



Title: Conducting Business in the Philippines and Singapore: A Study of Socio-Culture Issues, Governments, Economic Conditions and Infrastructures

Course: EMGT 520/620

Term: Fall

Year: 1998

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Report No: P98067

ETM OFFICE USE ONLY

Report No.: See Above

Type: Student Project

Note: This project is in the filing cabinet in the ETM department office.

Abstract: This paper examines essential conditions that affect a company doing business in the Philippines and Singapore. The research project focuses on comparing and contrasting attributes of the Philippines and Singapore, especially governments, economic conditions, infrastructures, and socio-cultural issues in relationship to the attractiveness and feasibility of an American company conducting business there.

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Conditions & Infrastructures**

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Executive Summary

This paper examines essential conditions that affect a company doing business in the Philippines and Singapore. The research project focuses on comparing and contrasting attributes of the Philippines and Singapore, specifically governments, economic conditions, infrastructures, and socio-cultural issues in relationship to the attractiveness and feasibility of an American company conducting business there. This paper includes country profiles assembled from a comprehensive literature search followed by an analysis of the relative importance of the country attributes to high-technology business using a pairwise comparison method (PCM).

The pairwise comparison of the assembled country attributes identifies a clear preference for Singapore over the Philippines as a place to conduct business. Singapore is clean, prosperous, predictable, trustworthy, linked within itself and with the modern world by state-of-the-art infrastructure. The Philippines, in contrast, is a developing country suffering from growing pains leading to conditions characterized by graft, corruption, economic volatility, pollution, sub-standard infrastructure, and unpredictability.

However, that the literature search as well as the PCM analysis targeted 'mainstream,' medium-high to hi-tech organizations. Research does not necessarily conclude that the Philippines is a 'bad' place to do business. To the contrary, the country is an attractive market with its population of 72 million consumers. The Philippines has a vast and relatively untapped reserve of natural resources and labor. There are presently numerous non-mainstream organizations possessing entrepreneurial spirit and unorthodox flexibility who are making huge returns on their investments. Some of these organizations are emerging; some of them have been contently located in the Philippines for over a century. Although Singapore appears to be the surer or safer bet over the long run, the Philippines offers some of the world's greatest investment opportunities for the third millennium.

Introduction

This paper examines important conditions that affect a company doing business in the Philippines and Singapore. The thesis statement developed at the time of project's inception sought to compare and contrast two Southeast Asian countries over four critical key characteristics in order to evaluate the attractiveness and feasibility of an American company conducting business there. The preferred methodology would use a comprehensive literature search, which would then be subjected to the validation or refutation by interviews with key personnel of a company which has had business experience in the chosen countries. The output of this project was perceived, at this early stage, to be a written report comparing, contrasting, and then recommending one country over the other as the preferred place to do business.

The group decided on adopting two sharply contrasting Southeast Asian countries for the research: The Philippines, and Singapore. The group relied heavily on a previous literature search conducted by Charisse Saldivar-Sali for direction in narrowing down the multitudes of country characteristics, which would affect the operations of a company conducting business in these countries [19]. Saldivar-Sali's search yielded economic, socio-cultural, governmental, and infrastructural conditions as the key categorical headings of "...country characteristics which are believed to affect the operations of organizations in different host countries."

Black & Veatch (B & V), a worldwide top 10 civil-engineering firm engaged extensively in design-build projects in Southeast Asia, was initially selected as the company to interview. Early positive indications from key personnel indicated that they would be willing to participate in this research project. Literature search progressed, reinforcing the contrasting nature of the two chosen countries. Communication with the B & V contacts broke down because of their busy, conflicting global time schedules and because of the proprietary nature of some of the B & V information the research group wanted to explore. Two contingent business organizations with experience in the Philippines and Singapore were contacted late in the life of the project; however, constructive connections could not be established in the limited period.

Early in the data collection, one of the group members suggested that the pairwise comparison method (PCM) could augment data analysis, adding depth to the project and its output. As the likelihood of completing the interview component became questionable, the group decided to change focus to the PCM. The project thesis statement remained the same: Compare and contrast the Philippines and Singapore in terms of governments, economic conditions, infrastructures, and socio-cultural issues, in order to evaluate the attractiveness and feasibility to an American company conducting business there. The methodology used was a comprehensive literature search to compile country attribute profiles, the profiles were then the subject of analysis through the pairwise comparison method by the project team members. This PCM analysis provided representative utility functions assigning relative weights to each of the attributes used in business determination decisions. The current work serves as a pilot study that could be extended to include the opinions of technology professionals with experience in these countries.

Socio-Cultural Issues in the Philippines

Overview of Socio-Cultural Issues

The Philippines, comprised of 7,107 islands, is the only predominantly Catholic country in Southeast Asia. The country stretches 1,143 miles from north to south, and spans 686 miles at its widest point. The northernmost island of Y'ami is 150 miles south of Taiwan, and the southernmost island, Saluag is only 30 miles east of Malaysian Borneo.

The two largest islands Luzon and Mindanao account for 65 percent of the total land area and contain 60 percent of the country's population of almost 64 million. The landmass of the archipelago, taken as a whole, is slightly larger than the British Isles.

▪ *Cultural Make-Up*

While an essentially Malayo-Polynesian genetic mix makes the Filipino relative of most Southeast Asian and Pacific peoples, there are also traces of Indian, Arabic, Chinese and Spanish blood. The Filipino is least oriental of the Orientals. Given 400 years of Hispanization, it is predictable that a visitor to this country should see certain traits that the Filipino has common with the Mexican or the Central or South American. There is a touch of the manana syndrome, volatility, capriciousness, rhetoric, an instinctive style and flair, the pursuit of all fads and fashions with avid enjoyment, and a feeling for music and rhythm.

At the latest count, there are 111 linguistic, cultural and racial groups in the country. The national language is Pilipino based on Tagalog, the dialect of the people of Manila and South Luzon, but another 70 languages and dialects, all belonging to the Malayo-Polynesian family of tongues, are also spoken in the Philippines today. Eighty years of English as the former and primary language of instruction, however, makes it easier for the English-language speaker to strike up a conversation with a rural Filipino than with any other Asian villager.

Most Westerners who come to the Philippines are pleasantly surprised to find English spoken everywhere. All the trappings of the American lifestyle are visible---Hollywood films, discos, English speaking media, fast-food chains, supermarkets, five-star hotels, Christian churches, credit cards, etc. A delayed shock follows soon after. The Westerner finds he is talking the same language, but is not communicating at all. He feels as if he is in another world.

Filipinos themselves, in a quandary about their own identity, use different time frames for Americans, fellow Filipinos, and other strangers. Punctuality does not correlate to politeness. It is customary to be late; so 15 minutes after the appointed time is being 'punctual.' The more important the invited guest, the later he will make his appearance, as much as two hours later

sometimes. Filipinos, who have studied and worked abroad, observe punctuality for business or official transactions.

Filipino culture becomes complex by traditional insistence on clouding all social and business intercourse with a harmonious, pleasant, polite atmosphere. Filipinos greet each other with their eyebrows. Eye contact is established and instantly both eyebrows rise up and down. It is a recognition signal. A smile to go with it becomes a friendly 'hello' without words. An abrupt backward toss of the head with hard eye contact is a challenge. Staring is rude and aggressive; intense eye contact is a danger signal.

Filipinos are big on smiles. They smile when they praise, when they criticize; when they are embarrassed and have caused some minor offense; when they need something from you; when they are happy; and for any other reason. An awkward situation invites a smile because of potential conflict. Smiles in return aid to diffuse the situation. A smile is a convenient response instead of an unpleasant remark; it is the best way out of having to say something that could create a controversy.

▪ *Language*

Misunderstandings over language occur less over peculiarities of Filipino English and more because of the deeper and broader social meaning given to terms. For example, time is less precise in Filipino terms. In rural areas, people will measure distance by calculating the time it takes to smoke a cigarette. The word 'fix' has a different cultural connotation. The Filipino who can 'fix' your papers is someone who is a go-between in the bureaucracy, someone who expedites paperwork and even launders illegal transactions, clears tax declaration forms, or disposes of traffic tickets you may have received. A 'fixer' is one whose trade is expediting red tape for a fee.

At times, his work requires the use of bribes to give your documents a clean bill of health. The Filipino 'yes' puzzles most Westerners. 'Yes' could mean just that; but it could also very well mean 'maybe,' or 'I don't know,' or 'if you say so,' or even possibly 'no.' In his desire to please, a Filipino cannot bring himself to say 'no' openly.

Courtesy flows within the Philippine languages. It is important for Filipinos and Westerners hoping to communicate with Filipinos neither to offend nor to presume anything in speech. It is important never to speak in belligerent, harsh or loud tones. Such a speaking style could disrupt harmony, initiate disagreement, and spark off a quarrel. It is not just what one says, but the tone and manner of speech that conveys meaning.

