

## Chapter 3 Productivity Movement in Singapore

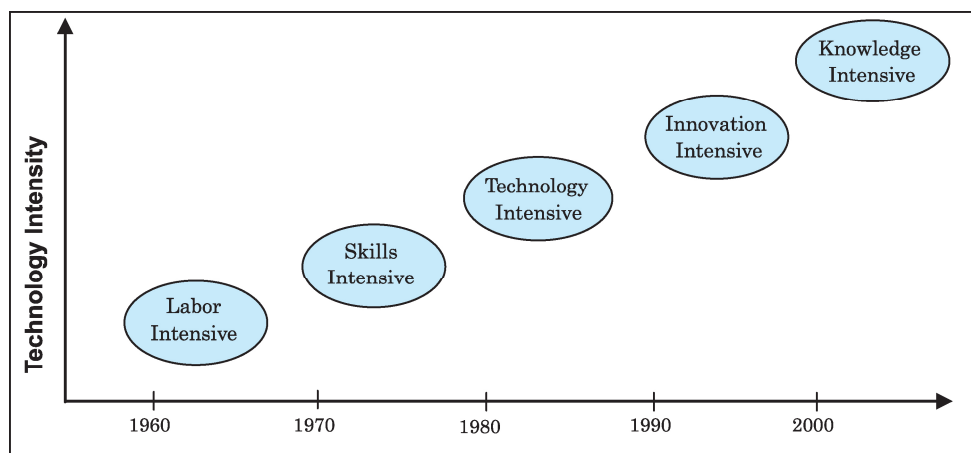
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### 3-1. Introduction

Singapore is a small citystate with total population of about five million.<sup>3</sup> It is a multicultural country, with ethnic composition of Chinese 74%, Malay 13%, Indians and others 13%.<sup>4</sup> Singapore faced severe racial, religious, and political turmoil, intensified by its 1965 separation from Malaysia (Lee, 2000). With no natural resources, the only significant resource Singapore had was (and is) manpower. The government has placed its highest priority on human resource development and made proactive efforts to enhance labor productivity and global competitiveness. Since the 1960s, the Singaporean economy has undergone significant development. The country has grown from its traditional role as a regional port and distribution center in the 1960s to an international manufacturing and knowledge-intensive technical services center (Lee et al., 2008). Its per capita income grew from USD533 in 1965 to USD37,220 in 2009.<sup>5</sup>

Singapore's industrial development can be divided into five phases: labor-intensive in the 1960s, skills-intensive in the 1970s, technology-intensive in the 1980s, innovation-intensive in the 1990s, and knowledge-intensive in the first decade of the 21<sup>st</sup> century as can be seen in the figure below.

**Figure 3-1. Singapore's Industrial Development Phases**



Source: Chan Lee Mun (2008), Figure 6.2.

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<sup>3</sup> According to the Department of Statistics, Singapore, total population was 5,076,700 in 2010. Total population comprises Singapore residents (i.e., Singapore citizens and permanent residents) and non-residents.

<sup>4</sup> Figures are the ethnic composition of the Singapore residents as of June 2010. Based on the Department of Statistics, Singapore.

<sup>5</sup> Based on the World Development Indicators, World Bank. Gross National Income (GNI) per capita.

It is widely held that the national productivity drive made an important contribution to this Singaporean miracle. In 1981, the Singaporean government launched the Productivity Movement at all levels of the economy to sharpen the country's competitive edge. The movement was initiated domestically, with strong leadership of the then Prime Minister Lee Kuan Yew. After meeting with Mr. Kohei Goshi, the then Chairman of the Japan Productivity Center (JPC), Lee Kuan Yew immediately requested the Japanese government to transfer Japan's productivity improvement know-how. To support this national initiative, the Japan International Cooperation Agency (JICA) implemented the Productivity Development Project (PDP) during 1983–1990. The PDP was the first project that JICA provided comprehensive technical cooperation for productivity improvement. Singapore became quite successful in internalizing, scaling up, and institutionalizing the Productivity Movement, and the country now offers technical cooperation in this area to developing countries. Even now, productivity continues to be high on the national agenda. Singapore is among the top three most competitive countries in the world (World Economic Forum, 2010) and is the best business environment worldwide (World Bank and IFC, 2010).

The Singaporean experience demonstrates the importance of six common factors for a successful national movement (discussed in Chapter 1). Moreover, Singapore presents a case of a government-led movement—unlike Japan where the private-sector-led *kaizen* movement took place thanks to strong private sector dynamism. Thus, its experience should serve as a useful reference for the governments of developing countries striving to enhance private sector capability by transforming the popular mindset.

This chapter is organized as follows. First, it will review the history of the Productivity Movement and its three-stage evolution. It will then explain the institutional framework for the Productivity Movement, giving attention to the channels of scaling-up and the role of key agencies involved. It will also discuss how the JICA project (PDP) supported Singapore's productivity improvement, including the country's process of graduating to become a donor in this area. Finally, it will explain the most recent national drive to boost skills and enterprise productivity.

The analysis will give special attention to the following factors that contributed to the success of Singapore's productivity movement.

- High-level political commitment, including strong leadership by Prime Minister Lee Kuan Yew himself
- Evolution of national productivity organizations as the core agencies charged with productivity development
- Institutional mechanisms involving all parties concerned, particularly tripartite cooperation among the government, industry, and labor unions

- A massive campaign aimed at awareness raising, and subsequent company-based, practical consultancy to translate the awareness into specific actions for productivity improvement
- Development of management consultancy capability in the private sector, by designing systems and incentives to mobilize those trained under the JICA project.

