IT-ENABLED SERVICES IN THE PHILIPPINES: PROSPECTS AND ISSUES

Emilio T. Antonio, Jr. and Winston Conrad Padojinog

I. INTRODUCTION

The services sector has become a dominant feature of the Philippine economic landscape. Within this sector, the IT-enabled services segment, which is still in its infancy, is starting to be perceived as a new growth frontier.

This paper examines the profile of the IT-enabled services industry, its prospects and potential contributions to the Philippine economy. The chapter also examines the existing IT policies and puts forward some policy recommendations aimed at nurturing the industry to grow and develop fully.

The paper is divided into four parts. The first part examines why the services sector has grown in importance in the Philippine economy. The second part discusses the driving forces behind the growth of the IT-enabled sector as well as the impact of this sector on the economy. The third part takes a closer look at specific segments of the IT-enabled services sector, examining the opportunities and threats that they face as well their strengths and weaknesses. The last part looks at the policy environment affecting the sector.

II. PHILIPPINE SERVICES SECTOR: TRENDS AND PROSPECTS

The economic structure of the Philippines is changing in terms of both output and employment. The relative importance of the three key sectors that make up the economy—agriculture, industry and services—has changed significantly over the past three decades.

The pattern of change differed through the years. In the seventies, the economy was obviously trying to take the path of industrialization as evident in the increasing share of output

contributed by the industrial sector along with the declining shares of the services and agricultural

sectors (Figure 1). This is not surprising. Industrialization used to be the mantra of development

economists. The dominant economic thinking during that period was that less-developed

countries could accelerate economic progress through rapid industrialization. Starting in 1986,

this trend reversed. The share of services overtook that of industry. Agriculture's share of output

continued to decline and so did the share of the industrial sector. The services sector now

accounts for more than half of the nation's output and provides jobs for almost half of its

workforce.

FIGURE 1
**Composition of GDP by Industrial Origin, 1970-2002**
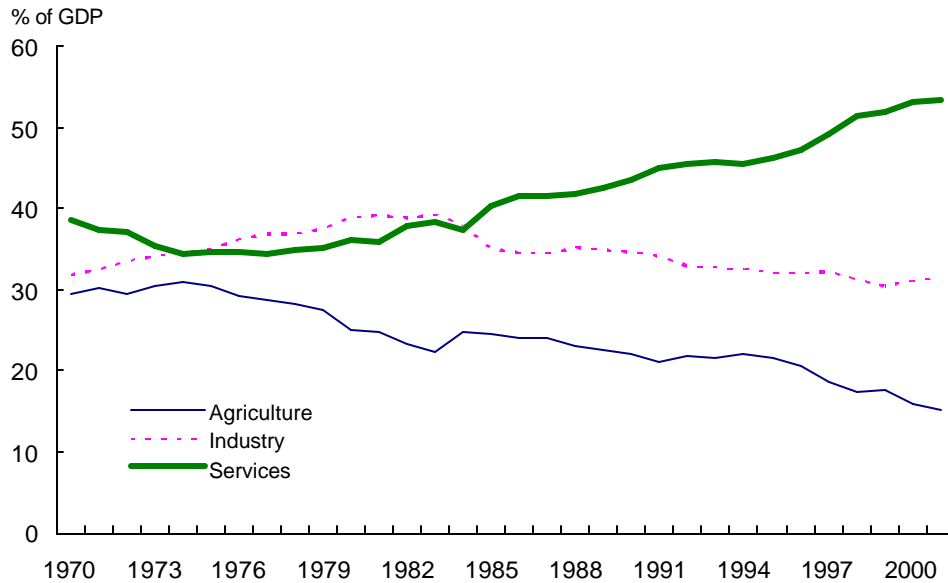
Source: National Statistical Coordinating Board

The transformation in the structure of the nation's labor force does not seem to match the

dramatic change in the structure of output (Figure 2). Agricultural workers still account for

almost 40% of the workforce. The proportion of workers in the industrial sector has remained

practically stagnant through the years. Only the services sector posted an increasing proportion of

the labor force.

FIGURE 2
Composition of Employment by Industrial Origin, 1970-2000

% of total employment
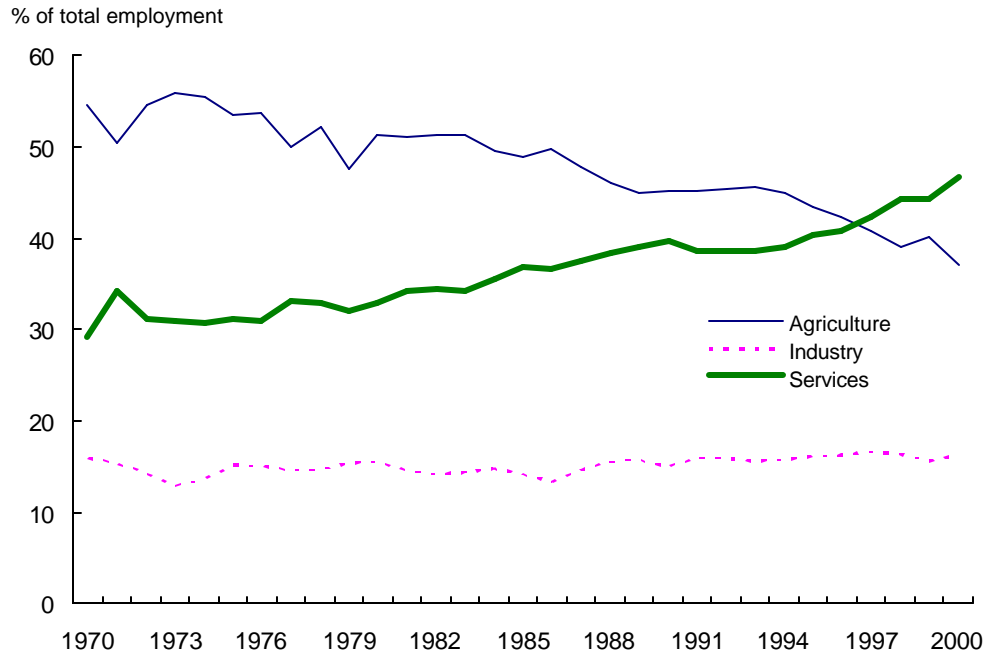
Source: National Statistics Office

Is the shift desirable?

This shift in structure has provoked contrasting reactions. Some are alarmed: could the structural change signal the 'hollowing out' of the economy? Those opposing globalization, for example, could claim this as a clear signal that Philippine industries are dying in the face of global competition. That is, the rapid opening up of the economy is quickly decimating industries. Some would also frown on the increased proportion of Philippine workers in the services sector: what, they would argue, is the good in becoming a nation of burger-flippers and chambermaids?

On the other hand, others would claim that the shift towards services means good things for the economy. It is commonly cited that the Philippines has a comparative advantage in service-related industries, due to the relative abundance of workers with skills suited to this sector. Thus, these trends could mean that the Philippines is bypassing the industrialization stage.

3

It is tempting to romanticize these shifts in terms of how the economy has learned to harness its comparative advantage based in the availability of trained manpower. Nevertheless, it is important to recognize that several forces at play have probably helped shape this emerging structure.

Factors behind the change in structure

Restructuring of firms

One aspect of the growing importance of the service sector is simply the natural offshoot of the current tendency of businesses to focus on "core competence". In other words, this shift could reflect the increasing practice of outsourcing some services that used to be carried out within the firm itself. For example, outsourcing janitorial and security services has become a common practice. Even the delivery of goods, credit collection, as well as backroom operations involving personnel, marketing and recording of financial transactions are increasingly being outsourced. In short, activities that used to be reported as part of the cost of traditional industries could now be recorded separately as components of the service sector. Strictly speaking, therefore, new business entities that sprouted with the spinning-off of specialized, non-core activities of manufacturing firms do not represent new economic activity in the economy as a whole. Thus, the growing importance of services might just be a reflection of the reorganization of the production units in the economy.

Change in the way development is financed

Another aspect of the change in economic structure reflects the shift in the way economic growth is financed. The drive for industrialization during the 1970s and earlier was financed by loans. Where these loans went depended primarily on the preferences of government planners and given the bias for industrialization during that period, most went to finance firms in the industrial sector. In contrast, from the second half of the eighties the government was saddled with debt and had limited capability to influence development. Overseas Filipino workers (OFWs) and their families

probably had a greater influence on the pattern of investment from this period. The biggest contributors of service sector output in the Philippines are retail trade, private services, and transportation. It would seem to be natural for OFWs to invest part of their incomes in small service businesses such as neighborhood retail stores and restaurants, barbershops, beauty parlors, tricycles, and jeepneys as a way to prepare a source of income for their return home at the conclusion of their contracts.

