

Human Capital of Taiwan

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Outline

- I. Introduction
- II. Human Capital in Taiwan
- III. A comparison with Japan
- IV. Conclusion

I. Introduction

Taiwan Intellectual Capital Research Center (TICRC)

**Established in 2003 under the
Sponsorship of
Department of Industrial Technology,
Ministry of Economic Affairs, Taiwan**

Origin of TICRC

- Since technology innovation is one of the important factors in upgrading industrial structure, Taiwan government has continually promoted industrial research.
-  (Department of industrial Technology) began setting aside budgets to commission NCCU and MIC to found Taiwan intellectual Capital Research Center (TICRC) from 2003.
- TICRC's most important task is to promote industrial IC research, and assist the development of intellectual capital in Taiwan.

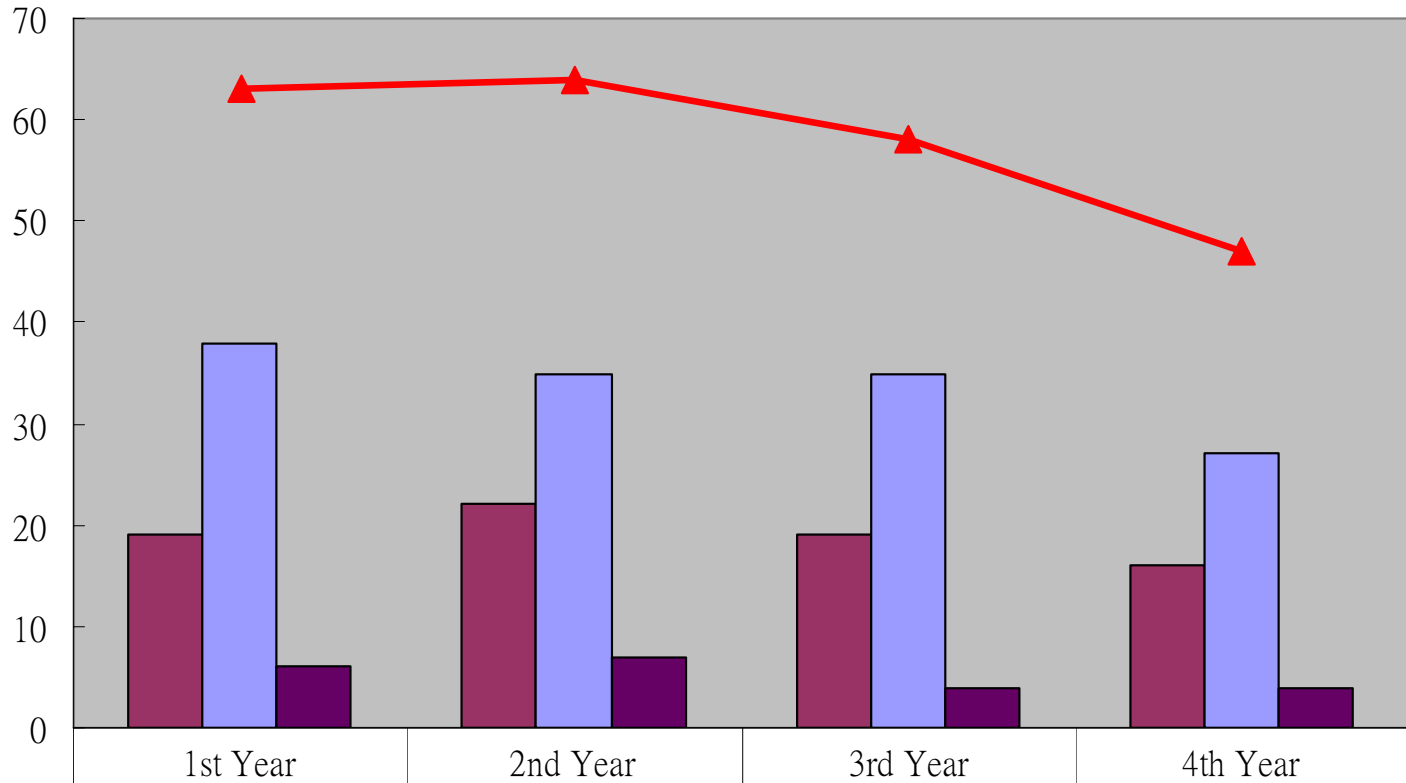
TICRC Project Structure (before 2005)







TICRC Project Structure



The Number of Researchers & Assistants in TICRC



 Researchers	19	22	19	16
 Assistants	38	35	35	27
 Administrators	6	7	4	4
 Total	63	64	58	47

Research Reports

- (1) Research Reports:
74 reports
- (2) Academic Papers for
Journal and
Conference: 100
papers

Meeting

- (1) Knowledge Sharing
Meeting (monthly)
- (2) Strategic Meeting

International Activities

- (1) IC Researchers' Exchange
- (2) Journal of Intellectual
Capital (JIC) Vol.6, No.2-Tiger
Brainpower
- (3) Internal Journal of Learning
& Intellectual Capital-Special
Issue (forthcoming)
- (4) 2003, 2004, 2006
International Intellectual Capital
Conference in Taiwan

Activities for Business

- (1) Workshops of IC Theory and IC
Practice for Business
- (2) Cross-industry IC & IT Surveys
- (3) Cross-industry IC Case Studies
- (4) Interaction with Industries
- (5) NCCU EMBA Courses
- (6) Text Book : Intellectual Capital
Management of Taiwan
- (7) Articles in Practical publications
for IC concept promotion

