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**The Impact of the SARS Epidemic in Taiwan:  
Implications for Human Resources, Labour Markets, and Unemployment in the  
Service Sector**

**GRACE O. M. LEE AND MALCOLM WARNER**

This paper examines the links between epidemics and their economic and human resources consequences in a contemporary setting, specifically in terms of their impacts on human resources, labour markets, and jobs. To exemplify the above, we looked at severe acute respiratory syndrome (SARS), a phenomenon we have previously investigated in the People's Republic of China, Hong Kong, and Singapore, in this specific study vis-à-vis its impact on the Taiwanese economy, its human resources, labour market, and its level of employment and unemployment. In this preliminary investigation, we worked on the assumption that the greatest impact would be on human resources in the service sector (and, in turn, on particular sub-sectors, such as in the hotel industry). Our tentative conclusions, caveats notwithstanding, lead us to report that the crisis brought not only relatively discernable economic losses but also observable damage to "trust" in labour-management relations.

**KEYWORDS: human resource management (HRM); labour market; severe acute respiratory syndrome (SARS); People's Republic of China (PRC); Republic of China (ROC); Taiwan; unemployment.**

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On March 12, 2003, the World Health Organization (WHO) issued a “global alert” on severe acute respiratory syndrome (SARS), a newly emerging respiratory illness associated with potentially significant morbidity and mortality (*World Health Organization*, 2003). International travel appeared to have been responsible for the rapid intercontinental spread of this disease, and by May 31, 2003, SARS had affected thirty-two countries with a total number of 8,360 cases (*World Health Organization*, 2003). Taiwan reported the third largest number of SARS infections and deaths, followed by Hong Kong and mainland China (Esswein, 2004).

The outbreaks beyond the mainland People’s Republic of China (PRC), namely in the Hong Kong Special Administrative Region, Taiwan, Singapore, and Vietnam, as well as in Toronto and elsewhere, were initiated by cases that were mostly imported from Guangdong, the southern-most Chinese province, before the virus had been identified and before appropriate measures had been put in place to prevent its transmission (Hsu, 2003; Lee and McKibbin, 2003). Taiwan, like Hong Kong, has one of the busiest airports in Asia, and has numerous arrivals each day from countries in the region that may often be affected by public health risks. The nation was, and still is, therefore potentially vulnerable to the importation of SARS that could in turn initiate new cases.

For some time, empirical studies have attempted to estimate the economic burden of an epidemic based on the private and non-private medical costs associated with the disease (Lee and McKibbin, 2003). The costs include private, as well as public, expenditures on diagnosing and treating the disease. These may be magnified by the need to maintain sterile environments, implement prevention measures, and carry out basic research. The penalty can be substantial for major epidemics, such as AIDS. According to the UNAIDS (the Joint United Nations Program on HIV/AIDS),

at present 42 million people globally live with HIV/AIDS. The medical costs of various treatments of HIV patients, including highly active antiretroviral therapies (HAARTS), are estimated to be more than US\$2,000 per patient per year. In the Southern African regions, the total HIV-related health service costs, based on assumed coverage rate of 10 percent, ranges from 0.3 to 4.3 percent of gross domestic product (GDP) (Haacker, 2002).

The costs of disease include incomes foregone as a result of the disease-related morbidity and mortality. Forgone income is normally estimated by the value of lost workdays due to the illness. In the case of mortality, foregone income is estimated by the capitalized value of future lifetime earnings by the disease-related death, based on projected incomes for different age groups and age-specific survival rates. This cost can be substantial for large-scale epidemics (Lee and McKibbin, 2003). HIV/AIDS and malaria between them, for example, kill many millions a year. Given the ultimately relatively low morbidity and mortality of SARS, *why had its economic impact appeared to be so apparently threatening?* Much of the potential economic impact appeared to have stemmed from the high degree of uncertainty and apprehension generated by the epidemic, as we shall shortly see.

This paper begins with a brief background account of the imported cases of SARS to Taiwan and then goes on to analyze the impact on the Taiwan economy, its labour market, human resources as well as employment and unemployment, in one particularly vulnerable sub-sector of its now pre-eminent service sector, namely hotels (and hospitality). Thus, as will be apparent in our analysis, epidemics, mortality, and urbanization are now arguably increasingly interlinked and mass air travel has become a potentially critical transmission belt in the contemporary, globalized world.

## **Methodology and Limitations**

In attempting to study the impact of SARS on the Taiwan economy, its labour market and specifically on hotel industry employment, we adopted a two-pronged methodology. First, we generated a data-base of information about the SARS epidemic, its economic as well as its human resource management (HRM) implications, by using the Internet, library resources, and literature searches, taking into full account the limitations of official statistical sources, where used.

Second, we carried out on-site empirical field research in Taiwan at first hand but faced a number of difficulties in the process. We started off by sending out an English-language questionnaire by email to a comprehensive list of hotel operators in Taiwan provided by Taiwan's tourist authorities but we had an unsatisfactory response rate, as many sites had apparently outdated addresses. To resolve this problem, we changed from a quantitative to *qualitative* research methodology, by approaching thirty hotels randomly selected from a more up-to-date list we later obtained, of which twelve replied, geographically evenly distributed in Taiwan. We arranged to interview at least two employees with managerial responsibilities in each hotel. Respondents were, however, generally reluctant to re-live what they nearly all described as the "painful" experience, as it was, they noted, a very "unpleasant" one indeed. One of the authors of this paper flew from Hong Kong to Taipei to conduct these field-investigations and in turn managed to conduct interviews with the over two dozen key stakeholders noted above, in the sites we selected that had been affected by the SARS epidemic in Taiwan, such as hotel CEOs, senior managers, and other senior employees, as well as liaising with trade union officials in the service sector over the period of the epidemic and its aftermath. Interviews were semi-structured, often in

depth and lasted over two hours each and in some cases longer.

With such a limited sampling and the other limitations of our methodology, it is only possible for us to discuss the human resource policies adopted by a specific number of different hotels, instead of explaining why varying but specific policies were adopted. However, we were assured that their experiences were “typical” over the period concerned, a view that was endorsed by the trade association and trade unions. The parallels with our similar ongoing studies of SARS in China, Hong Kong, and Singapore were sufficiently persuasive to lead us to believe that we were on the right track. Therefore, we trust that this exploratory study, *caveats not withstanding*, will meaningfully focus on the impact of SARS on the labour market and employment in the Taiwan hotel sector and provide a “snapshot” of a critical time for this key sector for jobs, in terms of what was seen as an “unprecedented” event, different from say the 1997 Asian crisis or the September 11 incident in 2001, in terms of its much heightened psychological dimension.