Rise of global outsourcing

A third aspect is the new service industries that have emerged in recent years as the result of two forces: the information revolution, which has made the movement of information fast and cheap; and the dramatically lower costs of carrying out some business operations in developing countries due to relative abundance of cheap educated manpower. These two forces induced businesses in developed countries to outsource certain backroom operations in less developed countries, leading to the expansion in the Philippines of such service activities as call centers for customer relations, transcription of medical records, financial and personnel management, engineering design, and development of computer programs.

Prospects

Whatever the reasons for the changing economic structure of the Philippines, the trend is clear: the services sector is likely to account for a bigger share of economic activity. This trend is likely to continue rather than reverse since: 1) firms are likely to continue spin-offing non-core business activities to increase efficiency through specialization; 2) overseas workers' remittances will remain an important part of the economy and continue to influence the pattern of investment; and 3) the Philippines appears likely to benefit from the continued global outsourcing of services in the coming years.

The structural shift towards service industries does not mean that agriculture and manufacturing will lose their relevance to the economy. Rather, these two sectors will rely on

services to create more economic value and to contribute to their competitiveness in an open economy characterized by customer-driven markets, fragmented industries, and IT-driven business strategies. Some manufacturing industries will remain active and competitive because of a large and growing consumer base, which will reach over 100 million in 15 years. Some of these industries that cater to the domestic market include food and beverages, garments, furniture, packaging, and automotive parts can also be competitive.

FIGURE 3
Composition of Service Sector Output, 1970-2002
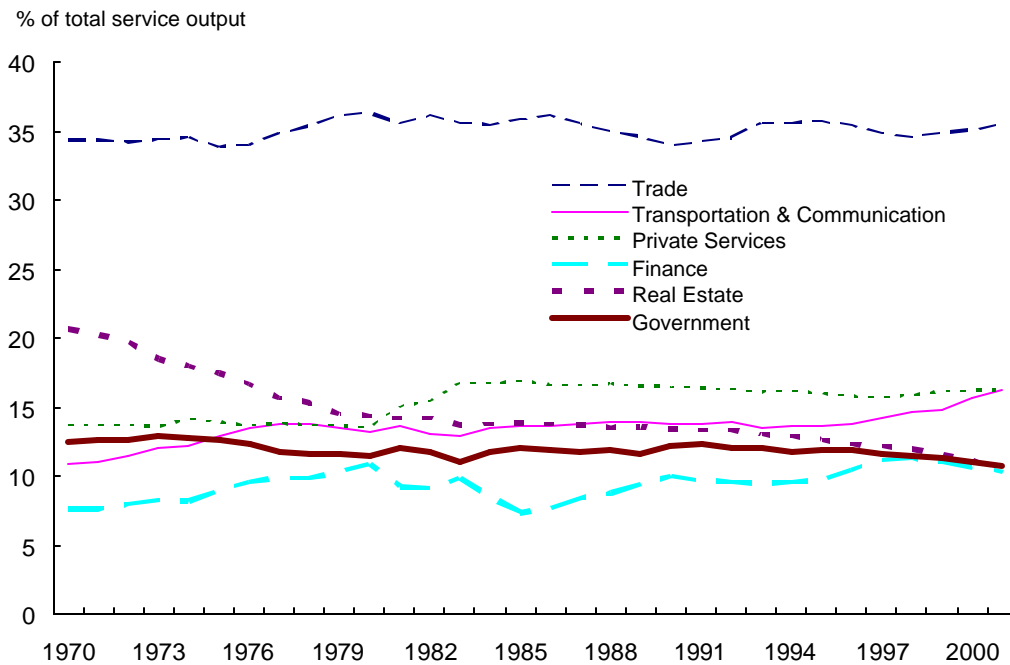
Source: National Statistical Coordinating Board.

III.   IT-ENABLED SERVICES: NEW GROWTH AREA IN SERVICES

Driving Forces

Among the three factors behind the structural shift toward services, the growth of global outsourcing appears to have great potential to make IT-enabled services a new avenue for growth, employment, and foreign exchange-generation for the Philippine economy in the next decade.

6

There are three reasons to expect IT-enabled services to become the next growth engine of the Philippine economy.

Rise of global outsourcing services and the Internet.

The sluggish global economy is exerting pressure on companies' margins and market share. To remain competitive and extract as much economic value as possible from their core business activities, more and more multi-national companies have begun to focus on improving core processes and marketing efforts and to farm out non-core activities that are better done by others.

The practice of contracting a service or a segment of business operations to another organization is called Business Process Outsourcing (BPO). While global semiconductor manufacturers adopted the practice of outsourcing as early as the 1970s, it was not until the advent of the Internet in the early 1990s that many companies also began farming out services. The Internet made it possible for companies to tap into the pool of knowledge-based workers in the Philippines and other countries to meet their outsourcing requirements.

Modern and competitive telecommunications network

Telecommunications is a critical aspect of the so-called info-structure needed to support IT-enabled technologies. The Philippines adopted deregulation and interconnection policies in the early 1990s, which stimulated competition in the telecommunications industry and revolutionized technological capabilities as well as availability, affordability, and accessibility of telecommunication services. In addition to helping overcome the limitations of inadequate physical infrastructure, the modern telecommunications network enabled the Philippines to connect with global-outsourcing markets through the Internet.

Availability of manpower qualified to man knowledge-based industries.

An ample supply of knowledge-based workers is critical for economies going towards the information age. The Philippines' large pool of educated, highly skilled, and trainable workers is key to the successful shift of the economy towards services, particularly towards IT-enabled

services.

Economic Impact of IT-Enabled Services

As an infant industry, the IT-enabled service sector has already contributed significantly to the Philippine economy in terms of jobs and net foreign exchange earnings. While existing data are not adequate to give a systematic picture of the overall economic contribution of IT-enabled services, some government statistics give a glimpse of the importance of this sector. According to October 2002 statistics from the Philippine Economic Zone Authority (PEZA), structures and areas designated as zones for IT-enabled services generated over 7,000 jobs, paid out some P974 million in salaries and wages, and generated a US$95.45 million trade surplus on US$112.73 million of exports. These figures certainly understate the actual contribution of the IT-enabled services sector since not all such service providers locate in IT-designated zones monitored by government. For instance, almost half of the 50 contact centers—one type of IT-enabled service—in the Philippines are estimated to operate outside government-designated economic zones.

Another way to gauge the contribution of IT-enabled services is to compare it with another important sector, such as electronics. While the electronics industry generates many times more export earnings than IT-enabled services and employs many times more workers, the IT-enabled service sector is twice as effective in generating a trade surplus and it pays higher salaries (Table 1).

TABLE 1
Selected Indicators for the Electronics Industry and IT-enabled
Services, October 2002

	Electronics	IT-enabled Services
Exports (US$-million)	18,388	113
Imports (US$-million)	11,388	17
Surplus (US$-million)	6,999	95
Surplus/Exports (percent)	38	85
Employment	314,584	7,038
Job creation (US$1,000 per person)	369	212
Average annual salary per head (pesos)	119,016	166,065

Note: job creation refers to average dollar investment divided by employment.
Salary data range from 1991 to 2001: for ITES, 1998-2001.
Source: Extrapolated from PEZA Statistics

Moreover, the IT-enabled services sector is expected to create more job opportunities than electronics. The continuing decline of investment in the electronic sector, the growing interest in IT and IT-enabled services, and the rapid increase in IT exports support this observation. From 1995 to 2001, investments in IT and IT-enabled services grew at 91% per annum, compared to 15% per annum in electronics, although the amount of investment in electronics averaged P2.58 billion a year compared to just P462 million average annual IT-related investments.

In terms of global competitive position, the IT-enabled services sector has better growth prospects than electronics. The rise of China as a world manufacturing center threatens the Philippine electronic industry since it is dominated by contract manufacturers that operate at the lower end of the value chain and compete on the basis of low costs. In contrast, IT-enabled services in the Philippines is less vulnerable to the rise of China; since its competitive position arises largely from the attraction of American and European companies to the Philippine workforce's English-language capabilities and compatibility with Western culture.

Hence, how fully the Philippines exploits the economic opportunities offered by IT-enabled services will largely determine its long-term growth prospects. The next two sections address the questions of what are the IT-enabled services in which the Philippines has already demonstrated a high degree of competitiveness, what obstacles do they face, what policies currently support these services, and how can they be improved?

IV.   IT-ENABLED SERVICES IN THE PHILIPPINES: SPECIFIC BUSINESSES

Global revenues from outsourcing services are estimated to hit US$100 billion in 2008. According to a joint study conducted by the Indian National Association of Software and Services Companies (NASSCOM) and McKinsey in 1999, the outsourcing services market is estimated to expand from US$10 billion in 1998 to US$100 billion in 2008 (Table 2). The updated NASSCOM-McKinsey study update for 2002 did not revise these projections in spite of the weakness in the global economy.

