institute for adult learning singapore

Different Approaches to the Skills & Employment System: **Learning from the Singapore Experience**

UKCES Skills, Jobs, Growth Convention 2010
8 – 9 February 2010

Dr Gary Willmott
Executive Director, Institute for Adult Learning, Singapore

Ms Joyce Tan
Principal Research Manager, Institute for Adult Learning, Singapore

Singapore

A short profile of the last 60 years…

Feb 1942 → Feb 2010

1965

Malcolm Baldrige National Quality Award 1989 Winner XEROX

AVERAGE DAILY CERTIFIED SALE EXCEEDS 150,000

The Straits Times

Estd. 1845. AUGUST 9, 1965 25 CENTS KDN 1189.

S'pore is out

PAGE 1 LEADER

Now look to the future

Excerpts of the front page editorial that appeared in the August 10, 1965 issue of The Straits Times which reported the separation of Singapore from Malaysia.

The right to form Malaysia was won in a bitter and prolonged battle in which the leaders of Singapore and the Federation joined forces against common enemies within and without. What has happened to the spirit

Nation becomes independent in dramatic turn of events

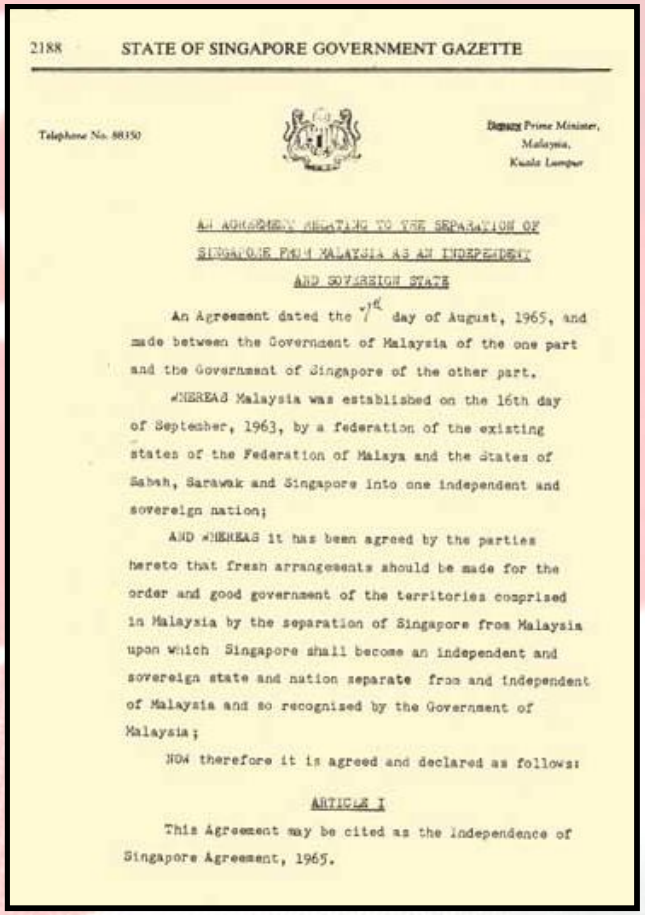
KUALA LUMPUR, August 9

SINGAPORE has separated from Malaysia, following an amendment to the Constitution approved unanimously by both Houses of Parliament under a certificate of urgency.

Simultaneously with the passing of the amend-

WHAT IT MEANS...

- All Singapore citizens cease to be Malaysian citizens.
- All civil servants, including police and armed forces personnel, courts and judiciary, who became employees of the Singapore Government on Malaysia Day, come under the Singapore Government once again.
- All civil servants employed by Federal departments in Singapore after Malaysia Day become forthwith employees of the Singapore Government.
- All properties taken over by the Malaysian Government on Malaysia Day are now properties of the Singapore Government.
- No turn-over tax.
- Bank of China reverts to status quo.
- No more Common Market arrangements as provided by Annex J of Malaysia Constitution.
- Full control by Singapore Government over broadcasting and television.
- Unchanged are Singapore's water supply from Johore and maintenance by Central Government of military bases in Singapore.



2188 STATE OF SINGAPORE GOVERNMENT GAZETTE

Telephone No. 88150

Deputy Prime Minister,
Malaysia,
Kuala Lumpur

AN AGREEMENT RELATING TO THE SEPARATION OF SINGAPORE FROM MALAYSIA AS AN INDEPENDENT AND SOVEREIGN STATE

An Agreement dated the 7th day of August, 1965, and made between the Government of Malaysia of the one part and the Government of Singapore of the other part.

WHEREAS Malaysia was established on the 16th day of September, 1963, by a federation of the existing states of the Federation of Malaya and the States of Sabah, Sarawak and Singapore into one independent and sovereign nation;

AND WHEREAS it has been agreed by the parties hereto that fresh arrangements should be made for the order and good government of the territories comprised in Malaysia by the separation of Singapore from Malaysia upon which Singapore shall become an independent and sovereign state and nation separate from and independent of Malaysia and so recognised by the Government of Malaysia;

NOW therefore it is agreed and declared as follows:

ARTICLE I

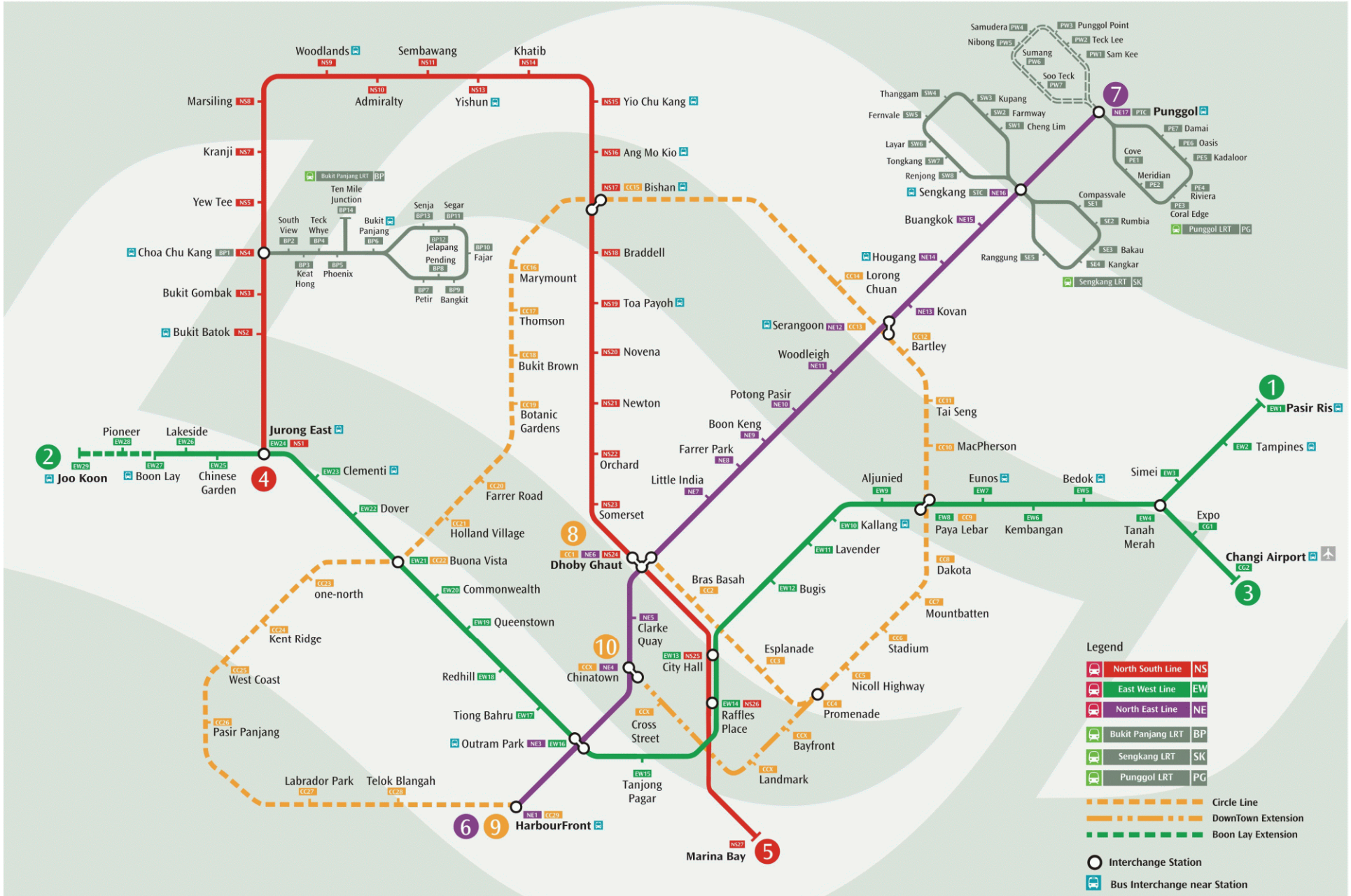
This Agreement may be cited as the Independence of Singapore Agreement, 1965.

9 Aug 1965

70s & 80s

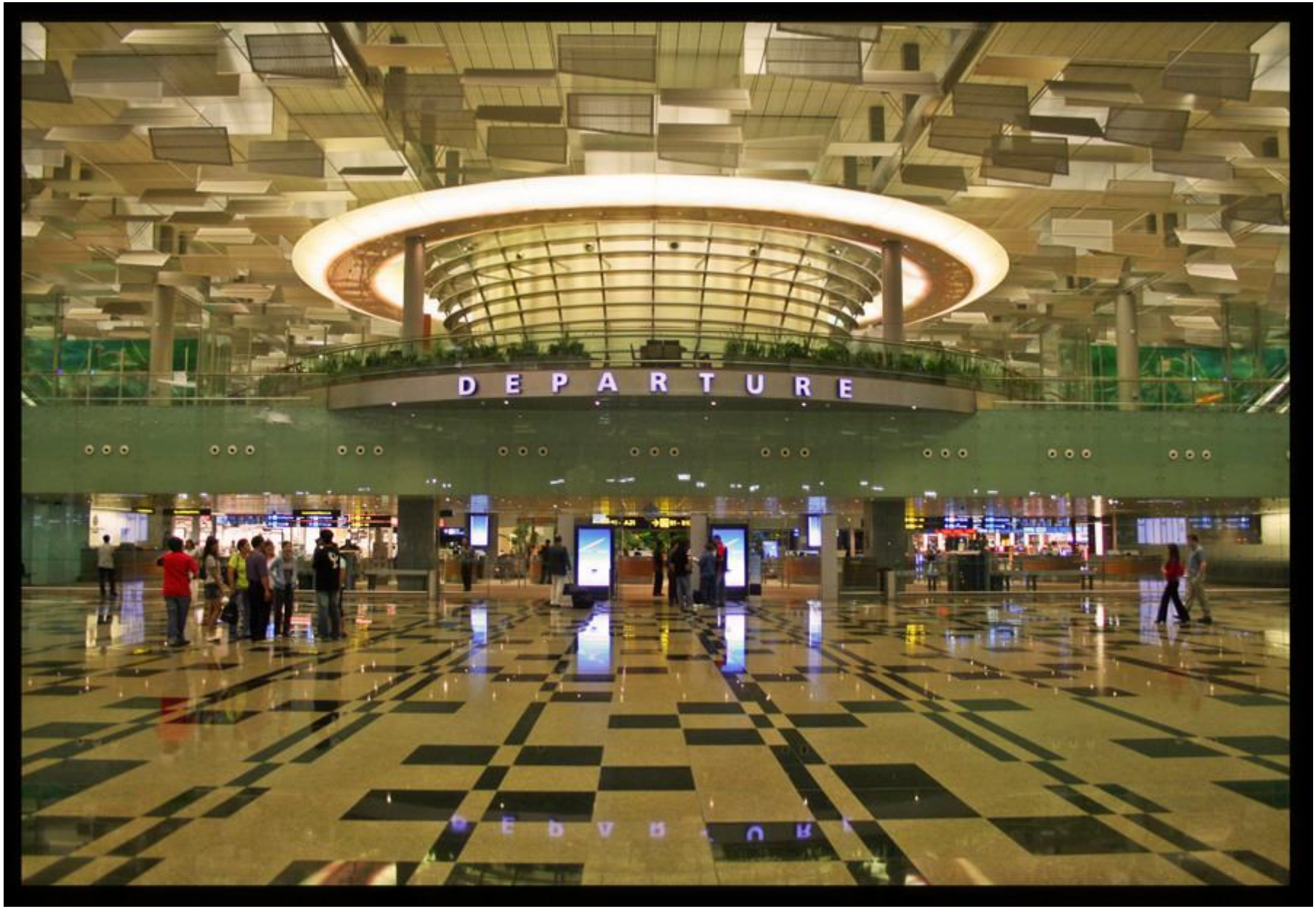
- **1981**
  Changi Airport, officially opens