### **Importation of SARS in Taiwan**

As of May 22, 2003, a total of 483 probable cases had been reported in Taiwan. All probable SARS patients were hospitalized; 84 (17 percent) had been discharged, and 60 (12 percent) had died (Lee et al, 2003). Three hundred and forty-one (71 percent) cases were from Taipei City and Taipei County, the largest metropolitan region of Taiwan.

The first case in Taiwan was the result of a visit to Taiwan by a resident of Amoy Gardens in Hong Kong, the apartment complex that produced many SARS cases in Hong Kong (Lee and Warner, 2005a).<sup>1</sup> The man, surnamed Tseng (? ), flew



to Taiwan on March 26, took a train to Taichung ( ? ? ) to see his brother the following day—to carry out the traditional “sweeping of the graves”—and flew back to Hong Kong the day after (Eyton, 2003). His brother was infected with the virus, admitted to hospital on April 3 and had the dubious distinction of becoming Taiwan's first SARS-related fatality.

Up until April 21, Taiwan reported twenty-eight probable SARS cases. During this period, SARS was characterized by sporadic cases among business travellers who were cared for primarily at large academic hospitals; the secondary spread was limited to identified contacts. Initial actions by the Taiwan Department of Health included the formation of a SARS advisory committee, infection-control training, contact tracing and quarantine, and airport and border surveillance. Because of Taiwan's apparent success with SARS control, in early April, the WHO changed Taiwan's designation from an “affected area” to an “area with limited local transmission” (Eyton, 2003). Taiwan, interestingly enough, hosted an international conference on SARS on April 20 to 21 to showcase its "achievements."

However, Taiwan's relative complacency over SARS was destroyed on April 22 when Taiwan's Department of Health was notified of seven cases of SARS among health-care workers (HCW) at a large municipal hospital in Taipei, the Taipei Municipal Heping Hospital (Hospital A). Since then, SARS cases in Taiwan had increased and had been associated primarily with health-care settings. The "index patient" for the first outbreak of SARS through local transmission in Taiwan was a female fellow traveller on the train Tseng (the first SARS-related fatality in Taiwan) took to Taichung. Feeling ill, she went to Hospital A, where she was thought to have passed the virus on to several medical staff and a laundry worker. They had had multiple exposures with patients, visitors, and HCWs who were not protected

adequately in order to prevent the acquisition of SARS. The number of potentially exposed persons was estimated at around 10,000 patients and visitors and 930 staff.

On April 24, Hospital A was contained, and all patients, visitors, and staff were quarantined within the building. All 930 staff and 240 inpatients were to be confined for fourteen days. Any staff not in the hospital when the quarantine order was issued was to return to the hospital immediately to start their isolation. Inside the hospital, all recognized SARS patients were concentrated on two floors. Personal protective equipment and disinfection materials were distributed, and active surveillance was enforced for all HCWs. However, incident SARS cases in Hospital A continued to increase. The result of the quarantine order had seen several displays of personal selfishness and lack of concern about the public good that had kept newspaper opinion pages and radio call-in shows busy for a week (Eyton, 2003). April 25 saw a demonstration at the hospital that involved bottle-throwing by staff angry about being quarantined. Meanwhile, some 32 of the staff that were out of the hospital when the order was imposed refused to return and went into hiding. A nurse, hiding from the quarantine order, wrote to a newspaper complaining that "no punishment can exceed the terror cast by the shadow of SARS" and claiming that quarantine was a death sentence. While the public was still wondering about the professional ethics of a nurse who was afraid of catching an infectious disease, it was presented with the less-than-edifying behaviour of an ear, nose, and throat specialist at Hospital A, who not only dodged the quarantine but continued to work in his private clinic treating patients. Only when threatened with arrest by the police did he return to the hospital.

During April 22 to May 1, the number of probable cases in Taiwan more than tripled, from 28 to 89. Subsequent HCW clusters at eight hospitals had been

associated with exposures at Hospital A. Many of these clusters occurred when presymptomatic patients or patients with SARS symptoms attributed to other causes were discharged or transferred to other health-care facilities. SARS then extended to multiple cities, and regions of Taiwan, including several university and private hospitals. On May 3, the WHO put Taiwan in the same risk category as Beijing and Hong Kong, the epicentres of SARS (Rigger, 2004).

Six days after the earlier mentioned conference on "SARS achievements" wound up, a seriously panicking Taiwan enacted draconian measures, placing all visitors from Hong Kong, mainland China, Singapore, and the Canadian city of Toronto in compulsory ten-day quarantine, as well as imposing extensive quarantine measures locally. Home quarantine was also mandated for discharged patients and visitors who had been at Hospital A since April 9. As of May 22, a total of 137 probable cases were associated with exposures at Hospital A, including 45 (33 percent) cases among HCWs; 26 (19 percent) persons died. We now turn to the *economic* costs of the phenomenon.

### **The Economic Impact of SARS**

We first set out economic background based on our data-base, as well as the HRM data collected at first-hand by ourselves, albeit with the limitations acknowledged earlier, followed, by a discussion of their implications and last, our conclusions.

SARS, we believe, initially affects the economy by mainly reducing demand. Consumer confidence did *in fact* dramatically decline in a number of economies, leading to a significant reduction in private consumption spending. Much of the

impact stemmed from the great degree of uncertainty and apprehension generated by SARS. The *Asia Times* depicted the city as a place where people wore masks, and taxi drivers drove with all their windows open (Eyton, 2003). Taxi drivers had virtually no business. A self-employed taxi owner-cum-driver informant tried her luck at the National Palace Museum, a popular tourist attraction, two times a day but there were no visitors at all (Field interviews, May 2005). The taxi driver informed that the plight of those drivers who had to pay rent for their taxis was even worse.

Nightlife was virtually nonexistent. Nobody, unless very sick indeed, would visit a hospital. The city government doled out bleach to every household in Taipei to encourage what it called a “mass sterilization of communities” (Eyton, 2003). The government also required all passengers on the Rapid Transit railway system to wear masks, or else there would be a penalty of NT\$3,000 (just a little less than US\$100) (Field interviews, May 2005)!<sup>2</sup> Furthermore, the Taiwan government imposed a mandatory fourteen-day quarantine on all incoming travellers from nearby China, Hong Kong, Singapore, Macau, and even from as far away as Canada. It later relaxed this to let passengers who had only transited in Hong Kong avoid the quarantine, pretty much an essential measure since so many of Taiwan's connections with the outside world were routed through Hong Kong. Taiwan residents had to go home and stay there for two weeks; non-residents were put up at Taipei's Chiang Kai-shek Airport Hotel, while an army camp was also being prepared for detainees near the airport. Some lawmakers had even suggested that the government declare a state of emergency over the SARS outbreak. This did not materialize because the principal concern of the government, apart from containing SARS, was the potential economic impact of the disease (Field interviews, May 2005).