▪ *Filipino Values*

They call *hiya* or shame the foremost value. Hiya is a universal social-sanction, applied within the society, controlling and motivating individual and social behavior. Filipino employees tend not to ask questions of a supervisor. This is true even if they are not quite sure what they should do. Because of *hiya*, an employee dismissed from his job may react violently because of *hiya*; a

colleague may not openly disagree with you even if he feels strongly about it out of hiya.

The Spanish term *amor-propio*, (literally 'love of self,' in other words self-respect) reinforces Hiya. To accept open criticism meekly, or not to offer honored guests the proper hospitality are examples of lack of *amor-propio*. The traditional oriental attitude about 'face' comes into play as well in Philippine society, reinforcing hiya and *amor-propio*. Unlike the Western code of behavior which hinges on an established code of right and wrong for which an individual feels guilt if he realizes he is wrong. *Hiya* operates even when the person is right and the other person wrong, because of the Filipino interaction between hiya and *amor-propio*. A Filipino hesitates to bring up a problem because hiya is in operation; Filipinos feel uneasy if they are instrumental in making waves, rocking the boat, and exposing someone's volatile *amor-propio* to injury.

Therefore, they avoid or delicately handle face-to-face situations. An intermediary or go-between might step in to keep a situation defused. They use go-betweens in business affairs, government transactions, in dealing with officialdom. The 'fixer' is a go-between within the bureaucracy. In practical applications, business executives dealing with Filipino co-workers and subordinates should know that the Filipino value of hiya-*amor-propio* is often the cause of much misunderstanding. The Filipino has a high sense of personal dignity. His dignity and honor are everything to him, so that the wounding of them, whether real or imagined, becomes a challenge to his manhood. He respects other people but they must also respect him. Disregard on the one hand, and a sacred regard on the other of individual dignity, has fueled many a conflict between a foreign superior and a Filipino subordinate [1].

Aside from a go-between, another way of maintaining smooth interpersonal relations is by the use of euphemism or indirect criticism. One indirect method of criticism is teasing, which when presented lightheartedly, gets the point across. Reliance on this euphemism makes the Filipino say 'yes' readily because he will not openly disagree or disappoint. This is why he smiles so readily, even when not agreeing. The Filipino anticipates and gives the expected answer, avoiding if possible a negative reply. A question by a person seeking a positive answer concerning the quantity of payment for services rendered will be invariably answered with 'Its up to you.'

Foreigners who like to get to the point may sometimes feel mystified by the purpose of a visit to one's office or home, engaging in light small talk that does not justify the call. The caller in the meantime has been waiting for the foreigner to offer proper openings to discuss the purpose of the visit. The rambling and the time-consuming pleasantries are part of the dynamics of upholding fragile self-esteem. The difference between Western and Filipino social interpersonal relations is that Western culture seeks to resolve a conflict by creating confrontation where the Filipino does so by avoiding confrontation.

Filipinos make a distinction between their private space and the public space. Filipinos do not think of public space as being a shared community asset, cared for and respected by all. That concern passes on as the task of government. Filipinos have not really come to terms with their relationship with the government (taxes, jaywalking, littering, etc.). Without the physical presence of a traffic policeman, for example, Filipinos do not obey traffic lights and signs. They respect a person in authority, but they generally ignore an abstract de-personified sign. People throw their trash out in the streets for the garbage truck to pick up. Filipinos do not use garbage cans because

they would disappear. Pilferage is rampant in the Philippines; even heavy iron manhole covers disappear, not to mention hundreds of yards of live wiring from electric poles.

While stealing is considered immoral and a crime, 'borrowing' and pilferage are rampant. Mail delivery is not very reliable for this reason. Traditional Filipino kinship patterns develop a lax attitude about helping oneself to a family member's goodies. They consider Reluctance to share extremely stingy. If you do not want something to be touched in a Filipino home, then you have to put it away and lock it in a private drawer. Buying cigarettes by the stick has proved a convenient practice among Filipino workers. Pulling out a pack requires that one must offer and share with everyone around. In questions of public space, of public property, and of corporate property, ethical standards and confusion of how to cope with these situations has led to pilferage, anarchy, and chaos. Filipinos simply try to muddle through these situations the way they do with traffic, and the foreigner must take this in stride.

▪ *Doing business in the Philippines*

The style of doing business in the Philippines is casual and leisurely. Things may seem to go speedily and smoothly at the top level, but at the level of implementation things move much more slowly. A go-between can assist in pushing through any kind of barrier.

All decision-making comes from the top. Access to the top is only through intermediaries in informal social meetings which then move to a more formal discussion, though still in a social situation such as a luncheon. Even at the top, the chief executive may not want to commit himself and he may say a proposal has to go to a board or committee. Chances are this is another way of saying 'no,' because the depersonalized board or committee takes the blame for the negative action. In meetings, many the decisions are predetermined through informal discussions and go-between assurances of support. Usually, by meeting time, most are aware of the positions of members on a sticky issue. Back room caucuses likely made the decision to approve or disapprove a proposal.

The business pace slows considerably in the Philippines and one must provide generous margins for timetables, deadlines, and work schedules. On many occasions nothing moves without a *lagay*, a euphemism for a small bribe, which some scholars prefer to call 'persuasive communication.' While there are those who claim it are not necessary, others swear that it is the only antidote for the agony of inaction. Lagay is officially and publicly considered illegal and immoral. It is part of split-level Christianity and the double standard.

For normal legitimate business affairs with Filipinos, one must bear in mind fundamental differences in motivation. Anthropologist Lynch identifies three things that motivate and control Filipino behavior: social acceptance, economic security, and social mobility. Material considerations and profit take secondary importance to family interests and job satisfaction. Titles of office proliferate in the Philippines for this reason. Despite a wider distribution of titles and job classifications, Philippine organizations are highly centralized with a wide gap in distribution of monetary rewards.

Philippine businesses run differently from Western ones, and the Filipino kinship values that seek an end goal of smooth interpersonal relations the style determine this. There is no way of getting away from this concept; one needs to be aware of this. Because terminating a regular employee's service involves a sense of hiya, government policy requires 'just cause' or authorization of the Department of Labor who will ask for documentation of 'just cause.' Personal interaction, socializing, establishing contacts in government sectors and in the media as well as in business are important not only to get your viewpoint heard but also to learn early of governmental changing moods.

Socio-Cultural Issues in Singapore

Overview of Socio-Cultural Issues

Lately, Singapore has become a good place to invest money and conduct business for Western companies. There are many reasons for this phenomenon. Singapore is a multicultural city-state where Chinese, Malay and Indian traditions coexist under the veneer of a western cosmopolitan culture.

Singapore reassembles any western city with clean streets, modern skyline and efficient transportation. Yet, Singapore maintains the cultural traditions of its people. The people remain Asian and all their values stem from traditional beliefs and customs that have been there for centuries. Cultures have marked the way Singaporeans do business with foreign companies and investors.

Singapore became independent from Malaysia in 1965. Much ethnic strife emerged, as a place where different cultures and people lived side by side. This contributed to the industrial and economic development of the country. Singaporeans do not adopt habits from all the cultures existing there; people preserve their values and ethnic identities.

Understanding the business culture of a particular Singaporean requires knowledge of whom one is dealing with. It is necessary to have a good knowledge of that person's cultural backgrounds and values. The understanding of the traditional beliefs and social practices associated with that background increases the probability of business success.

Modern Singapore is the result of one man's leadership and vision, Lee Yew. Yew reigned as a Prime Minister and paramount leader of Singapore for 31 years. Although he is not in the government anymore, he continues to exert tremendous influence in government and policy affairs. Confucian principles of hard work and obedience to superiors form a basis for Singapore's operations in every field.

Singapore's government policies are paternalistic. The government provides people with housing, education, and a host of human services. In return, the majority of Singapore's residents support the government. They believe the government pursues the good of all society and all efforts drive towards this purpose.

▪ *Language*

The official language of Singapore is English, but for most Singaporeans, English is a second language. The result is a mix of English, Malay and Chinese, which combines with non-English slang. They call the mixed language "Singlish." Visitors can find the accent hard to understand. However, with a little attention and remembrance of a few linguistic characteristics, visitors will

soon communicate freely and without hesitation. While doing business with Singaporean associates, if one does not understand, ask politely to repeat and never laugh. They know you are not familiar with the local slang and they will make an effort to speak Standard English.

Professor Stella Ting-Toomey has studied the cross-cultural communication problems that arise when western companies do business in Asia, specifically in Southeast Asia [29]. This research has concluded that between fifteen and forty percent of managers sent to overseas operations have been failures and resulted in their premature return home. The root cause appeared to be due to their cultural assumptions and the attitudes about the communication process. Communication is a very important issue in negotiating with people from a different culture, it can function as strong link, but it can also function as a barrier.

▪ *Management Practices*

Geert Hofstede has been investigating the International Management area for over twenty years [9]. His research has used data from US-based multinational subsidiaries consisting of organizational management practices in fifty countries. He discusses four dimensions in understanding organizational management practices:

- 1.- Individualism and collectivism
- 2.- Power distance
- 3.- Uncertainty avoidance
- 4.- Masculinity versus femininity

These four dimensions are used to detect the cultural and communication problems that may appear when negotiating with Singaporean companies. Singaporean business people always act as a whole. Collectivism is the main principle for all acts. They belong to a close group of friends, classmates, friends of friends; relatives and associates with shared interests. These people do favors for one another and always remember what they have given or received. The importance of personal connections has its roots on the traditional concept of family where the individual is part of a whole entity. This entity is the source of protection and strength against forces from the outside.