TABLE 2
Growing Market for Outsourcing Services

	Revenues		Cumulative annual growth
	1998	**2008**	**(%)**
Call centers	6.5	33.0	18
Finance and accounting	1.5	15.0	26
Animation	1.3	2.0	4
Engineering and design	0.4	5.0	21
Transcription, translation, and localization	0.3	1.2	29
Other services	0.2	44.0	71
Total	10.0	100.2	

Source: NASSCOM-McKinsey Study

There are two general forms of IT-enabled service business: independent outsourcing and shared services. Independent outsourcing, or outsourcing of operations and services, involves companies contracting or farming out non-core services to other parties to take advantage of effectiveness and efficiency gains. Shared-services outsourcing, on the other hand, involves companies that consolidate activities of regional and local offices into one central office to take advantage of economies of scale and cost savings.

At present, the IT-enabled services sector in the Philippines is comprised of customer service, medical transcription, human resource management, data storage, shared accounting and financial services, R&D, and animation activities.
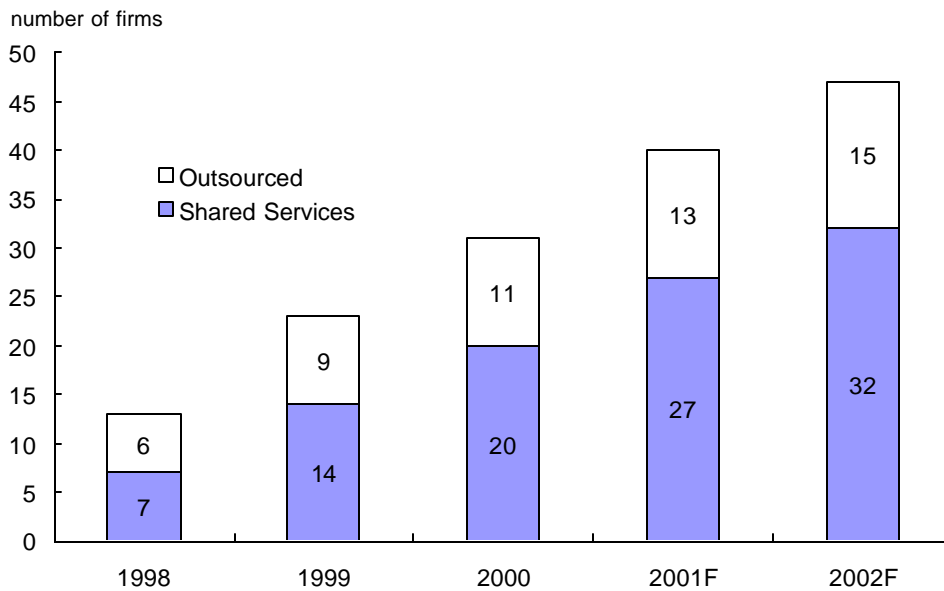
Contact Center Operations

Profile, prospects, and economic contribution

Contact centers represent the front-end operation of a company focused on customer relationship management (CRM) operations such as marketing, sales and customer support services. Contact centers operating in the Philippines include customer service, help desk, customer care, account management, and telemarketing activities.

According to the Contact Center Association of the Philippines (CCAP), there are close to 50 contact centers in operating (Figure 4). A majority of these are shared services. Call centers yield a total of 6,500-7,000 seats, with individual operations ranging from as few as 2 to over 500 seats (Figure 5).

FIGURE 4
Estimated Number of Contact Centers in the Philippines, 1998-2002

number of firms

Source: Optel, UA&P Estimates.

11

FIGURE 5
Estimated Number of Seats for Selected Contact Centers, 2002
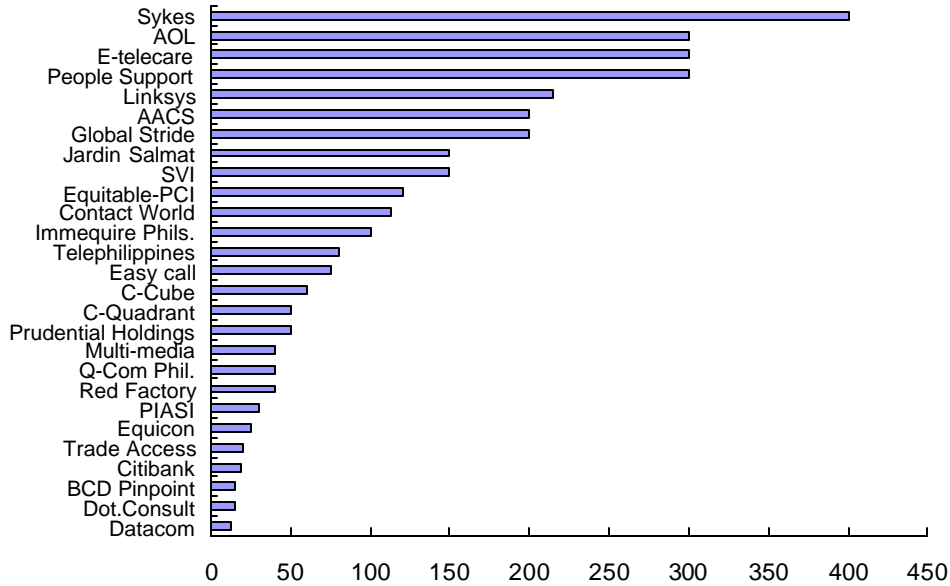
At least ten major outsourced contact centers operate in the Philippines today. These are companies with at least 100 seats that operate seven days a week, twenty-four hours a day.

America Online (AOL) was one of the first of the eight identified shared-service contact centers in the Philippines. The extended presence of these companies demonstrates the feasibility of overseas companies outsourcing operations in the Philippines. Citibank, which came to the Philippines much earlier, could have been motivated by AOL's success, to begin centralizing its CRM operations in Manila. Software Venture, Inc (SVI), is perhaps one of the first majority Filipino-owned companies that has successfully diversified from shared-services, which was originally intended to support its growing businesses, to also accept outsource contact center services. Because of its capability to program and adopt advanced CRM technologies, SVI now can offer its in-house services to external clients with globally comparable quality at affordable costs. Many other companies including Easy Call, Accenture, and Barnes and Noble are closely monitoring the success of SVI. These companies are reportedly also restructuring their operations to cater to outsource contact center services.

Two of the biggest companies in terms of seats available are People Support, which counts

12

Microsoft among its prestigious clients, and Sykes Asia, which currently serves clients based in Japan, Singapore, China, Hong Kong, and the United States. Among local companies, ePLDT (the IT arm of the PLDT) has investments in three call centers, Contact World (a joint-venture with Australian firm Salmat), Vocativ Systems, Inc., and Parlance Systems.

The first contact centers in the Philippines were established before 1997. However, most of these were part of shared services catering to front-end CRM operations of companies like Telephilippines, Citibank, AOL, BCD Pinpoint, Equitable PCI, Fujitsu, Linksys, and Cybercity Teleservices. The first, independent outsourced contact center operation began in 1998 following the strategy of U.S.-based companies to contract out their CRM operations in response to the global economic slowdown. Companies in this latter group that have an external clientele base include Advance Contact Solution, Dot.Consult, People Support, Sykes Asia, and Easycall.

IDC Asia/Pacific predicts that the market for call center services will surge from US$1.2 billion in 2000 to over US$4.0 billion in 2005, with a compound annual growth rate in excess of 25%. The Philippines' share is expected to grow from about 5.0% of the pie (US$65 million) in 2000 to reach US$150 million in 2004.

What are the prospects for the Philippines in call center outsourcing? The United States alone has are over 70,000 call centers, half of the global market, where companies spent about US$15 billion in 2001 (Table 3). Spending is expected to grow at 22% per year. Shrinking markets, increasing costs, manpower problems, and shortages have encouraged many U.S. firms to avail of offshore services. In spite of the seven million call center agents in the United States, the industry is beginning to face such problems as an inability to attract the best people due to a poor perception of the work; high job turnover and absenteeism; and increasing wages and benefits. The personnel turnover rate in the United States is very high—the average stay of a call agent is 8 to 9 months. The shortage of qualified manpower is expected to push wages up.