Investment was affected by reduced overall demand, heightened uncertainties,

and increased risks. SARS highlighted Taiwan's economic interdependence with China, the birthplace of the virus that had spread across Taiwan (Lee and Warner, 2005a).<sup>3</sup> Attempting to accurately assess the impact of SARS on Taiwan's economy would require knowledge of how bad the outbreak had become in China, particularly the Shanghai/Yangtze River Delta area, and Fujian and Guangdong provinces, which in recent years have become manufacturing centres—and increasingly, development centres as well—for Taiwanese companies. Unfortunately, accurate information on mainland China was not forthcoming at that time. Although Taiwan's key technology sector reported no interruptions in their chains across the Taiwan Strait, many did note that downstream customers in the United States and Europe had requested that they stock up on inventories to prepare for possible SARS-related interruptions (Taylor, 2003). And some had even been asked to move their manufacturing bases to Southeast Asia, which seemed to have contained outbreaks of SARS, or to Latin America (Field interviews, May 2005). Wang Yung-ching, chairman of the massive Formosa Group, the core businesses of which revolve around basic materials such as plastics and rubber—and which are heavily invested in hard-hit southern China, said that he expected “a severe blow” to his companies in terms of weakened orders from overseas clients who were fearful that the spread of the disease might impact Formosa's ability to fulfil the orders in a business environment that required minimal inventory to remain competitive. Furthermore, unlike the majority of foreign-invested firms operating in the PRC, Taiwanese were not only focused on manufacturing for export, but also on internal Chinese demand.

Although SARS had affected every component of aggregate demand, private consumption had particularly borne the brunt of the impact. Services involving face-to-face contact had been dealt a severe blow by the widespread fear of infection

through such interactions. In Taiwan, the major impact of SARS had cantered on the hospitality, travel and tourism industries. In large part, this was due to a dearth of business travel after foreign companies had postponed or cancelled plans for employee travel to Taiwan and other SARS-affected nations as standard corporate policy. Meanwhile, the normal flood of tourists from Japan, by far Taiwan's main source of incoming tourism, failed to materialize during the recent weeklong series of Japanese holidays. Despite cut-rate deals on luxury hotels, occupancy rates in Taipei and elsewhere were at or near rock-bottom. Meanwhile, domestic tourism, which accounted for the bulk of the industry, had melted away as Taiwanese avoid public transit and air travel. The indefinite postponement of Computex, Taiwan's most important industry convention and the third largest IT show in the world after CeBIT in Hanover and Comdex in Las Vegas, stroke a further blow to the hotel industry (BBC, May 23, 2003). Originally scheduled for early June 2003 as it had been over the years, the show's organizers postponed it, citing the unwillingness of registered exhibitors to attend. It was thus very likely that there would be closely linked implications in terms of human resources and labour markets.

Asian economies, as we have noted earlier, are heavily dependent on tourism, which accounts for as much as ten percent of GDP in many of the affected countries. Destinations such as Hong Kong, Singapore, and Taiwan are heavily dependent on the sort of service industries that demand regular and varied human contact—something many in the region were eager to avoid during the alert: these sectors are very labour-intensive (Field interviews, May 2005) (see table 1). Governments had actively encouraged tourism in their policies to create jobs.

**Table 1**

**Number of Employees by Industry, 1981-2004 (Unit: thousand persons)**

Year	Agriculture	Industries	Services
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1981	1,257	2,828	2,587
1982	1,284	2,813	2,7143
1983	1,317	2,909	2,844
1984	1,286	3,089	2,934
1985	1,297	3,088	3,044
1986	1,317	3,215	3,201
1987	1,226	3,431	3,366
1988	1,113	3,443	3,551
1989	1,066	3,476	3,717
1990	1,064	3,382	3,837
1991	1,093	3,370	3,977
1992	1,065	3,419	4,148
1993	1,005	3,418	4,323
1994	976	3,506	4,456
1995	954	3,504	4,587
1996	918	3,399	4,751
1997	878	3,502	4,795
1998	822	3,523	4,944
1999	774	3,492	5,118
2000	738	3,534	5,220
2001	706	3,377	5,299
2002	709	3,332	5,413
2003	696	3,334	5,543
2004	642	3,446	5,698

**Source:** *Annual Report on Manpower Survey 2004*,  
<http://www.stat.gov.tw/public/Attachment/53910445671.xls> (accessed April 6, 2005).

According to an analysis of the International Labour Organization (ILO), reduced travel due to new concerns over SARS, combined with the ongoing economic downturn, was set to cut up to eight million jobs in the Asian tourism sector in 2003 (Belau, 2003). What was the evidence that justified such prognostications? Airline passenger loads to Asia dropped by up to 70 percent, and overall reservations in Asia were in fact down 30 to 40 percent in 2003, according to the World Tourism Organization (*USA Today*, June 20, 2003). According to official statistics in April 2003, passenger rates had fallen by 60 percent in Hong Kong, as compared to 40 percent in Singapore and South Korea, 37 percent in Bangkok, and 36 percent in Kuala Lumpur (*Ming Pao*, May 7, 2003). The decline in tourist arrivals shocked Taiwan. Passenger arrivals totalled 866,498 in the first four months of 2003, down by 8.39 percent from the level registered in the same period in 2002, but the gap widened to 49.46 percent during the period between March 19 and May 18 following the

SARS outbreak. Some airlines, such as the Singapore Airlines and United Airways, had cancelled direct and indirect flights to Taiwan. A historical low of passengers was recorded for the Taipei airport since its operation twenty-four years ago (*The Taiwan Economic News*, April 15, 2003).

At the same time, the number of outbound departures fell to 1.86 million for the January to April period, a 23.41 percent decline as compared to 2002. About 90 percent of the tours to China were cancelled in March 2003; virtually 100 percent of individual booking of air tickets to Hong Kong were cancelled (*The Taiwan Economic News*, April 15, 2003). The number of outbound departures suffered a 60.94 percent decline during the March 19 to May 18 period (BBC, May 23, 2003). Around 80 percent of the outbound tours had been cancelled in April and May 2003; the number of visitors had dropped to less than 6,000 a day in mid-May 2003. Over 80 percent of the 100,000-strong employees of the travel industry received half or even none of their salaries. The potentially deadly disease also had taken a heavy toll on domestic travel (Field interviews, May 2005). Occupancy rates at tourist hotels across Taiwan averaged 37.44 percent in April 2003, as compared to a normal occupancy rate of over 80 percent when Japanese tourists flocked to Taiwan in April, with those in northern Taipei, Taoyuan, Hsinchu, and Miaoli regions being the most affected. Since the mass outbreak of SARS in April 2003, visitor arrivals to private-run recreational parks had dropped from 60 percent to 80 percent. Including similar establishments on outlying islands, a total of 277 tourist resorts across Taiwan recorded an average contraction of 15.26 percent, with large indoor facilities suffering the largest impact (BBC, May 23, 2003). Taiwan had lost at least US\$350 million in tourism revenue in May and June 2003 because of the SARS outbreak (BBC, May 23, 2003).