Under this principle Singaporean business people work for the prosperity of the whole country and not for their own personal gain. Executives and entrepreneurs work constantly to expand their personal networks of connection, while the companies grow with the purpose of mutual financial profit. The criterion is the same with personal connections, based on trustworthiness and loyalty. Americans have to look at this aspect very carefully when doing business. Any sign of individualism that could hurt the unity of the network will result in the termination of the deal.

Distance from positions of power is also a very important issue in the organization of Singaporean companies. There is a very high sense of respect for the superiors in eastern companies and Singapore is no exception. Hierarchical structures in the east have a high power distance unlike American or Canadian companies. Westerners tend to have a lower power distance and equal

power distribution, American executives should always treat to Singaporean and American businessmen with respect.

Avoiding uncertainty is a typical characteristic of eastern companies. Singaporeans like to have all the information possible about a project. First business meetings have little or no results. A very complete presentation should be prepared without leaving out any aspect, even if it does not seem relevant. Foreign delegations must also observe the rank of the executives that form the delegation. Singaporeans measure the seriousness of a proposal by looking at the rank of the members. They would not give importance if only junior executives form a delegation. They also require the delegate's rank to match their own rank. If the attending Singaporean delegation does not have similar rank members, chances are they are not interested in the proposal or were not notified about the member's rank in the foreign delegation.

▪ *Cultural Values*

Women in Singapore are becoming more cosmopolitan and westernized. Although their appearance has changed in recent years, women keep their traditions and cultural values in all their actions. The relationship between a businesswoman and businessman should always remain respectful. Everyday the number of women in managerial jobs is greater and they occupy very high positions in companies. When western people do business with a Singaporean woman executive, they have to be very careful of the way they speak or act. Every interaction has to be very formal. Flirtatious behavior is a taboo in Singaporean society; such behavior could cause a woman to lose her job.

Physical contact between people from the opposite gender is restricted. Hugging or kissing in the work environment is inappropriate. Any complements should refer to a woman's work and never to her looks, as this too could also be misinterpreted. It is customary to wait for the woman to start the handshake and, if there is none, a smile will do. These conditions apply to women in Singapore. Men inside the work environment have more freedom.

Another big aspect that westerners should consider is the Singaporean concept of face. Face value is a mark of high dignity and honor. Face is a cherished possession that could be lost or taken away. According to the Singaporean mentality, face can be lost when you insult or make a bad comment about that person in front of others. However, as face can be lost, thanking someone or remarking about his or her performance in front of the superiors returns it. Western people should always wait for their turn to speak; interrupting someone could cause them to loose face. This is an important subject to take into account. If improperly handled, such behavior could ruin business prospects.

Any business interaction in Singapore should recognize these cultural aspects. A company should be very careful in selecting the people who will be directing negotiations, make sure the leader and the members are aware of cultural sensitivities, and preferably have had previous experience in Singapore.

Government in the Philippines

Government Overview

The Philippines models its Government from the United States. There is a President, Vice President, Senate and Congress. The government was structured in 1946, after World War II. The Philippine Government is currently in a state of flux. From the Ferdinand Marcos Era to the Corazon Aquino backlash, from Fidel Ramos to the current Joseph Estrada period, the Philippines government has changed radically. The government has swung from corrupt dictatorship to a democracy backlash and is currently swinging back into corruption. The basic form has remained in tact, but the manipulation of the components has changed the face of politics in the Philippines. Elected officials of the Congress and Senate have tended to be persons from the Philippine elite, these officials practice politics to benefit the rich and powerful. Bills passed have benefited the interested of the rich, with tax rates on land kept very low.

▪ *The New Regime*

The current president of the Philippines, Joseph Estrada, took the office June 30 of this year. His assumption of power has brought with it baggage from the Marcos era [22]. In his bid for power, Estrada has merged two political factions that had been at each other's throats for years [23]. His new party, Laban ng Masang Pilipino (Fight of the Filipino Masses), is a merger of the Laban ng Demokratikong Pilipino (Corazon Aquino's old party which was a backlash from Ferdinand Marcos) and the Nationalist People's Coalition (that has been supporting old Marcos political bosses since 1986). This merger has brought characters from the Marcos era back into the political arena. Businessmen, charged by the Presidential Commission on Good Government (PCGG), formed in 1986, are in the good graces of the government since they had supported President Estrada in his election campaign [22]. Eduardo Cojuangco, a billionaire who had a 20 % stake of San Miguel brewery that was taken away by President Corazon Aquino, is regaining his share of the brewery. Cojuangco is the head of Estrada's political party. Since Estrada's election, the PCGG has not had any convictions. Government courts have dismissed thirty-two cases filed against Marcos' cronies.

Estrada has had problems from the outset. There is growing concern that there will be a return to the bad old days of dictator Ferdinand Marcos [24]. Estrada's appointments to political offices are fueling this. Carmelo Santiago, a former drinking partner of Estrada, has been appointed to the board of the National Power Corp. Patricia Zamora Riingen, a daughter of Estrada's long time friend Manuel Zamora, became the country director of the Asian Development Bank. This is patronage politics in its most blatant form. The president's inner circle of officials are major personalities that were key to his campaign. These officials are individuals that will closely guard their turf and will not act cohesively to aid the government. The Congress is anticipating the

president's weakness and can easily override his best efforts, maintaining their own preferred "pork barrel" policies.

▪ *Government Business Policy*

In August of this year, the new president shocked the foreign business world by announcing that the government must use Filipino language rather than English in official business [14]. This was the culmination of a nationalist movement that had been brewing over the previous two decades. Estrada, in his campaign, exaggerated his ineptness at English in order to gather the nationalist vote. Companies like Texas Instrument have stated that the use of English is a major reason for companies to relocate to the Philippines. Estrada retorted that globalization should not be an excuse to suppress the use of the national language.

Government has had great influence over the economic conditions in the Philippines in the past. Initiated under Corazon Aquino, the government has begun divesting its holdings of companies in an effort to reduce a horrendous debt. At the end of 1985, the Government owned 300 businesses. The fourteen largest combined for an annual debt of US\$580 million [28]. In an effort to further reduce the debt, government has focused on five goals:

1. Securing much needed foreign aid
2. Stimulating domestic consumption by increasing government spending on employment generating projects
3. Freeing the economy from the distortions of the Marcos era
4. Restructuring and reducing the burden of the country's US \$26 billion in foreign debt
5. Encouraging new domestic and foreign investment.

Signs of foreign penetration abound in the Philippines. Products from America and Japan are widely present. The Philippine people perceive that the foreign products have greater quality and value than the local products. With the government contemplating a full-scale import liberalization policy on tariffs and eliminating quotas on imports, industry in the Philippines must brace for competition with a strong foreign market [28].

Government in Singapore

Government Overview

Singapore is a republic with a parliamentary system of government based on the British (Westminster) model. This means that all cabinet members are elected members of Parliament. (An analogy with the American model would mean that all of the US President's cabinet secretaries would be congressional representatives.) The cabinet is the visible representation of the government, led by the Prime Minister, appointed by the President. The Prime Minister is a member of the parliament and commands the confidence of the majority of the parliament. On the advice of the Prime Minister, the President appoints other ministers from among the members of parliament to form the cabinet. The cabinet consists of ministers in charge of ministries such as communications, community development, defense, education, the environment, finance, foreign affairs, health, home affairs, information and the arts, labor, law, national development, trade and industry, etc.

Singapore's government and its agents are clean and above board in their dealings. The Singapore government also pays its ministers salaries in par with the private sector industries. This lessens the temptation of the office holder to misuse his/her position. The Singapore government is quite business friendly and expects the foreign businesses to play by the rules. The Singapore government has put in place laws and procedures so that the business transactions run smoothly. It plays an active role in inviting foreign investors and encourages them to continue their investment efforts. Well documented and clearly described, the rules still contain many gray areas of operation where the businesses must perform as "advised by the government".

Singapore's government promotes and facilitates foreign investment, and investors face few restrictions. Government promotions include tax concessions and holidays, research and development incentives, export incentives, and loan/grant programs. The Economic Development Board (EDB) administers the industry incentive programs.

▪ *Capital Import Restrictions*

There are no capital import restrictions in Singapore. A foreign firm is free to bring in as much capital as it needs and is free to borrow from the local banks. Foreign investors are also free to transfer the profits abroad. However, these firms have to comply with the local banking and tax laws.

- *Government Regulations*

Singapore produces very little of what it consumes. Most of the imports are free of duties and restrictions. Certain products such as arms, pharmaceuticals, transmitters, meat products, publications, audio-video materials, and coffee require "endorsement", or approval, from the relevant government authorities. Enforcement of intellectual property rights is generally good. For instance, the Singapore government has taken active and effective measures in eliminating many pirated consumer goods, such as watches, audio-video cassettes, and clothing. However, enforcement of software copyrights remains weak.