TABLE 3
Huge Contact Center Market

Country	Size	Issues
United States	• 2 million call agents • 70,000 contact centers • US$ 15 billion • 22% per year	• High turnover • Absenteeism • Increasing costs • Poor work perception
UK	• 400,000 call agents • over 4,000 contact centers	• Short contracts • high turnover • Disaffected labor • High training costs
Australia	• 240,000 call agents • Over 4,000 contact centers • US$ 1 billion	• High labor costs • High turnover • Labor shortage

Such problems are not confined to the United States. Australia, the traditional global powerhouse in contact center operations, has a mature (20 years old) $2 billion industry employing over 240,000 people in over 4,000 contact centers. Compared to Asian or most European call center agents, Australian call agents have an attractive English accent and live in an economically advanced Western society; which enables them to understand Western culture and language as applied to customer service. Most Australian call centers have flexible employment contracts, allowing management to adjust employment to seasonal and market needs. The increasing number of institutions training call center agents ensures the availability of a well-educated workforce. Australia possesses a sophisticated, state-of-the-art telecom infrastructure and a high level of technical support knowledge.[1]

But the industry is also beset with problems. There is a shortages of agents willing to take lower-skilled jobs in cities that have long been popular contact center locations, such as Sydney and Melbourne. The turnover rate is likewise worsening. Annual turnover in Australian call centers is currently reported to be 30%, up from just 11% in 1995.[2] Turnover costs the Australian call center industry AUS$550 million a year. Furthermore, Callcentres.net reported on 17 July 2000 that the average salary of call center agents in Australia increased from AU$30,000 to

---

1 http://www.ozcallcentres.com

2 Martin Conboy, director of ACA Research and CEO of Callcentres.net (both in North Sydney, Australia), a research firm that also offers a news service known as callcentrenews.net.

AU$33,500 over the six-months prior to a quarterly survey conducted by staffing agency Smalls Recruiting (Sydney, Australia).[3]

According to a January 2002 article in the *Financial Times* call centers in the United Kingdom also suffer from high staff turnover. UK centers employ over 400,000 people or about 2% of the working population. About 20% of call center staff leave their jobs. High job-turnover is expensive for companies since it costs about US$5,200 to train and recruit each employee. Many perceive work in a call center as a short-term, structured by 6-, 9-, or 12-month contracts. Disaffected call center staff results in poor customer service, costing British Telecommunication's retail division £300,000 annually, according to CEO Pierre Danon.

These problems in the United States, Australia, and the UK augur well for the Philippines. For example, the experience of contact centers in the Philippines suggests that Filipino call center agents are willing to stay for 2.5 years, compared to the 8.5 month tenure of US agents. This translates to savings on recruiting and training programs. Moreover, the 12-16 hour time differential between the Philippines and the west and east coasts of the United States also means additional savings on labor cost for US-based companies since they can avoid paying domestic agents costly nigh-shift premiums. In addition to being close to the booming Asia market, the Philippines is also an excellent gateway for multinational companies keen on serving the 500 million market in the ASEAN Free Trade Area (AFTA).

Opportunities and threats

Opportunities for the Philippines in the contact center industry are:

- The global recession and the resulting pressure on companies to contract out non-core operations,;
- Labor shortages and rising wages in the United States, the European Union and Australia, as well as in other destinations for outsourced services like Ireland and Singapore;
- Strategic location and time-differentials; and,

---

3 http://www.callcentermagazine.com/article/CCM20001026S0001/4.

- Limitations of India, the largest beneficiary of outsourced contact centers, including:

  · British accent.

  · Poor telecommunications infrastructure/bandwidth which is largely analog-based technology, manifested by the inability to go VoIP (voice-over-IP) and relatively high telecommunications costs with government-controlled Videsh Sanchar Nigam Ltd. (VNSL) the sole provider of telecommunication services.

  · Ongoing problems with electricity/power grid.

Threats to the contact center industry in the Philippines are:

- India, which is the undisputed leader in global contact center outsourcing. Indian call centers, which attract 200,000 seats, are located not only in New Delhi, Mumbai, and Bangalore, but also in Hyderabad, Kolkata, and Jaipur. A large proportion of India's population is English-speaking and has an international reputation for hard work and knowledge of technology. India continues to upgrade its infrastructure and establish cyber parks catering to outsourcing services, such as the US$85 million technology park in Madras, which was fully occupied within a month of opening.

- China, which is a potential site for contact centers. Sykes has demonstrated the possibility of operating call centers in both Manila and Shanghai. Public and private sectors in China have begun investing in English-language programs and large numbers of high school students are now required to study English. In the long-term when it develops a large base of young people able to speak and understand English China could emerge as a global center for contact operations.

- Ease of entry and exit. When companies see the strategic advantages of a certain location diminish or disappear, they can readily move their contact center operations or change their service providers without incurring substantial switching costs.

Strengths and weaknesses

The Philippines' strengths as a location for the contact center industry are:

- Large pool of highly skilled and English-speaking workers. The 2002 *World Competitiveness Yearbook* ranked the Philippines first in terms of the availability of skilled labor. Four hundred thousand students graduate into the workforce annually, 28% with degrees in general business, 13% in engineering, and 8% in computer science and mathematics.

- Competitive wage rates compared to Western countries.

- Strong and competitive telecommunications platform to support value-added and networked-based services. The competitiveness of Philippine telecommunications is illustrated by the cost of an E-1 line to the United States, which was once around $10,000 and is projected to shrink to as low as US$5,000-7,000.

- Available info-structure—including hardware, software programmers, managers—to support IT-enabled services.

- An economic policy framework based on deregulation and liberalization.

- Strong administration support for IT-enabled services through active promotions, special legislation, and fiscal incentives.

- A stable democratic political system and a highly developed civil society.

Weaknesses afflicting the contact center industry in the Philippines include:

- Specific provisions in the Labor Code that require premiums for nighttime work and limit work hours for women.[4]

- Deterioration in the quality of education, which is reflected in the low ratio of successful hires to recruits. One contact center company claims it has to screen 5,000 applicants to fill just 200 seats. Educational policy promoting Tagalog as the language of instruction for most subjects contributed to the deterioration of English language skills, while a shortage of qualified teachers, a high pupil-to-teacher ratio and low priority for education in the public budget aggravate the problem.

- Mismatch between the quality of graduates and the expectations of employers.

- Perceptions of instability and high cost of business due to corruption and continued political bickering.

Medical Transcription

Profile, prospects, and economic contribution

Medical transcription is a data-storage and migration service catering to medical practitioners who need to convert dictation from patient consultations, examinations, and progress reviews into document or written form. The remarkable growth of this business, particularly in the United States, is based on three sources of demand for such documents:

- For litigation purposes when medical practitioners are involved in malpractice suits. Lawyers have encouraged medical practitioners to adopt medical transcription services to protect them from legal problems in the future.

- For reimbursement. Insurance companies and healthcare organizations require medical practitioners to keep comprehensive and complete records of patient histories in order to receive reimbursement for services provided.

- For quality control. Comprehensive and complete records of patient histories, including examinations, prescriptions, diagnosis, and progress reviews, are important to maintaining the high quality of healthcare services in the United States.

Demand for medical transcription (MT) services in the United States is estimated at US$10

---

4. Article 86 of the Labor Code provides that every employee shall be paid a Night Shift Differential of not less than 10% of the regular wage for each hour of work performed between 10 pm and 6 am, whether or not it is part of the worker's regular shift. Article 130 provides that no woman shall be employed or permitted to work, with or without compensation, in any industrial undertaking between 10 pm and 6 am or in any commercial or non-industrial undertaking, other than agricultural, between midnight and 6am.

billion in 2001 and is expected to grow 15% per year. About 30 to 40% of this work will be outsourced to other companies. The NASSCOM-McKinsey study estimated U.S. demand for outsourced medical transcription services at about US$300 million. The same study found that MT outsourcing will grow by at least 28% per annum to hit US$1.2 billion by 2008 (Table 2). Potential global demand for MT services is about US$20 billion with the United States accounting for half, Europe for 38% and the rest of the world 13%.

The Philippine MT industry is young and caters solely to the U.S. market. The Philippines provides almost 1% of U.S. MT services, or some US$100 million. Nine companies were identified as offering MT services in the Philippines in 2001. Of these, Vantage Information Services, Inc is the biggest with about 100 seats and it generated about US$10 million in revenues in 2001.

The Philippines' large pool of medical personnel makes it an attractive destination for outsourced MT services. The educational system annually churns out about 28,000 graduates from medical-related courses. In 1999, the country had about 41,000 medical technologists and laboratory technicians, 127,000 midwives, 332,000 nurses, 10,000 dieticians, 42,000 pharmacists, and 8,000 physical therapists, all of whom are qualified to handle MT services.

In spite of the huge global demand for MT services and the country's ample supply of qualified manpower, the Philippine industry faces tough competition from India. Indian MT companies have already cornered about 20% of the global market and about 50% of the U.S. market for MT services.