## **3-2. History of the Productivity Movement**

### **3-2-1. Creation of a national productivity organization**

Singapore's interest in productivity dates back to the early days of independence. The first step was the creation of the Productivity Unit within the Economic Development Board (EDB) in 1964 and creation of the Charter for Industrial Progress in 1965. The Charter for Industrial Progress is a joint declaration by employer groups and unions to work together to increase productivity under a Productivity Code of Practice. This historic joint declaration was witnessed by the Ministers for Finance and for Labor. The Charter also proposed the establishment of the Singapore Productivity Center as a national productivity organization to promote productivity in Singapore.

In 1967, the National Productivity Center was established under the EDB. Since then, national productivity organizations have evolved with the stages of development and the needs of the Singaporean economy (Table 3-1). In 1972, the Center was upgraded to a separate agency, the National Productivity Board (NPB), and in 1981 the government launched the Productivity Movement. The movement continued for about two decades. The NPB was made the principle agency to implement this national productivity drive. Separately, the Singapore Productivity Association (SPA) was established in 1973 as an affiliated body of the NPB with the purpose of promoting active involvement of organizations and individuals in the Productivity Movement and spreading the idea of productivity and its techniques. In 1996, the NPB merged with the Singapore Institute of Standards and Industrial Research to become the Productivity Standard Board (PSB). In 2002, the PSB's productivity-related functions were transferred to the Standards, Productivity and Innovation Board (SPRING).

**Table 3-1. History of Productivity-related Organizations**

Period	Organization	Remarks
1964	Productivity Unit, Economic Development Board (EDB)	1965: Charter for Industrial Progress, Productivity Code of Practice
1967–1972	National Productivity Center - Autonomously run division under the EDB	1971: Tripartite Interim Management Committee (to prepare NPB)
1972–1995	National Productivity Board (NPB) - Statutory body, initially affiliated with Ministry of Labor and later with Ministry of Trade and Industry (MTI)	1973–present: Singapore Productivity Association (SPA)
1996–2001	Productivity Standard Board (PSB) - Statutory body, affiliated with MTI	1981–85: Awareness stage 1986–88: Action stage 1989–90s: Ownership stage
2002–present	Standards, Productivity and Innovation Board (SPRING) - Statutory body, affiliated with MTI	

### 3-2-2. Driver of Singapore’s Productivity Movement

Despite over fifteen years of efforts to enhance productivity, the leaders of Singapore felt that the country remained far behind other countries in productivity development. In 1979, Prime Minister Lee Kuan Yew was concerned: “Workers here were not as proud of or as skilled in their jobs compared to the Japanese or the Germans.”<sup>6</sup> In early 1981, Lee Kuan Yew met key Japanese employers in Singapore to discuss practices, work attitudes and productivity in Japan. Immediately, the Committee of Productivity was formed to study Japan’s productivity movement and examine the issues of productivity improvement, work attitudes, and labor management relations. In June 1981, Lee Kuan Yew met with Mr. Kohei Goshi, then JPC Chairman, and was strongly convinced of the need for a Productivity Movement. The Committee of Productivity compiled a report, which emphasized the importance of “human aspects” or mindset change, and proposed the establishment of a high-level council to review productivity efforts and outline future strategy.

Based on this proposal, in September 1981, the National Productivity Council (NPC) was established as an oversight and policy coordination body for the Productivity Movement. The NPC was chaired by the State Minister of Labor (from 1986, by the State Minister of Trade and Industry) with high-level representation from government, employer groups, unions and academia. The first action of the NPC was to launch the Productivity Movement with the NPB as the primary implementing agency.

<sup>6</sup> According to Low Choo Tuck, former Director of the Planning Division, SPRING Singapore, by the early 1980s, an increasingly tight labor market had driven up wages. Companies realized that to compete successfully, they must introduce better management systems and more importantly have good labor management relations and teamwork. Nevertheless, the state of labor-management relations then was fragile and there were many industrial disputes.

The NPB was re-structured and expanded to carry out its mission of inculcating the concept of productivity in every man, woman and child in Singapore (NPB, 1987).

In this process, the Singaporean government requested bilateral cooperation from the Japanese government for productivity improvement, and the JICA-supported PDP was implemented for seven years. A large number of Japanese experts (including those from JPC) were mobilized. As such, the Productivity Movement in Singapore was primarily a nationally driven initiative. The practices of foreign direct investment (FDI) companies operating in Singapore also served as important benchmarks for assessing Singapore's productivity level.

### **3-2-3. Concept and principles of the Productivity Movement<sup>7</sup>**

In Singapore, "Productivity Movement" refers to the commitment and active involvement by the government, employers and workers in activities to increase productivity. All industries and public sectors—regardless of the scale of these enterprises and organizations—are encouraged to participate in such activities.

According to NPB, the goal of the Productivity Movement is to improve the welfare of the Singaporeans through economic progress based on the three guiding principles.

- Improvements in productivity will increase employment in the long run.
- Government, employers and labor must work together to implement measures to improve productivity.
- Fruits of improved productivity must be distributed fairly among management, labor and consumer.

It should be noted that the basic idea on the three guiding principles was drawn from those of the JPC in 1955 (the time of its foundation).