Digital information

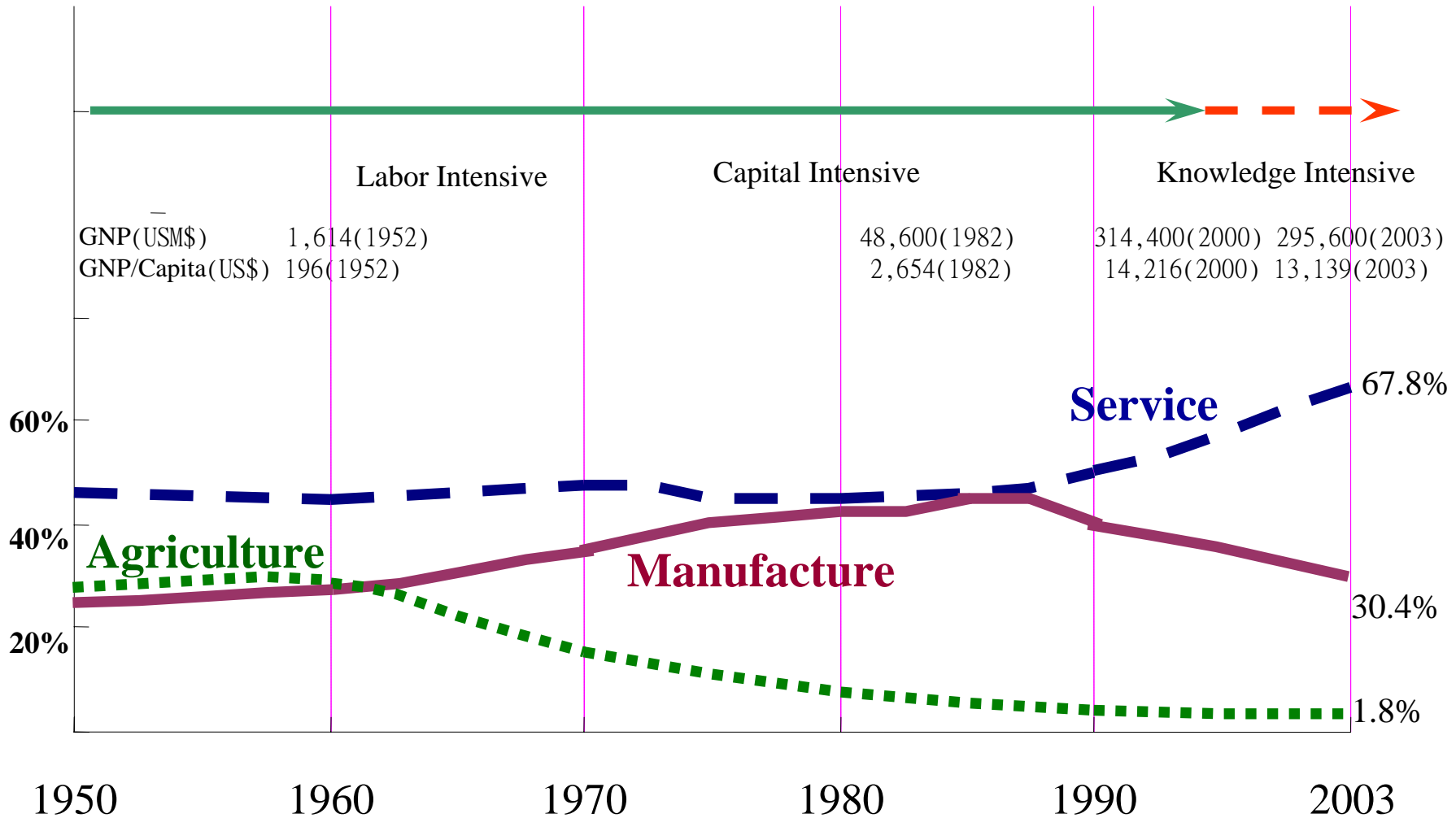
- (1) English & Chinese Website
(<http://www.ticrc.nccu.edu.tw>)
- (2) English & Chinese E-paper
- (3) Literatures & Industrial Database

TICRC

Taiwan Economy

- Formally in WTO, Customs Territory of Taiwan, Penghu, Kinmen and Matsu.
- Population=22,715,030 (2005/5)
- GDP >200 billion Dollars (after 1990)
- Growth rate= 3.63% (2005)
- Unemployed rate= 4.04%(2005)
- After 1960, Manufacturing sector leads the growth.
- After 1990, Service sector (with knowledge intensive industries) dominates the economy.

The Shifting of Industrial Structure in Taiwan



Intellectual Capital of Taiwan

- **Human Capital**
 - Education
 - Human Network
- **Structural Capital**
 - Intellectual Property
 - IT Infrastructure
 - City Infrastructure –Taipei
 - Institutions-ITRI/HSIP
- **Social Capital**
 - Venture Capital
 - Industrial Network
 - International links:
 - Brands,
 - MNC's R&D centers/IPO
 - Trade Shows