Opportunities and threats

The following are opportunities for the Philippine MT service industry:

- Pressure to outsource MT services in order to further reduce the cost of MT operations.
- Increasing cost of insurance and healthcare in the US and Europe;
- Increasing number of malpractice suits.
- Time-differential that permits affordable, next-day delivery of voice transcriptions.

Major threats confronting the Philippine MT industry are:

- The exodus of medical graduates and experienced medical personnel seeking higher incomes and superior benefits abroad. Hospitals and healthcare institutions overseas recruit Filipino medical personnel based on the country's reputation in healthcare provision;

- The willingness of India's underemployed medical professionals to accept low wages. Average monthly wage for transcribers in India is US$120-200 compared to US$160-300 for Filipino transcribers. India's educational system graduates 15,000 medical professionals annually, most of whom fail to land jobs in the medical profession.

Strengths and weaknesses

Strengths of the MT industry in the Philippines are:

- Large supply of experienced medical personnel and new graduates.

- Comparatively lower wage rates than Western nations.

- Advanced and modern telecommunications, hardware, and software programming suited for MT.

Some of the weaknesses of the MT industry in the Philippines are:

- Labor laws biased against night shifts.

- Absence of a concerted, industry-wide effort to market the Philippines in the United States.

- Susceptibility of unlicensed Philippine-developed MT service technologies to imitation by competitors.

- MT companies' lack of capital to expand operations and increase their capabilities.

Human Resource Management Services

Profile, prospects, and economic contribution

Outsourcing or centralizing human resource management operations, particularly in the fields of recruiting, job placement, and job search, is a new frontier. Web-based hiring and job-posting created a revolution, permitting centralized, global hiring and placement operations to serve the offices scattered around the world. Some US companies have also resorted to such strategies. The *Asian Wall Street Journal* reported in January 2003 that managing the back office operations of its own clients is one of the fastest growing businesses of Fidelity Investments, known as the largest mutual fund firm in the United States. Benefit administration accounted for about one-third of Fidelity's US$9.8 billion revenues in 2001 and the company expects it to reach 50% of revenues

in the next 10 years.

In the Philippines, many companies began centralizing their HR operations particularly in the record keeping, hiring, payroll, and benefit management. A significant portion of this is web-based job-posting agencies mainly catering to the 33 million workforce where 12% are unemployed. Job placement services are not exclusively focused on the domestic market; they also cater to those who want to join the 7 million Filipinos who work overseas. Many of these manpower placement agencies are gradually bringing their operations, online.

The first internet-based HR operation in the Philippines was launched in 1996 when Trabaho.com came online. While the placement market appears lucrative, competition is becoming more intense. Besides the nine identified on-line recruiting agencies, there are over 600 manpower placement agencies not hooked on-line and spread all over the Philippine archipelago. Not only Philippine-based companies but also other companies in Asia compete to recruit Filipinos to work overseas. At least six regional companies including Monster.com and Asiasources.com are dipping into the pool of Filipinos for placements in IT-related jobs, overseas.

Two factors drive the growth of this industry: the large supply of IT professionals in the Philippines and the cost savings realized by centralizing HR operations. While the industry is considered to be in the infancy stage, the outsourced and shared HR services industry will continue to flourish and grow in the Philippines as long as these two factors are present.

Opportunities and threats

Opportunities for shared and outsourced HR services and management include:

- Labor shortages and aging populations in developed economies, which in the long-run will force many developed economies to import substantial numbers of workers from developing economies.
- Geographic expansion of companies, which will force many to either centralize or outsource HR operations.
- Growing interest in the impact of sharing and outsourcing HR operations and management on business cost and efficiency.
- Collapse of the dot-com industry, which limited the expansion potential of independent web-based HR operations.

Threats confronting the HR service segment are:

- Availability of cost-effective labor in Pakistan, Indonesia, Romania, Bangladesh, Croatia, and even Russia, which broadens the hiring pool of recruiting agencies and can affect domestic-oriented HR operations in the Philippines.

- Centralization of HR operations in labor-abundant areas like India and Indonesia where MNCs have an active presence.

- Internet-based HR operations expand the boundaries of competition for resources (i.e., manpower) and markets (i.e., hiring companies). Thus, Philippine-based operations will have to compete with other web-based HR companies with regional presence and perhaps even, wider global networks.

- Competition from other web-based HR companies that have regional presence and perhaps wider global networks as the Internet expands the boundaries of competition for resources (i.e., manpower) and markets (i.e., hiring companies).

Strengths and weaknesses

Strengths of the industry are:

- Positive experience of MNCs that have centralized their operations in the Philippines.

- Large English-speaking, trainable, and educated workforce.

- Competitive cost for a comparable level of labor quality.

- High unemployment and underemployment levels in the Philippines.

- Growing access of Filipinos to the PC-based Internet using Internet cafes and mobile phones.

The weaknesses of the industry in the Philippines are:

- Low Internet penetration rate. There are only about 800,000 PCs in the Philippines, today, with only half connected to the Internet.

- Presence of illegal recruiters that tarnish the image of legitimate recruiting and hiring agencies.

- Non-productivity related wage increases legislated during elections that price Filipino laborers and recruiters out of the market.

Technical Support Services

Profile, prospects, and economic contribution

Many Filipino students are drawn to the IT field. Enrollment in IT courses swelled to 117,000 in 1996 from just 66,000 the year before and grew average of 20% per year in succeeding years. The Philippines has over 100,000 IT professionals, 99% of whom hold college degrees. Aside from being adept on hardware and software, these IT professionals are also literate in technical and

business areas.

The competence of Filipino IT professionals is acknowledged worldwide; Manila is an outsourcing center for companies from the US, Europe, and Japan. Companies like Accenture and Fujitsu recognize the technical competence of Filipino programmers. In fact, foreign companies began outsourcing software services in the Philippines even before setting up contact center operations.

The global market for IT spending is huge. In 1999, global IT spending reached almost US$349 billion. By 2004, it will reach as high as US$573 billion, which translates to an average annual growth rate of 10.4% for the period 1999 to 2004. The Philippines has barely scratched the surface as observed in statistical indicators. Based on a PIDS study by Austria, software exports from the Philippines increased from only US$60 million in 1993 to US$250 million in 1997, an annual average growth rate of 43%.

Most if not all technical support services provided in the Philippines take the form of shared services. Many of the ten companies providing the technical support are IT multinationals tapping into the country's manpower pool.

Opportunities and threats

Opportunities in the technical support industry are:

- Huge global spending on IT;
- Outsourcing of low-value activities in the IT value chain by large global IT companies; and,
- Increasing wages and labor shortages of IT professionals in developed countries;

Threats to the Philippines in the technical support industry are:

- Competition from China and India, with the latter the global leader. India employs 340,000 IT professionals and graduates between 73,000 and 85,000 software engineers and 30,000-50,000 professionals with Master's degrees or special qualifications each year. The high level of competence of Indian software developers is indicated by their attaining SEI Capability Maturity Model (CMM) Certification Levels 4 and 5.
- Strong government support for IT services in other countries. Many governments have promoted the industry with fiscal incentives and support for IT education; China

and India are known to invest heavily in their physical and human infrastructure; and,

- Migration of the best IT professionals to countries that lack qualified IT personnel, where wages and benefits are better.

Strengths and weaknesses

Strengths of the industry in the Philippines include:

- English-speaking, educated, custom-trainable and cost-effective IT workforce;
- Growing enrollment levels in IT education.

The weaknesses of the industry in the Philippines include:

- Concentration of the industry's workforce at the low-end of the IT value chain. Catering to low value-added and low-margin activities is not sustainable and makes the industry vulnerable to competition from other low-wage countries;
- Most IT professionals are involved with technology and software. There are few talents in the fields of design, integration, and implementation;
- Low-test scores in math and sciences of primary and secondary students in the Philippines compared to their peers in neighboring countries which could hamper the country's developing a competitive edge in software design, development, integration, and implementation.

Shared Accounting and Financial Services

Profile

The Philippines is an ideal location for outsourced and shared accounting and financial services for US based companies because accounting standards in the Philippines closely follow the U.S. GAAP. Filipino business graduates, particularly the 100,000 accountants in the labor force, are trained and familiar with the accounting and financial reporting practices of the US.

We identified only two companies, Caltex and Proctor and Gamble, to date that have gone into shared accounting and financial services based in the Philippines. Companies like Watson Wyatt and Unilever are planning to follow the same tack in the Philippines. The actual number of companies could be higher, but it is difficult to determine since these activities are done "in-house" and are not publicly reported.