### **3-3. Three-stage evolution of the Productivity Movement: awareness, action, and ownership<sup>8</sup>**

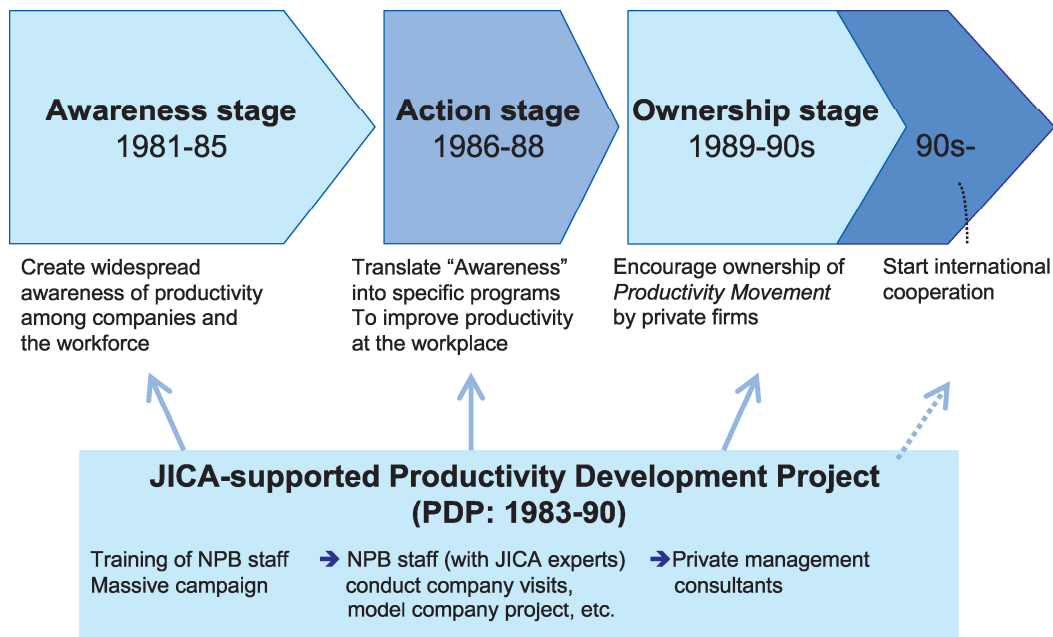
The Productivity Movement in Singapore evolved in three stages: (i) awareness (1981–85); (ii) action (1986–88); and (iii) ownership (1989–90s), as shown in Figure 3-2.

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<sup>7</sup> This section is based on the Power Point material, "Evolution of the Productivity Movement in Singapore," SPRING Singapore.

<sup>8</sup> This section is largely based on an interview with Mr. Low Hock Meng, Executive Director of the SPA and the information provided by him to the GRIPS mission on September 2, 2010. Mr. Low was one of the counterparts of JICA-supported PDP.

**Figure 3-2. Evolution of the Productivity Movement in Singapore**



Source: Elaborated by the author, based on the information provided by Mr. Lo Hock Meng, Executive Director of Singapore Productivity Association (SPA) to the GRIPS mission on Sept. 2, 2010.

Note: Reprinted from Figure 1-2.

### 3-3-1. Awareness stage

The objective of the awareness stage was to create widespread awareness of productivity among companies and the workforce. The main focus was to foster positive attitudes and to promote teamwork and recognition for companies and individuals.

More specifically, the NPB took the following measures.

- Education of the public: launch of the productivity movement, publication of productivity data, media support, and changes in schools and tertiary institutions.
- Information dissemination and training: delivering courses with emphasis on human relations, creating a library of local case studies on good management practices, maintaining a registry of courses on productivity and management.
- Strengthening company identification: payment of variable bonus, special awards for long-serving employees, house unions, sports facilities (companies given preference during peak periods).
- Promotion of labor-management joint consultation: work excellence committees and quality control circles (QCCs).
- Promotion of productivity in the public sector: productivity campaign in the public sector,

work improvement teams (WITs),<sup>9</sup> Productivity Working Committee.

- Formation of the NPC with high-level representation from the government, employer groups, unions and academia. This aimed to review productivity efforts and outline future strategy on an annual basis.

Throughout the awareness and action stages, the strong commitment and leadership of the then Prime Minister Lee Kuan Yew was critical. Massive productivity campaigns were launched at both national and company levels. November was designated as “Productivity Month,” in which Lee Kuan Yew delivered annual speeches on productivity starting in 1981 for seven consecutive years.

Moreover, the NPB made a great effort to disseminate the spirit of productivity to the public. They created a symbolic mascot, named Teamy, which was a tiny cute bee character. This Teamy Bee symbolized hard work, team work, and efficiency. Productivity campaign slogan and posters were created in 1982, around the key message “Together We Work Better.” This message was political. Productivity improvement often invites worker resistance because they fear that efficiency gains from improved productivity might lead to unemployment. Mindful of such resistance, this slogan deliberately aimed at creating a virtuous cycle such that: increased productivity will promote growth of the business and economy, which should generate more consumer demand for products; this should bring satisfaction for individuals and more work for workers; as a result, there will be welfare gains for individuals, including workers.

Unlike Japan, Singapore introduced the Productivity Movement to both the business and the public sector. This has had a remarkable impact on popular mindset change. WITs were implemented in the civil service. WITs emphasized worker involvement, participation and bottom-up management; team members worked together and focused on tackling problems facing their common work areas. The Productivity Working Committee was established in the form of a joint committee with management and labor. By the mid-1980s, a high level of awareness of productivity among the Singaporeans was achieved.

### **3-3-2. Action stage**

Then, in the mid-1980’s, the focus shifted from national promotion of productivity to company level promotion. The objective of the action stage was to translate productivity “awareness” into specific action at the workplace through a participatory program. It focused on upgrading the skills of management and workers and upgrading companies’ operational efficiency. In 1986, the total approach to productivity (TAP) concept was introduced. TAP emphasized the productive interaction

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<sup>9</sup> The WIT is a Singaporean adaptation of the Japanese-style QCC concept in the private sector. In Singapore, WITs have been implemented in the public sector, as part of civil service reform program.

of man, machines and systems at the workplace (NPB and JICA, 1990).