- **1987** Official Opening of MRT Passenger Service



Circle Line will commence operations on **17 April 2010**

▲ Esplanade, Theatres by the Bay
Officially opened 2002

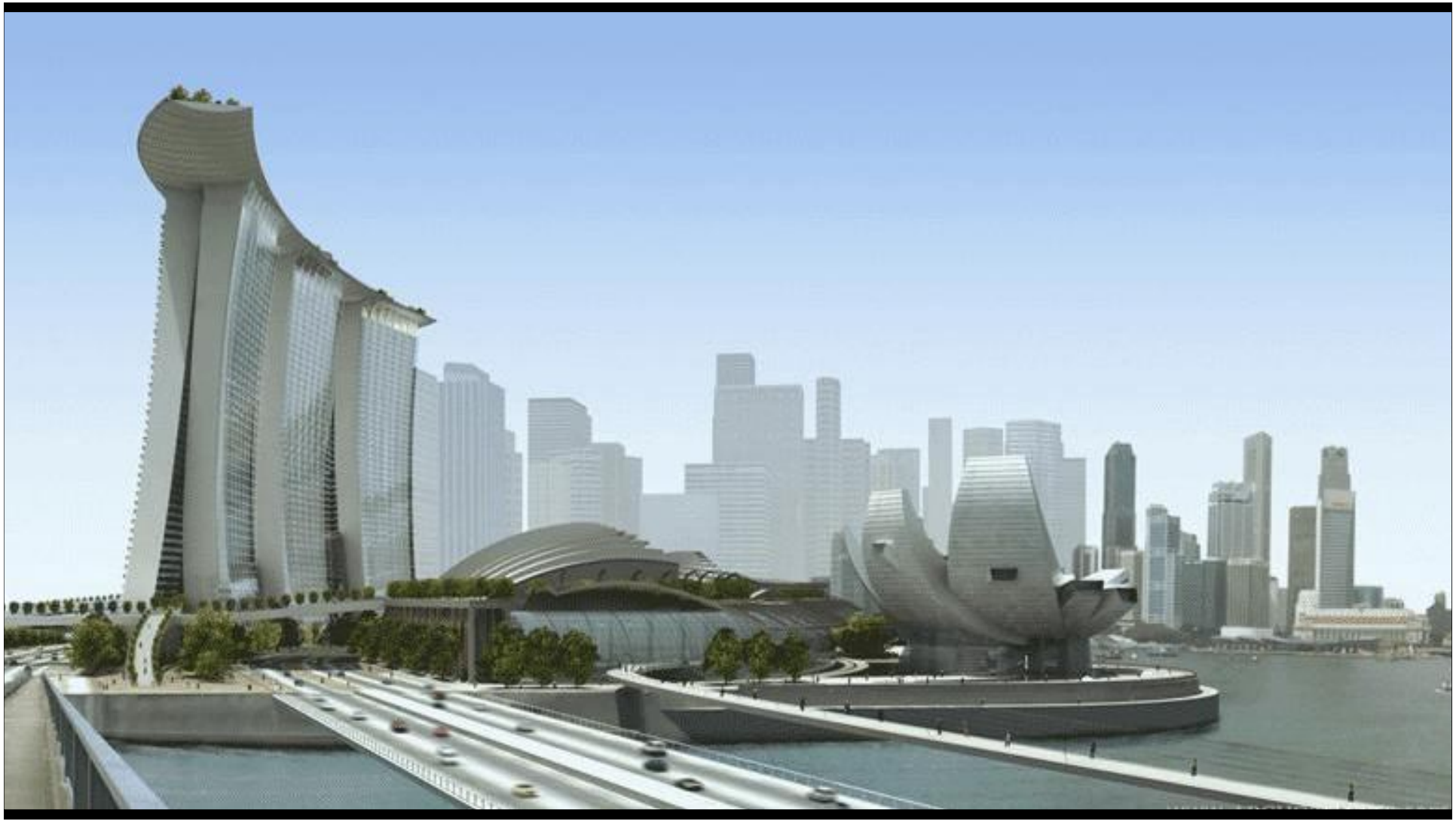


▲ **Terminal Three**, Changi Airport, *officially opened in 2008*

Singapore today

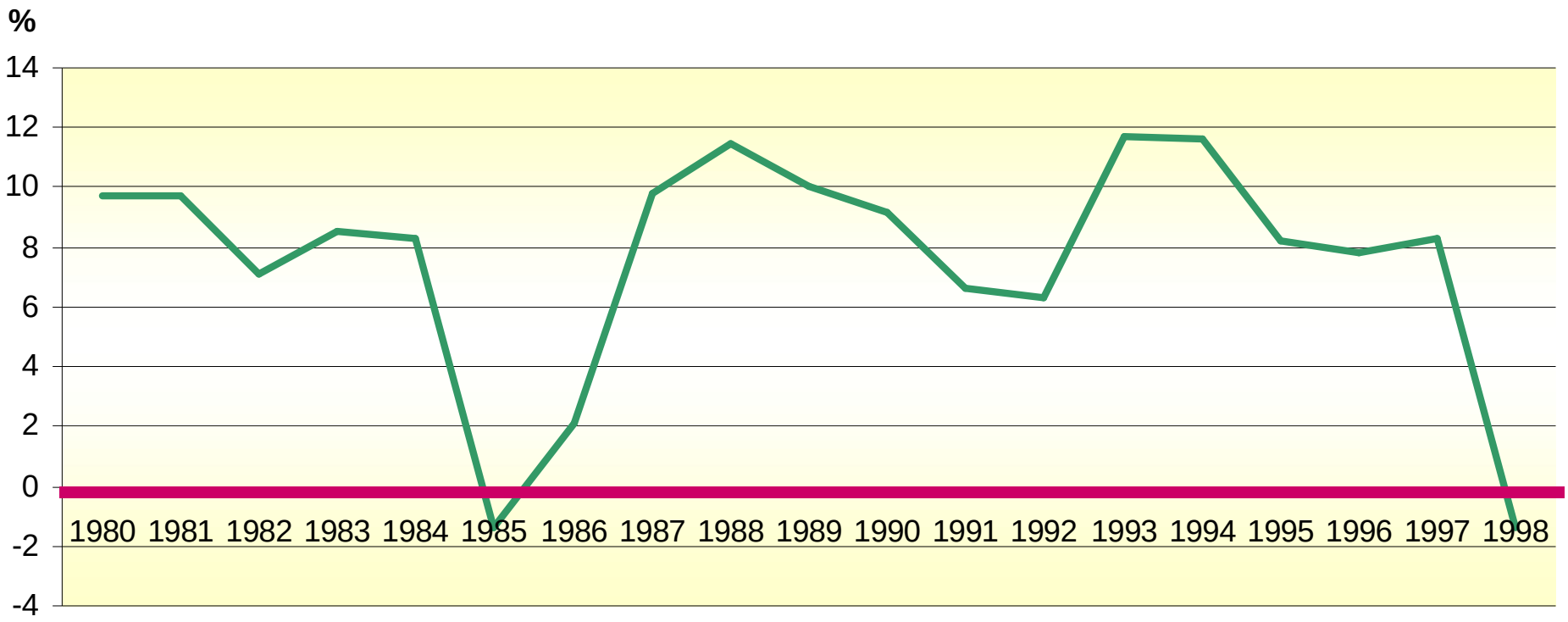
▲ Singapore's Port

▲ One of the Integrated Resorts: Marina Bay Sands



(3.73 million = Singapore Residents,
1.25 million = Non-Residents)