Opportunities and threats

Opportunities in the shared and outsourced accounting and financial services in the Philippines

are:

- Centralization of non-core operations of regional offices to reduce operating costs;

- Similarity of Philippine accounting standards to the U.S. GAAP standards;

- Filipinos' ability to understand and readily adopt new accounting standards such as the IASS;

- Geographic proliferation of companies and subsidiaries; and,

- Increasing wages in Western nations.

Threats confronting Philippine providers of outsourced accounting and financial services are:

- Significant changes to the GAAP and more stringent domestic-based monitoring practices as a result of accounting scandals in the United States;

- Exclusive dependence on the US market because accounting standards in Europe and Japan differ significantly from US-Filipino model;

- Inadequate laws and standards governing the implementation and responsibilities of outsourced accounting and financial services limit the industry's potential to capture outsourcing business;

Strengths and weaknesses

The strengths of outsourced and shared financing and accounting services in the Philippines are:

- Large pool of English-speaking Filipino accountants, accounting graduates, and enrolled students, and graduates of business-related courses, many of whom are employed outside the area of their professional training.

- Rising enrollment in MBA programs.

- Business education curriculum patterned primarily on US methodologies and materials.

The weaknesses of the industry are:

- Bias of existing labor laws against night work.

- Lack of concerted marketing effort to promote the service in the United States.

- Lack of capital to expand business operations.

R&D Services

Profile, prospects, and economic contribution

Companies can outsource any primary or secondary functional activities or business processes

except those that generate their core competence. Outsourcing helps many companies focus on

marketing and improving work processes or developing new core competencies or on effectively

deploying their resources.

Southeast Asian countries, including the Philippines, benefited from the contract outsourcing of manufacturing operations by multinational semiconductor and electronic manufacturers beginning in the late 1980s. Now, contract manufacturers are responsible for 26% of global electronics production.

Outsourcing allowed manufacturing firms to concentrate on R&D activities to improve their competitive edge. In fact, shared R&D activities between and within companies emerged over the last 10 years as clients and contractors collaborated and shared resources to achieve technological breakthroughs. Now, global companies' reliance on shared R&D services with IT firms and contract manufacturers is becoming more intertwined and mutually beneficial. The advent of the Internet pushed the frontiers of R&D further, this time toward outsourcing services using IT-enabled technologies.

About ten such IT-enabled shared R&D services operate in the Philippines.

Opportunities and threats

Opportunities for the Philippine industry include:

- Global recession and intense competition, which pressure IT companies to sustain R&D while holding down costs.
- Growing reliance of global companies on contract manufacturers.
- Labor shortages and high wages in Western nations.

Among the threats confronting the industry are:

- Ireland, China, and India, which outsource R&D services to many IT firms and electronic manufacturers.

Strengths and weaknesses

Strengths of the industry are as follows:

- Flexible, trainable, and creative Filipino workers.
- Strong presence of export-oriented contract manufacturers.
- Pressure on industries to migrate from low to high value-added activities forcing them higher on the value chain, which includes developing R&D capability.

Weaknesses afflicting the industry are the following:

- Absence of a technology-oriented culture and system. Neither Philippine industry nor the educational system has placed much emphasis on R&D.

- Lack of homegrown R&D capabilities and talent, which prevents developing, patenting, and licensing new domestic technologies (in contrast to India);

Animation

Profile, prospects, and economic contribution

Foreign advertising, animation, and post-production agencies have tapped Filipinos creative talents. With the advent of IT-enabled services, these agencies began outsourcing their requirements, making the Philippine animation industry virtually part of their global production network.

In the early 1980s, many local animation companies began serving the domestic market. Since the early 1990s with the Internet and the technological revolution in software-based animation, the industry blossomed. Renowned global companies like Walt Disney, Nestle and other production outfits have tapped into this talent pool. A large part of Disney's highly successful animated film "Aladdin" was produced in the Philippines. The animation for "Heavy Metal 2000", a feature film released in 2000, was largely done in the Philippines.

Of the fifteen companies in the animation industry, six are major players

Opportunities and threats

The opportunities for the industry are:

- Greater inherent talent for animation than found in close competitors like India, Australia, and Ireland;

- Closer familiarity with Western culture and humor than competitor countries that are proficient in written and spoken English.

- Booming market for animation as well as computer graphics-related production in movie entertainment.

One threat confronting Philippine companies in the animation industry is:

- Low salaries commanded by local talents, which make them vulnerable to recruiting by multinational animation companies that pay higher salaries and offer better benefits;

Strengths and weaknesses

The strengths of the animation industry in the Philippines are:

- Creative flair.

- Proficiency in spoken and written English.

- "Westernized" culture.

- Strong worldwide government effort to support and promote the Philippines' capability in animation and post-production services.

- Long track record of globally prestigious and highly successful production services.

Weaknesses of the industry include:

- Individualized company efforts to attract overseas business to the Philippines compared to India and Ireland, which market their capabilities as an industry rather than as individual companies.

- Loss of talent to foreign agencies.

- Lack of capital to invest in sophisticated equipment and software to meet global production requirements.

V.   POLICY ENVIRONMENT

The Philippine government is aware of the potential of a competitive and fully developed IT-enabled service industry to spur economic growth and to generate employment and foreign exchange. It has pushed for the development and promotion of IT-enabled services with concrete policy steps. First, the government has enacted policies and legislation to encourage the development of information and communications technology (ICT). Second, it pushed ICT as an important tool and system to improve public governance and to make government a reliable support for the local business community. And last, it has identified IT-enabled services as an area where the Philippines had a unique competitive advantage in the global market.

Existing Policy Initiatives

The present administration is working on an E-services framework focused on reforming IT policies and promoting IT initiatives. Such a framework will be a permanent fixture of the country's development plans and programs. This framework is the guiding light of the

Information Technology and Electronic Commerce Council (ITECC) which was formed by Executive Order (EO) 264, 13 July 2000. ITECC, chaired by the President of the Republic, placed various government agencies and six private-sector representatives under one umbrella in order to facilitate interagency coordination, projects, and initiatives in IT. Under the same structure, EO 18 directed the ITECC to create special committees, co-chaired by government and private-sector representatives, to concentrate on specific areas or clusters including business development, human resource development, information infrastructure development, legal and regulatory, and e-government.

Among the most important clusters is e-government, which was tasked to implement, monitor, and review the National Information Technology Plan for the 21st Century, or IT21, and the Internet Strategy for the Philippines, or the ISP.com program.

National Information Technology Plan for the 21st Century (NITP)

The NITP, or IT21, lays out the strategy for promoting and developing the IT industry. EO 469 dated 23 February 1998 activated the IT21 Action Agenda. The implementation was divided into three strategic stages:

- Stage 1: consolidation and providing impetus for further development (1998 - 2000)
- Stage 2: building momentum based on accomplishments in the previous stage (2001 - -2005
- Stage 3: transformation of the Philippines into a Knowledge Center of Asia.

Implementation was delayed slightly by the abrupt government change in government in 1999, so that country is still in the first, or consolidation, stage, but the Macapagal administration is working to get back on track.

The current phase is composed of the following strategic programs:

- Create a policy environment favorable to increased investment in IT through the adoption of specific policies.
- Enhance universal access to the information infrastructure.
- Develop the human capital base primarily composed of IT-literate professionals.

- Install a government organization responsive to local business requirements and to support IT and other technology-based industries.

- Enhance the role and influence of ITECC to institute the IT agenda.,

- Disseminate the IT21 Action Agenda to the private and public sectors.

Appendix Table 1 summarizes the status of the IT21 Action Agenda.

ISP. com

Formulated in April 2000, the ISP.com program aimed at addressing critical areas in the IT industry in order to better integrate the Philippines into global e-commerce. A recent review of its plan and performance recommended revising the e-commerce strategy to re-align it with the IT21 Action Agenda. The realignment was incorporated under a program called "Make IT Philippines." Among the highlights of this new program is its emphasis on promoting and developing IT-enabled or E-services

The policy initiatives for each IT-enabled service can be summarized under the following seven categories:

1. Revision of particular sections of the Labor Code on overtime and night premiums and limited working hours for women;

2. Standardized and upgraded curriculum for educational courses and training programs;

3. Accreditation programs for agents and professionals connected with IT-enabled services;

4. Industry or national accreditation of educational and training institutions for IT-professionals, call agents, etc.;

5. Concerted industry-based efforts to promote IT-enabled services in global outsourcing markets;

6. Establish close collaboration with companies and countries strong in IT software development, programming, and integration; and

7. Encourage licensing of domestically developed IT programs.

Appendix Table 2 summarizes the status of the ISP.com program.

IT-enabled services, which are labor-intensive and high value-added economic activities, have the potential to generate jobs, investment, and foreign exchange for the Philippines. IT-

enabled services will define the future structure and sources of growth of the economy and the country's niche in highly competitive global market.