Stores, restaurants, hotels, and travel agencies temporarily reduced staff,



halted hiring, and forced workers to take unpaid leave as the SARS epidemic kept residents at home and tourists away. The official unemployment total in Taiwan lingered at 4.99 percent (as the short-term human resources impact appears not to have led those adversely affected to register as officially job-less, as most people were not fired once and for all) compared with Taiwan's all-time high of 5.17 percent recorded in 2002 (see table 2).

**Table 2**  
**Number of Unemployed Persons and Unemployment Rate, 1987-2004**

Year	Unemployed Persons (thousand persons)	Unemployment Rate (%)
1987	161	1.97
1988	139	1.69
1989	132	1.57
1990	140	1.67
1991	130	1.51
1992	132	1.51
1993	128	1.45
1994	142	1.56
1995	165	1.79
1996	242	2.60
1997	256	2.72
1998	257	2.69
1999	283	2.92
2000	293	2.99
2001	450	4.57
2002	515	5.17
2003	503	4.99
2004	454	4.44

**Sources:** *Annual Report on Manpower Survey 2004:*

[www.stat.gov.tw/public/Attachment/53910461771.xls](http://www.stat.gov.tw/public/Attachment/53910461771.xls);

and [www.stat.gov.tw/public/Attachment/53910463571.xls](http://www.stat.gov.tw/public/Attachment/53910463571.xls).

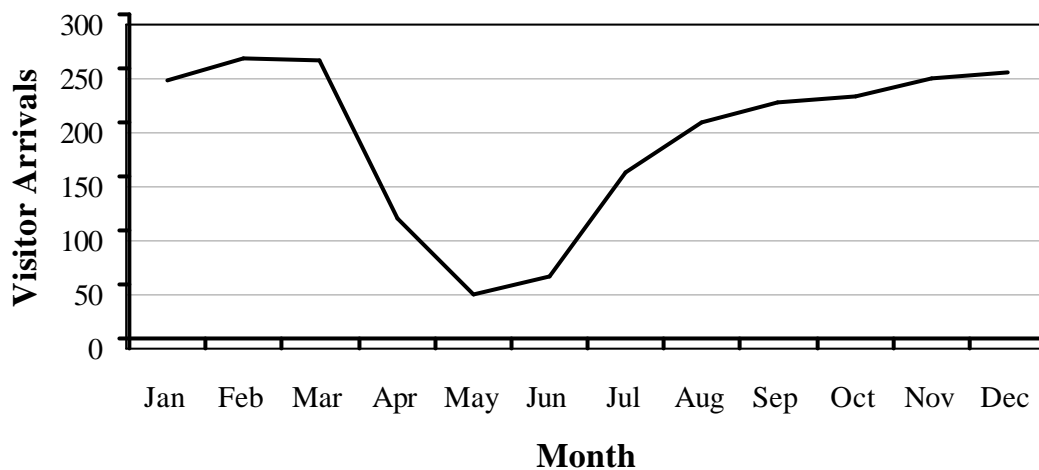
### **Discussion and Evaluation**

We now turn to a discussion and evaluation of the economic and HRM impact of SARS on Taiwan, specifically focusing on its service sector, specifically in terms of tourism and hotels. The first imported cases started in late March and April 2003, and the WHO global alert was issued on March 12, 2003. These led to a fall in the percentage change of the GDP generated in the service sector vis-à-vis via the

corresponding period in 2002.

As seen in fig. 1, the number of tourist arrivals drastically declined since the travel advice was issued by the WHO on March 12, 2003. The number of visitor arrivals from the first quarter of 2003 to the second quarter plunged from 258,128 in February to 40,256 in May 2003. Hong Kong and Singapore also experienced a broadly comparable decline in tourist numbers.

**Figure 1**  
**Visitor Arrivals, January–December 2003 (Unit: thousand persons)**



**Source:** *Monthly Bulletin of Statistics, April 2004*, National Statistics of Taiwan website, <http://www.stat.gov.tw/bs2/bulletin/xls/K-3.xls>.

There had already been a marked slowdown in the growth rate of international tourism by the 1990s, affected by the 1997 Asian financial crisis and the September 11, 2001 terrorist attacks in the United States. Despite the bombings on Indonesian island of Bali in 2002, which raised questions about security throughout Southeast Asia, recovery seemed under way as there were more than 2.9 million visitors. The uncertainties relating both to Middle East tensions and SARS, dominated expectations, and over time these were made worse by the onset of the epidemic being totally unexpected.

According to Richard Stirland, the leader of the Association of Asia-Pacific Airlines, the region's airline trade group, the impact of SARS had been unprecedented, inflicting damage on some carriers as much as five times greater than the September 11 attacks (Dennis et al, 2003). The International Air Transport Association expected the world's carriers to lose US\$10 billion in 2003 as a result of the health crisis, a generally dismal world economy and fear of flying associated with terrorism and the Iraq war. Singapore Airlines (SIA) reduced nearly 40 percent of its capacity at the peak of the epidemic, parked thirty-four aircraft, and phased out its Airbus A310-300 and A340-300 fleets ahead of schedule. It laid off 414 workers and asked others to take pay cuts. Hong Kong's Cathay Pacific Airways parked twenty-two of its eighty-two aircraft at the peak of the epidemic. Its other passenger carrier, China-specialist Dragonair, had to park nearly half its fleet (eleven of twenty-one aircraft) because both Hong Kong and China were the epicentres of the SARS outbreak. Dragonair's China network of nineteen destinations was reduced to a skeletal service (Dennis et al, 2003).

Taiwan's airline industry also reported heavy losses due to flight cancellations. The cancellation rate for flights to Hong Kong, Macau, Singapore, and Vietnam from March 17 to April 11 amounted to 16.2 percent. From late March to end of April, local airlines had cancelled 796 flights, or 22.95 percent of their usual total (*South China Morning Post*, May 1, 2003). The number of passengers from Hong Kong had dropped by 10,000 daily while the number of passengers from Macau had dropped by 3,200 per day. Most tour guides had not received any work assignment for periods of months; a tour guide interviewed had no income for three months (Field interviews, May 2003). A coach driver interviewed had no income for six months (from March to August 2003). Yet, according to the 30-year experience

coach driver, there were very few complaints as employees were said to be understanding of the fact that the employer had no business and hence no revenue to pay its employees (Field interviews, May 2003).