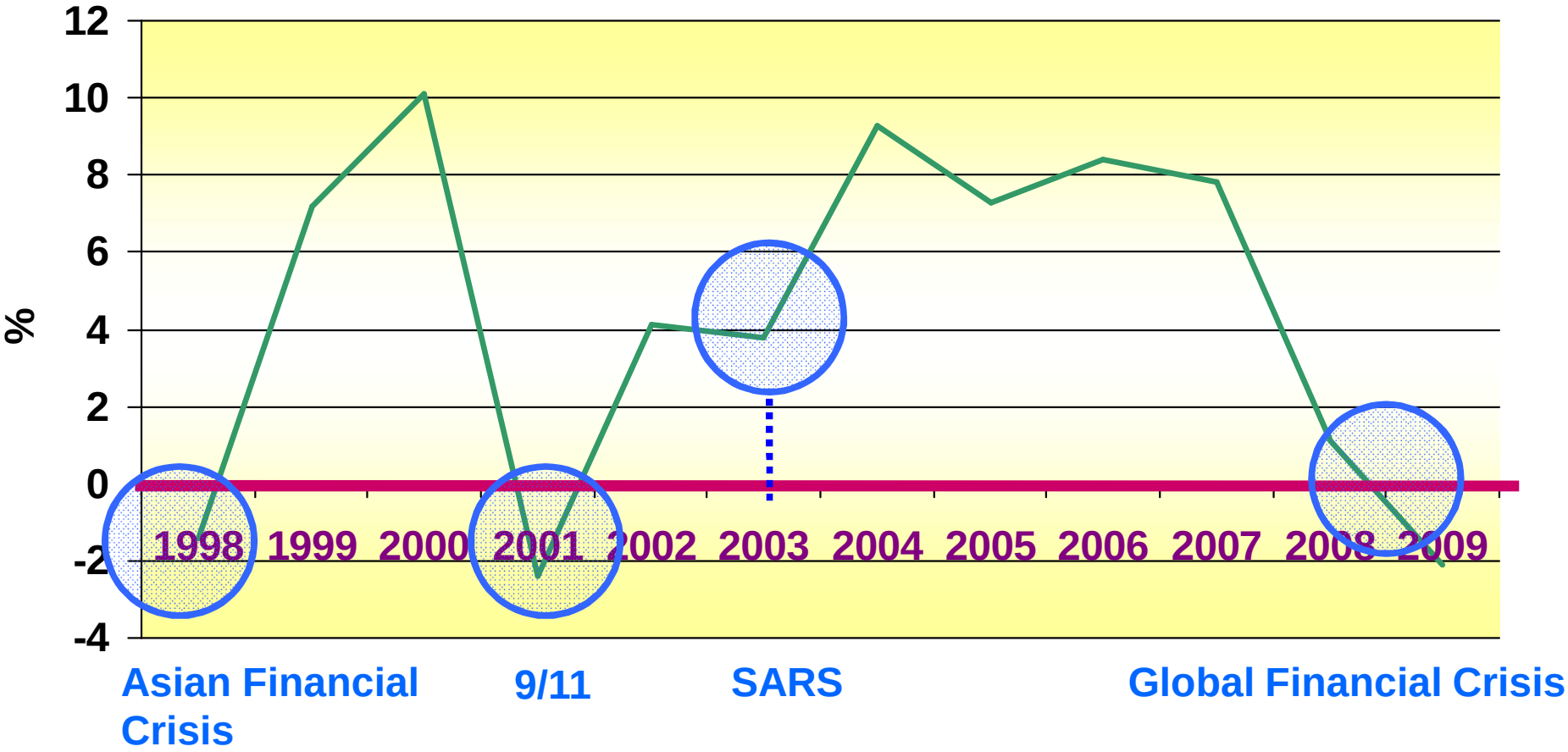
Real Economic Growth (%)
1980 - 1997



Source: Singapore Department of Statistics

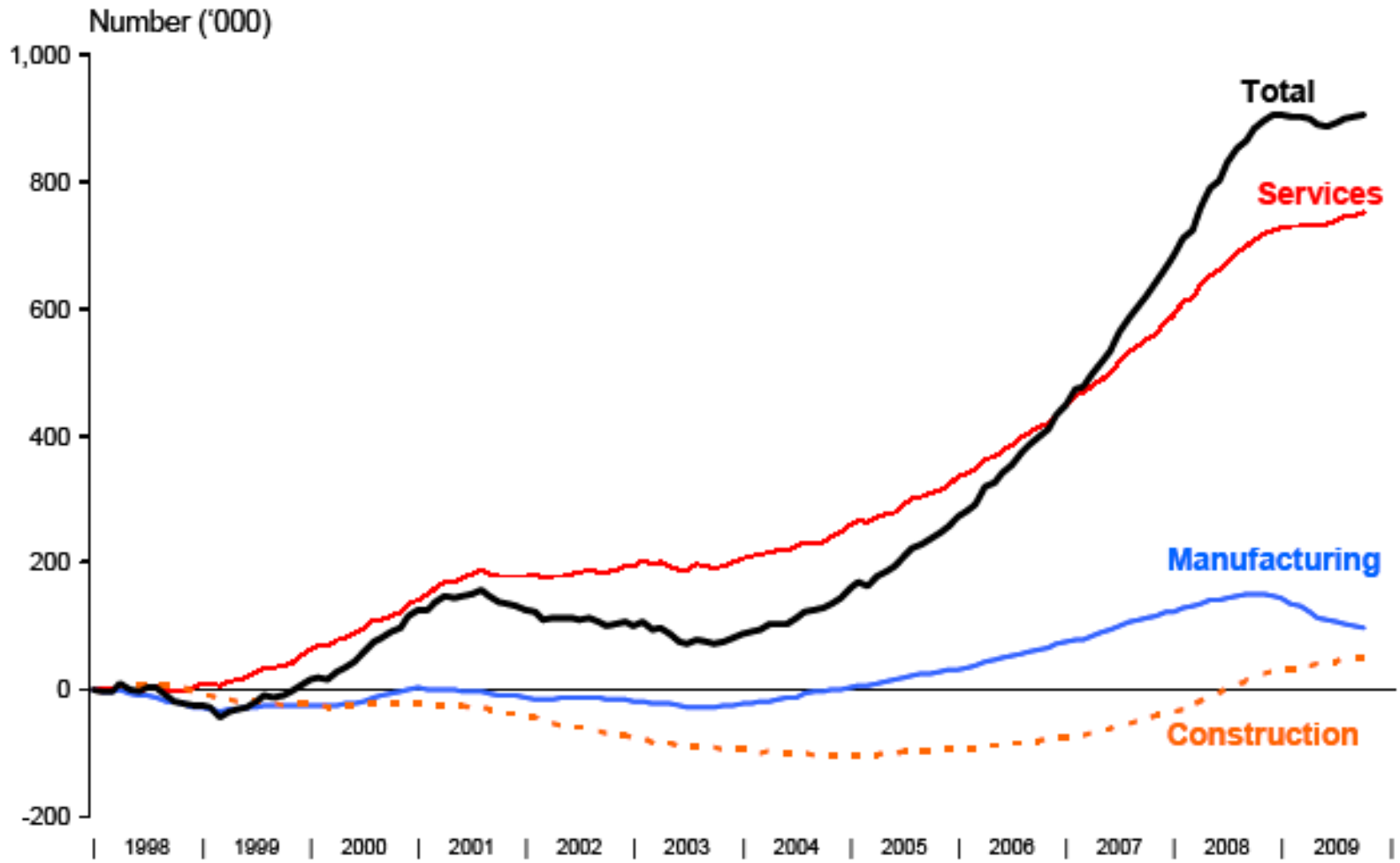
Real Economic Growth (%)

1998 - 2009



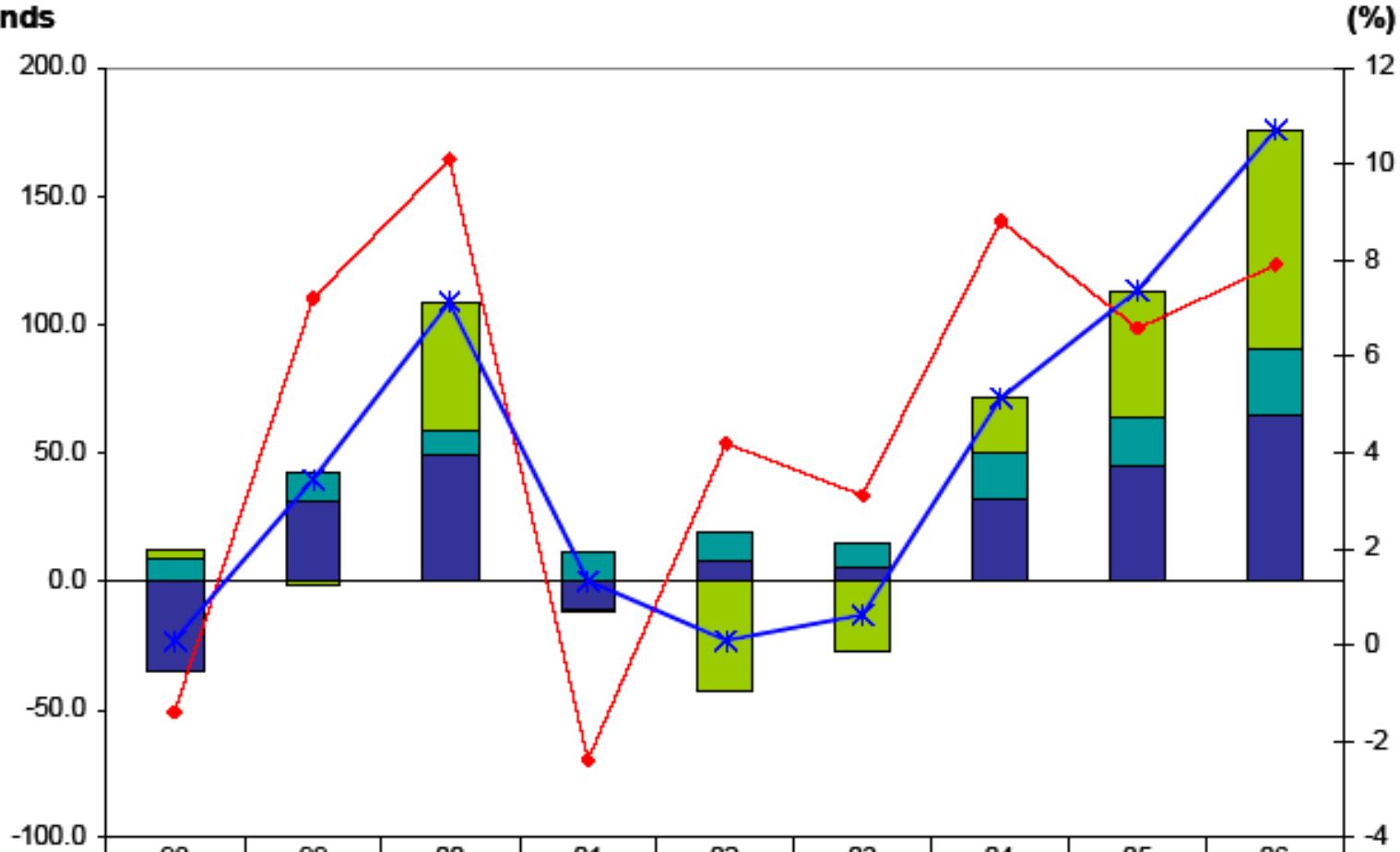
Source: Singapore Department of Statistics

Cumulative Employment Change by Sector
(Jan ’98 – Sep ’09)



Source: Ministry of Manpower Singapore, Labour Market Q3, 2009

Employment Change by Residential Status, 1998 to 2006

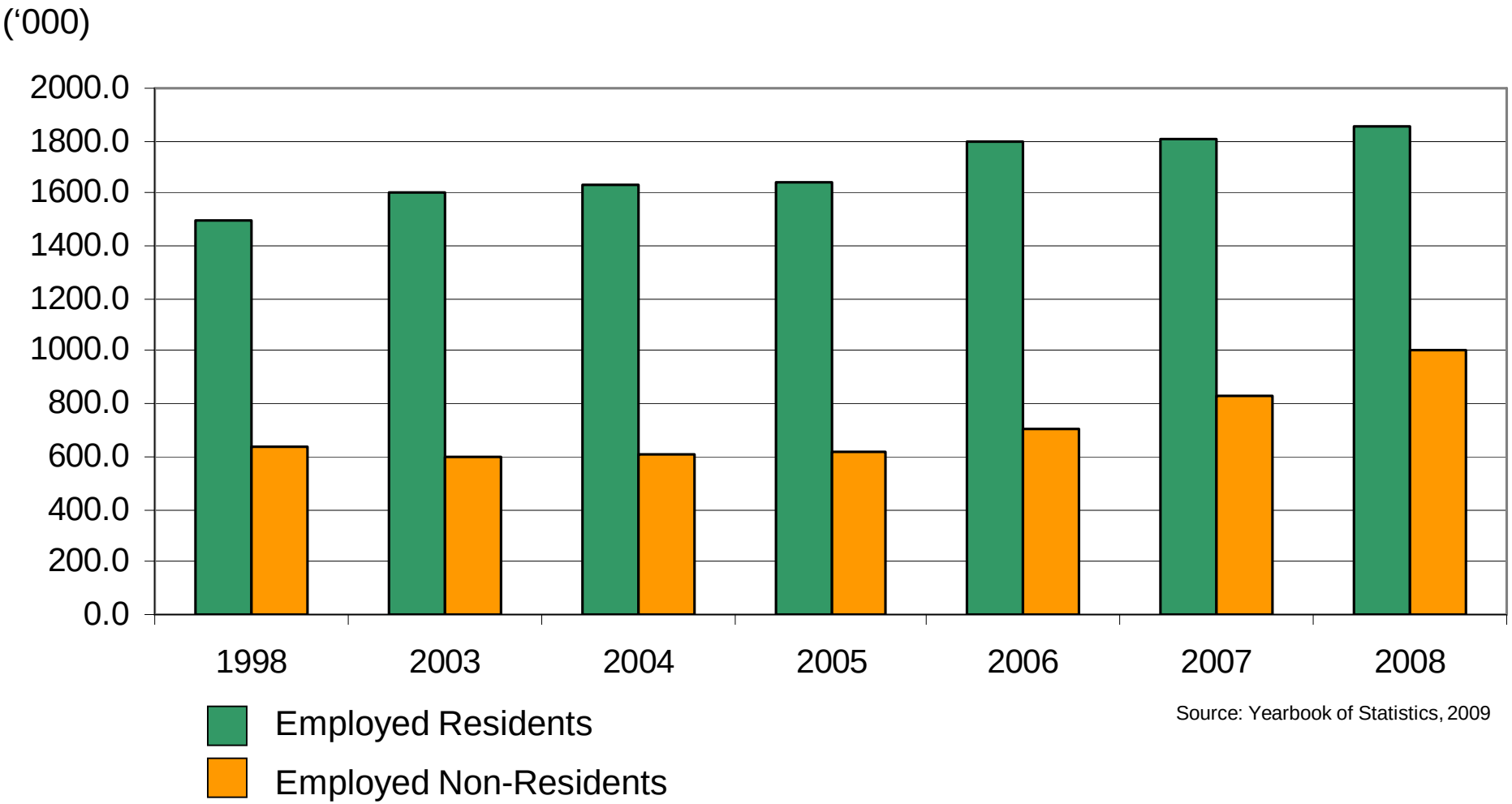


	98	99	00	01	02	03	04	05	06
Foreign Employment Change	4.3	-1.8	50.1	-1.4	-42.3	-27.9	21.5	49.8	85.1
PR Employment Change	8.3	10.7	9.6	11.8	12.1	9.5	17.8	18.4	26.3
SC Employment Change	-36.0	31.0	48.8	-10.5	7.4	5.5	32.0	45.0	64.6
GDP Growth (%)	-1.4	7.2	10.1	-2.4	4.2	3.1	8.8	6.6	7.9
Total Employment Change	-23.4	39.9	108.5	-0.1	-22.9	-12.9	71.4	113.3	176.0