The government has enacted strict environment-friendly laws. These laws are well enforced and reflect international standards. There are strict emission standards and requirements. The environment ministry inspects factories periodically to ensure compliance with existing laws.

- *Intellectual Property and Technology Programs*

Singapore is laden with governmental institutions encouraging technology and facilitating collaboration on endorsed technology ventures as mentioned previously. In February 1995, Singapore joined the Paris Convention for the Protection of Industrial Property (Stockholm version) and the Patent Cooperation Treaty (PCT). Singapore is in the process of establishing its own patent office and board of examiners. Previously they were subject to the British patent system, being a former British colony. Furthermore, Singapore has established the Patent Application Fund (PAF). The fund, set up initially by the National Science and Technology Board (NSTB) to encourage Singapore organizations and individuals to register their innovations and inventions, established intellectual property rights. The fund provides financial assistance to defray the costs of patent applications. These efforts are notable in creating the path and expectations that encourage technology advancements.

Philippine and Singapore Government Comparison

Both Singapore and the Philippines have governments that are supportive of foreign trade and have enacted laws to encourage foreign investment in their economies. Singapore and the Philippines have democratic governments. The British system serves as a model for Singapore's government while the Philippines follows the US system. Singapore's government that has demonstrated years of stability, while the Philippines is still recovering from the authoritarian rule of the Marcos regime. The varied economic bases have dictated the degree to which the governments have enacted protective laws. Singapore has a technological base; Philippines has an agrarian base. Taxes, land-use laws, and encouragement of foreign investment reflect these basic differences.

Philippines Economic Characteristics

Economics Overview

In the 1980's, the economy of the Philippines was substantially behind neighboring ASEAN (Association of South East Asian Nations) countries due to natural distress and local financial crisis [12]. Economic and political reformation in the Philippines had made significant progress in the 1990's [7]. Sound macro-economic policies and wide-ranging structural reforms sharply boosted growth and brought down inflation. Since the middle of 1997, a number of Southeast Asian economies have been in the grip of severe financial crises that have thrown the region into a deep recession [20]. A commitment to economic stability and reforms has made the Philippine economy more elastic and has enabled it to survive the current crisis thus far. However, the economy remains vulnerable. This regional financial crisis has highlighted their weaknesses and made the task of addressing them more urgent.

In long term business operations, especially technology investment, economic environment is an important determinant. An economic trend drastically influences investors' decisions in anticipating the success or failure of their businesses. Martino 1997 established that two economic trends are of particular importance in assessing the potential for technology growth; these are growth of knowledge industries and increasing integration of a nation into the world economy [16]. Aspects suggested by Martino (in his 1997 PICMET paper) provided the following structure for discussion of the Philippines and, in the next section, Singapore.

▪ *Economic Growth and Income Levels*

"Rather than trying bottom-fishing in the Southeast Asian markets, I would invest in China"—Gary Shrilling [20]. "Yesterday's sick man of Asia (Philippines) looks pretty perky today – and without the help of an autocratic doctor" – The Economist, November 16th 1996.

Although there are many different perceptions (both positive and negative) concerning the current Philippine economy, it is still considered attractive to foreign investors in many ways. Exports, imports, and foreign investments keep increasing. The GNP from 1993 through 1997 grew from 746.9 to 931.1 billion pesos. In addition, the statistic trend of economic growth rate (in terms of GDP by industrial types) has also been increasing gradually (Figure 1). The predicted economic growth in the Philippines will continue to advance with a GDP and GNP growing 5-8 % each year (Table 1). Because of these growing numbers, the Philippines is seen as a strong example of a 'Newly Industrializing Economy' (NIE).

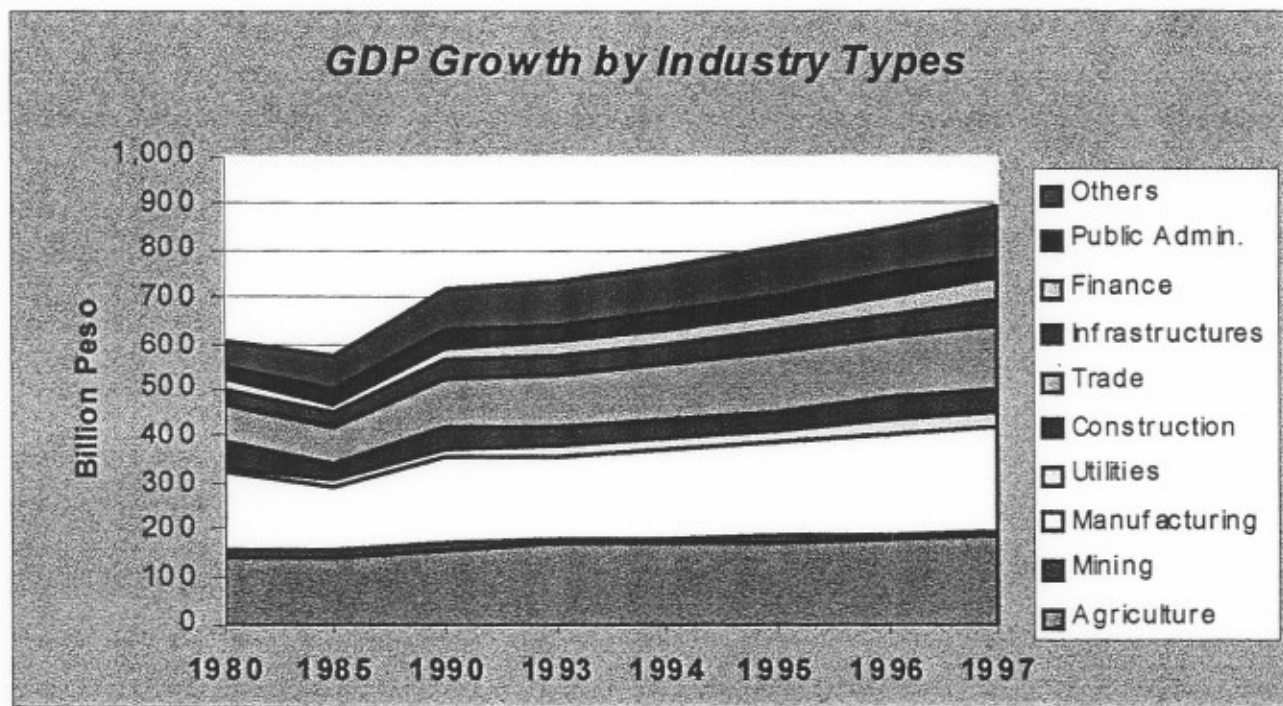


Figure 1: Philippines GDP Growth by Industry Types

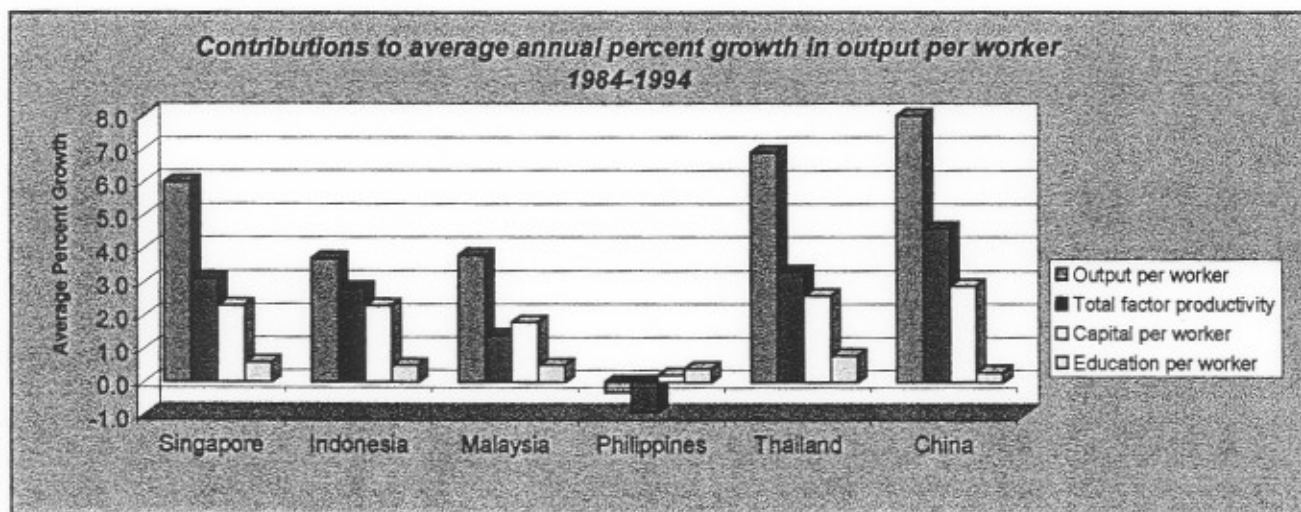


Figure 2: Sources of Economic Growth
[Source: World Economic and Financial Surveys, IMF, September 1998.]