The director of human resources of a five-star hotel in Taipei informed that the room occupancy rate fell from a normal 85 percent to 20 percent in March 2003 when SARS hit Taiwan (Field interviews, May 2003). As the hotel association in Taiwan had not discussed the situation and did not operate in a “cartel” system, individual hotels had to think of ways to survive. The Westin Taipei was the first hotel to target the local market and introduced free twin-bed accommodation for the purchase of breakfast and dinner buffet combos at NT\$2,900 (Field interviews, May 2003). Such marketing efforts proved to be very attractive to the local Taiwanese population. The personnel manager of a five-star hotel informed that 15,000 room nights had been sold in five months from the end of March to August 2003 (Field interviews, May 2003).

By April and May 2003, virtually all hotels offered steep discounts to encourage consumer spending (and boost employment) when SARS was at its worst (*Minsheng bao*, April 26, 2003). Howard Plaza Hotel offered a night’s stay for single at around NT\$3,000 (around US\$100) including breakfast and afternoon tea (NT\$1,400 for two excluding breakfast); Grand Hyatt Taipei offered a night of twin accommodation at NT\$3,300 (original price at NT\$9,100). Other five-star hotels used gimmicks to attract customers: Grand Formosa Regent Taipei offered a night’s stay at the super deluxe room for two at NT\$4,000, including buffet breakfast, free Chinese herbal tea and Germany-imported music to enhance self-defence metabolisms against SARS; and Evergreen Laurel Hotel offered meals and spa treatment for two at NT\$9,999 (about 65 percent discount over the original price of NT\$30,000).

Some hotels offered “cut-throat” bargains. For example, Gloria Prince Hotel offered local Taiwanese a night’s stay at a super deluxe room for two at NT\$3,999, plus a transferable coupon for one night’s free accommodation; Caesar Park Taipei offered a night’s accommodation at NT\$2,500 (containing NT\$2,000 worth of vouchers for meals in the hotel, purchase of souvenirs and worldwide web service); and the Landis Ritz Hotel offered a two bedroom apartment for four at NT\$4,888 (original price of which was NT\$21,450), including breakfast and every night’s extension of stay at NT\$1,000 per person. Hotel groups that have operations in different cities offered twin-cities packages to lure customers: Caesar Park Taipei and Caesar Park Hotel Kenting (in the north and south of Taiwan, respectively) collectively offered promotional packages that ranged from NT\$999 to NT\$29,999 (including airfare, presidential suite, all meals, day trips, and ecotours).

Some hotels offered low rates through packages put together with airlines (Field interviews, May 2003). For example, the Grand Hotel at Taipei cooperated with a local airline to offer Taiwanese attractive hotel plus airfare packages that ranged from NT\$3,088 to NT\$4,900; while Grand Hotel Kaohsiung in the south offered similar packages for four people at a price of around NT\$10,000 (Dennis et al, 2003). The Executive Yuan of Taipei called an emergency meeting on April 7 to discuss methods for helping Taiwan's tourism sector to tide over financial difficulties triggered by the outbreak of SARS (BBC, April 7, 2003). The emergency meeting, presided over by the minister of transport and communications—attended by officials from the Tourism Bureau, as well as officials from other cabinet-level agencies, including the Council for Economic Planning and Development, the Ministry of Finance, and the Council of Labour Affairs—was aimed at working out expedient and contingency measures to render a helping hand to the domestic tourism industry,

particularly travel agencies, at the time when SARS was scaring tourists away from mainland China, which have been a major source of business for Taiwan travel agencies over the past few years. A rescue plan was announced on May 1 to bail out its faltering airline and travel industries. A tax cut or exemption was being considered for some industries (*Zhongguo shibao*, April 15, 2003). Vice chairwoman of the Council for Economic Planning and Development remarked that the Taiwan government had already reduced fees for local airlines and that would "cost the government almost NT\$2 billion in lost revenue" (Dennis et al, 2003). The finance committee of the Legislative Yuan also approved a proposal to stop local banks from cutting loans for industries in need of short-term financing during the SARS outbreak (Dennis et al, 2003).

The CEO of an Internet employment agency reflected that SARS impacted hardest on the tourism industry, the aviation industry, and the wholesale and retail businesses (in that order). Labour demand for the tourism industry in the short-term was worst hit: the number of vacancies they recorded fell from 8.63 percent in February to 6.32 percent in late March when SARS broke out, to a further 5.82 percent in mid April—a 30 percent drop in one and a half month's time (*Pacific News Taiwan*, April 25, 2003). Yet, the aviation industry and the wholesale and retail sector, which are more capital intensive, could endure the temporary economic setback and avoided massive retrenchment.<sup>1</sup> This could have accounted for the moderate fall in the overall demand for labour in the service sector's industries, with the biggest drop in the number of employees in the hotel and hospitality industry. It was natural that all hotels in Taiwan resorted to the tactic of frozen recruitment during the period of SARS. One personnel manager remarked that even the interns<sup>4</sup> were sent back to the

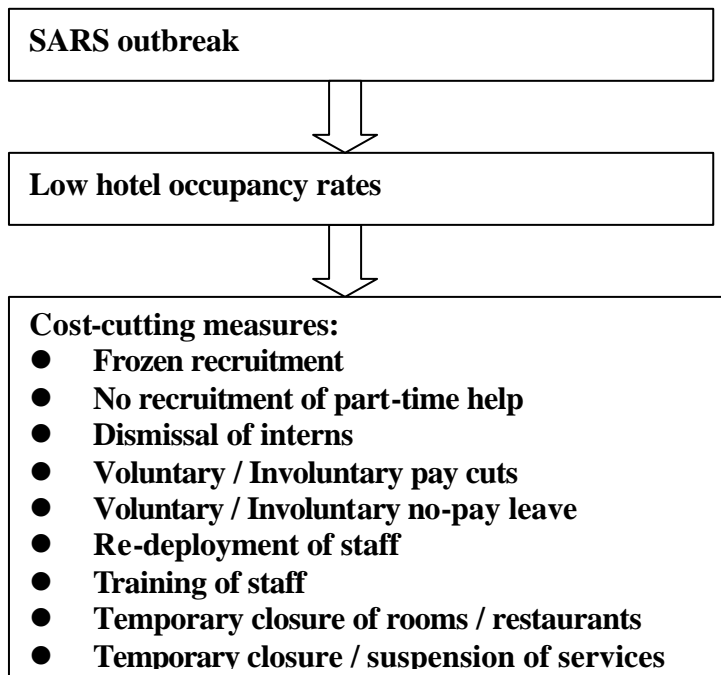
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<sup>1</sup> Ibid.

universities; part-time workers, like chefs and service staff, normally recruited for big functions such as wedding banquets, were no longer required (Field interviews, May 2005).