In 1986, NPB established a Management Guidance Center to administer various management consultancy programs for local companies (NPB and JICA, 1990). Specific programs and activities implemented under the Center include

- Model Company Project
- Management Consultancy Referral Scheme
- Associate Consultants Scheme
- Industry-based Consultancy Assistance Scheme
- Training of workforce through the Skills Development Fund (SDF)<sup>10</sup>

The “Model Company Project” was implemented jointly by the Japanese (JICA) experts and NPB counterparts and provided assistance to companies. This paved the way for on-the-job training (OJT) of NPB staff to equip them with relevant skills. Together with training sessions and workshops, and other company-related productivity improvement programs, the Japanese experts transferred skills to the NPB counterparts under the PDP. The Management Consultancy Referral Scheme and the Associate Consultants Scheme are the systems to mobilize those trained under the JICA project as qualified private management consultants. The NPB allowed private sector participation in the PDP training fellowship in Japan. Those trained became NPB Associate or Referral Consultants. A pool of over 200 associate and referral consultants was created to supplement the NPB’s efforts in reaching out to industries (NPB and JICA, 1990). Furthermore, NPB introduced the Industry-based Assistance Scheme in 1986. The scheme was designed to raise the level of productivity in key industries and assist companies on an industry-wide basis to impact productivity levels. Six priority industries were identified and targeted for assistance under the scheme. The industries included food manufacturing, restaurant, hotel, retail, textiles and garment and finance.

It is notable that under the Management Guidance Center, the NPB assisted companies, particularly small and medium enterprises (SMEs), in improving their business efficiency and productivity management. Cases of successful companies were highlighted to serve as models for the others. NPB also promoted the growth of management consultancy services for SMEs. Some 105 local companies have benefitted from assistance rendered by NPB consultants and Japanese experts, as well as the Associate and Referral Consultants (NPB and JICA, 1990).

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<sup>10</sup> SDF was established in 1978 as an employer-based funding that provides financial incentives for staff training. Currently, through SDF, employers can enjoy course fee subsidies of up to 90%, though the amount of subsidies depends on each course. All employers must pay a Skills Development Levy for all workers up to the first S\$4,500 of gross monthly remuneration at a levy rate of 0.25%, or S\$2 per worker, whichever is higher. The Central Provident Fund collects the levy on behalf of the Workforce Development Agency. (In the latter 80s, the NPB administered the SDF.) The levy collected is channeled into the SDF, which provides grants to companies that send their workers for training. (Appendix 1, “Report on Singapore Mission,” September 13, 2010, GRIPS Development Forum, Tokyo)



Besides consultancy, in-company training was emphasized to equip the workforce with relevant skills to increase productivity. The NPB teamed up with reputable companies such as Singapore Airlines (Service Quality Center), Philips Singapore (Industrial Engineering Training Center), and Seiko Instruments (OJT Project) to develop national training programs in specific areas for managers and workers.<sup>11</sup> Moreover, extensive training for upgrading workforce skills was conducted, supported by SDF. In Singapore, all employers must pay a certain share of their workers' salary to the government. The government then provides subsidies to employers, through the SDF, who invest in upgrading the skills of their employees. While the SDF was initially managed by the Ministry of Labor, from 1986 it came under the NPB's responsibility. High priority was placed on productivity-related training programs, and companies were encouraged to send their staff for training.

### 3-3-3. Ownership stage

By 1989, companies and individuals had become actively involved in the Productivity Movement. Hence, sustaining this enthusiasm became the focus of the ownership stage.<sup>12</sup> This stage is critical to self-sustain the Productivity Movement to ensure that productivity habits become part of the work ethic. Private and public organizations as well as individuals are encouraged to lead the Productivity Movement. The government launched various initiatives to promote company-level productivity improvement.

For example, NPB encouraged the private sector to lead annual productivity campaigns. Employer groups were urged to chair the Campaign Steering Committee. In 1994, the Singapore Quality Award was introduced. In 1996, the Productivity Activist Scheme was launched.

The Productivity Activist Scheme aimed to develop a core of productivity "champions" in companies. Key activists from the public and private sectors were introduced into the Productivity Movement to lead, organize and influence other members of the workforce in various productivity-building activities.<sup>13</sup> A network was formed to enable members to benchmark their productivity against partners and improve their skills and techniques. Resources are pooled for an effective exchange of information in support of productivity improvement.

In this regard, the following words of Mr. Mah Bow Tan, then Chairman of NPB are worth noting: "..... to have a successful Productivity Movement, we must have a critical mass of organizations and individuals who know that they will benefit from it, are proud to be part of it, and are willing and ready to make it succeed." (Mr. Mah Bow Tan, Chairman, NPB, 1987)

<sup>11</sup> Speech by Mr. Low Choo Tuck, former Director of Planning Division, SPRING, "Productivity movement and competitiveness—the Singapore's experience," delivered at the Vietnam Productivity Center.

<sup>12</sup> Ditto.

<sup>13</sup> Ditto.

