Telecommuting in Singapore:
Current Status and a Comparison with Other Countries

Lai Lai Tung, Nanyang Technological University
Shailendra Palvia, Long Island University, CW Post Campus
Lee Chia Huei, Nanyang Technological University
Loy Ye-Meng, Nanyang Technological University
Teng Min Yee, Nanyang Technological University

Telecommuting is a possible solution to several problems faced by employees in large congested cities around the world. These problems include time wasted in commuting, environmental pollution caused by gas-guzzling automobiles, rising costs of day care for children, and deterioration in the quality of family life. With excellent IT infrastructure in place and a high number of computer-literate workers, Singapore is well suited to the use of telecommuting technology. This empirical study documents several advantages (motivators) and drawbacks of telecommuting for computer professionals and their employers in the Singapore environment. The study goes on to rank these motivators and drawbacks in order of importance as perceived by these respondents. Finally, results of this study are compared with those of similar studies conducted in other countries.

Telecommuting refers to a form of work arrangement involving the use of computer and telecommunication technologies that allows employees to substitute telecommunication for physical transportation, thereby permitting the job to be performed at a remote work site (Yap and Tng, 1990). Telecommuters can live in their preferred location and substitute electronic communication for physical travel (Stanworth and Stanworth, 1991). With advanced information technology available in Singapore, many jobs dealing with the manipulating of information can be done at home.

In addition to these benefits, a number of socio-economic factors are forcing business organizations to evaluate new technologies and consider using alternative ways of carrying out their business activities such as the implementation of telecommuting.

Firstly, the globalization of economic markets means that competition is intensified and businesses have to be even more productive in order to stay competitive. Telecommuting is widely perceived as a way to reduce organizational overhead and improve individual and organizational productivity.

Secondly, evolving information technologies have also brought about increased interest in telecommuting. The growth in telecommunication and computing technologies motivates telecommuting. As the cost of personal computers (PCs) continues to decline, they become enormously popular in the business setting. The PCs are connected to the company’s main computer via telephone lines and they enable office and remote workers to send messages or transmit work back and forth and use file and database servers, printers and other peripheral devices. Evolving desktop teleconferencing and electronic mail systems, coupled with continually upgraded computer hardware and software, local area digital technology and mobile and wireless systems, are also contributing to the growth and development of the telecommuting
concept (Cross and Raizman, 1986). In addition, client/server architecture and software, such as Windows for workgroups, Windows NT and Lotus Notes, encourages cooperation among employees and information sharing.

Thirdly, changes in management style have also increased the attractiveness of telecommuting. Information-based organizations find that by decentralising managerial authority and responsibility, their staff can make faster and better decisions. Because of decentralisation, the flow of information from managers to operating personnel has become increasingly important to an organization (Cross and Raizman, 1986).

Finally, as part of the business process reengineering movement and with the trend of networked organizations and autonomous teams, team members may not be working at the corporate office, but at different locations, or even at home. Information technologies enhance the work of such dispersed teams, including telecommuters.

**Literature Review**

Several studies have surveyed the status of telecommuting in Singapore.

Yap and Tng (1990) surveyed the attitudes of female computer professionals in Singapore toward telecommuting. Of the 459 respondents, 73% were in favour of telecommuting. Most would prefer to work at home one to 3 days a week and at the office on the other days, instead of working at home full-time. They would telecommute only in times of need, such as when they have young children. They were concerned with work and interaction-related problems that might arise from telecommuting. The findings suggest that telecommuting will be of particular interest to employees who are married, those with a high proportion of work that can be done at home, those who find their journey to work frustrating, and those with supervisors and coworkers who are supportive of telecommuting. Respondents who are single and have a study room at home are also likely to favor telecommuting.

A subsequent survey of data processing managers was done by Yap and Lim in 1990. Only twenty-one percent of the managers indicated that they were “likely” or “very likely” to adopt telecommuting as an alternative work arrangement for computer professionals under their supervision. The computer managers were particularly concerned about security issues, legal issues, unauthorized access to reference materials and files in the office, and unnecessary communication with users, colleagues and clients. Only 4% said that they intended to implement a pilot telecommuting programme within the next year.

Recently, Lam et. al (1995) surveyed 868 Singapore establishments employing 10 or more employees. Results show that 12% of the responding organizations practise some form of teleworking with some having more than one teleworking arrangement. Increased productivity and reduced office space are viewed as the main benefits of teleworking, while main perceived problems include data security and provision of adequate supervision.

**Motivators and Drawbacks of Telecommuting in Singapore**

From the literature, the following factors were found to be the primary motivators and drawbacks of telecommuting.

**Motivators for Employees**

Telecommuters can save on expenses associated with having to travel to work. *Cost reduction* for a telecommuter would be in the areas of travel (gasoline and vehicle depreciation), office clothing (fewer occasions to dress up formally), food (more economical to eat at home), day care for children and the opportunity cost of saved travel time (Kelly & Gordon, 1986, Ford & Butty, 1992).

In addition, the telecommuter no longer faces rush-hour traffic, crowded rail or road routes, or waste time travelling (Ford & Butty, 1992), hence reducing his level of stress and exposure to pollution.

Added time *flexibility* is yet another attractive feature of telecommuting. A telecommuter can do his office work whenever he wants (Kinsman, 1987) as long as the work is completed on time and to an acceptable standard (Stanworth and Stanworth, 1991). A telecommuter’s ability to modify working schedules give rise to another benefit—balancing work and home life (Stanworth and Stanworth, 1991). This feature appeals particularly to working mothers (and fathers as well) as it enables them to organize their dual role as working mothers - bringing up a family and meeting work deadlines at the same time (Huws et. al, 1990). Social appointments such as dentists’ appointments or shopping or time commitments like looking after sick children or school holidays can be arranged more easily.

A high level of *job satisfaction* can be derived from the time flexibility in telecommuting as well according to Huws et. al (1990). Compared to traditional work, the telecommuting environment was felt to be very much more relaxed (Kinsman, 1987) in spite of given deadlines.

Finally, female telecommuters can *avoid a career gap* after statutory maternity leave (Stanworth and Stanworth, 1991) and can keep up-to-date with skills already acquired. It gives them a chance to remain on the career ladder of the organisation—maintaining and then developing their careers at the speed that suits them (Kinsman, 1987). At the same time, it enables women to earn income while providing their own child care.

**Drawbacks for Employees**

Day-to-day loneliness is a feature of telecommuting (Stanworth and Stanworth, 1991). Conversations during coffee breaks or at after-hours gatherings give people a chance to learn about what is going on within the organisation. The