Concerns arise when looking at the output per worker in comparison to the education per worker (Figure 2). Typically, an increase in education produces an increase in worker output, this has not occurred in the Philippines. Income levels and labor costs vary in different regions, but the Philippines rates low in comparison with other ASEAN countries. In the Saldivar-Sali's study, the Philippine labor cost is less than 10 % of production cost. As a comparison, in the UK labor cost is 14 % of product cost [19].

▪ *International Mobility of Managers and Workers*

The mobility of labor in the Philippines is relatively intense. Filipinos primarily work in agriculture and forestry sectors [7]. Many Filipinos work aboard, typically on construction projects in the Middle East, on ships at sea, as English teachers in Asia, and in hospitals in the United States and Europe. In 1996, the Filipino workers abroad contributed nearly 8% to the GNP, that is more than 71.72 billion pesos [8]. It is unfortunate the country can not make use of its considerable human resources, but the working class Filipinos have turned this to their own advantage, marketing themselves abroad and sending the money home to create broad-based capitalism.

	<i>Philippines (Billion Pesos)</i>						<i>Singapore (Million Singapore Dollars)</i>					
	1990	1993	1994	1995	1996	1997	1990	1993	1994	1995	1996	1997
GNP	1,071.4	1,500.2	1,736.3	1,968.5	2,261.3	2,526.8	681,327.7	93,497.8	109,160.5	121,887.4	133,108.0	146,880.0
GDP	1,076.7	1,473.9	1,692.4	1,905.5	2,180.4	2,423.2	67,705.3	94,317.5	108,216.9	120,704.1	130,775.3	131,314.1
GDP by Industry												
Agriculture	235.9	318.5	372.5	412.1	447.8	452.5	176.6	156.8	171.7	199.9	215.8	198.8
Mining	16.6	16.6	16.5	16.8	17.1	17.3	81.7	38.3	53.4	37.5	47.1	43.5
Manufacturing	267.4	349.5	393.8	438.2	495.3	540.3	19,393.1	24,651.8	27,619.5	31,536.6	33,164.2	34,742.6
Utilities	22.3	36.4	44.8	49.4	56.7	66.0	1,250.0	1,571.1	1,713.6	1,956.9	2,279.7	2,678.5
Construction	64.9	79.2	95.4	106.6	127.5	156.1	3,724.0	6,772.4	7,943.6	8,986.7	11,140.2	1,206.3
Trade	154.5	207.5	230.7	261.8	295.0	317.1	12,590.6	18,021.4	21,360.9	23,734.3	24,937.4	26,872.4
Communications	53.1	78.3	82.8	88.9	101.0	118.8	8,715.6	11,494.5	13,025.1	14,277.5	14,671.3	15,803.1
Finance	42.5	58.5	67.3	78.2	96.4	114.4	17,835.1	26,577.6	31,939.0	34,966.2	39,051.9	44,254.7
Others	219.5	329.4	368.6	453.5	543.6	640.7	3,938.6	5,033.6	4,390.1	5,018.5	5,267.7	5,514.2

Table 1: National current market price (Billion Pesos and Million Singapore Dollars)

[Source: Asian Development Bank, 1998.]

▪ *International Investment*

The levels of international investment have continued to grow since 1990. The net income from abroad has increased by 6.8 % since 1990 [8]. The agricultural and manufacturing segments have seen the greatest activity from international investments, but since agriculture is highly sensitive to environmental impacts, there are concerns that the growth may not be sustained. The slower pace of the manufacturing sector can not finance the country's investment. Foreign exchange remittances of Filipino workers abroad continue to be the primary booster of the Philippines'

economy.

▪ *Economic and Tax Policies*

When the GDP dropped during the period 1980-1985 (Figure 1), the government of the Philippines decided to reform the tax system [7]. The more significant changes of recent years include adoption of a 10 % value-added tax (VAT) to replace an over abundance of business and excise taxes. VAT includes a withholding tax on residents and the Simplified Net Income Tax Scheme (SNITS) for professionals and the self-employed [13]. This is especially critical since most foreign investments in the Philippines in the past five years come from countries such as the U.S., Europe and Japan, all of which have a tax system based on net income. By imposing a minimum gross asset tax, the Philippines might be on the cutting edge of the new wave of tax reforms for developing countries [7]. Table 2 shows comparable corporate tax systems in a sample of Asian countries

	<i>Max Corporate Income Tax</i>	<i>Tax on Gross Asset</i>	<i>Loss Carry Forward</i>	<i>Accelerated Depreciation</i>
<i>China</i>	30%	None	5 years	None
<i>Indonesia</i>	35%	None	5 years	Yes
<i>Malaysia</i>	30%	None	No limit	None
<i>Philippines</i>	35% ✓	None	None	None
<i>Singapore</i>	27%	None	None	Yes
<i>Thailand</i>	30%	None	5 years	None
<i>Vietnam</i>	25%	None	5 years	None

Table 2: Comparison of corporate tax systems in certain countries in ASIA

Source: CCH Asia Limited, Doing Business in Asia, 1994.

Tax reform has influenced several Philippine industry sectors, for some there have been benefits, for others there have been penalties. Production of metal mining has fallen, while the production of the nonmetal mining industry has expanded. Capital intensive industries have gained more tax benefits than have land or labor intensive ones. While the consumption of energy, clothing, transportation, and education has increased, the consumption of housing, fish, medical services, milk and meat has decreased [3].

Singapore Economic Characteristics

Economics Overview

Singapore's high technology sector is lead by government initiatives. A National Science and Technology Board (NSTB) was established in 1983 and the Ministry of Trade and Industry (MTI) was set-up in 1991. The positive side of high government involvement in technology industry is strong financial support and incentives for individuals to seek scientific and engineering training with the promise of many high-paying, secure government jobs. Singapore has a mandatory public savings plan. The government reviews and identifies promising technology ventures and supports their development. The government provides university scholarships in science and technology in return for obligatory public service terms by the students when they graduate. Singapore's nurturing government involvement in the technology sector has been highly successful to date. In 1996, US\$1,798M was expended on R&D (63% from non-governmental sources). The government has begun to more closely monitor the health of the high-tech private sector, and advertise that private sector R&D investment grew 28.6% between 1995 and 1996 [21]. These are indeed indications that Singapore is a highly developed, technologically strong country.

The downside to this ubiquitous government involvement in technology is lack of competing and innovative ideas. The government determines which technology ventures they expect to be most viable and fully support them, rather than letting competition between private entrepreneurs identify the strongest new ideas. The government hires the best and the brightest from the universities each year, which discourages the expansion of private ventures, virtually eliminating competition and diversity of technological ventures. Dolven [6] noted that entrepreneurs who pursue their interests outside of the public sector are considered underachievers that are not good enough to work for the government.

▪ *Economic Growth and Income Levels*

In 1996, the Organization for Economic Cooperation and Development (OECD) took Singapore off the list of developing countries in need of international assistance. Even in the midst of the Asian economic crisis, Singapore continues to see GDP growth (Table 1), however, the GDP growth for 1998 is expected to be only 1% from 1997. Except for 1998 (due to the Asian Crisis), Singapore has been seeing strong growth since their 1985-86 recession. The fast growth over the previous decade has contributed to a soaring cost of labor and property. Looking at the period from June 1995-1996, the Unit Business Cost Index of the manufacturing sector saw quarterly increases around 6%; Unit Labor Cost Index saw increases of 4.3%; and the Consumer Price Index increased only 2.0%. Due to these rising costs of doing business, Singapore has lost some business to Malaysia and Thailand. Unemployment increased to 3.2% in 1998, but this is still below the

levels seen in most Western countries.

Table 1: Singapore Economic Figures Source: 1994-1996 [30], 1997 [11]

	1994	1995	1996	1997
Real GDP (% change)	10.5	8.8	7.0	7.8
Per Capita GDP (\$US)	19,940	28,000 (est)	N/A	31,142
CPI Inflation (Avg. % change)	3.1	1.7	1.4	2.0
Unemployment Rate (% change)	2.0	2.0	2.0	1.7
Exports (US\$B)	95.0	115.5	122.5	125.0 ✓
Imports (US\$B)	96.0	116.8	123.1	132.4
Exchange Rate (S\$/US\$)	1.461	1.414	1.400	1.68

Singapore's National Wages Council implemented a policy during the 1985 recession of wage restraint. The government can reduce the wages of civil servants by as much as 20 % in a given year to control inflation. The private sector can vary wages by as much as 16 %. The wage council maintains that "wage restraint is an integral part of our response to the current problems, for both the private and public sectors." [10]. This policy has a significant effect in controlling the CPI and the unemployment rate.