To survive in such turbulent environments, hotels in Taiwan resorted to various HRM measures to cut costs. We now go on to discuss these HRM implications, of changing labour demand and labour supply consequences, as noted above (see fig. 2). Compared with our earlier study in Singapore (Lee and Warner , 2005b) and Hong Kong (Lee and Warner , 2005a) on the same subject, Taiwan shares a labour market known for its flexibility with Hong Kong, as well as a paternalistic organizational culture. Singapore's labour market, on the other hand, was more directly affected by government intervention.

**Figure 2**  
**Cost-cutting HRM Measures Adopted by the Taiwan Hotel Industry**



In order to cut costs and sharpen competitiveness, job-sharing was common in the businesses affected. An employee of a travel agency informed that even though employees were on duty on a rotational basis, not many of his colleagues thought of changing jobs because they were confident that the crisis would someday be over (Field interviews, May 2005); some younger colleagues made use of the opportunity to upgrade themselves by taking professional examinations. On the other hand, an accountant of a travel agency contemplated looking for a part-time job at convenient stores as a monthly salary of NT\$15,000 (around US\$500) that resulted from her half-salaried employment was inadequate. To help relieve the pain, the Taiwan government embarked on a series of retraining initiatives in tourism, hotel and leisure management. The employer received a possible subsidy for the training costs to a maximum of 80 percent, capped at NT\$500,000 (*Taiwan ribao*, April 28, 2003).

At the organizational level, the HRM consequences were noteworthy although not unduly dire, as our questionnaires and on-site interviews revealed (see table 3).

**Table 3**  
**Human Resources Responses of Major Hotels in Taiwan**

Hotel A in Taipei	All 744 staff received training.
Hotel B in Taipei	All 700 employees took involuntary no-pay leave of 12 days; all staff received training on the wearing of masks to prevent SARS.
Hotel C in Taipei	Annual leaves were cleared; 120 out of 450 staff were re-deployed; One out of 8 restaurants was closed.
Hotel D in Taipei	All part-time employees were laid off for 3 months; other 333 staff took 2 days no-pay leave per month for 4 months; all staff received training on the nature of SARS and its prevention.
Hotel E in Taipei	All 228 employees took involuntary no-pay leave that ranged from 4 days to 10 days from April to July 2003 (4 days in April, 6 days in May, 10 days in June, 6 days in July).



Hotel F in Taipei	Hotel was closed for 3 months; all 200 staff were on no-pay leave.
Hotel G in Taichung	All 200 employees were required to take 1 day no-pay leave per week, and 10% pay cut.
Hotel H in Yilan	10% of part-time workers were laid off for 2 months; all other hotel operators in Yilan met to discuss pay cuts, but their operator did not cut staff's salary.
Hotel I in Yilan	All 110 staff were on no-pay leave of 4 days a week for 2 months; 50% of staff had resigned.
Hotel J in Kaohsiung	All 325 employees took involuntary no-pay leave of 3 days a month from May to August 2003.
Hotel K in Hualien	All 120 employees were on no-pay leave for 2 to 3 days a month for 3 months.
Hotel L in Hualien	All 228 employees were on 2 days no-pay leave in May.

**Sources:** Self-administered questionnaires and field interviews, 2005.

Part-time workers were the usual vulnerable group as most hotels temporarily laid-off all or part of their part-time workers when SARS hit the hotel business. At the height of the outbreak, Hotel F where one group of tourists from Hong Kong were kept for ten days' quarantine because a six-year-old child had a fever, had actually closed down for several months, and all employees were on no-pay leave. Most hotel employees were required to take an average of two to four days' no-pay leave for up to four months in April to August 2003 (Field survey, April 2005). With certain exceptions, which we shall shortly see, it seemed that the smaller the hotel in Taipei (the worst affected city in Taiwan) in terms of the number of employees, the more drastic the human resources measures. For example, employees of the biggest hotel in our sample (Hotel A that had 744 employees) took no other action other than organizing training courses; in other bigger hotels in our survey (Hotels B and D that had 700 and 333 employees respectively) employees were required to take about twelve and eight days' no-pay leave, while a 228-employee hotel (Hotel E) made them

take four to ten days of no-pay leave *per month* from April to July, peaked in June 2003. In other parts of Taiwan, a relatively small hotel of 110 employees in Yilan (Hotel I) made its staff took no-pay leave of four days *a week* for two months. Another 200-employee hotel (Hotel G) introduced a ten percent pay cut on top of the no-pay leave scheme of one day *per week*. Training on the nature of SARS and its preventive measures were held in few hotels as one HR manager expressed that “people were too afraid of SARS to hold public meetings.” (Field interviews, May 2005).

Most HR managers empathized with the income loss suffered by their employees but they opined that employees expressed a sense of helplessness and some were able to understand and accept the consequences that were brought about by the decline of business as they actually saw the gloomy situation. As one HR manager, who declined to be named had succinctly put it, “No guests, no business and no income. The only way to survive, both for the hotel and the employee, were to cut down the expenses... It was no good to complain, as everyone knew the situation.” (Field interviews, May 2005).

Yet, there were exceptions. Fifty percent of the employees in Hotel I in Yilan protested against the policy of four days' no-pay leave per week for two months, and resigned (Field survey, April 2005).<sup>2</sup> On the other hand, the customer services manager of a relatively small 41-employee Spring Resort (Hotel H) informed that their employees were not requested to take no-pay leave or pay cut, even though other hotel operators of the district had come together to discuss collective measures to be taken, because their CEO was benevolent. Their hotel operator was of the view that the SARS crisis would not last and saw the decision of not introducing pay cuts as

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<sup>2</sup> Field survey, April 2005.

some kind of employment benefits. Thus, according to this respondent, employees in the resort did not suffer any loss of income because all the shock was absorbed by the boss (Field survey, April 2005).

.<sup>3</sup> Income was drastically reduced but expenditure was not lessened by the mere ten percent layoffs of the part-time employees for two months.

There were also rare cases of no retrenchment, no no-pay leave and no pay cuts in five-star hotels (Hotel A and Hotel C). With access to Hotel C, we focus our discussion on the coping strategies adopted by this particular five-star hotel. According to the director of human resources, the hotel took several measures to cope with the situation as the room occupancy rate fell drastically from the normal 85 percent to 20 percent (Field interviews, May 2005).