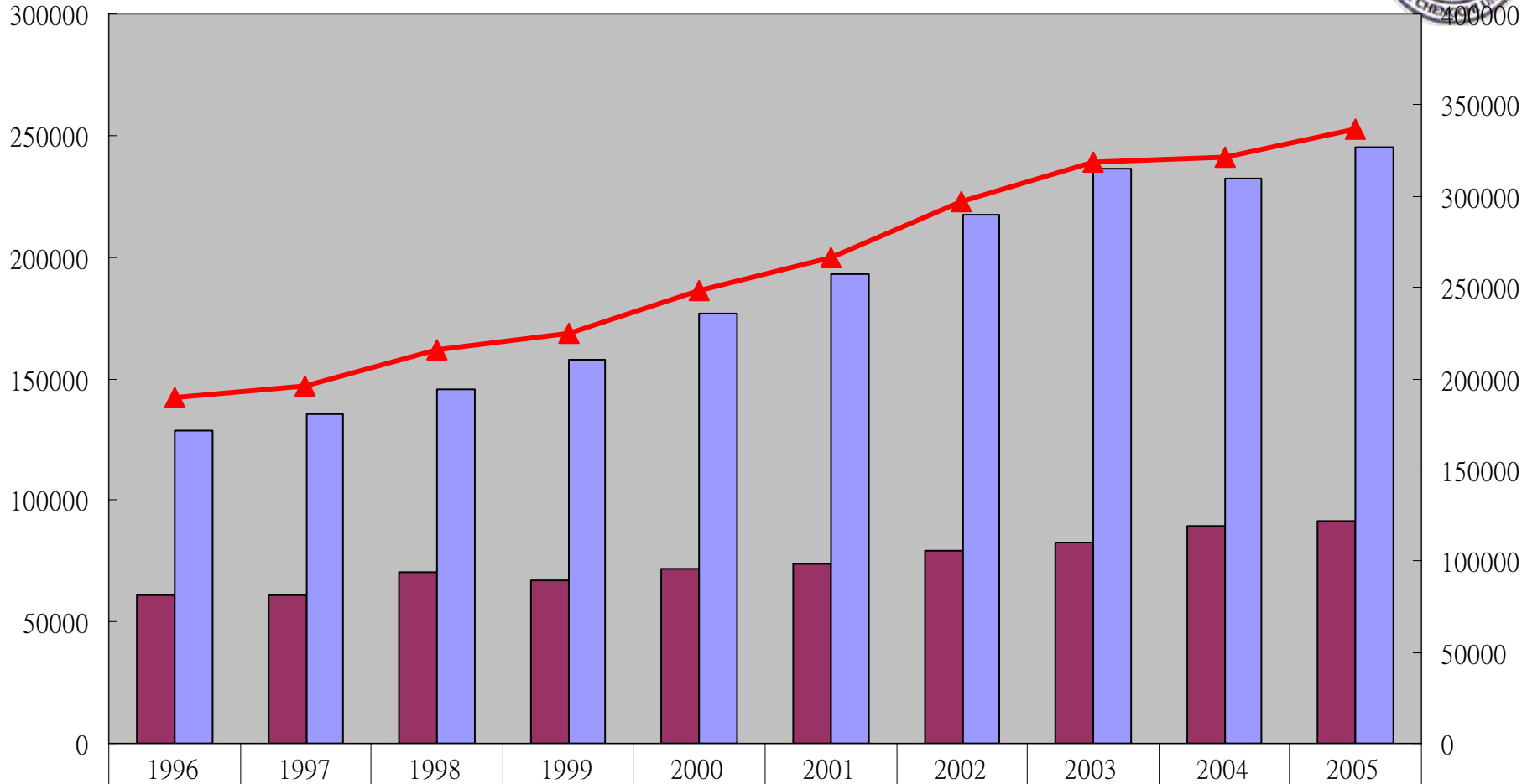
II. Human Capital in Taiwan

Human Capital

-Education

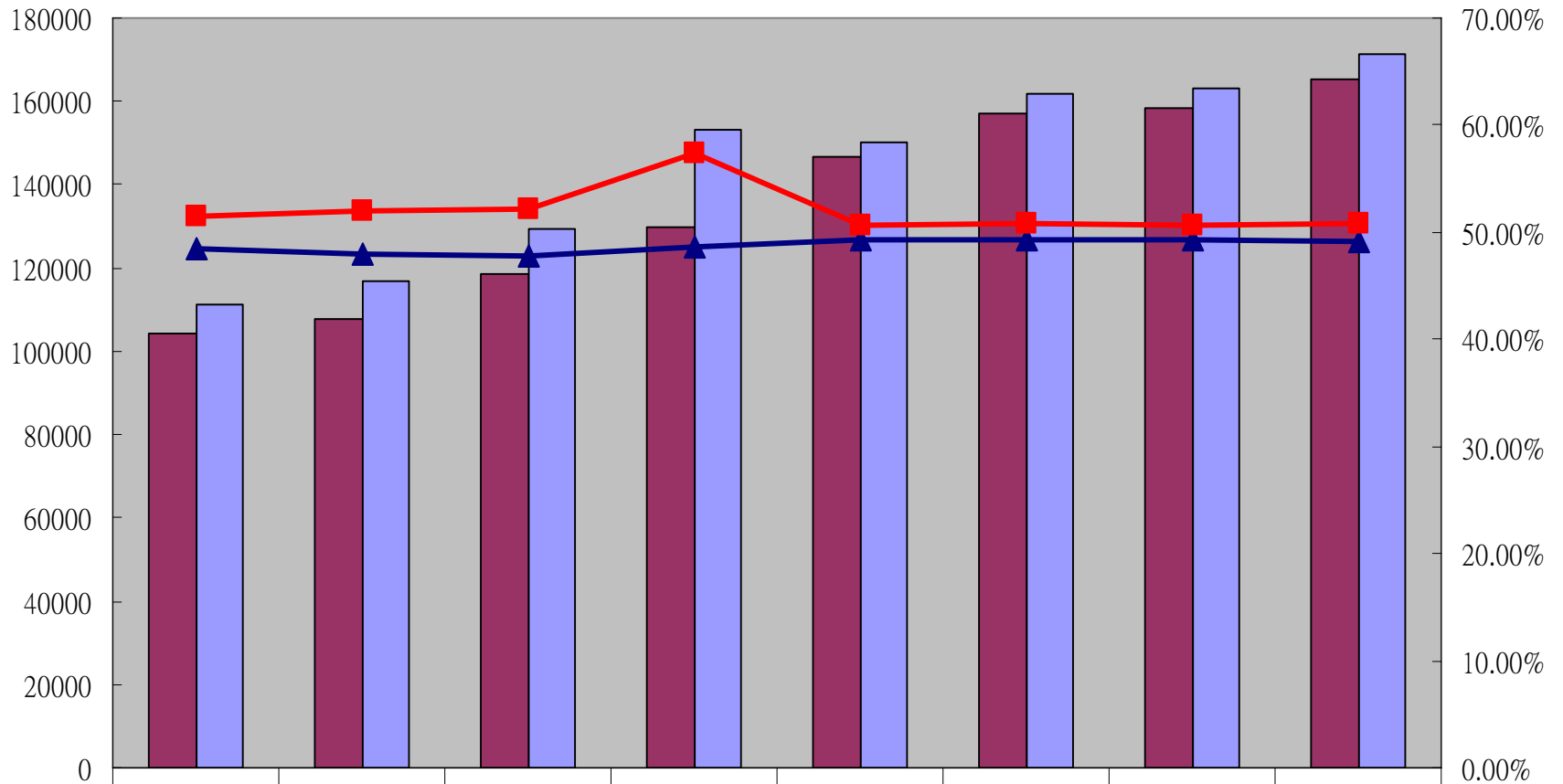
- Higher educations continue to grow
- High Quality Human Capital focus on Science and Technology
- Chinese culture of industriousness:
 - Working hour=2280hours/year
 - 24-hour working factory
 - 24-hour convenient store (not just 7-11)