In addition to the programs described above, the government passed a host of legislative acts that favored the development of IT in one way or another. These included laws related to investment promotion and incentives such as the Foreign Investment Act of 1991, Special Economic Zone Act of 1995, Export Development Act of 1994 and the Regional Headquarters Act. Laws were also passed liberalizing certain industries like banking, insurance and retail trade and deregulating other industries like telecommunications and shipping.

A landmark IT-related policy passed recently was the E-Commerce Act of 2000, which made the Philippines the sixth country in Asia with a similar legislation. The Intellectual Property Code (RA 8293) is being reviewed in light of new concerns about intellectual property protection brought about by technological innovation and developments such as writable CDs, music downloads, and Internet domain addresses.

Policy Analysis

These two major policies have contributed significantly to the development of the IT sector in the Philippines, particularly to development of IT-enabled services. To judge the efficacy of policy in realizing the full economic potential of the industry, it is important to consider the specific factors critical to successful development of each particular IT-enabled service segment. The left-hand column of Table 4 lists these factors. Matching these critical factors with the existing framework highlights areas that remain to be addressed by government policy. The right-hand column of Table 4 lists some policy recommendations that should be considered to promote the continued growth and development of the IT-enabled service industry in the Philippines.

TABLE 4
Critical Success Factors of the Industry and the Suggested Policy Responses

Key Success Factors	Suggested Policy Directions
Contact Centers Ample manpower capable of speaking good English (communication skills), are computer literate (technical skills), and with good etiquette (personal and social skills) Competent CRM supervisors, trainers and agents Political stability and reliable power and telecommunication services with redundancies to ensure 24/7 operations	Accredit schools offering specialized call-center training Institute contact center industry-recognized professional licensing or accrediting system for call agents Adopt industry benchmarking system to measure contact center operations in the Philippines against global standards Revise the Labor Code provisions on night time premiums and work hours for women
Medical Transcription Licensing of new MT technologies developed in the Philippines. Formation of strategic tie-ups with US-based medical transcription companies. Aggressive marketing efforts to promote the MT service industry in the Philippines to the US.	Form a strong and active industry association to market the Philippine capabilities abroad Institute system to compare practices and performance of MT providers in the Philippines with those in other countries like the US and India Revise the Labor Code provisions on night time premiums and work hours for women

Table 4 continued.

Human Resource Management Sustained global demand for quality Filipino workers in IT and management. Proven and longer track record that centralized HR operations can lead to cost savings and improve effectiveness in HR management.	
Technical Support Services IT professionals and students trained in high-value added services to become designers and implementers of technology. IT professionals focus on specific IT-skills training and vendor-specific education to keep pace with the evolution of technology. Strong and collaborative partnership between the academe/vocational schools and the IT industry to ensure a steady supply of IT professionals and talent.	Encourage, promote and develop strong linkages and tie-ups with software companies and training and educational institutions with India
Shared Accounting and Financial Services Ability to immediately incorporate changes in accounting standards and principles into the curricula of educational institutions and systems of accounting firms. Encourage multinational firms through incentives to locate their accounting and finance shared services in the Philippines;	Offer incentives to promote the development of the industry Revise the Labor Code provisions on night time premiums and work hours for women
R&D Services Install technology-oriented curriculum and educational system with the government providing incentives and policy framework. Licensing locally developed technologies	Fiscal incentives for R&D undertaken in-house Revise the Labor Code provisions on night time premiums and work hours for women
Animation Concerted effort of companies to cooperate and agree on a global market strategy for the industry rather than undertaking promotion on an individual company basis. Sustained investment in the latest technological breakthroughs in animation and post-production services. Constant upgrading of university, college, and vocational curricu la in fine arts as well as facilities to keep graduates abreast of the latest animation and production technologies.	Coordinated efforts by the industry and the government to promote the animation industry to other countries Fiscal incentives for imported equipment used to upgrade technology

References

Antonio, Emilio T. Jr., Winston Conrad B. Padojinog,, Cherrylyn S. Rodolfo and Luis Molina. "Directions for Industrial Restructuring in the Twenty-First Century: The Philippine Case, " In *Industrial Restructuring in East Asia*, edited by S. Masuyama, D. Vandenbrink, and S-Y Chia. Singapore: Nomura Research Institute and Institute of Southeast Asian Studies, 2001.

McKinsey and Company. *NASSCOM-McKinsey Report: Strategies to Achieve the Indian IT Industry's Aspiration.* McKinesy and Company, 2002.

Menchavez, Johnpaul Dean and John Leonard Ganihong: "A Situationer of Contact Centers Operating in the Philippines: University of Asia and the Pacific." Unpublished Research, University of Asia and the Pacific, 2001.

OPTEL Ltd. *Philippine Information Technology Perspective*, First Ed. Philippines, 2002.

Padojinog, Winston Conrad B. "IT-Enabled Services: Welcome to the Future." *Industry Monitor*, University of Asia and the Pacific, 2002.

Solomon Smith Barney Equity Research India. *Indian IT Services: Growth-Enabled*. 2000.

APPENDIX TABLE 1
Status of the IT21 Action Agenda
(as of September 2001)

PHASE 1 STAGE	ACTIVITY	STATUS
Provide the policy environment	• Adopt and implement policies to promote increased investment in IT and related electronics industries (e.g., through strategic partnerships, venture capital).	• Amendments updating Omnibus Investment Act completed.
	• Adopt more investor-friendly policies, systems, and procedures in government.	• Special incentive packages for Ecozone Developers and for regional headquarters introduced.
	• Implement Philippine commitments through international agreements that favorably affect the IT sector (e.g., IT Agreement, ITA).	• E-Commerce Act enacted.
	• Adopt administrative measures to effectively enforce intellectual property rights (IPR), particularly as they affect IT products and services.	• On-going legislative review of the IPR Code to address new pirating technologies.
	• Rationalize and coordinate the development of techno-parks and cyber-cities throughout the country for greater complimentary in investment and infrastructure development.	• PEZA- and DTI-led boom in IT Park development over 2001, with almost 60% of available space occupied by new and expansion IT ventures.
Enhance the physical infrastructure	• Accelerate universal access (i.e., making telecommunications services accessible and affordable to all), especially in underserved areas.	• Telecommunication industry liberalization binning in 1996 expanded Internet access; 390 ISPs in June 2001.
	• Fast-track the formulation and implementation of the Philippine Information Infrastructure (PII).	• Implementation stalled in 2000 by political crisis • Current administration is feverishly bringing it back on track.
	• Intensify investment promotion in the telecommunication industry.	• Telecommunications services, particularly mobile phones, began expanding in 1999 as a result of liberalization.
	• Formulate laws governing the use of networks, particularly the Internet, to ensure information security and network reliability.	• On-going review of the e-Commerce Act to cover encryption standards, security, and infrastructure reliability.
	• Promote Telecommuting/Tele-working, particularly in software development and multimedia production.	• Convergence Bill under review by Congress will give impetus to develop multimedia products and services.

Appendix Table 1 continued.

Develop the IT manpower base	• Produce a critical mass of IT professionals and IT-literate manpower, including competent IT educators and teachers at all levels.	• Moving back on track with the help of the DTI and improved inter-agency coordination under ITECC.
	• Recognize and reward designated IT training institutions, universities or colleges as IT Centers for Excellence.	• On-going mainly through linkage between the DOST and CHED
	• Organize a nationwide network of Core Competency Institutions in IT, in partnership with local and international development institutions and business organizations.	• On-going, mainly through linkages between DOST, CHED, and businesses such as Microsoft, Cisco, and Oracle.
	• Conduct continuing IT education for teachers/trainers, IT practitioners, and workers	• On-going, mainly through linkages between the NCC, CHED, and tertiary and vocational education institutions with IT and IT-based curricula.
	• Adopt dual-tech approach to IT education and training.	• On-going, particularly in Mapua, La Salle, UP-Diliman, and Baguio University. UP Diliman even has an incubation center linked with incubator companies such as IdeaFarm, Inc.
	• Establish high-quality distance education and training.	• On-going, particularly through linkages between CHED and specialized distance education (e.g., Inter-Ed) and online education (e.g., FTAsia and NEXTeD) institutions and companies.
	• Develop and implement life-long learning through the Internet.	

Appendix Table 1 continued.

