding of how the global economy works will confer.

EXHIBIT 3

THE BUSINESS INTELLIGENCE SYSTEM: A NETWORKING MODEL



The networking model put forward here, the ‘Business Intelligence System’ (see Exhibit 3), is embedded within a Strategic Management framework, which identifies decision-making as the critical business process, networking as the critical information resource for competing in regional and global markets and learning as the key to sustained competitive advantage.¹⁶ In exploring this model it is important to distinguish between the formal and informal networks of a group of organizations operating as an alliance to pursue objectives beyond the reach of individual partners working separately. Formal networks come in a wide variety of forms including consortia, joint ventures, partnerships, alliances and a variety of sub-contracting and licensing arrangements. An informal network, on the other hand, applies more to individuals than to organizations.

The dominant rationale for establishing a formal network is to obtain the best partners, resources and information with a view to providing optimum service to customers. Examples would include Japanese Keiretsu, South Korean Chaebols and the distinctive Indonesian conglomerates. The main benefits of informal networking are much broader and include monitoring trends, identifying changes in the competitive environment, and stimulating new ideas and innovations. An informal network is a much looser configuration of connections, relationships and affiliations, which provides opportunities for exchanging information and ideas, exerting influence and winning support and, above all, lifting profile and building reputation. It is important to recognise the significant overlap between formal and informal networking activity. This is reflected in basic international business tasks such as locating an agent, selecting a partner, obtaining information about government policy, monitoring market conditions, identifying customers, establishing an office or plant, and recruiting staff. However, the Internet has created the means to enhance the quality and effectiveness of informal networking by opening up the possibility of virtual alliances.

According to Deloitte Consulting, only 17% of consumer companies are using the web effectively to link customer management and supply operations. Their research shows that companies establishing ‘digital loyalty networks’ are much more profitable and enjoy much greater customer loyalty than companies that do not.¹⁷ As a guide to SME owner/managers, twelve personal networking protocols have been developed (See Exhibit 4) as a framework for conducting business internationally, and especially in Asia. These protocols emphasise the value of regular personal contact and entertaining, the need to maintain a judicious balance between business and non-business conversation, the danger of relying too heavily on networks centred around individual rather than organizational relationships, and the importance of treating networks as vital business investments and assets, and not simply as optional extras.

EXHIBIT 4

TWELVE PERSONAL NETWORKING PROTOCOLS FOR SUCCESSFUL MANAGERS IN ASIA

1. Be aware of the considerable time and hospitality investment in cultivating effective long-term business relationships in Asia
2. Appreciate the unique features of Asian ‘business friendships’ which frequently do not extend to the families and may not even include direct business involvement.
3. Give priority to network relationships that are based on mutual interest, complementary resources, regular reciprocity and trust.
4. Ensure that there is a basis for a relationship which is independent of short-term business dealings.
5. Recognise that *guanxi* relationships are intensely personal and rarely transferable.
6. Avoid becoming part of *guanxi* relationships which rely on secrecy, cronyism and collusion.
7. Work through appropriate intermediaries in arranging introductions to potential partners, clients or influential ‘helpers’.
8. Assume that networks are dynamic and fluid rather than stable and static and focus on networks as a whole as well as individual relationships.
9. Accept that, while some relationships may overlap, even partners in the same culture may have little in common and, if brought together, may regard each other with jealousy, suspicion and mistrust.
10. Evaluate business opportunities on the basis of investment risk fundamentals and not simply as a means of sustaining a relationship.
11. Approach networking as a sophisticated management competency which is to be continuously reflected upon, developed and refined.
12. Regard networks as precious, long-term investments which should be valued, nurtured and protected.

In summary, strategic innovation leadership demands creative risk-taking not just in the sense of investing in new ventures but also in opening up the organization to external ideas and influences. By forming alliances, connecting with universities, participating in networks and becoming actively involved with professional bodies, the organization is continuously exposed to new insights, unexpected opportunities and potential partners.

CONCLUSION

It is scarcely surprising that Asian SME owner-managers demonstrate a serious lack of Strategic Management skills, perspective and commitment. They operate in an environment which discourages creativity, risk taking and experiment – and especially in technology – related industries which require long-term vision, heavy up-front investment and exceptional tolerance of failure. Given the existing political and cultural constraints, there is little chance of an early transformation in the leadership and management of significant numbers of Asian SMEs unless governments show the way by becoming role models in managing cultural change.

In the case of Taiwan, government has concentrated upon simulating ‘the Silicon Valley Effect’ by creating the sort of environment where innovative people and innovative companies might flourish. This approach is in contrast to the mechanistic programs initiated by governments elsewhere in Asia, where there has been little attempt to link innovation and technopreneurship strategies with the provision of supportive cultural contexts. As the Hsinchu Science – Technology Park clearly demonstrates, state intervention in Taiwan has stimulated rather than stifled entrepreneurial business flair. By contrast, in most of the other countries in the survey, the perpetuation of policy confusion, corruption and cronyism in government has diverted entrepreneurial effort into playing the system in order to win concessions, buy favours and peddle influence.

Overall, it must be concluded that the strenuous efforts by governments throughout the Asian region to promote technopreneurship have been a failure. The main reason for failure has been the undue emphasis upon providing narrow, short-term infrastructure solutions. While it is important to create a supportive infrastructure framework, it is even more important to have a community which values new ideas, openly questions the *status quo*, constantly seeks to find better ways of doing things and is prepared to accept failure. Unfortunately, the values of innovation and continuous improvement do not tend to flourish in societies with strong hierarchical and authoritarian traditions, such as those in many parts of Asia. Thus, although the problems are mainly economic and cultural, in most cases the solutions will almost certainly be political.

Innovation is the key to international competitiveness. The successful creation and marketing of new sources of added value from the customer’s perspective may or may not require technological sophistication. Competitive advantage may just as easily be created through skilful branding and superior servicing strategies. What is important however, whether or not advanced technology is involved, is the ability and willingness of businesspeople to take a long-term strategic approach to building enterprises based upon world-class capabilities and partnerships. Without the broader social conditions favouring all kinds of enterprising behaviour and innovative initiative, it is unlikely it is that significant numbers of technopreneurs will emerge. Of course, Asian entrepreneurs will continue to operate. But, as in the past, they will seek and find opportunities within a fairly narrow band of business activities such as trade, retailing and hospitality – activities which permit family control, involve liquid assets, provide quick returns and, above all, the minimum risk of government interference.

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