The Number of Public/Private College Graduates



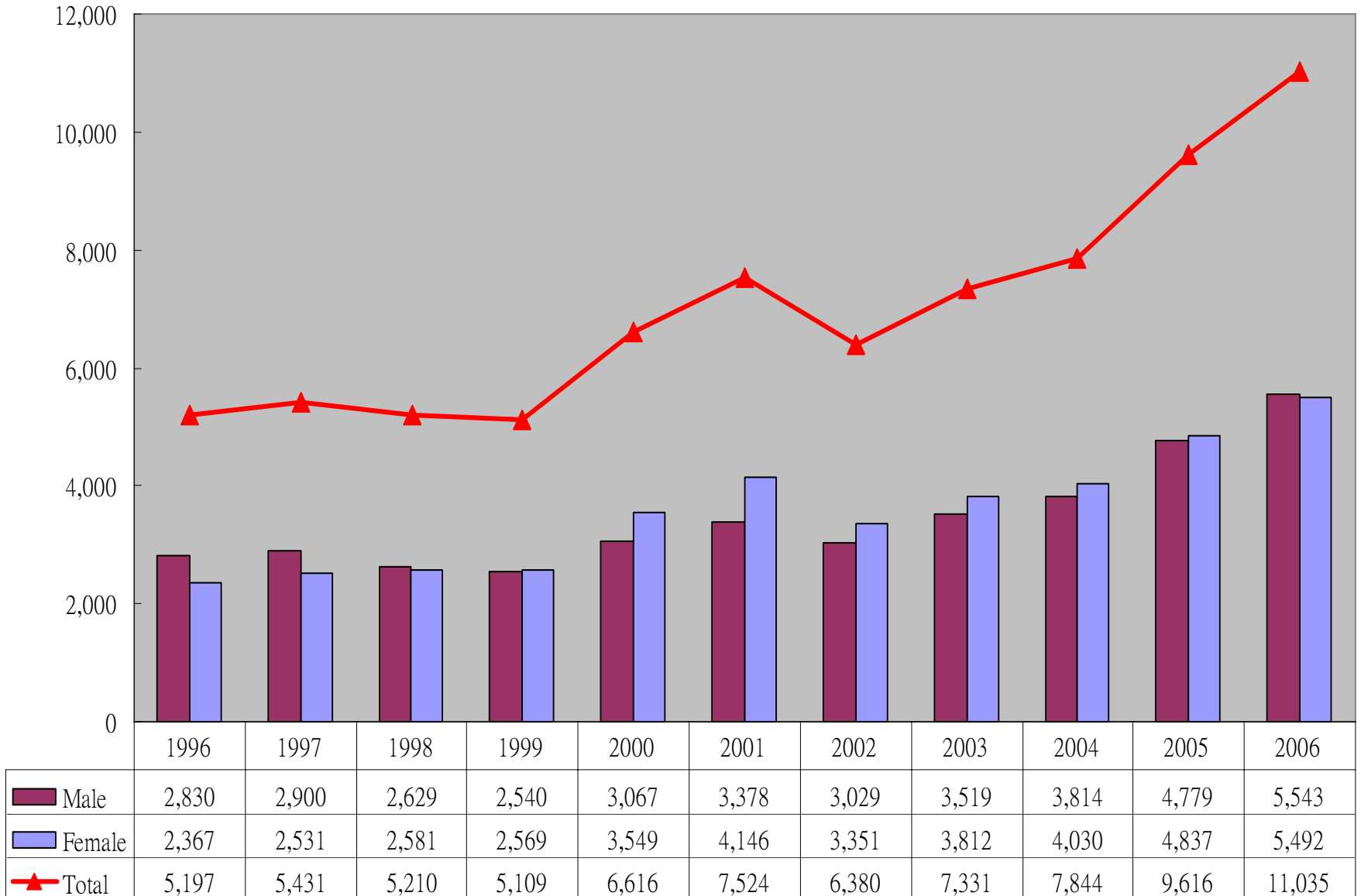
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Public	60819	61248	70147	66970	71451	73509	79490	82744	89493	91608
Private	128698	135136	145265	157660	176439	193052	217394	236123	232315	245257
Total	189517	196384	215412	224630	247890	266561	296884	318867	321808	336865