▪ *Trade and International Market*

Singapore's exports were valued at US\$125B in 1997. Primary exports include computer disk drives, printed circuit boards, integrated circuits, refined oil products, and chemicals. Imports for 1997 were valued at US\$132 B. These primarily include electronic components, crude oil, food, electric generators, aircraft and ships. In 1997, 44% of manufacturing output and 2/3 of exports were electronic products. This participation in the high technology markets is a sign of economic advancement. It is notable that Singapore imports food and crude oil, Singapore recognizes that given its limited territory, other countries can produce food more cost effectively than they can. Similarly, Singapore has the knowledge base to import crude oil and capitalize on their competence in refining it. Furthermore, Singapore considers one of its prime trade indicators to be 'non-oil domestic exports'. This figure has slipped to \$7.3B in September 1997, a decrease of 6.2% from 1996. Large participation in the electronics industry also causes the country's economy to be subject to downturns in this industry.

▪ *International Mobility of Managers and Laborers*

Singapore's population is 3.6 Million, but only about half of its adult population has education that includes secondary schooling or university work. They are in need of skilled workers for existing high-tech industries as well as for new telecommunications and electronic commerce endeavors

the government is currently pursuing. To increase the strength of its labor force, Singapore is conducting mass recruitment in Australia, the U.S., and Europe hoping to bring in foreign professionals and to lure educated Singaporean expatriates back home with good jobs. Prime Minister Goh Chock Tong stated that in the information age, "Human talent, not physical resources or finance capital, is the key factor for economic competitiveness and success." [31]. To ease the integration of foreign professionals, Singapore has established a fast-tracked employment pass application process and is making it easier for these workers to bring their spouses and dependents to Singapore with them. The government is extending to desirable foreigners housing subsidies given to its citizens. Currently, Singapore employs about 530,000 (76% increase from two years ago) foreigners, 80,000 (60% increase from two years ago) of which are professionals and hold employment passes. With the Asian financial crisis, unemployment has increased to 3.2% from a level of just 1.7% in 1997. The situation has created a justified concern among Singaporeans about foreigners taking many of the best jobs away from citizens.

▪ *International Investment*

"Singapore has attracted more foreign direct investment per capita than any other major Asian country-by a mile." [6]. However, this high foreign investment, especially by multinational electronics firms, positioned Singapore precariously for the current Asian economic crisis. Once Asian currencies became unstable, international investors pulled many of their investments out of Singapore. Singapore has felt this sting through slowing growth in 1997 and 1998. However, the country's economy has demonstrated itself to be among the strongest in Southeast Asia due to a high level of government control and regulation. Strong fundamentals form the basis for the Singapore economy. Citizens are encouraged to maintain a high savings rate and the government maintains large fiscal and external-current account surpluses, along with high regulation and supervision of domestic financial institutions. The corporate tax rate is currently 26%, one of the lowest in Asia [10]. It has also maintained relatively low interest rates as compared to its neighbors, Malaysia and Thailand. Each of these factors lends stability to its financial institutions and economic health. However, in 1998, the International Monetary Fund's (IMF) economic review encouraged improved financial disclosure standards for government assets and for individual banks regarding non-performing loans and hidden reserve levels to decrease the perceived risk to international investors [11].

Economic Summary

Technology growth in any country is not separable consideration from the economy. Technology growth is largely measured in growth of the GNP and revenues from high-tech industries. Technology is the way to increase the economic base of a country, and to increase the productivity of the resources of the country. These resources include natural resources, knowledge base, and labor force. Martino [16] discusses the particular importance of two aspects of the economy that contribute to technological change and growth. These are internationalization of the economy and the growth of knowledge industries with respect to other sectors.

Internationalization helps a country make use of competitive advantage. Making use of competitive advantage means optimal employment of national resources. It means importing those commodities that are difficult or expensive to produce domestically, and focuses on industries in which the country has some special knowledge or raw material advantage. Strong economic indicators of a technologically advancing country include growth of GNP and wages, increased trade and export markets, import of raw materials, international mobility of workers and managers, and international mobility of capital investment. Both the Philippines and Singapore are using international markets to the best of their abilities. Philippine laborers are seeking better paying jobs overseas and Singapore is seeking to import managers to fill their personnel needs. The Philippines is modifying tax laws to draw international investment; Singapore already entertains considerable levels of international investment.

Growth of knowledge industries compared to traditional or low skill industries is, similarly, a sign of technological advancement of the nation. Marketing of products whose value added is due to knowledge rather than low skilled labor or raw materials expands the income potential of a country. Indicators of economic expansion through the growth of knowledge industries include increased numbers of workers and a larger share of GNP associated with knowledge industries, and increased emphasis on patents and copyright laws. Both countries are working towards higher technology exports and better utilization of comparative advantage. Singapore has supported this agenda since the early 1990's and has become a major contributor of high-tech products and knowledge value added to the world economy. The Philippines lags behind the Singapore but is on its way, the government is encouraging the growth of capital intensive industries over those that exploit natural resources and inexpensive labor.

Infrastructure in the Philippines

Overview of Infrastructure

The following episode explains the typical situation of Philippines infrastructure. By 1992, the Philippine government managed power industry was in crisis. Twelve hours of power brownouts were common place in the Philippines [18]. When President Ramos took office, he proposed a legislation that allowed Build-Operate-Transfer (BOT) of power projects and the government passed a law allowing BOT in 1993 [25]. In the next three years eighteen, private power projects worth \$3.4 billion were successfully completed [5].

Later, the BOT scheme extended to other infrastructure industries such as shipping, telecommunications, airlines and roads. The BOT used \$50 billion as the target project cost to upgrade the Philippines infrastructure. In the last 5 years, the BOT scheme and its variations have been the primary method used by the Philippine government to upgrade their antiquated infrastructure. By 1996, thirty-five private sector projects, worth \$5 billion, were almost complete [7].

▪ *Government Activity Affecting the Infrastructure*

~~The government has been actively working to improve Philippines infrastructure.~~ Between 1992 to 1994, new legislation opened shipping routes to competition and deregulated the passenger rates. This eliminated the "one port, one cargo-handler" system. As a direct result of the new competition, mergers like the No. 1 line, William Lines, the No. 5 line, and Carlos A. Gothong Lines resulted in the countries largest shipping line, the WG&A Lines. The WG&A turned its focus on improving and modernizing their shipping line to combat the new competition [26].

~~The government ended the telecommunication monopoly by 1994,~~ which resulted in nine new telecommunication companies. The Philippine telephone density increased from 1.67 to 2.80 lines per 100 people, and is expected to increase to 10.00 lines by the end of 1998. However, questions do arise with respect to President Estrada's commitment to open market capitalism. For example, the Philippines Long Distance Telephone Company shares, owned by the government, might not be sold despite the government's need for cash. However, there are no firm indications that president Estrada will be returning to "crony capitalism" of the past. An example was the government's unwillingness to bail out the Philippines Airlines (PAL) which also affected by deregulation in 1993 [15]. Three privately owned companies started operation and the competition threatened existing Philippine Airlines [27].

▪ *Future Plans*

Philippines plans on a complete makeover of its roads, railways and water system using the BOT method of financing. A \$514 million dollar skyway project has a consortium of investors consisting of Philippine National Construction Corporation, PT Cita Lomtoro Gung, and American International Group Inc. The Philippine National Bank has issued a letter of credit for \$192 million for the project [17]. A planned new railway will tie two business districts together at a cost of more than \$650 million. The Philippines government would run the day-to-day ticket revenue operation of the new railway, paying the Metro Rail Transit Corporation a fixed fee in U.S. dollars yearly. This eliminates any risk to the MRTC regarding operation and currency [4].

Privatization has made the existing markets leaner and more competitive. The Subic Shipyard & Engineering Inc., a state owned business, is an example of a success story after its sale to private business. Yet, not all ventures have been so successful. Philippines Airlines (PAL) is unimproved and continues to have the reputation of being unreliable [5].

The current Asian recession has caused a mild economic downturn, which could influence the government and private sector's dedication to modifying the existing infrastructure. Many of the infrastructure projects identified since 1992 did not receive funding by the government but rather through donor-country grants and BOT schemes. An example is the new airport that opened in 1996 in General Santos City [2]. Incentives to continue investments in the region include the strategic location of the Philippines as the center of the worlds fastest growing region, and a local market of 68 million people [18].

Regardless of all the optimistic news for the Philippine infrastructure, it is apparent the existing infrastructure is substandard to infrastructures experienced by an American business in the United States. Strategic planning for any company doing business in the Philippines would need to include contingent plans for the time and money lost due to the inadequate infrastructure. Economic success for the Philippines requires an infrastructure that supports the requirements of predominate business ventures. If the Philippines is to become the "Silicon Valley of the east" investors must have access to reliable utilities, fast transportation, and a good communications network [18].

INFRASTRUCTURE IN SINGAPORE

Overview of Infrastructure

"Singapore has probably the best general infrastructure in the Asia-Pacific Rim." [8]. For example, Singapore has a world-class airport and fast-computerized trade documentation. Along with these, there is Mass Rapid Transit (MRT) whose trains covers most of the island, a central expressway and one of the very best container ports in the world.