.<sup>4</sup> First, at the beginning of SARS, staff was required to clear their annual leave; about 2,000 days of annual leave were taken; second, one Cantonese restaurant was closed. The redundant staff, twenty-two altogether, were absorbed by the remaining nine restaurants. The HR director confided that such a tactic of re-deployment was not very effective in cutting cost as labour cost amounted to 25 percent to 30 percent of total hotel revenue. The “no retrenchment” policy reflected, to a certain extent, the influence of national culture. The hotel, though a franchise of a U.S.-based international hotel group, was managed by a Korean general manager of the group, a “family person” as described by the HR director. The Korean general manager was well aware of the fact that each “associate” (typically U.S. terminology for “employee”) had a family to support and any retrenchment decision would

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<sup>3</sup> Field survey, April 2005.

<sup>4</sup> Field interviews, May 2005.

adversely affect a large number of families.<sup>5</sup>

Hence the hotel came up with a promotional package in collaboration with a credit card company. About one-third of its work force received two days' training before being re-deployed to the selling of a hotel-credit card package. Every new card applicant would get some benefits on dining at the hotel. The hotel could receive a commission of NT\$2,500, equivalent of a night's room revenue, from each new credit card issued by the credit card company. The 126-strong sales force was drawn from various departments including the front office, house keeping, and reservations. In this way, all employees could keep their monthly payroll.

As the promotional packages aiming at local Taiwanese became very popular, the room occupancy rate rocketed from 20 percent to 95 percent in the first two months of its introduction (Field interviews, May 2005). With one-third of its regular employees re-deployed to selling credit cards, the senior management staff from various departments such as finance, human resources, and engineering had to help with the increase in demand for service staff. The senior managerial staff was required, on top of their normal duties, to collect used dishes from tables at the buffet restaurant, starting from 7 o'clock in the morning until the busy breakfast hours were over; as well as during lunch and dinner time. These senior staff could only leave the hotel at around 8 or 9 o'clock in the evenings. Even the general manager and the director of human resources served at the reservation desk so that the hotel could "survive as a team." (Field interviews, May 2005). Thus, it seems that the senior staff was victimized as they worked for longer hours, heavier and more menial workload

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<sup>5</sup> Such organizational culture of "paternalistic benevolence" was also reflected by the practices of annual staff outing, both local and overseas, sponsored by the Welfare Committee of the hotel, funded by a 5 percent monthly contribution from the employees and five percent of the total revenue monthly revenue of the hotel; year-end party with lotteries and prizes; and hotel gift vouchers for employees to dine with their families. Field interviews, May 2005.

but got only regular salaries.

According to the HR director, there were pros and cons in the arrangements. On the one hand, it provided excellent training to the other “associates” as they were “inspired” by the effective managerial skills, and became “closer” to the senior staff. (Field interviews, May 2005). On the other hand, it sowed the seeds for complaints from managerial staff, and serious complaints were raised when the hotel contemplated introducing involuntary no-pay leave (three days a month for managers, five days for directors, and seven days for the general manager) in July and August 2003 when the number of local visitors dwindled as a result of the cut-throat competition created by different hotel packages, seeing no end to the SARS episode.

To make matters worse, complaints were also raised by many associates who had been re-deployed to the sales work force selling credit cards (Field interviews, May 2005). Hotel management was puzzled by the act of complaint as they perceived that the sales staff had actually higher salary because they received a commission of NT\$500 per new credit card application, and less workload when compared to their long hours helping in the buffet restaurant. The HR director informed that most sales staff could reach the monthly target of 25 credit card applications early in the month as some could sell up to five credit card applications per day. However, the re-deployed staff found it a “condescending” experience meeting strangers and “begging” for credit card applications (Field interviews, May 2005). The difference in perception suggested a breakdown in communication between staff and management. What seemed to be a win-win approach had a price to pay. Some staff actually complained to the Labour Bureau (Field interviews, May 2005)<sup>5</sup> which, according to the HR director, was very “protective” of the workers. The Labour Bureau issued a memo to the hotel and held a meeting with the hotel management to ask for evidence

of communication and employee consent to re-deployment.

As a matter of fact, as informed by the HR director, heads of different departments had been asked to draw up a list of staff suitable for marketing. It was later discovered that the list was drawn up by involving “associates” who had gone on leave, and they were then asked to report duty at the marketing department upon resumption of work. Although the re-deployed staff had signed forms of consent and did not express contempt during the two-day training, they found the job very “condescending” when they were in actual operation on the streets, and wanted to resume their normal duties, but failed. In the end, the case was closed by the Labour Bureau, but was referred to the Labour Inspection Unit for monitoring of the hotel for another month. The HR director reflected upon the experience and lamented that better communication with the “associates” was essential, as instances and rumours of pay cuts and no-pay leave prevalent in the hotel industry led to a “breach of trust” in labour relations (Field interviews, May 2005).

### **Conclusion**

Although we regard our findings as tentative, we can conclude that the impact of SARS on the Taiwan economy and specifically on human resources in the service sector may be seen as a matter of concern in the time period in question. Both the quantitative, as well as the qualitative, data we have gathered, points in this direction, although we must be cautious to over-generalize. We have placed many caveats regarding our study in the body of the paper and we are aware of the limitations of our investigation.

But the Taiwanese economy was highly resilient and soon able to come up

with new promotions. Learning that Taiwan was removed from the WHO travel advisory list on June 17, the Tourism Bureau organized a three-day festival to kick off an international campaign to lure back foreign visitors (*The China Post*, June 18, 2003).<sup>6</sup> The Taiwanese economy, given its market-oriented flexibility fortunately recovered fairly quickly. The aviation and tourism sectors did in fact soon see a tangible rebound in the wake of the SARS impact.

As the economy revived by mid-2003 (*Taipei Times*, July 13, 2003),<sup>7</sup> it was thought that recovery in service-sector jobs above all, in industries like hotels and hospitality, both in low- as well as high-value added products and services would compensate for earlier job losses. The SARS epidemic of early and mid-2003 has no doubt been a sharp reminder to Hong Kong, Singapore, and Taiwan, all *Nanyang* city-state economies, of their economic vulnerability and their reliance on tourism both to generate revenue and jobs. The Tourism Bureau Director remarked that Taiwan had "lost at least US\$350 million in tourism revenue" in May and June 2003 because of the SARS outbreak (*South China Morning Post*, July 7, 2003). The Chinese mainland case was somewhat different, given the lower weighting of the service sector in that economy. Today, there is less of a major "crisis of confidence" but spirits remain low as the economy recovers, with the labour-market still remaining "fragile".

Economic growth rates of the Taiwan economy surged by 71.5 percent from 3.33 percent in 2003 to 5.71 percent in 2004, while GDP per capita rose from US\$12,715 in 2003 to US\$13,529 in 2004 (Directorate-General of Budget, Accounting, and Statistics, March 29, 2005). Tourism helped the economy recover; total number of visitor arrivals jumped from 2.24 million in 2003 to 2.95 million in 2004 (see table 6). Total officially registered employment rose by 22,000, from 957,000 in 2003 to 979,000 in 2004; total officially registered unemployment dropped

from 503,000 in 2003 to 454,000 in 2004; the government's jobless rate also fell from 4.99 percent to 4.44 percent from 2003 to 2004 (see table 4) (Directorate-General of Budget, Accounting, and Statistics, March 29, 2005). The average stock market index jumped from 5,162 in 2003 to 6,034 in 2004; the annual changes of tax revenue also surged from 2.2 percent in 2003 to 10.5 percent 2004.