The Number/Ratio of Male/Female of College Graduates

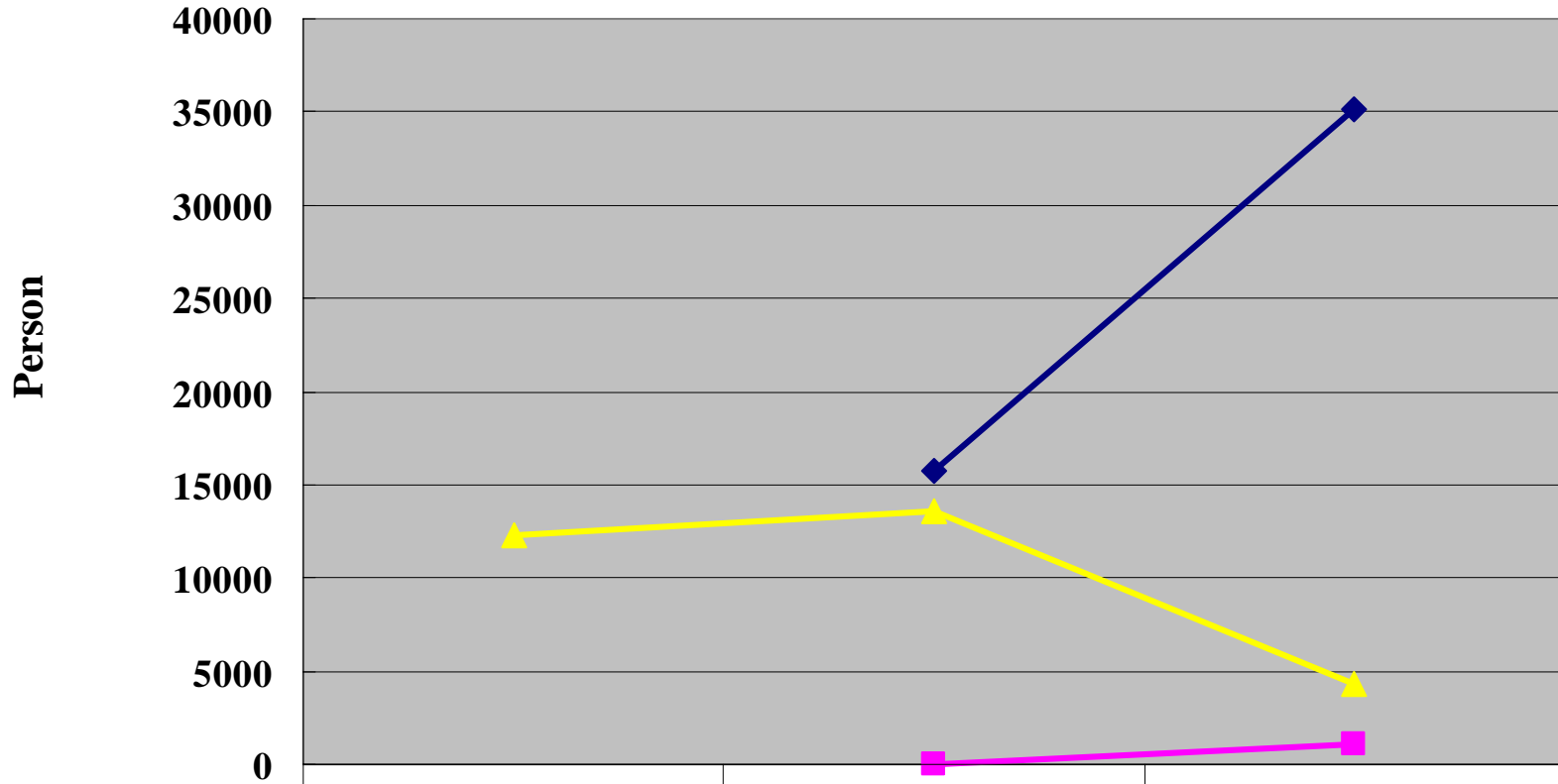





Male	104397	107724	118485	129599	146610	157066	158572	165,502
Female	111015	116906	129405	152975	150274	161801	163236	171,363
Male %	48.46%	47.96%	47.80%	48.62%	49.38%	49.26%	49.28%	49.13%
Female %	51.54%	52.04%	52.20%	57.39%	50.62%	50.74%	50.72%	50.87%