For transportation, most people living in Singapore take advantage of MRT and the bus system that supports it. Buses and taxis run where the MRT does not run. There are a few toll roads on the island, and most roads are maintained well and have good signage. Singapore constantly invests to upgrade its infrastructure. In 1989, Singapore introduced a \$15 million cellular phone network for its mass transit system. In 1994, all financial exchanges went digital and fiberoptic cables replaced copper wiring for communication lines.

▪ *Government Activities Affecting Infrastructure*

It is imperative to maintain a strong, active local presence when a foreign company does business in Singapore. The main governing body for trade and industry is the Trade Development Board, established in 1983. This and other local boards control major development projects and will not award such projects to businesses that do not have an established presence in the country. However, this obstacle is achievable by using joint ventures with native firms. At a minimum, one Singapore executive must be in an important position and law requires that at least one major shareholder reside in Singapore.

Comparison of Philippine and Singapore Infrastructure

Singapore and the Philippines, while located close geographically, have many differences concerning the existing infrastructure. Contrasting pictures based on the research, both these countries present a Contrasting picture. Congestion, poor roads, unreliable transportation and promises of a better, more modern infrastructure is the Philippine's story, while Singapore possesses relatively clear roads, a world class airport and a mass transit system. Infrastructure conditions in Singapore appear to be far more superior in Singapore.

Project/Technology Evaluation

In addition to the qualitative analysis (literature search) used in this paper, researchers utilized the project/technology evaluation technique accompanied with the "Pairwise Comparison" and "Utility Function" methodology for analyzing the results. The pairwise comparison method (PCM) was employed to provide normalized weights to the attributes considered and to provide a measure of internal inconsistency among respondents. These two quantitative methodologies were used to analyze the consistency and reliability of the qualitative information presented in the earlier sections of this paper. A pairwise comparison method program (PCM - version1.3) was used as a tool for turning vague perceptions and attitudes (as a measure of subjective probability) into a consensus for decision making regarding project/technology selection.

▪ ***Questionnaire Design and Pilot Test***

At the heart of this analysis was the process for questionnaire development. The key considerations were the way the attributes were paired and ordered within the survey instrument. The survey was called "Managing a Project in Southeast Asia". Responses by the team to the questionnaire were based primarily on the results of the literature review. After developing the first questionnaire, a simple pilot test was conducted to validate the survey. All eight project team members completed the survey and gave comments in terms of clarity, ease of use, and readability. With consideration of this feedback, the questionnaire was modified and then distributed to the larger sample of target respondents.

The final format of the questionnaire was separated into two sections for analysis as shown below.

1. **Questionnaire Format for Pairwise Methodology** (Appendix A)

▪ ***General Information***

A set of questions determined the backgrounds of respondents in terms of work and personal experiences. One question asked the respondent to rate their level of confidence regarding the knowledge required to respond to the questionnaire.

• ***Individual Perception - Effects on Project/Technology Decision of Selected Country***

The following are decision criteria used in the questionnaire survey.

Criteria A1: Socio-culture characteristics

Criteria A2: Economic conditions

Criteria A3: Government and politic conditions

Criteria A4: Infrastructure conditions and characteristics

Respondents were asked to compare all criteria in pairs. The respondents were instructed to divide 100 points between each pair of items being compared, based on their own perceptions about the relative importance of each in making international project/technology business investments. For example, consider a respondent comparing two criteria for their relative importance in the decision process to invest abroad. If the respondent felt that the first criterion was far more important than the second criterion, he or she should assign 80 points go to the first criterion and 20 points to the latter.

- **Results**

Results were calculated using the PCM program. Since perceptions and experiences of target respondents are not identical, consideration must be given to variations within and between respondents. Thus, levels of significance of criteria and internal inconsistency measures from individual results were compared across all respondents (Appendix C).

- 2. **Questionnaire Format for Utility Function of the Criteria** (Appendix B)

- ***General Information***

Again a set of background questions assessed the experiences of team members. This survey was performed later in the semester so that the team members had relatively greater experience with the topic, having completed the literature searches and participated in lengthy group discussions. This questionnaire format included updates resulting from the pilot study.

- ***Individual Perception - Effects on Project/Technology Decision of Selected Country***

The second questionnaire was similar in format to the first except that the relative importance of each criteria are considered separately by country:

- Philippines***

- Criteria B1: Socio-culture characteristics

- Criteria B2: Economic conditions

- Criteria B3: Government and politic conditions

- Criteria B4: Infrastructure conditions and characteristics

- Singapore***

- Criteria C1: Socio-culture characteristics

- Criteria C2: Economic conditions

- Criteria C3: Government and politic conditions

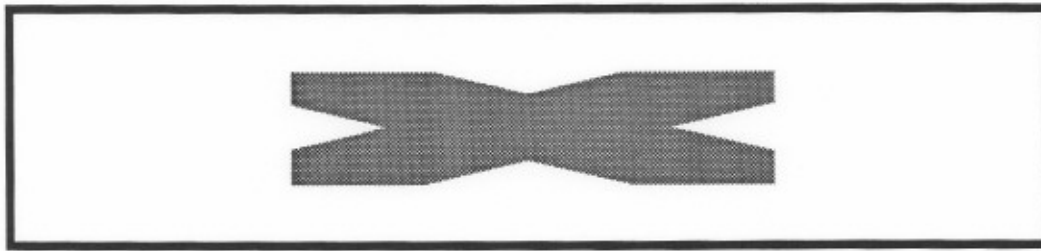
- Criteria C4: Infrastructure conditions and characteristics

Project team members compared all criteria in pairs (Philippines vs. Singapore). Like

the former questionnaire format, quantitative measures of internal consistency were calculated. The significance of these initial results were limited by the small sample size, having collected responses only from the eight project team members.

- ***Results***

Project team members independently expressed their own attitudes and preferences in addressing the relative importance of the criteria for each country. Since perceptions and experiences of team project members varied, weights were calculated for each attribute. The result of the analysis was the determination of “expected values” regarding the determined importance of each country attribute in technology investment decisions (Appendix C).



Target Respondents & Survey Distribution

The next step was to distribute the questionnaire to as many participants with experience relevant to the study as possible. The researchers defined target respondents who had direct and indirect experiences of working and/or investing in Southeast Asian countries. These targeted respondents held expertise in various functional areas, and included professors at Portland State University, Asian students, and white-collar workers at local companies in Portland.

The distribution of the surveys was begun in the middle of the academic session and lasted for three weeks. Forty surveys were distributed throughout Portland, 26 people responded (65% total percent responses). The respondents may be categorized as follows:

- Professors at School of Business Administration – 3 responses
- Professors at Economics Department – 2 responses
- Professors at Engineering Department – 3 responses
- White-collar managers who have experiences in the Philippines and/or Singapore – 4 responses
- International students (Asian students) – 6 responses
- Project team members – 8 responses

Analysis of Results - Project/Technology Evaluation

By using the project/technology evaluation accompanied with “Pairwise Comparison” and “Utility Function” methodologies, the researchers found that the attractiveness of Singapore was far greater than that of the Philippines (0.86 and 0.43, respectively – Appendix C). Based on the results of the pairwise comparison methodology, it was discovered that the level of significance of criteria used varied among the respondents. Relative criteria weights were determined for each respondent and depended on his/her own experiences and perceptions. However, respondent weights were highly similar (with a small degree of inconsistency - 0.013). The statistical analysis indicated that the most important issue of decision-making process for investment in Southeast Asia was economic conditions, with government &

politics, infrastructure and socio-culture issues following in that order.

The subjective judgments made by research members demonstrated an overall preference for Singapore over the Philippines when considering each as an investment alternative. It is interesting that when the researchers applied this multi-criteria decision model to decision-making process, the results were quite different from initial perceptions. Even in the same decision situation, conducted by the same group of people, the results from the two different samples and situations can significantly vary. This indicates that a multi-criteria decision process is much effective than single criteria, especially in important decision domains.

Conclusion

The pairwise comparison method (PCM) and utility function development applied to the research data clearly points to a preference favoring Singapore over the Philippines as a place to conduct business. Singapore is clean, prosperous, predictable, trustworthy, and linked within itself and with the modern world by state-of-the-art infrastructure. The Philippines, in contrast, is a developing country suffering from growing pains leading to conditions characterized by graft, corruption, economic volatility, pollution, sub-standard infrastructure, and unpredictability.

However, the literature search as well as the PCM analysis targeted 'mainstream,' medium-high to hi-tech organizations. This research does not necessarily infer that the Philippines is a 'bad' place to do business. To the contrary, the country has a huge built-in market consisting of 72 million consumers. The Philippines has a vast and relatively untapped reserve of natural resources and labor. There are presently numerous non-mainstream organizations possessing entrepreneurial spirit and unorthodox flexibility who are making huge returns on their investments. Some of these organizations are emerging; some of them have been contently located in the Philippines for over a century. Although Singapore appears to be the 'sure bet' over the long run, the Philippines will offer some of the world's greatest investment opportunities in the coming third millennium

Future Work

Using this study as a platform, future work might look at different classes of companies doing business in Singapore and the Philippines. Based on the limitations of the PCM methodology revealed in the current research, and its sensitivity to internal inconsistencies of the data, future studies would need to focus on companies with specific characteristics. Similar types of companies would have to be considered in separate analyses, the categories would be distinguished by the relative importance of various risk factors determined by the nature of

different industries and by company size.