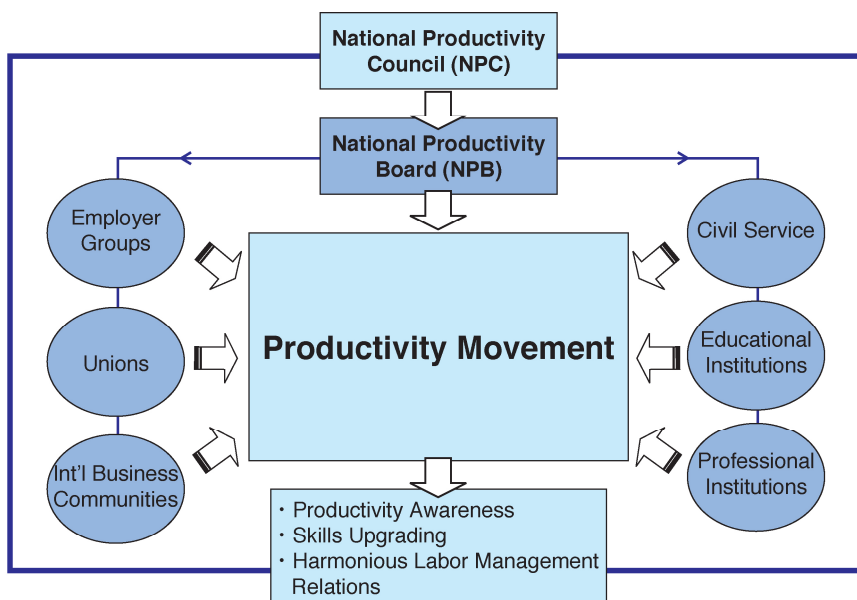
### 3-4. Institutional framework for implementing the Productivity Movement

To implement the Productivity Movement, Singapore established a strong organizational structure. A centralized oversight and coordination mechanism was created, and the existing national productivity organization was reinforced to perform such operational functions as running public campaigns, training, consulting, research, measurement, and conducting industrial relations. The mechanisms were built on strong involvement and support of tripartite key stakeholders (the public sector, unions, and employers) to ensure that productivity gains were shared among these stakeholders. These institutional factors contributed significantly to the successful awareness raising and scaling-up of the Productivity Movement.

#### 3-4-1. Role of a tripartite council and national productivity organizations

Figure 3-3 shows the institutional framework for policy coordination and implementation of the Productivity Movement in Singapore. This framework has provided channels for involving various groups and institutions and thus facilitated the scaling-up of the movement. Because Singapore is a city-state, there was no need for a local-level coordination mechanism.

**Figure 3-3. Framework for Productivity Movement (Around the 1980s)**



Source: Information provided by Mr. Lo Hock Meng to the GRIPS mission on Sept. 2. 2010.

At the policy level, in 1981, the NPC was established as an oversight and policy coordination body for promoting the productivity movement. NPC was a tripartite council, initially chaired by the State Minister of Labor and later by the State Minister of Trade and Industry, with the participation of about

20 members from government, employer groups, unions and academia.<sup>14</sup> By actively involving those key stakeholders, the NPC annually reviewed productivity programs and outlined its future strategy. As such, the NPC ensured national consensus on key productivity strategies and programs.

At the operational level, the NPB played a key role as the secretariat of the NPC and as the operational arm in charge of spearheading productivity campaigns in both the public and private sectors throughout the three stages of the Productivity Movement. Under the oversight of the NPC, the NPB coordinated and promoted the diffusion of the key objectives of the Productivity Movement, such as productivity awareness, skills upgrading of management techniques and harmonious labor management relations, and so on. It also provided training and management consultancy, spread Quality Control Circles (QCCs), promoted the concept of productivity, and administered the SDF, which provides financial incentives to companies to send their staff to productivity-related training.

### **3-4-2. Singapore Productivity Association (SPA)**

The SPA, established in 1973 as an affiliated body of the then-NPB, also played an important role in spreading the Productivity Movement. SPA promotes the active involvement of organizations and individuals in the movement and expedited its diffusion and techniques. SPA charges fees to the members (institutional or individuals) and organizes courses and seminars, company visits, study tours, and so on, to encourage their knowledge and skills acquisition. The members have access to information, training and seminars, and networking opportunities. Mr. Lo Hock Meng, current Executive Director of SPA, was one of the counterparts of the JICA-supported PDP.

Unlike the case of Burkina Faso (see Chapter 4), SPA continues to be affiliated with the SPRING which replaced the PSB, successor of NPB, in 2002. SPA also provides international cooperation, in collaboration with the Ministry of Foreign Affairs, the Ministry of Trade and Industry (MTI), SPRING, the Asia Productivity Organization, and the Association for Overseas Technical Scholarship (Japan).

### **3-4-3. Channels of awareness raising and scaling-up**

The Singaporean government promoted productivity improvement across the public and private sectors, building a partnership between the two sectors (Sum, 2000). Various channels were created to support awareness raising and scaling-up of the Productivity Movement. These included: employer groups, labor unions, international business communities, civil service, educational and professional institutions.

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<sup>14</sup> In 1986, NPB was transferred from the Ministry of Labor to the Ministry of Trade and Industry. The State Minister of Trade and Industry assumed the position of Chairman of NPB.

At the awareness stage, the productivity campaign was actively promoted in the public sector. The government, as the largest employer, endeavored to set an example for the private sector to improve productivity, work attitude, and human resource management. The productivity campaign was linked with civil service reform and was spearheaded by the Central Productivity Steering Committee. The Central Steering Committee was formed immediately after the launch of the Productivity Movement to oversee the movement within the civil service. Its members also included a representative of the civil service unions. An annual civil service campaign was launched in conjunction with the national productivity campaign. WITs were formed in all ministries to make up plans to promote teamwork spirit and productivity. A WIT is a small group of civil servants of different ranks from the same work unit in an organization. This voluntary groups met regularly to identify those improvements that could be achieved and formulate ways to attain the desired improvements (Sum, 2000).

For example, the Ministry of Defense and the Armed Forces launched the productivity drive in 1981. Since all young Singaporean males (age 18–21) were obligated to enroll in the national service (Singapore Armed Force, Singapore Policy Force, and Singapore Civil Defense Force) for 24 months, this has proved to be an effective way of disseminating the concept of productivity.<sup>15</sup>

Regarding labor unions, the National Trade Union Congress (NTUC) spearheaded the productivity campaign and created the Productivity Promotion Council. The campaign aimed to inculcate productivity and quality-consciousness at the workplace. Regarding employers groups, Singapore National Employers' Federation and Singapore Manufacturers' Federation supported the Productivity Movement. Both unions and employer groups supported workforce training, with financial incentives from the NPB-administered SDF. Furthermore, productivity-related programs were promoted at various educational institutions (including polytechnics) to raise productivity awareness in the future workforce.