The Number of Male/Female Foreign Students



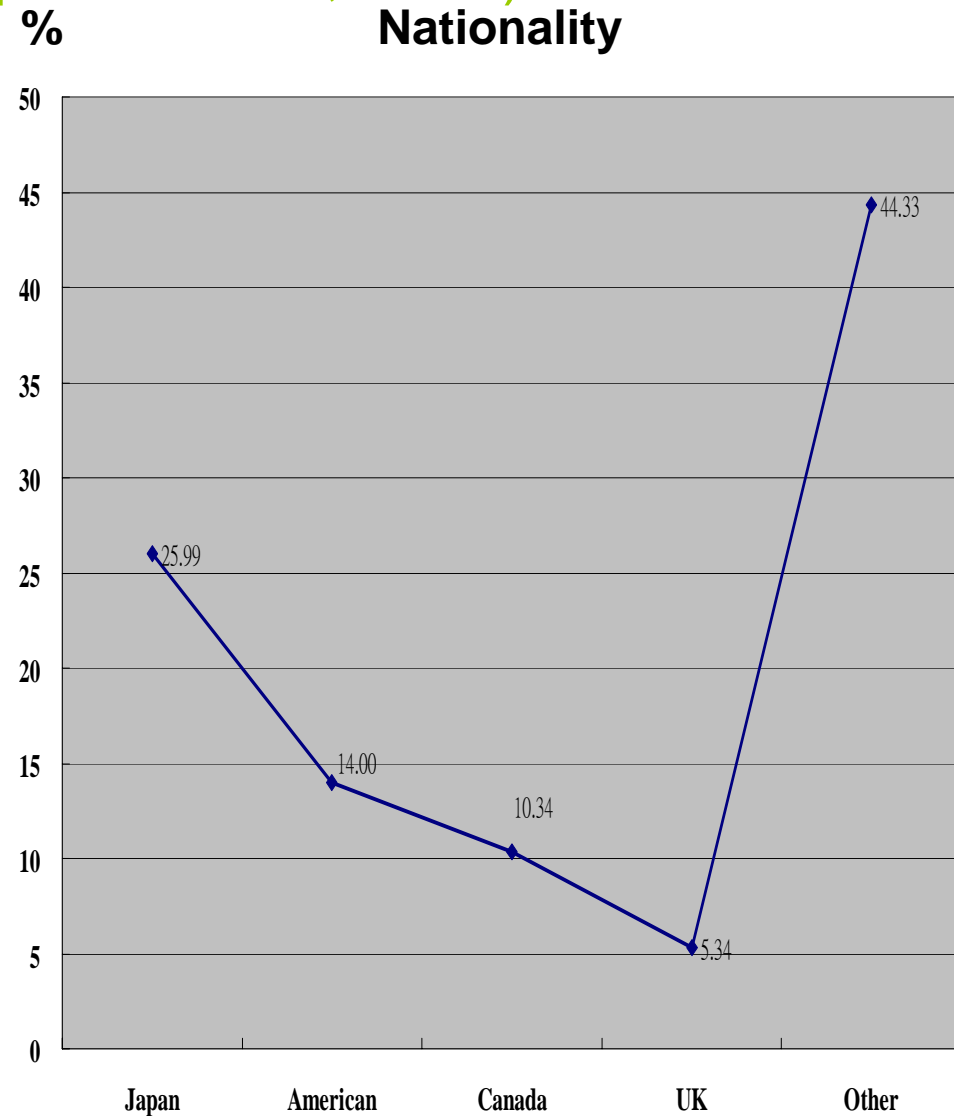
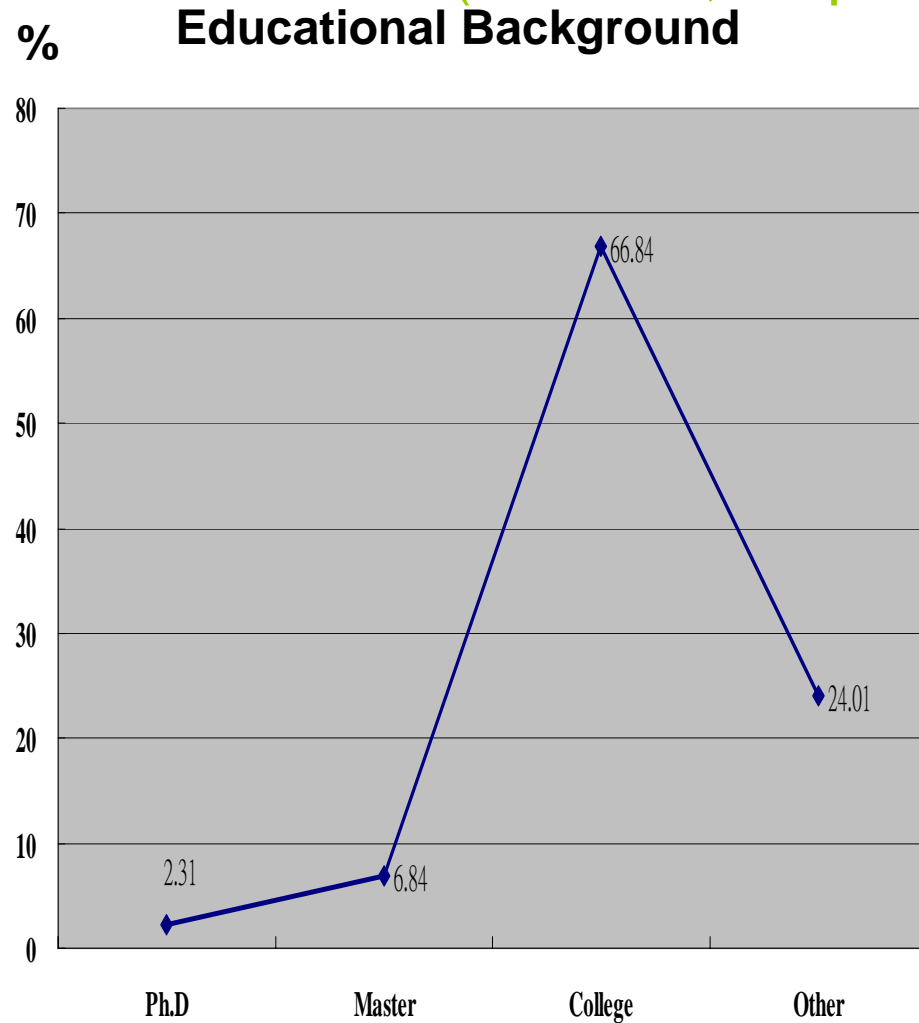
2005 Number of Trainees Supported by Bureau of Employment & Vocational Training (total 576,787 people)



 Training for college students	NA	15792	35107
 Training for International collaboration	NA	0	1065
 Training for target industry	12325	13591	4266