This study concluded that Singapore is a country that has a stable and solid government and supports high tech business. The risk seen in this environment lessens with Singapore's policies and with education of its people. The Philippines, on the other hand, has high risk factors. The current study focused on country factors rather than on the profile of companies investing there. Future work might focus on profiling examples of successful and unsuccessful international businesses located in these countries in an effort to verify which risk factors are the greatest real world determinants of success.

The study would first identify the particular characteristics of companies currently conducting business in each country. Control factors which would allow a candidate data set for PCM analysis would include:

1. Companies that conduct business primarily in Singapore or the Philippines and not both countries simultaneously
2. Companies in the same range of gross revenue
3. A specific type of business would need to be identified. Companies with varied products and business must be studied, thought in separate subsets.
4. The current trend in both economies would be a weighting factor in the analysis.

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Appendix A

Technology/Project Evaluation By Pairwise Methodology

General Information

Name (Optional): _____

Work Experience: _____

Project Category: Managing a Project in Southeast Asia

Level of Confidence: Very Low___ Low___ Medium___ High___ Very High___

Judgments on Decision Criteria

Criteria A1: Socio-culture characteristics

Criteria A2: Economic conditions

Criteria A3: Government and politic conditions

Criteria A4: Infrastructure conditions and characteristics

A1___ : A2___	A1___ : A4___	A2___ : A4___
A1___ : A3___	A2___ : A3___	A3___ : A4___

Individual

Level of Significance: A1:___
A2:___
A3:___
A4:___
A5:___

Inconsistency Measure: _____

Overall Result (Internal Used)

Level of Significance: A1:___
A2:___
A3:___
A4:___
A5:___

Inconsistency Measure: _____

Appendix B

Technology/Project Evaluation By Utility Function Methodology

General Information

Name (Optional): _____

Category: Managing a Project in Southeast Asia

Level of Confidence: Very Low___ Low___ Medium___ High___ Very High___

Comparison of Characteristics and Conditions between Philippines and Singapore

Criteria B1& C1: Socio-culture characteristics

<i>Preference</i>	<i>Level of Sig.</i>	<i>Philippines (B1)</i>	<i>Singapore (C1)</i>
Very Good	1.00		
Good	0.75		
Medium	0.50		
Poor	0.25		
Very Poor	0.00		

Criteria B2& C2: Economic conditions

<i>Preference</i>	<i>Level of Sig.</i>	<i>Philippines (B2)</i>	<i>Singapore (C2)</i>
Very Good	1.00		
Good	0.75		
Medium	0.50		
Poor	0.25		
Very Poor	0.00		

Criteria B3& C3: Government and politic conditions

<i>Preference</i>	<i>Level of Sig.</i>	<i>Philippines (B3)</i>	<i>Singapore (C3)</i>
Very Good	1.00		
Good	0.75		
Medium	0.50		
Poor	0.25		
Very Poor	0.00		

Criteria B4& C4: Infrastructure conditions and characteristics

<i>Preference</i>	<i>Level of Sig.</i>	<i>Philippines (B4)</i>	<i>Singapore (C4)</i>
Very Good	1.00		
Good	0.75		
Medium	0.50		
Poor	0.25		
Very Poor	0.00		

Team Result (Internal Used)

Philippines

<i>Team Members</i>	<i>Socio-Culture</i>	<i>Economics</i>	<i>Government</i>	<i>Infrastructure</i>
1				
2				
3				
4				
5				
6				
7				
8				
Mean (Team)				

Singapore

<i>Team Members</i>	<i>Socio-Culture</i>	<i>Economics</i>	<i>Government</i>	<i>Infrastructure</i>
1				
2				
3				
4				
5				
6				
7				
8				
Mean (Team)				

Appendix C

Technology/Project Evaluation Analysis of Results

Table 1: Technology/Project Evaluation by Pairwise Methodology

<i>Respondents</i>	<i>Socio-culture (W1)</i>	<i>Economics (W2)</i>	<i>Government (W3)</i>	<i>Infrastructure (W4)</i>	<i>Inconsistency</i>
1	0.20	0.36	0.25	0.19	0.003
2	0.20	0.30	0.29	0.21	0.003
3	0.17	0.35	0.22	0.27	0.057
4	0.13	0.25	0.43	0.18	0.013
5	0.16	0.33	0.27	0.24	0.004
6	0.16	0.30	0.27	0.27	0.005
7	0.07	0.12	0.52	0.29	0.075
8	0.15	0.27	0.27	0.32	0.012
9	0.11	0.46	0.15	0.28	0.037
10	0.24	0.33	0.29	0.14	0.004
11	0.13	0.29	0.29	0.29	0.000
12	0.10	0.30	0.30	0.30	0.000
13	0.17	0.36	0.17	0.29	0.005
14	0.22	0.14	0.36	0.28	0.014
15	0.07	0.26	0.22	0.45	0.021
16	0.12	0.18	0.30	0.40	0.003
17	0.30	0.33	0.20	0.18	0.013
18	0.15	0.31	0.34	0.20	0.002
19	0.19	0.29	0.29	0.23	0.000
20	0.12	0.21	0.28	0.40	0.024
21	0.47	0.22	0.22	0.10	0.002
22	0.15	0.33	0.29	0.23	0.001
23	0.18	0.33	0.24	0.24	0.021
24	0.21	0.32	0.32	0.16	0.000
25	0.20	0.35	0.24	0.21	0.003
26	0.30	0.25	0.20	0.25	0.016
<i>Mean</i>	<i>0.18</i>	<i>0.29</i>	<i>0.28</i>	<i>0.25</i>	<i>0.013</i>
<i>Min.</i>	<i>0.07</i>	<i>0.12</i>	<i>0.15</i>	<i>0.10</i>	
<i>Max.</i>	<i>0.47</i>	<i>0.46</i>	<i>0.52</i>	<i>0.45</i>	
<i>Std. Dev.</i>	<i>0.07</i>	<i>0.07</i>	<i>0.08</i>	<i>0.07</i>	

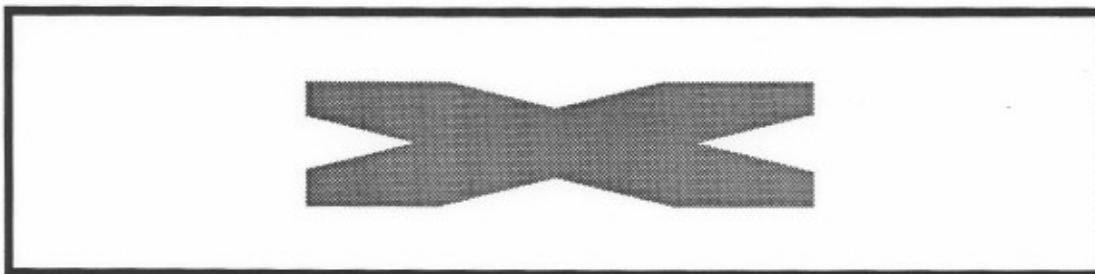
Table 2: Technology/Project Evaluation by Utility Function in the Philippines

<i>Team Members</i>	<i>Socio-culture (UP_{w1})</i>	<i>Economics (UP_{w2})</i>	<i>Government (UP_{w3})</i>	<i>Infrastructure (UP_{w4})</i>
1	0.75	0.25	0.50	0.75
2	0.50	0.50	0.25	0.25
3	0.50	0.25	0.25	0.50
4	0.50	0.50	0.50	0.25
5	0.75	0.75	0.75	0.50
6	0.75	0.50	0.25	0.75
7	0.50	0.25	0.00	0.25
8	0.25	0.50	0.25	0.25
<i>Mean</i>	<i>0.56</i>	<i>0.44</i>	<i>0.34</i>	<i>0.44</i>

Table 3: Technology/Project Evaluation by Utility Function in Singapore

<i>Team Members</i>	<i>Socio-culture (US_{w1})</i>	<i>Economics (US_{w2})</i>	<i>Government (US_{w3})</i>	<i>Infrastructure (US_{w4})</i>
1	1.00	0.75	1.00	1.00
2	1.00	0.75	1.00	1.00
3	1.00	0.75	0.75	1.00
4	0.75	1.00	0.75	1.00
5	0.50	1.00	0.75	1.00
6	1.00	0.75	1.00	1.00
7	0.75	0.75	0.75	1.00
8	0.75	0.50	0.75	0.75
<i>Mean</i>	<i>0.84</i>	<i>0.78</i>	<i>0.84</i>	<i>0.97</i>

Table 4: Results of Technology/Project Evaluation



*Note: $E(UP_{wt-w4}) = (W1*UP_{w1}) + (W2*UP_{w2}) + (W3*UP_{w3}) + (W4*UP_{w4})$
 $E(US_{wt-w4}) = (W1*US_{w1}) + (W2*US_{w2}) + (W3*US_{w3}) + (W4*US_{w4})$