### **3-5. The role of international cooperation**

#### **3-5-1. JICA-supported Productivity Development Project (PDP)**

The JICA project supported a crucial part of the Productivity Movement by sharing best practices, training NPB staff and company workers, and developing manuals.<sup>16</sup> The project was fully integrated into Singapore's national initiative and contributed to (i) upgrading the skills of the NPB staff and the private sector; (ii) developing manuals and promotional materials; (iii) developing a pool of management consultants; and (iv) raising productivity in key industries. Furthermore, the project

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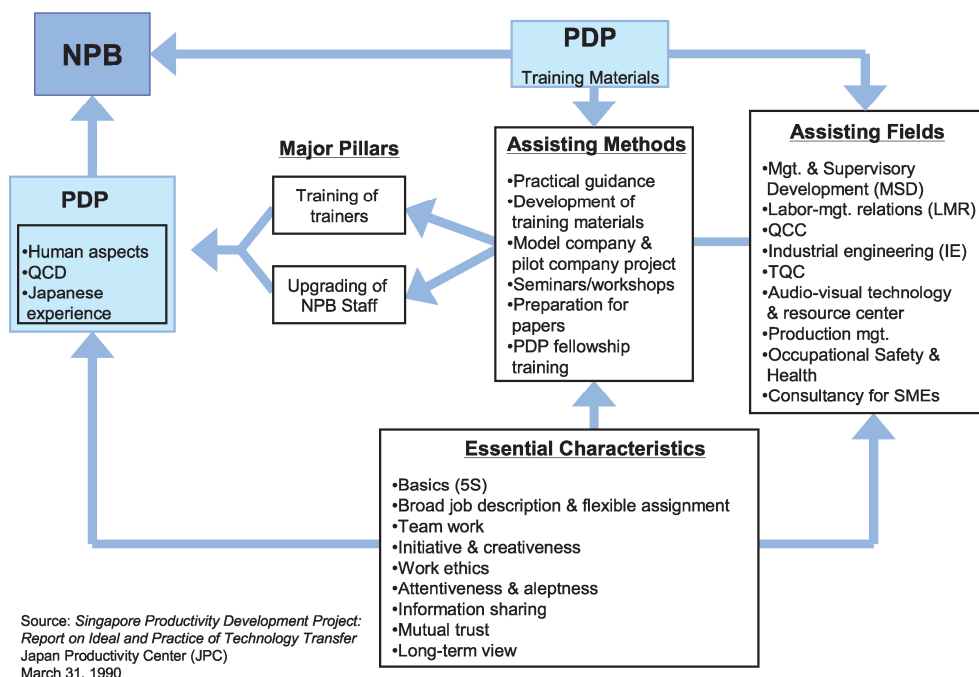
<sup>15</sup> As of January 2008, obligatory military service was replaced with voluntary military service.

<sup>16</sup> Over 200 Japanese long-term and short-term experts were dispatched from Japan to help improve the capabilities of NPB and local industries (NPB and JICA, 1990)

supported the process of transforming NPB into a donor by providing an opportunity for NPB to consolidate its acquired management consulting skills and share them with ASEAN countries through regional training programs.

As Figure 3-4 shows, two major pillars of the PDP were (i) training of trainers and (ii) upgrading of NPB staff. Various methods were used such as practical guidance, development of training materials, model company and pilot company projects, seminars and workshops, papers, and training in Japan (PDP fellowships). PDP emphasized human aspects, quality, cost, delivery (QCD), and the transfer of Japanese experience.

**Figure 3-4. Summary of JICA-supported PDP (after restructuring)**



The PDP lasted for seven years and developed through four phases: (i) preparatory phase (June 1983–March 1985); (ii) restructuring phase (April 1985–October 1986); (iii) implementing phase (November 1986–June 1988), and (iv) follow-up or consolidation phase (June 1988–June 1990 (NPB and JICA, 1990)).<sup>17</sup>

Because this was the first experience for JICA to transfer software (humanware) technology through comprehensive technical cooperation, the initial years of PDP encountered some difficulties. The Japanese experts, assuming that the same steps should be taken in Singapore as in Japan, started to instill basic concepts and principles in their Singaporean counterparts. They believed that it was necessary to take this step in order to form a solid base before teaching concrete methods of

<sup>17</sup> This and the following four paragraphs were based on the section “Four Phase of Technology Transfer in PDP” of NPB and JICA, 1990.

productivity improvement (Ueda, 2009). By contrast, the Singaporeans requested quick and tangible results, such as the transfer and application of production management technologies on the ground. This was partly because the NPB management felt strong pressure due to the close attention being paid to the PDP by the Prime Minister. Based on discussions between JICA and the NPB, the role of the Japanese partners changed. They no longer just trained their Singaporean counterparts in classrooms; they adopted OJT so that the counterparts were able to experience and learn how their jobs could be done (Ueda, 2009).

During the restructuring phase, a technology transfer plan was developed to enable expertise to be built up within the NPB to directly assist industries in improving their productivity (for example, through the Model Company Project).

The implementation phase saw the attachment of long-term JICA experts specializing in management consultancy for SMEs. This was in line with the NPB's focus on providing management guidance services for local companies. During this phase, the experts' role shifted from that of leaders to advisors for the NPB project teams. The NPB counterparts were then better equipped to lead industry project teams with the experts playing a supporting role as advisors. For the first time, fellowship training in Japan was extended to private sector managers and consultants. Upon their return, several of them were appointed as NPB Associate Consultants to supplement the expertise of the NPB in providing consultancy services to industries.