Notes: SC - Singapore Citizen
PR - Permanent Resident

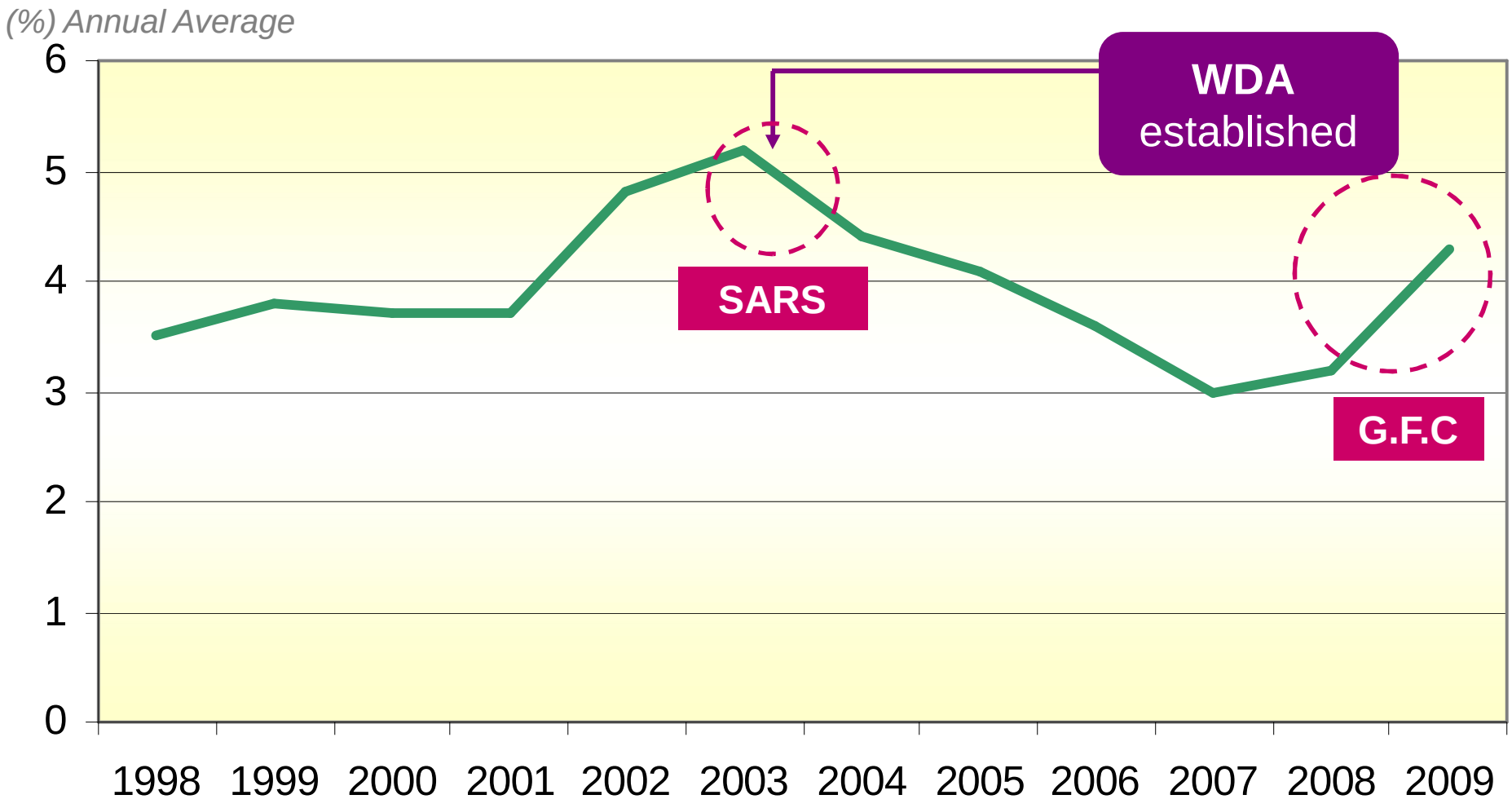
Source: Ministry of Manpower, Singapore, Employment of Singapore Citizens, Permanent Residents and Foreigners, 1997 to 2006

Labour Force:
Employed Residents & Non-Residents



Source: Yearbook of Statistics, 2009

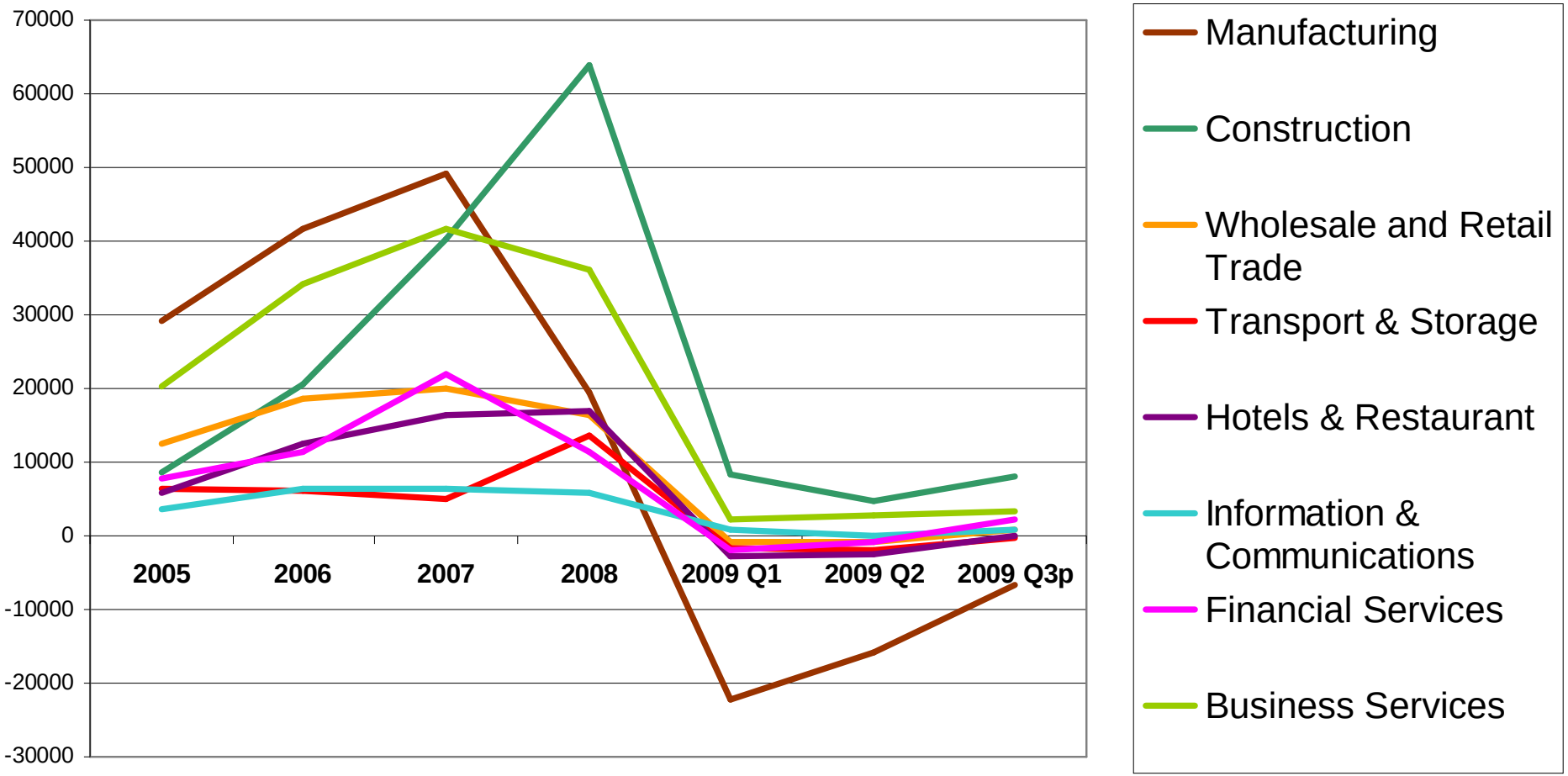
Resident Unemployment Rate (%) 1994-2009*



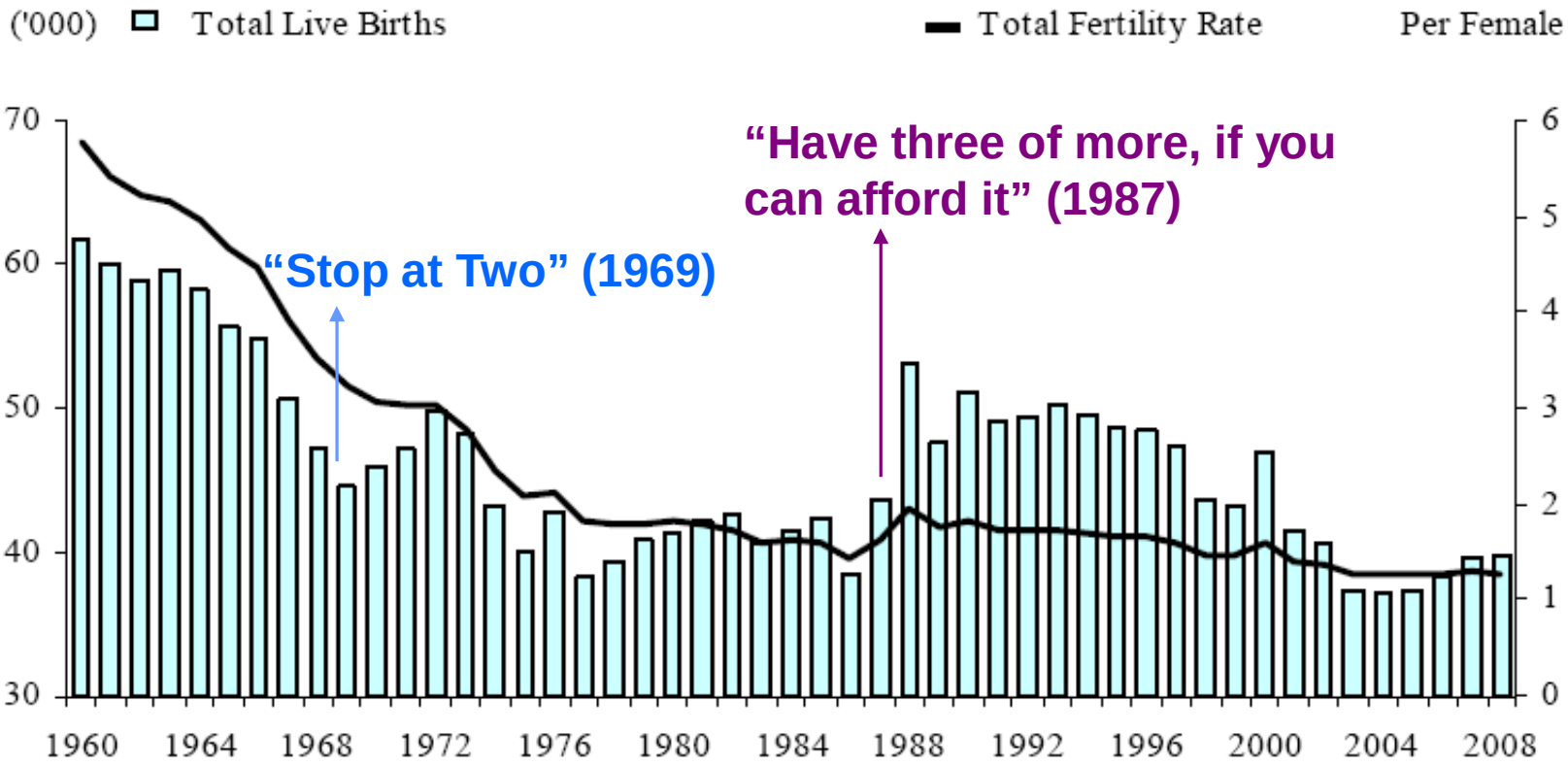
* Preliminary 2009 Unemployment Rate

Source: Ministry of Manpower

Changes in **Employment** by Sector



Source: Manpower Research & Statistics Department, Ministry of Manpower

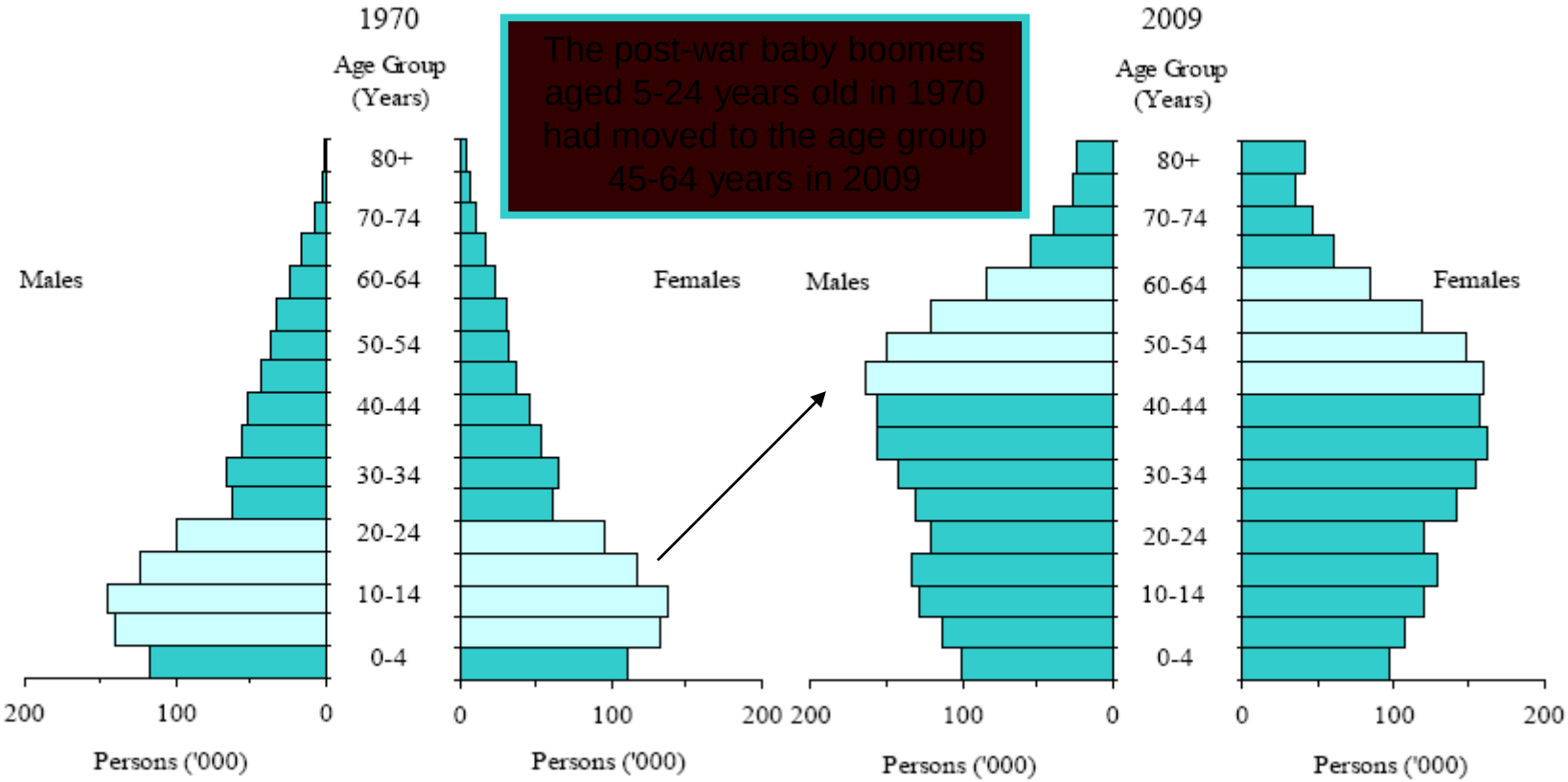


Note : Prior to 1980, rate refers to total live births and total population.