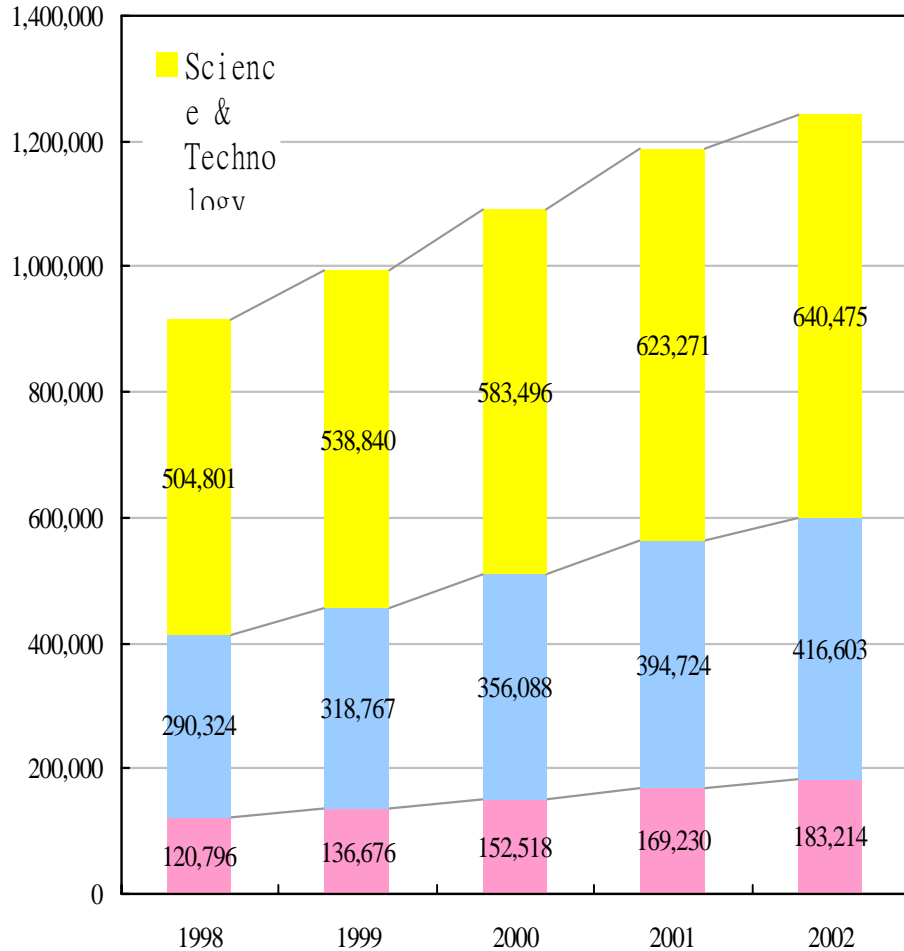
White Collar Foreign Professionals

(Total 94,329 people October, 2006)