The two years of the follow-up or consolidation phase were devoted to upgrading management consultancy skills of NPB staff through practical OJT and to launching a two-month Japan-ASEAN Regional Training Program on management consultancy where the NPB took prime responsibility for sharing its acquired skills with ASEAN countries. Fundamental productivity practices (such as 5S) were firmly entrenched in industry. Attention was also placed on the service industries, with Japanese experts providing advice, particularly in upgrading customer service.

### **3-5-2. Singapore's international cooperation**

After the PDP was completed in Singapore, the NPB and JICA conducted joint training programs in developing countries in Asia and Africa until around 2005.<sup>18</sup> In parallel, under the Singapore Cooperation Program (SCP) managed by the Technical Cooperation Directorate of the Ministry of Foreign Affairs,<sup>19</sup> SPA also provided cooperation to productivity improvement in Botswana from

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<sup>18</sup> Since 1997, JICA has been managing the Japan-Singapore Partnership Program for the 21<sup>st</sup> Century (JSPP 21) with the Technical Cooperation Directorate of the Ministry of Foreign Affairs. This includes a joint training program on productivity management in the Southern African Development Community (SADC) countries, implemented during 1997–2004.

<sup>19</sup> The SCP was established in 1992 by the Singaporean government to share its development experience and public sector expertise with developing countries.

1991 for about ten years at the request of the President of Botswana to then Singaporean Prime Minister Goh Chok Tong. Based on the experience of the PDP, SPA supported (i) the promotion of tripartite cooperation among government, labor, and industry; (ii) staff training of the Botswana National Productivity Center (BNPC); and (iii) the implementation of pilot projects for model companies (see Chapter 5). For the public sector, a twinning arrangement was made between the Botswana Institute of Administration and Commerce (BIAC) and Singapore's Civil Service Training Institute in order to introduce WITs to Botswana's civil service (World Bank, 1996).

### 3-6. Latest initiative on productivity improvement

When the JICA-supported PDP came to an end in the mid-1990s, Mr. Mah Bow Tan, former Minister of State, Trade & Industry and Communications & Information and the Chairman of NPB, stated, “The Productivity Movement has been compared to a marathon with no finish line.” (NPB and JICA, 1990)<sup>20</sup> This is true. Singapore continues to work on productivity improvement. In fact, in recent years, productivity improvement has been resurrected as a high-priority, national agenda item.

As the Singaporean economy came out of the recession caused by the global financial crisis, the government sees an opportunity to restructure its economy and maximize growth capability in the post-crisis era—the new world environment characterized by the rise of China and India. The government formed a high-level Economic Strategies Committee (ESC) in May 2009, chaired by Minister of Finance Tharman Shanmugratnam, with the participation of representatives of the government, labor unions, and business.<sup>21</sup> The ESC submitted the final report to Prime Minister, Lee Hsien Loong at the end of January. It was officially launched on February 1, 2010. Envisioning “high-skilled people, innovative economy, distinctive global city,” the ESC Report recommended a drastic shift to productivity-driven growth (aiming at annual productivity growth of 2–3% and GDP growth of 3–5% on average in the next ten years) and presented seven key strategies to achieve this goal. The main thrust of the ESC Report was endorsed by the Prime Minister and reflected in the FY2010 budget (starting from April 1).

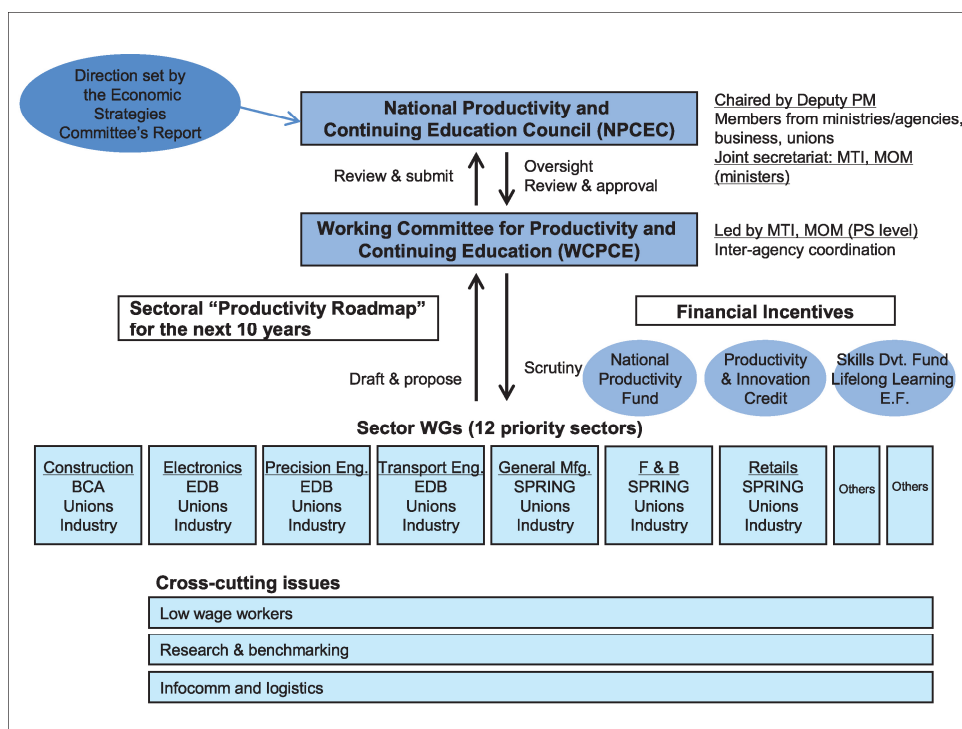
One of the seven key strategies is “growing through skills and innovation.” To oversee and drive the national effort to boost productivity and skills upgrading, the government established the National Productivity and Continuing Education Council (NPCEC) in April 2010. NPCEC is chaired by Deputy Prime Minister (DPM) Teo Chee Hean and its members come from government, the business