Source: Singstat

- **In 1987, approximately <u>45,000</u> births**
- **2 decades later, in 2007, <u>223,000</u> new jobs were created**
- **Gap ≈ 180,000 jobs**

Changing Demographics

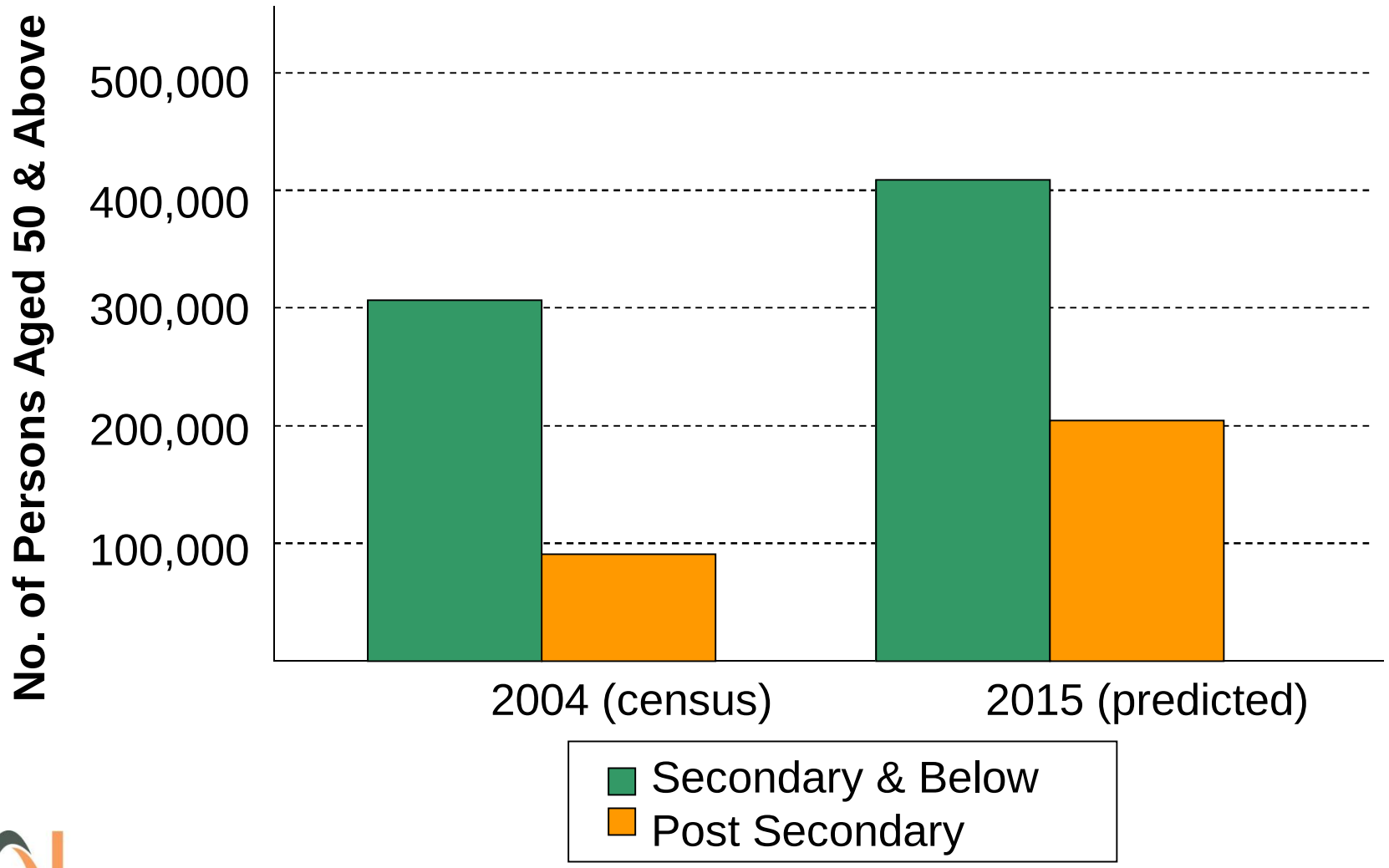


The post-war baby boomers aged 5-24 years old in 1970 had moved to the age group 45-64 years in 2009

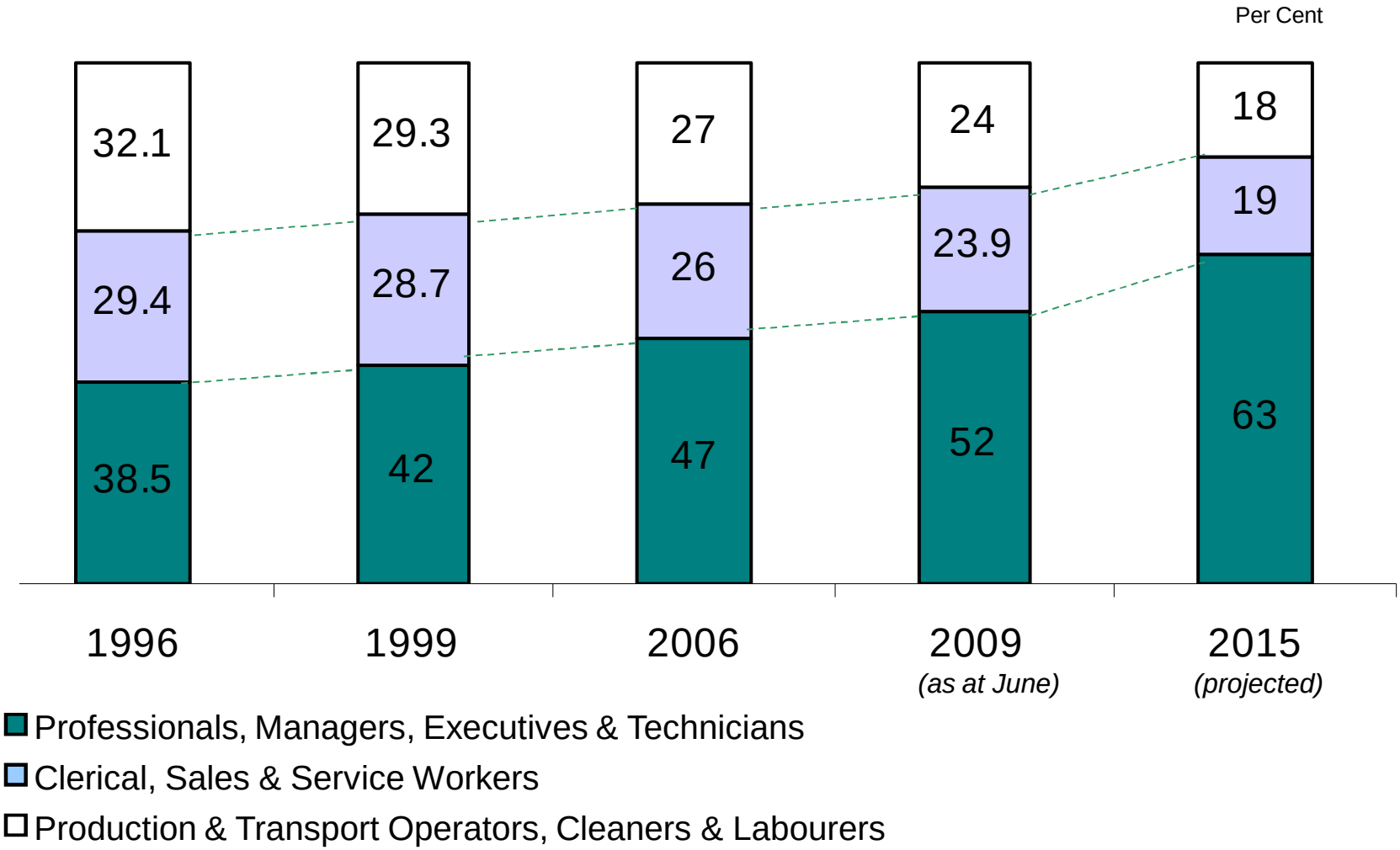
PROJECTION:
Over 50 % of workforce will be above 40 years old by 2020

http://www.singstat.gov.sg/stats/visualiser/population/population.html

…older workers are generally less educated and more vulnerable…

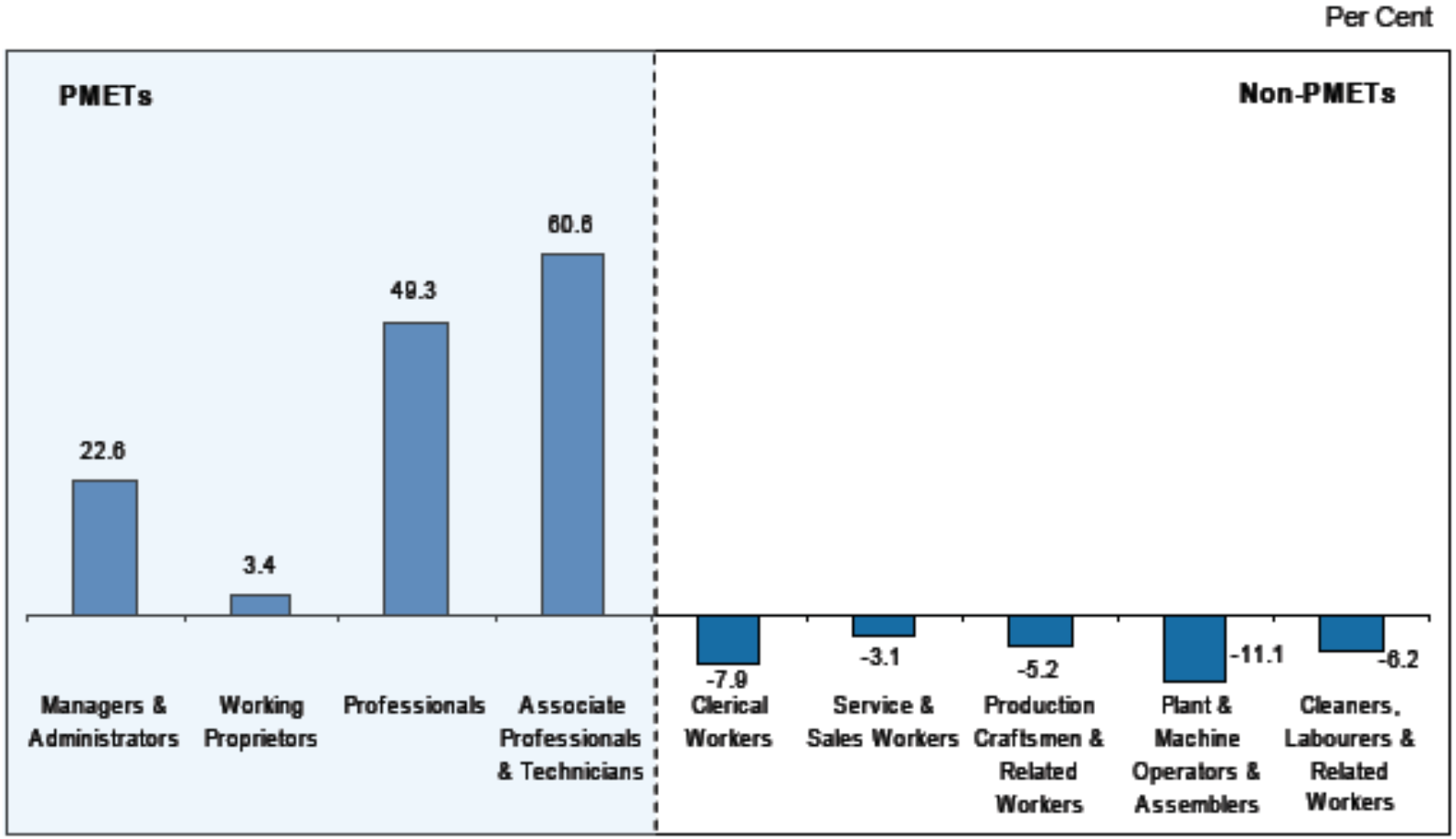


Occupational Distribution



Source: Ministry of Manpower, Singapore

Share of Resident Employment Change by Occupation 2006 to 2009



Notes: (1) Data exclude full-time National Servicemen.