**Table 4**  
**Economic and Social Indicators Comparing 2003 and 2004**

Indicators	2003	2004
Economic growth rate (%)	3.33	5.71
GDP (100 million, US\$)	2,860	3,054
Per capita GDP		
US\$	12,715	13,529
NT\$	437,638	452,168
Employed persons (thousand persons)	957	979
Unemployed persons (thousand persons)	503	454
Unemployment rate (%)	4.99	4.44
Annual rate of inbound departure of nationals (%)	-24.5	31.2
Annual rate of outbound departure of nationals (%)	-19.9	31.4
Annual rate of visitors to the principal scenic spots (%)	15.7	15.1
Annual change of tax revenue (%)	2.2	10.5
Tax revenue / GDP (%)	12.7	13.6
Stock price index (average)	5,162	6,034

**Source:** Directorate-General of Budget, Accounting, and Statistics, Executive Yuan, Republic of China, March 29, 2005. <http://eng.dgbas.gov.tw/public/Data/54416455371.xls>

Yet a note of caution must be signalled here: - it is clear that if the crisis brought about relatively discernable economic losses at the time, *there were also, for example, clearly relatively negative direct consequences for many employees, particularly part-time workers, in the wide range of firms affected at the time.* It is also clear that there was observable damage to “trust” in labour-management relations, as had been seen in both the Hong Kong and Singapore experiences of SARS, some of it very visible but in some other cases less so and more subtle in its impact. As can be seen from the evidence presented, the HRM evidence is mixed. Many employees in our Taiwan study, for example, thought that they had been made to lose “face”. Even managers in some



instances said they felt that their treatment had been “cynical”. Perceptions such as the above may have indirect consequences in terms of human resource management implications that in their turn do not help to reinforce a positive workplace climate and their ultimate impact may be hard to predict.

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## Endnotes

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<sup>1</sup> Amoy Gardens was the second major epicenter in Hong Kong, accounting for over three hundred cases. The source has been attributed to a patient with renal failure receiving haemodialysis at the Prince of Wales Hospital who stayed with his brother at Amoy Gardens. He had diarrhea, and infection may have spread to other residents by a leaking sewage-drain, allowing an aerosol of virus-containing material to escape into the narrow light-well between the buildings and spread in rising air-currents. Sewage had also back-flowed into bathroom floor drains in a number of apartments. Spread to people in nearby building also occurred, probably by person-to-person contact and contamination of public installations.

<sup>2</sup> The price of masks had risen to a few hundred New Taiwan dollars each and became a commodity of speculation.

<sup>3</sup> The first fatal cases of “atypical pneumonia,” as it was first called, probably occurred in Guangdong province in southern China in November 2002. The term “SARS” appears to have been first used for a patient in Hanoi who was visiting Vietnam, became ill on February 26, 2003, and was evacuated to Hong Kong, where he died on March 12. This first case in Hanoi had stayed at a hotel, in Kowloon, Hong Kong, at the same time as a 64-year-old doctor who had been earlier treating pneumonia cases in southern China. This doctor stayed at the Metropole Hotel and was admitted to hospital on February 22. He died from “respiratory failure” soon afterwards. His was the first known case of SARS in Hong Kong and appears to have been the source of infection for most, if not all

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cases in Hong Kong, as well as possibly for the cohorts in Singapore, Taiwan, Thailand, Vietnam, as well as in Canada, a number of European countries, such as Germany and Ireland, and the United States. See Lee and Warner, “Epidemics, Labour-Markets, and Unemployment” (cited in note 10 above).

<sup>4</sup> Taiwan hotels have been sponsoring the internship programs of the hospitality schools of Taiwan universities for over ten years. The prospective degree-holders will serve two six-month period of internship during their two-year study, earning about HK\$4,500 (around US\$600) per month, about 65 percent of the salary of regular staff.

<sup>5</sup> Industry-wide hotel unions were not popular among hotel employees, although all but one Taiwan government-owned hotel has a trade union affiliated to the hotel; accordingly, hotel employees resorted to seeking help from the state.

<sup>6</sup> Altogether NT\$2 million worth of dinner coupons were distributed at the festival, 10,000 cans of beer were provided by the Taiwan Tobacco and Liquor Company, while 200 discounted airline tickets were offered in a raffle draw. The government had spent NT\$300 million (around US\$8.7 million) on promotional activities targeting visitors from Hong Kong, Japan, Europe, the United States, New Zealand, Australia, and other South East Asian countries, including Singapore and Malaysia. The government and private tourist agencies organized a delegation to five major cities in Japan, including Tokyo and Osaka, to exchange views with travel agents on how to promote tourism in Taiwan. The Tourism Bureau had invited 3,000

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travel agents from the targeted countries to “experience safe travel to Taiwan.” Lottery draws were held in Japan to offer 1,000 Japanese the chances to visit Taiwan for free; cheap sightseeing packages were also offered to 5,000 Japanese. A HK\$999 (around US\$128) three-day, two-night package was offered for Hong Kong people, while cheap tours were also available for Southeast Asians. Starting from July 1, foreign passengers arriving at Taipei were given a half-day city tour free of charge; an overnight stay cost only 49 Euro dollars. The Taipei Food Festival took place from August to September 2003, and the Taiwan Visitors Association sent delegates to a series of meetings abroad to promote travel to Taiwan.

<sup>7</sup> The Council for Economic Planning and Development officials said that the aviation industry has shown an obvious rebound, with the cancellation rate on international flights dropping to 20 percent in the first week of July 2003, compared with a high of 50 percent in early June. Although the number of passengers on international flights in the first week of July was down 33 percent compared with the same time last year, it marked an improvement over May, when the figure was down 82 percent over the same period last year. Although the number of passengers on domestic flights in May was down 55 percent compared with the same time last year, it was up four percent in the first week of July over the previous year's figure. Meanwhile, the entertainment and tourism sectors had also seen a rebound. Ticket sales at Taipei theatres in June were up 57 percent over May, while the average occupancy rate at hotels in the second part of June was 51 percent as compared to 22 percent in May. At Taiwan's various scenic spots, the number of tourists decreased by 62 percent in May, but had shown a growth of 24 percent in June.

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The council officials reported that the number of travel agencies had remained steady, while the number of staff had continued to decrease, though the level of decrease had slowed down.