<sup>20</sup> Its original statement came from Mr. Kohei Goshi, former Chairman of JPC: “The transformation of mankind's way of thinking can be compared to a marathon with no finish line.” (From his letter to Prime Minister Lee Kuan Yew in September 1986)

<sup>21</sup> The ESC is an *ad hoc* mechanism. Under the main committee chaired by the Minister of Finance (comprised of 25 members), eight subcommittees and several working groups were formed. Each subcommittee was co-chaired by representatives of the public and private sectors.

community, and labor unions. The chairpersonship of the DPM signifies the high priority accorded to the productivity issue. MTI and the Ministry of Manpower (MOM) jointly act as the secretariat. Under NPCEC, there are two layers of organizations: (i) the Working Committee for Productivity and Continuing Education (WCPCE) led by the Permanent Secretaries of MTI and MOM; and (ii) 12 sector working groups and horizontal thematic working groups coordinated by responsible government agencies (see Figure 3-5).

**Figure 3-5. Institutional Mechanism for Boosting Skills and Enterprise Productivity through National Effort**



Source: Elaborated by the author based on the information gathered by the GRIPS mission to Singapore during Aug.29-Sept.3, 2010.

NPCEC has selected 12 priority sectors based on the criteria of the size of contribution to employment and GDP and high potential for productivity gain. Each sector group formulates a productivity roadmap for the next ten years. These roadmaps are reviewed by the WCPCE and submitted to the NPCEC for final approval. A ministry or an agency is assigned to oversee each priority sector. For example, the EDB is responsible for electronics, precision engineering, transport engineering, logistics and storage, while SPRING is responsible for general manufacturing, food and beverages, and retail. In addition, horizontal working groups are created to work on cross-cutting issues such as low-wage workers, research and benchmarking, and infocomm (ICT) and logistics. Government, businesses, and unions participate in these sectoral and thematic working groups.



### 3-7. Conclusion

Singapore's successful experience with the Productivity Movement can be taken as a benchmark for countries which are striving to introduce such a government-led national movement. Following are some of the lessons learned from the Singaporean experience.

First, productivity is a question of paradigm shift. It is a movement, not an event. There is no finish line. Productivity mindset is an attitude with which people strive for and acquire the habit of improvement, as well as the systems and the set of practices that translate the attitude into action.<sup>22</sup> Hence, what is required is a new mindset for all political, business, academic and union leaders: a curiosity and concern with context, acceptance of complexity and its contradictions, diversity consciousness and sensitivity, seeking opportunity in surprises and uncertainties, faith in organizational processes, focus on continuous improvement, extended time perspective, and systems thinking (Kitaw, 2011).

Second, productivity needs strong commitment. It needs strong commitment from higher officials, organizations, and individuals. In Singapore, the deep interest of Prime Minister Lee Kuan Yew was critical to making the Productivity Movement widespread and entrenched in the society. Even now, at the National Day Message (2010), Prime Minister Lee Hsien Loong states: "We must keep learning from others, improve in every area and strive hard to achieve our future goals. Tomorrow's Singapore is better than today."

Third, productivity needs strong organizational structure. As the Singaporean experience suggests, the establishment of a high-level tripartite council for policy coordination and a national productivity organization as an implementation body is vitally important. These organizations must be linked with broader members of the society, namely, key stakeholders such as the government, business (including business associations and chambers), labor, and academia. Such mechanisms should provide channels of disseminating productivity awareness and translating the awareness into actions in their workplace, training and education. While this Chapter primarily discussed tripartite partnership among the government, employers, and unions, the partnerships among the government, the private sector, and academia (including universities) are also important. Such linkages are important for (i) preparing suitably trained graduates to meet the manpower needs of industry; (ii) conducting practice-and application-oriented training; (iii) providing "industry attachment" (internship) for students; and (iv) collaborating with industry and development agencies.

Fourth, the three stages of the Productivity Movement—awareness, action, and ownership—can be a

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<sup>22</sup> This is the productivity concept of the NPB, Singapore, quoted in the Power Point material, "Evolution of the Productivity Movement in Singapore," SPRING Singapore, 2010.

useful reference for a country where the cultural awareness of productivity is low. Attitudinal change is achieved through the stages of awareness, understanding, conviction and action. In this regard, annual productivity campaigns are required to promote the theme of quality and productivity. Having campaigns launched by high-level ministers, developing nationwide program, and forming QCCs at the workplaces are several ways to promote productivity. Productivity promotion may be effectively carried out through (i) education, seminars and publication (e.g., support, teaching quality and productivity at all levels in the education system, quality award conferences, national quality circle conventions, publications and dissemination of quality news); (ii) promotion and establishment of national awards; and (iii) adoption of best practices.

Fifth, to self-sustain the Productivity Movement, there is a need to develop a cadre of private management consultants. As explained earlier, the JICA-supported PDP trained not only the NPB counterparts, but also private experts. Under the “Management Consultancy Referral Scheme” and the “Associate Consultants Scheme,” those trained under the JICA project became NPB Associate or Referral Consultants and were mobilized as “qualified” private management consultants (NPB and JICA, 1990). As such, a pool of associate and referral consultants was created to supplement the NPB’s efforts in reaching out to industries and ensuring the sustainability of the Productivity Movement.

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