(2) Change from 2006 to 2009 is computed by summing the employment change from (i) 2006 to 2007 (based on 2007 original figures) and (ii) 2007 to 2009 (based on 2007 adjusted figures).

Source: Ministry of Manpower, Singapore, Singapore Workforce 2009

Growth of Post Secondary & Training
(Pre- Employment)

Institute of Technical Education (ITE)

25% of coherent post secondary cohort

Singapore Polytechnic (1959)
Temasek Polytechnic (1990)
Nanyang Polytechnic (1992)
Ngee Ann Polytechnic (1963)
Republic Polytechnic (2002)

40% of cohort

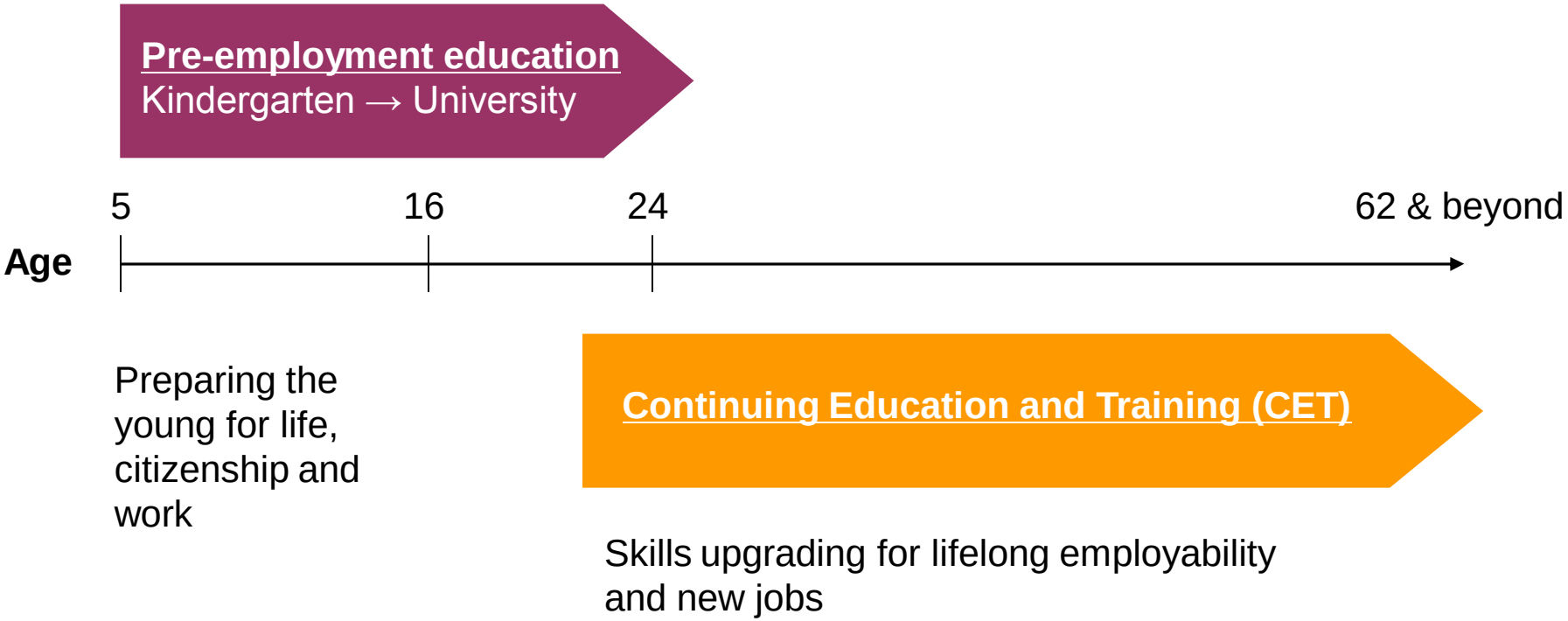
National University of Singapore (1980)
Singapore Management University (2000)
Nanyang Technological University (1981)

25% of cohort

So, what emerges from this **snapshot?**

- Strong economic growth
- Volatile economic cycles
- Historically low levels of resident unemployment
- Increasing imported labour
- Aging workforce
- High quality educational system and participation rate
- Growing recognition of importance of continuing education and training to sustain workforce competitiveness & productivity

CET complements the Pre-Employment Training System….



singapore
workforce
development
agency

Established **September 2003**

The Singapore Workforce Development Agency (WDA) in brief…

Establishment

Formed 1 Sep 2003

Statutory Board under Ministry of Manpower Singapore

430 pax Staff Strength

Vision

A resilient, skilled and agile workforce for a vibrant Singapore economy

Mission

To enhance the employability & competitiveness of employees and job seekers, thereby building a workforce that meets the changing needs of the Singapore economy

Annual Budget

$250 million (training grants)

↑ to $360million (during 2008-2009 Global Recession)

The parent ministry of WDA is the
Ministry of Manpower

MINISTRY OF MANPOWER

WDA singapore workforce development agency

A Key Strategy of WDA in supporting a national CET system was the development of the Workforce Skills Qualifications (WSQ) System

SINGAPORE WORKFORCE SKILLS QUALIFICATIONS

Launched by then-Minister for Manpower, Dr Ng Eng Han, 27 October 2005

"The WSQ will run parallel and complement the qualifications systems that we have for pre-employment learning, which are all of high standards and internationally accepted as stamps of quality. They open up pathways for good jobs and careers."

– Dr Ng Eng Hen

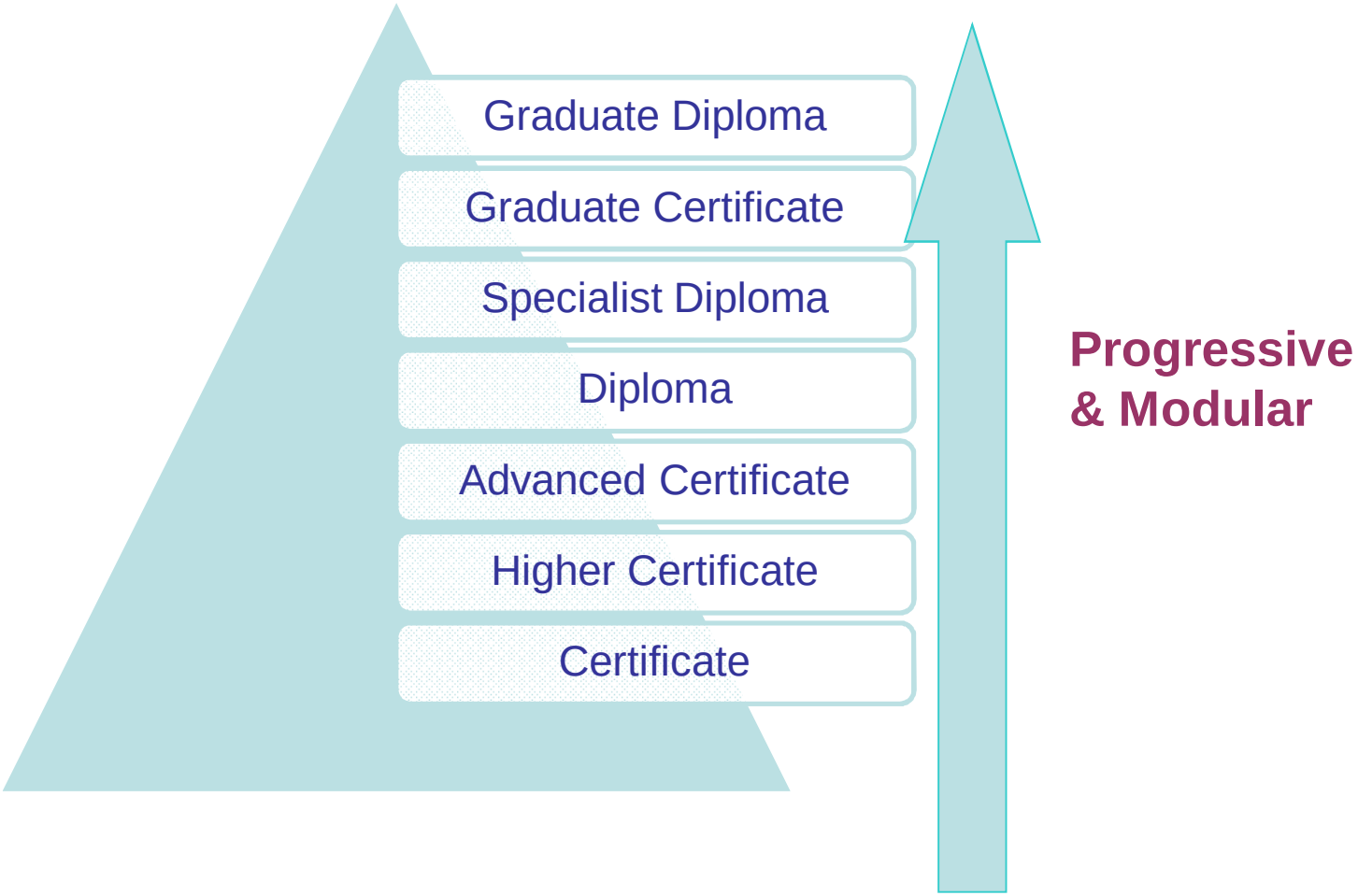
SINGAPORE WORKFORCE SKILLS QUALIFICATIONS

A national adult training framework that is not based on Academic System!

Areas	Concept	Examples
Skills-based	Instills practical working experience; competency-based	Competency based training; Training framework
Progression	Modular, Adult Learning Principles bite-sized; Single module training element	Competency-units
Accessibility	Open Access Recognition of Prior Learning; Flexible training	On-The-Job (OJT) training, for Aerospace technicians
Relevance & Authority	Industry agreed standards & Int'l benchmarks	Retail WSQ Framework developed by major retailers in S'pore

IAL

The Workforce Skills Qualifications (WSQ) Framework



24 WSQ Frameworks established to-date

New Industries …

Creative Industries

Wafer Fabrication

Chems / Petrochems

Industries with manpower demand …

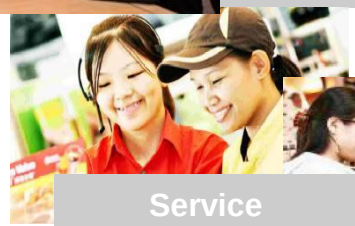
Healthcare

Community & Social Services

Cross Sectoral Skills …

HR

Generic Mfg



Service Excellence

Growth Industries …

Finance

Tourism

ICT

The Continuing Education Training (CET) Masterplan
Announced Mar 2008

The CET Masterplan is a major government initiative to increase resources, training places and funding for the CET system.

- Establishment of first class providers
- New and Expanded CET Centres
- Quadruple training capacity from 22,000 workers per year in 2008 to 80,000 in 2010, now projected to 200,000 per year
- Establishment of the Institute for Adult Learning
- Better integration of CET and education systems and tripartite outreach to all workers
- To support the CET masterplan, the Government topped up the Lifelong Learning Endowment Fund by $800 million in FY08 to $3 billion

The Story of IAL….

- Established by WDA in April 2008 as part of the CET Master Plan
- Singapore's first research centre for adult learning and CET
- Continuing Eduation and Training Centre for adult education and training sector

"Championing Excellence in Continuing Education and Training"

IAL

How IAL is supporting CET

Professional Development Roadmap of courses and qualifications for professional upgrading of adult trainers working as:

Deliver the Advanced Certificate in Training and Assessment (ACTA) which is the benchmark train-the-trainer course for WSQ trainers

Build research capability in CET to improve professional practice and inform CET policy

Develop a membership body to support trainers and adult educators with their professional development, creating opportunities for networking

"Championing Excellence in Continuing Education and Training"

KEY PRIORITIES:

Certified Workplace Trainer (CWT)	(Q1 2010)
Diploma in Adult & Continuing Education	(Q1 2010)
Master of Arts (Lifelong learning)	(Q1 2010)
Recognition of Prior Learning	(Q2 2010)

International Collaborations

The Impact of the Downturn
2008-2009

1. Unemployment increases
2. Negative Growth
3. Workforce Retrenchment
4. Potential Company Closures…

How Singapore tackled the 2008/09 Financial Crisis

A strategic injection of training and adult-education funding to:

1. Help companies and workers manage the economic downturn;
2. Invest in skills for recovery; &
3. Strengthen confidence in the local labour market.