Pump-prime IT industry development	• Implement a government-wide computerization program, emphasizing development and deployment of front-line, mission-critical and common application information systems.	• GISP has all government agencies and departments on-line under incorporating appropriate communication and information dissemination channels • Local governments being put on-line.
	• Implement the RPWEB to interconnect all government offices and units through Internet Service Providers (ISP) in their area, to interconnect all ISPs through the Internet Exchanges	• On-going; currently interconnecting LGUs.
	• Organize and monitor government and business response to the Year 2000 (Y2K) problem and opportunity	• Completed
	• Set up an IT Development Fund or other appropriate financing scheme for outsourcing information system development and deployment in government	• DOST and NCC formulating an action plan
	• Promote technological innovation and experimentation by creating new products, services and applications and by developing value-added services and networks	• On-going, through linkages between CHED, DOST, and companies • Utilizing incubation centers, training/learning centers (e.g., VCTI), and think tanks
	• Provide appropriate financial support for active private sector participation in R&D and in development and incubation of new products and solutions	• Finalizing mechanism for government facility provided by DOST • Private-sector initiatives such as through FIT-ED currently supporting these projects
	• Fast-track measures to streamline administrative processes and procedures in government procurement, budgeting, accounting, auditing, monitoring, reporting, etc.	• On-going; revised mandates for NCC and DOST clarifying their respective tasks
Organize for action: institutional reform	• Reorganize the NITC to broaden and strengthen private-sector involvement in IT development activities.	• Completed. NTC and ECPC merged to form the ITECC on 13 July 2000 under Executive Order No. 264
	• Constitute NITC task forces to carry out specific IT21 programs/actions	• Completed. Business development, HR development, information infrastructure development, legal & regulatory, and e-government strategic clusters formed under ITECC.
	• Organize a 50-member private-sector advisory council to facilitate private sector participation in implementing IT21	• Assigned to the ITECC business development cluster, with completion targeted before the end of 2001
	• Strengthen the NCC to enable it to better carry out its primary mandate of promoting widespread use of IT in government.	• The e-Commerce Act expanded the NCC's mandate to cover policy planning, implementing e-commerce policies, and interconnection of government agencies and departments
	• Create a comprehensive database management, monitoring and benchmarking system for key IT indicators	• On-going; DOST developing a system of Science and Technology Indicators for ASEAN countries, particularly in IT, jointly with Philippine Council for Advanced Science and Technology Research and Development.

36

Appendix Table 1 continued.

Market the national IT Plan for the 21st Century (IT21)	• Organize a task force to undertake a nationwide communication and advocacy program, including focused IT trade missions and international road shows	• DTI launched Make IT Philippines campaign in 2001, promoting Phil. as Asia's ideal IT investment destination positioned as an e-Services hub • DTI conducted several missions and road shows in Europe and the US
	• Develop, produce and disseminate promotional materials on IT21 and the Philippines IT Action Agenda.	• DTI taking lead along with such other government agencies as CITEM (Center for International Trade Expositions and Missions) • Outsourcing and subcon trade exhibit held in June 2001
	• Create a Philippine Web Site promoting IT21, the IT Action Agenda.	• NCC tasked with creating the web presence for the IT21 Action Agenda, so far devoting a section of its website to promote the IT agenda; • ITECC also promoting the IT21 Action Agenda from its I-Philippines website

Sources: OPTEL, NCC, DOTC, ITECC, DOST, DTI.

APPENDIX TABLE 2
Implementation Status of ISP.com (Internet Strategy for the Philippines)

Strategy Component	Revised Priority Activity	Status as of September 2001
1. Infrastructure and access	• Promote community access mechanism	• Roll-out of the "PCs for 1,000 High School" program on-going after identifying top high school candidates in June 2001.
	• Bandwidth mapping	• Broadband maps for fiber-optic and microwave completed September 12, 2001
	• Review of regulatory regime on basic and advanced services and convergence	• August 2001 NTC reviewed the current IRR for retail telecom service pricing, with special emphasis on improving the price structure for access charges
		• NTC working on a Master Plan for Telecom Convergence, based on a position paper submitted to DOTC in 2000 (which was also the basis for the pending ICT Convergence Bill)
	• ASEAN Information infrastructure (for research, digital divide, etc.)	• On-going.
2. Human resources	• Academe-industry programs, (e.g., bridging, certification)	• CHED formulating an action plan for coordinating a nationwide network of IT education and recruitment centers
		• NCC running a pilot IT proficiency exam in its training programs
		• Cisco has an on-going networking academy program linked with CHED (via COCOPEA—Coordinating Council of Private Education Association) and various educational institutions.
	• Curriculum updating, including review of CHED, TESDA policies	• CHED is advisory and advocacy body for promotion of updating all tertiary curricula to make them more IT-centric, as exemplified by the May 2001 Higher education Congress hosted by CHED, which focused on the role of educational institutions in the creation of a knowledge-based economy (KBE) for the Philippines
		• CHED is advocating and advising on updating tertiary curricula to make them more IT-centric, as exemplified by its May 2001 Higher Education Congress, which focused on the role of educational institutions in the creation of a knowledge-based economy (KBE) for the Philippines
	• Teacher training : Use of IT in classrooms IT tools for math, science, English	• Ongoing teacher training programs through the learning center projects of such IT companies as Oracle and Cisco
	• Support for basic research	• PREGINET (Philippine Research Education and Government Information Network) established as the R&D component of the VCTI;
		• Other CHED/TESDA proposals under review, including a project to interconnect schools and on-line education institutions which is being reviewed by the Technical Panel on Information Technology Education (TPITE).

Appendix Table 2 continued.

3. Legal	• Enforce existing Laws (i.e., ECA)	• The ITECC, under the Legal Cluster headed by Janette Toral, had been working on the IRR for B2G transactions until July 2001; • Official guidelines being formulated, although DTI's Trade-line on-line trader database is a limited-scale B2G facility and the private sector initiated such online exchanges such as Bayantrade. • Recommendations to the ITECC based on Atty. J.J. Disini's assessment of the legal implications of the e-Commerce Act will be reviewed by the new ITECC membership before the end of September 2001
	• Strengthen legal framework	• Private sector initiating several fora to discuss various issues such as security, consumer protection, advanced IP services, taxation, and the like • ITECC uses the proceedings of such fora as input in policy formulation and review activities.
	• Ensure consistency with international norms.	• The Philippines lead role in ASEAN ministerial meetings on science and technology matters demonstrates its commitment to the e-ASEAN Agreement
4. Business development	• Market Niche	• Projects previously in-progress
	✧ Business Case for E-S	✧ Private sector initiatives have taken shape but no published output yet.
	✧ Inventory of E-S companies	✧ BOI's inventory of companies have yet to be published so far although they consider their directory to be substantial already
	✧ Inventory of manpower Resources	✧ The DOST's PCASTRD (Phil. Council for Advanced Science and Technology Research and Development) has recently expanded the focused of their experts database (which has been online since 1997) to include those the area of ICT R&D; their other focused is in the area of biotechnology
	✧ Improved Balik Scientist	✧ DOST trying out a scheme whereby Filipino scientists in Silicon Valley can support local R&D efforts without leaving the US ✧ Testing a "virtual" version of the Balik-Scientist program (which achieved little success over 10 years). ✧ Already online ✧ Ongoing road shows by DTI, headed by Mar Roxas
	• Communications and Promotion Development of collaterals Targeted investment promotion missions • Strategic Alliance	• Citem conducted Outsourcing and Subcon Exhibition 28-30 June 2001.

Appendix Table 2 continued.

5. Financial	• Benchmarking Incentives	• DTI has ongoing program for benchmarking and continuous review of incentive packages for investments in PEZA and BCDA zones, as well as for regular BOI incentives • Dissemination of IRRs for IPP, PEZA and BCDA investments, PEZA zone development, IT parks and buildings, Regional Headquarters (ROH), and Retail Trade Liberalization allows a more comprehensive benchmarking against similar incentives offered by countries in ASEAN, Asia, and the rest of the world.
	• Aggressive tax regime; Inclusion in BOO/BOT	• Benchmarking studies led the task force on the Rationalization of Fiscal Incentives—composed of DTI-BOI, DOF, NEDA, PEZA, PIDS(Phil. Institute for Development Studies) and DoBM—to recommend extending the Income Tax Holiday Package offered to IT investments under the Omnibus Investments Code (possibly necessitating amendment of the code), in order to make the incentive more attractive
	• Better environment for venture capital and Angels.	• DTI Help Desks offer one-stop system for BIR, DTI, BID, SEC, BOI, PEZA and BCDA, although there are still some technical problems • Departments and agencies yet to be included are DOST, CHED, BD and SSS. • Under the APEC framework for SME development DTI initiated a project to educate SMEs on utilizing e-commerce for business and market development; other projects include micro-financing development and entrepreneurial education for SMEs.
	• Streamlining of BIR, SEC, BB procedures • Incentives/financing for SME re-engineering	

Source: OPTEL, ITECC, NTC, CHED, DOST, DTI, DOTC