How we did it:

Leverage on the extensive CET training system to scale up training programmes.

spur
Skills Programme
for Upgrading & Resilience

IAL

A Singaporean company that benefited from **SPUR**

Hup Fatt Brothers Engineering Pte Ltd

[redacted]

Cost cutting measures include

[redacted]

Affected Workers

[redacted]

"SPUR, together with other Government measures, helped the company cope with the deep downturn earlier in the year. Now, the SPUR-JOBS scheme is helping to meet our increasing manpower needs by defraying recruitment and training costs. It incentivises me to recruit local workers and invest in their training.."

- Director, Hup Fatt Brothers Engineering

Another SPUR initiative – moving sectors and companies to new careers in growth industries

Professional Conversion Programmes (PCP)

An example of a PCP programme converting experienced and knowledgeable company staff facing retrenchment into programme trainers

- 90% course fee support
- $1000 training allowance

Industry experience and expertise
+
Wish for career change

↓

4 month training and apprenticeship

↓

Placement as a trainer in a CET Centre or WSQ provider

Trainees who benefited from PCP programmes

Mr George Stephen Nethen

- 36 years old
- Retrenched from Restaurant Manager position in March 2009
- Professional Conversion Programme (PCP) for Adult Educators at the IAL
- Now placement as Food and Beverage (F&B) apprentice trainer

Mr Low Xiang Hui

- 33 years,
- Graduated in 1997 with Diploma in Electronics, Computer and Control Engineering
- No relevant qualification to work in IT industry
- 2009 PCP for Software Developers at Institute of Systems Science (ISS) at National University of Singapore
- Internship now at Autoscan Technology Pte Ltd

What SPUR Has Achieved between 1 Dec 2008 to 31 Nov 2009

spur
Skills Programme for Upgrading & Resilience

264,000 workers committed for training

About 42,000 unemployed placed into jobs

390 companies offering traineeship positions (as of end Oct 2009)

4,000 companies tapped on SPUR

IAL

Overall …

CET infrastructure has enabled quick implementation of SPUR to help companies and workers manage the downturn

SPUR has contributed to helping companies cut cost and save jobs and workers to find jobs

Public commitment is to continue with programme till end 2010

More emphasis on capability building aspect going forward

The **Job Re-creation Programme** (JRP)

Increase Productivity

- Increases Skills Content of Jobs
- Increase Skills Level of Workers
- Redesign Jobs, Redefine Industry Practices

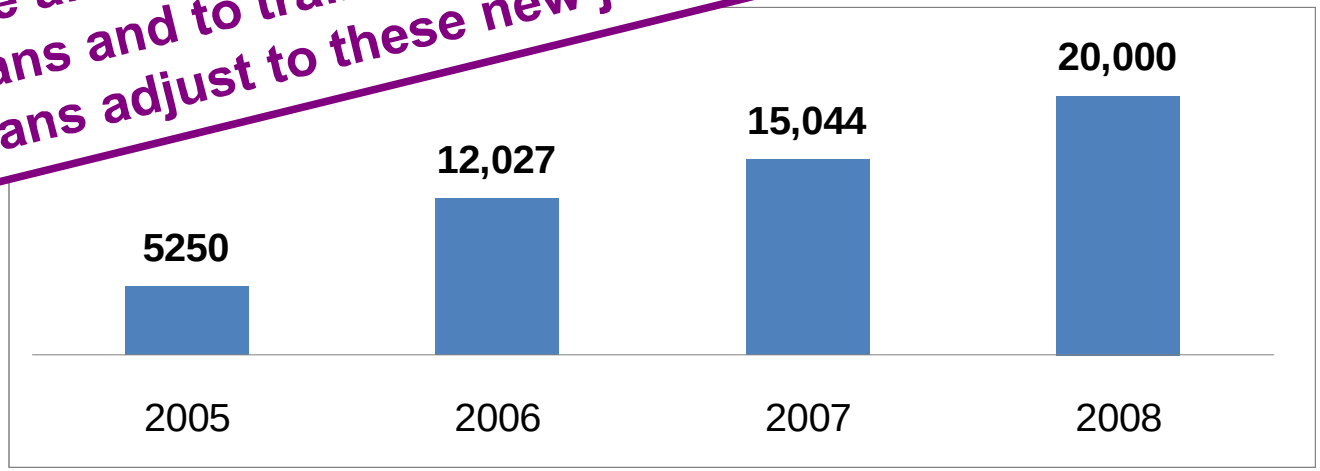
Industry Re-development

- 72% received assistance to be prepared for, and placed in re-created jo
- 28% progressed to earn higher pay as they were upgraded o job roles.

Number of Workers Assisted

- From 2005-July 2008, 43

To redesign low-value, low paying and non-attractive jobs, source and identify new job opportunities for Singaporeans and to train and help jobless Singaporeans adjust to these new jobs



SPECIFIC WSQ FRAMEWORKS

2004-06	2006	2007-9
•Retail • Food & Beverage • Tourism • Employability Skills system • Finance • Training Industry • Information & Communication Technology • Security • Precision Engineering	•Community & Social Services • Landscaping • Human Resources • Process Industries • Creative Industries	• Creative Industries • Aerospace • Logistics • Light Manufacturing • Marine & Maritime Industries • Integrated Resorts • Healthcare Assistants • Allied Health Technicians • Waferfab

The WSQ Report Card to-date

Item	Achievements (as of 30 Sep 09)
Frameworks completed	24
SOA and NSC issued	764,546
Workers Upgraded	318,217
Older Workers Upgraded	150,813 (47.4%)
Lower Skilled Workers Upgraded	224,684 (70.6%)
Qualifications Awarded	8,846
Accredited Training Organisations	482
Accredited Courses	3,310

Note: SOA – Statement of Attainment NSC – NSRS Skills Certificate

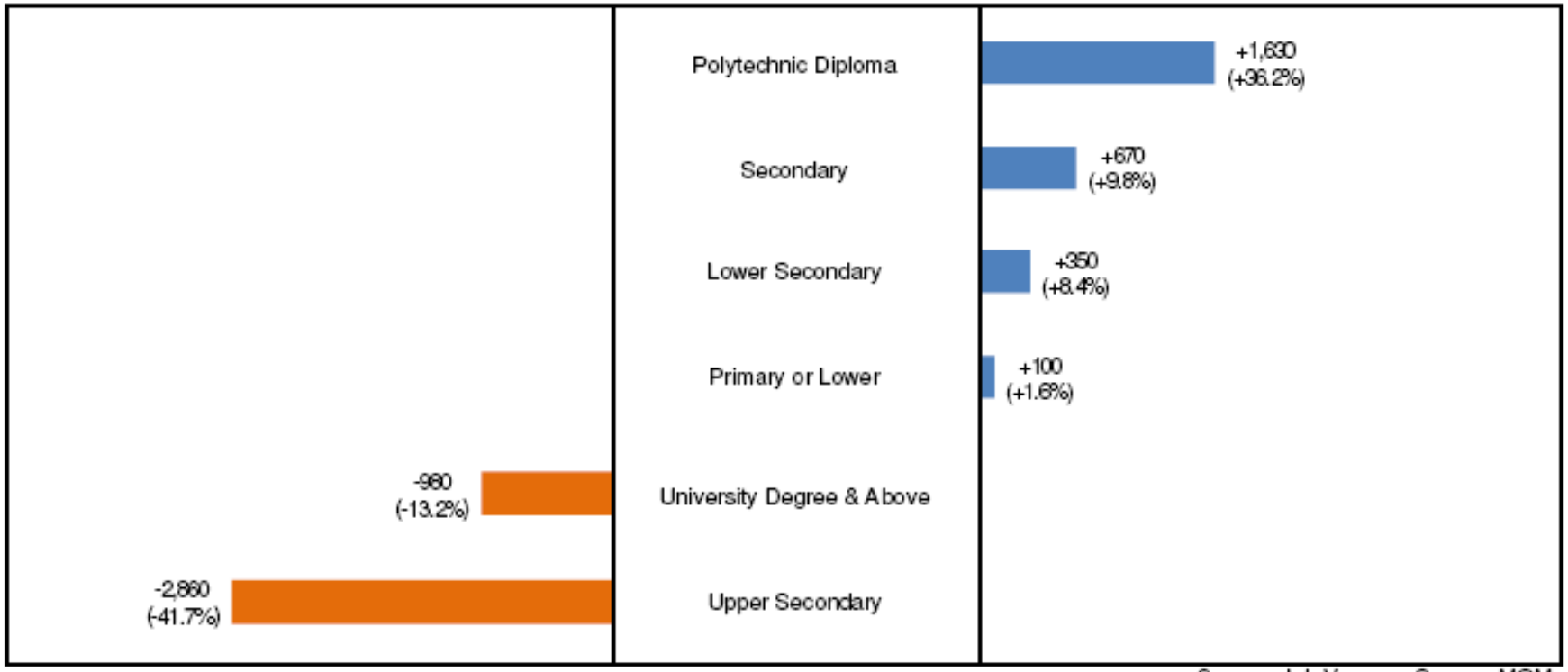
The Current Setting for Skills Policy

- A National Workforce Skills Qualification System (WSQ) in 24 sectors with 375,525 training places in 2009
- A central agency for skills development, policy management and funding (WDA)
- A successful application of skills and training policy as an economic stimulus package
- A series of emerging, post-GFC, skills and labour market issues

A **model of skills and training strategic planning** based around…

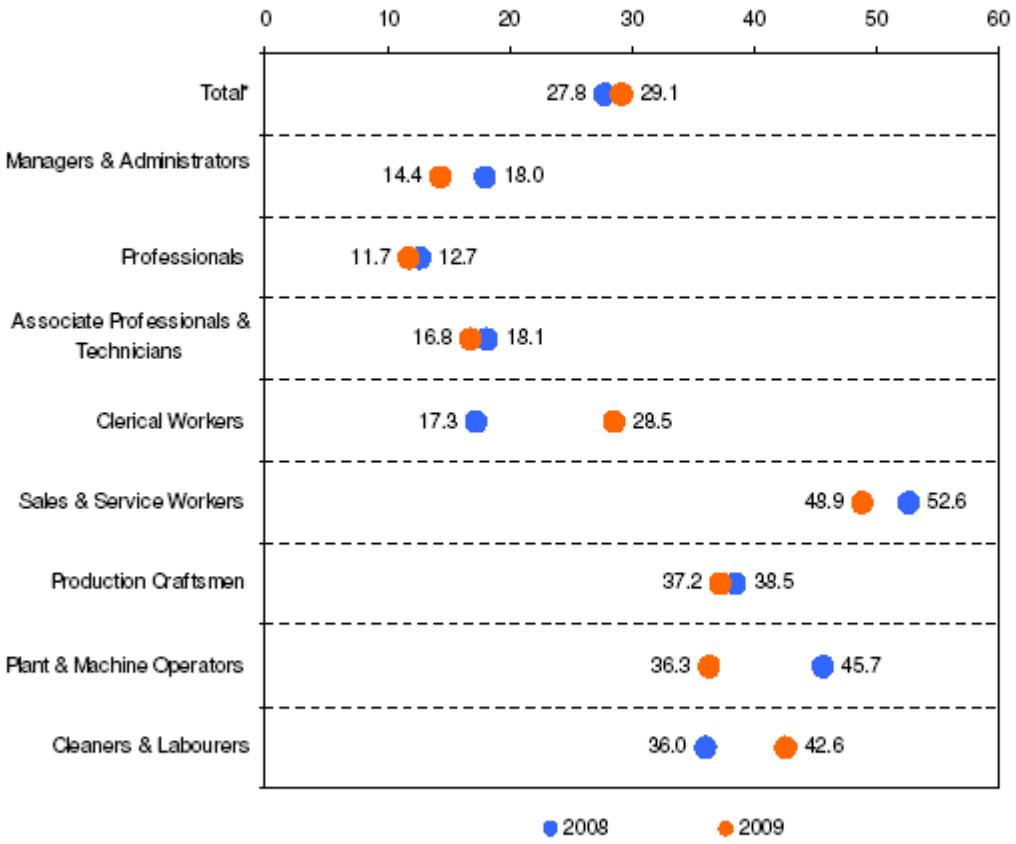
- Detailed labour market employment data and trend analysis
- Monitoring of emerging sectors
- Support for high technology, leading edge enterprises & innovation
- Use of sector skills advisory committees of WDA: Manpower Skills & Training Councils

Chart 8: Change in Job Vacancies over 2008 by Minimum Qualifications Required (As at September)



Source: Job Vacancy Survey, MOM

Chart 11: Incidence of Vacancies Unfilled for at Least Six Months by Occupation, 2008 and 2009
(As at September)



	Number of Vacancies Unfilled for at Least Six Months	
	2008	2009
Total*	10,010	10,140
Managers & Administrators	310	230
Professionals	950	730
Associate Professionals & Technicians	1,220	1,060
Clerical Workers	510	670
Sales & Service Workers	3,190	3,550
Production Craftsmen	1,110	1,250
Plant & Machine Operators	930	970
Cleaners & Labourers	1,780	1,670

Source: Job Vacancy Survey, MOM

Note:
(1) * refers to data that includes job vacancies for Workers Not Classified by Occupation and Agriculture & Fishery Workers which are not reflected here

Table A3: Top Ten Job Vacancies by Minimum Qualifications Required, 2009 (As at September)

University & Above	6,450	Polytechnic Diploma	6,120	Upper Secondary	3,990	Secondary	7,550	Lower Secondary	4,580	Primary & Below	6,200
Teaching Professional	430	Teaching Professional	2,320	Private Security Guard	300	Shop Sales Assistant	700	Private Security Guard	690	Construction Labourer	770
Software Engineer	280	Customer Service Executive	170	Enrolled/Assistant Nurse	120	Administrative Clerk	590	Shop Sales Assistant	330	Waiter	520
Management Executive	240	Professional Nurse	170	Administrative Clerk	120	Protective Service Worker (Fire Fighters, Policemen, Prison Guards)	430	Waiter	300	Office Cleaner	290
Sales & Marketing Executive	160	Sales & Marketing Executive	140	Machinery Mechanic	80	Receptionist & Information Clerk	430	Cashier & Ticket Clerk	220	Cleaner (Industrial Establishment)	280
Auditor (Accounting)	110	Management Executive	140	Mechanical Engineering Technician	80	Security Officer (Include Flight Marshall, Security Screening Officer)	410	Electronic Equipment/ Component Assembler	210	Private Security Guard	270
Sales Manager	110	Administrative Clerk (Include Insurance, Under-writing Clerk, Library Clerk)	110	Professional Nurse	70	Waiter	360	Welder	200	Shop Sales Assistant	210
Marketing Manager	100	Quality Assurance Technician	100	Pre-Primary Education Teacher	60	Pipe Fitter	300	Carpenter	150	Electronic Equipment/Compon ent Assembler	190
Mechanical Engineer	100	Mechanical Engineering Technician	100	Machine-Tool Setter-Operator	60	Cook	150	Scaffolder	150	Kitchen Assistant	180
Budgeting & Financial Accounting Manager	100	Personnel/Human Resource Officer	80	Specialised Nurse	60	Sales Demonstrator	150	Cook	130	Material & Freight Handling Worker	180

(…cont'd)

A **model of skills and training strategic planning** based around…

- National Training Frameworks and Skills Mapping in 24 sectors
- Comprehensive funding of employer-driven and individual-based training
- Periodic high-level national economic development analyses
- No national strategic skills audit or skills gap analyses

The Economic Strategies Committee Report

February 2010

THE BIG SHIFT

High-powered panel tells what it will take to grow Singapore's econo

■ Higher produ

KEY RECOMMENDATIONS BY ECONOMIC STRATEGIES COMMITTEE

HIGH-SKILLED PEOPLE

- Target productivity growth of 2 per cent to 3 per cent per year, up from 1 per cent currently
- Set up a national productivity council and fund
- Increase foreign worker levies and raise the quality of the foreign workforce
- Enhance Workfare for low-wage workers

INNOVATIVE ECONOMY

- Grow spending on research and development (R&D) to 3.5 per cent by 2015
- Consider coal and nuclear power, and importing electricity from overseas
- Have 1,000 local companies with global sales of $100 million
- Start an export-import ("exim") bank to help companies expand abroad
- Invest up to $1.5 billion in promising Singapore-based SMEs

DISTINCTIVE GLOBAL CITY

- Plan for new waterfront city at Tanjong Pagar post-2027
- Explore new ways to use underground land
- Make Singapore a cultural capital and a home to diverse talent

▲ **Straits Times,**
2 Feb, 2010

Wanted: Workers with 'T-shaped skills'

By Nur Dianah Suhaimi

THE characteristics of a new type of Singapore worker were spelt out by Finance Minister Tharman Shanmugaratnam yesterday.

Being clean, competent, thorough and efficient is no longer good enough.

Workers in a more productive economy need to have a mastery of skills and depth of expertise in whatever job they do and at whatever level, he said.

For instance, PMETs, or professionals, managers, executives and technicians need to have "T-shaped competencies" possessing deep skills in their area of expertise as well as a broad knowledge of horizontal skills such as management, finance and business operations, he added.

Such workers require the Government, companies and unions to invest heavily in their training and education – a vital course of action recommended by the Economic Strategies Committee (ESC) chaired by Mr Tharman.

However, he noted that it was more critical to invest in low-wage workers so that they can earn a higher pay and keep up with the rest.

To produce more productive workers, the ESC recommended two moves.

One is that in five years' time, 240,000 workers should be going for Continuing Education and Training (CET) programmes every year.

The other is to enhance the CET framework for lifelong learning, with the Government offering multiple skills-based programmes through schools and the CET system.

It wants a more seamless link between the CET's Workforce Skills Qualifications (WSQ) programme and formal tertiary education.

This means a worker who has completed several WSQ modules should be allowed to skip the same modules at the Institute of Technical Education (ITE) or polytechnics.

"This will minimise overlaps and make it easier for workers who wish to pursue higher education," said ITE director and chief executive officer Bruce Poh, who is part of the ESC sub-committee on fostering inclusive growth.

While the Government can provide a first-class CET system, it is equally important for companies to play their part by investing in their employees, said Mr Tharman.

He cited Atlas Sound & Vision, a local audio system retailer, which has sponsored several of its managers and front-line staff for postgraduate and diploma courses.

Its chief executive officer Michael Tien told The Straits Times: "As a small company, we are not able to pay high salaries like the MNCs. To retain staff, we had to offer something different – a chance at pursuing higher education."

The strategy has worked well. Of the 11 employees who went for higher education in the past three years, only three have quit. The remaining eight are actively helping the company to train its other employees, said Mr Tien.

"Investing in our staff has paid off. These days, most workers want a career, not just a job. If they feel they don't have a future with the company, they will leave."

SINGAPORE'S PRODUCTIVITY PROBLEM

WHAT IS PRODUCTIVITY?

In economic terms, it is defined as the value of output produced by one unit of input, but most of us understand it as how much work a person has done in a given time. A car salesman's productivity is how many cars he has sold in a single working day. For a property agent, it may be how many dollars of commission she has earned per hour of work.

Productivity can be increased in two ways – either increase the amount of output, or reduce the number of workers used.

- Using machines or automating processes is one example of how companies can increase output per worker.
- Improving teamwork is one way that the same amount of work can be done by fewer workers, also increasing productivity.

Govt help for firms to boost productivity

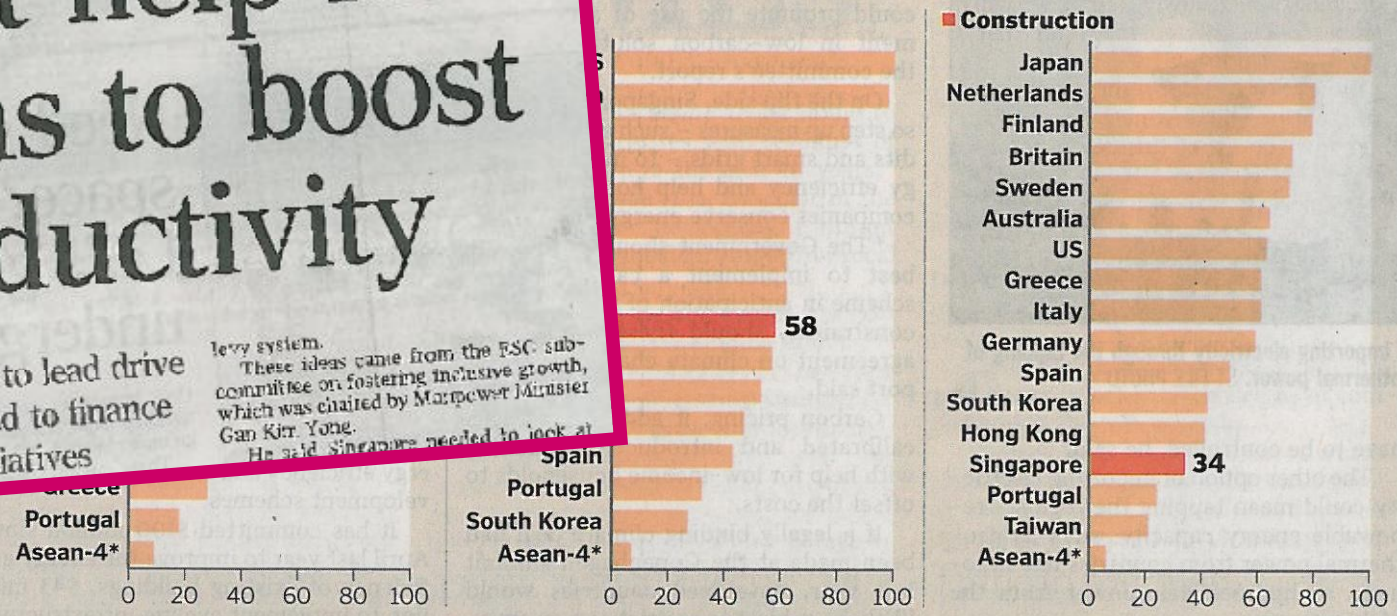
New council to lead drive and new fund to finance industry initiatives

levy system.

These ideas came from the FSC sub-committee on fostering inclusive growth, which was chaired by Manpower Minister Gan Kim Yong.

He said Singapore needed to look at

In retail, it is 75 per cent of that in Hong Kong and just one-third that of the US. In construction, the situation is even worse.



Note: These graphs show how productive Singapore is on a scale of 1 to 100, with 100 being the most productive.
* Asean-4 refers to Indonesia, Malaysia, Philippines and Thailand

Source: MINISTRY OF FINANCE

Economists have pointed to one key reason for this: the abundance of cheap foreign labour. In sectors such as construction especially, Singapore companies tend to employ lots of low-wage workers to do the job, while firms in other economies may employ fewer but higher-skilled workers or use more automation in their processes.

Singapore workers are also not as well-educated as in some other economies. About 60 per cent of Singapore's workers never made it past secondary school.

The Emerging **Landscape**

- Economic transformation to a dominant high skills, professional, managerial, executive (PME) labour market

- Emphasis on capability-driven growth (productivity-based rather than based on increasing labour supply)

- Enhanced skills development in specialised areas based on investment pipelines and high value-add jobs

The Emerging **Landscape**

- Supporting productivity push in key sectors:
  - bio-technology, aerospace, aviation, digital media, med-tech, clean energy, fusion technologies, lifestyle, sports & recreation, creative industries
- T-Shaped Skills Profiles: Deep technical and cross-disciplinary, cross-cutting expertise
- **The widening income gap…**

Some ongoing priorities

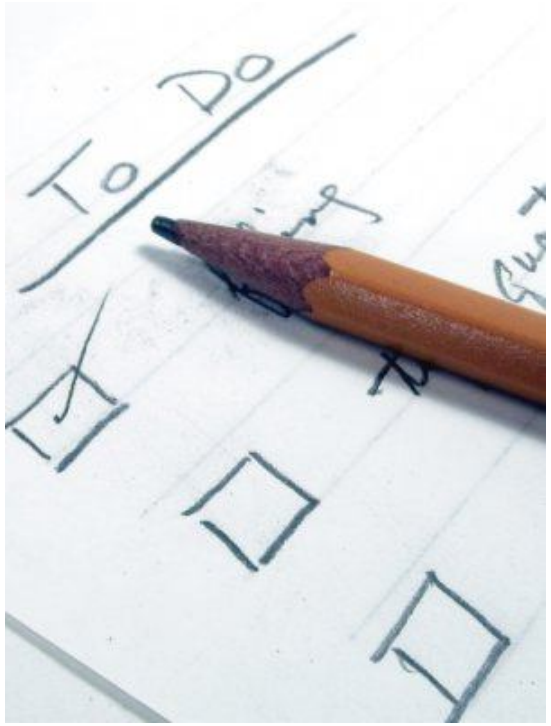
- Keeping older workers in the workforce
- Adult workplace literacy and employability
- Increasing workforce participation
- Career conversion programmes
- Improved articulation
- Building quality and a research base for workforce development

Some **New Value Propositions**…

- Capacity to commercialize innovation
- Multiple peaks of excellence
- More sophisticated consumer analytics
- Cross-disciplinary expertise
- System integration capabilities

Implications for **skills formation** & **training policy**…

- Codifying and framing new skill sets
- New models of competence and capability-building
- Sectoral transformation and, ironically,
- Moving beyond the sector-based model
- Horizon-scanning to identify emerging skills eco-systems
- Refocusing of skills and training efforts higher up the value-chain and
- Commensurate reshaping of funding policy



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Thank You