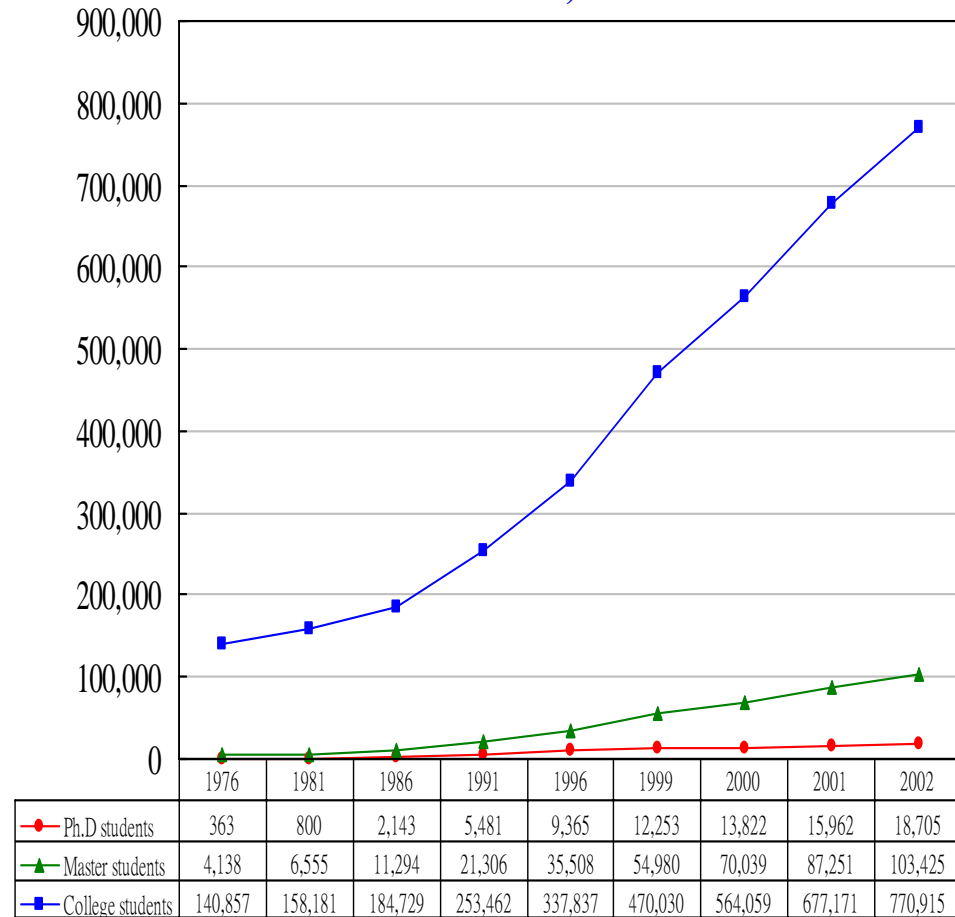


High Quality Human Capital focus on Science and Technology

Profile of Academy Domain

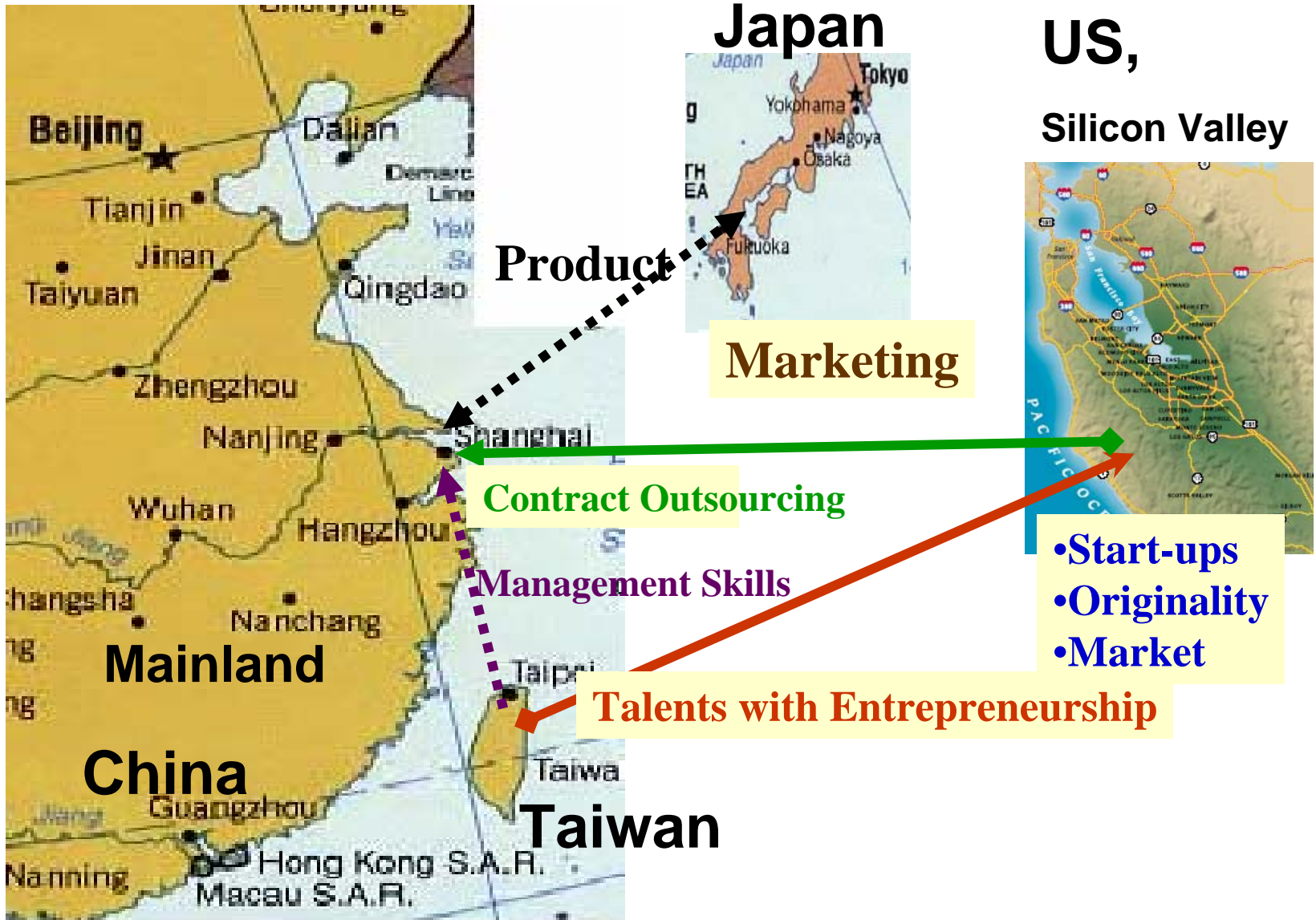


Percentage of Student profile (in school)



Human Capital -Human Network

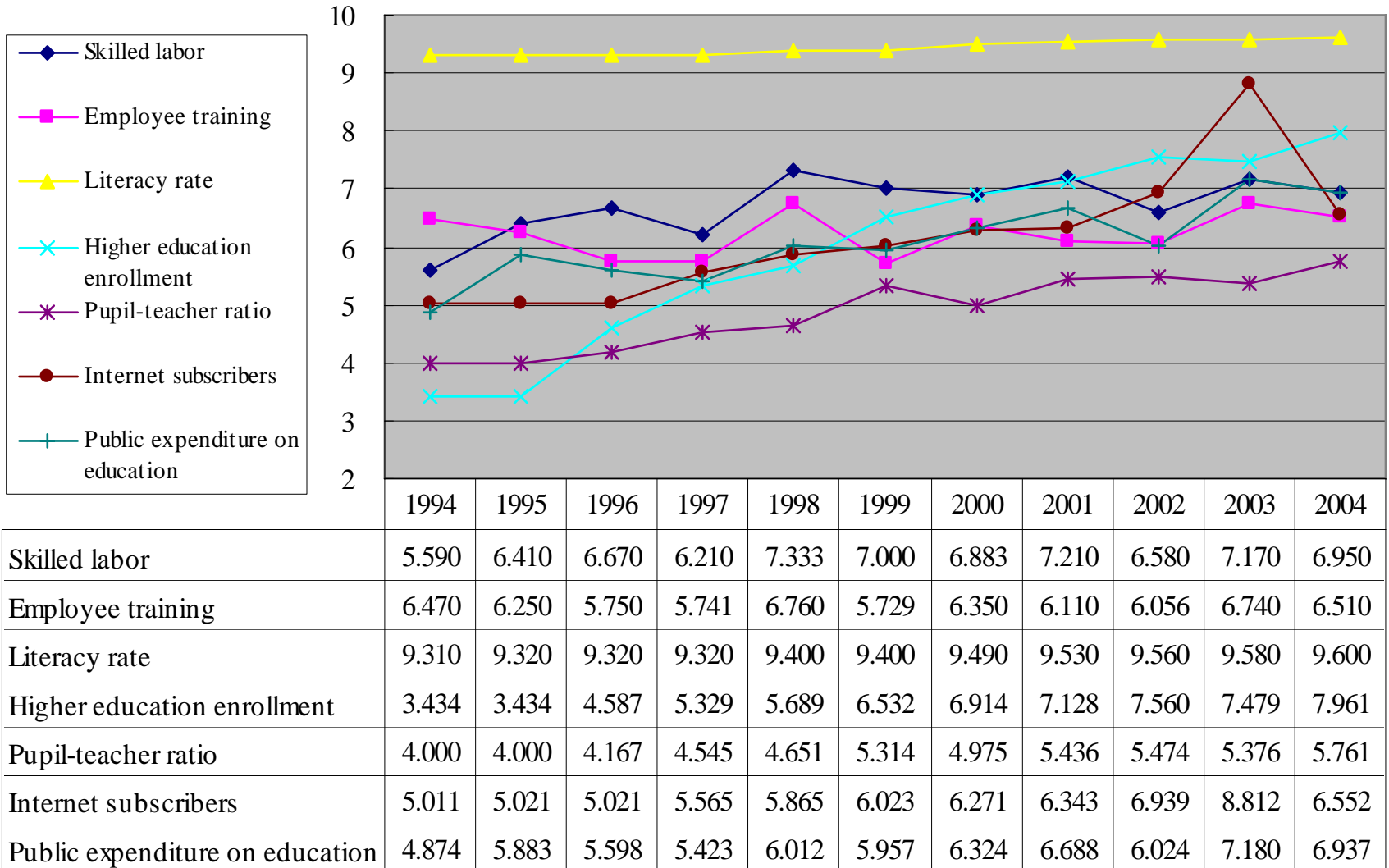
- Intelligence flows within and between Knowledge Capital Clusters of Taiwan, U.S., Japan and Mainland China.
- Taiwanese students were eager to study abroad and returned to work after obtaining international working experiences.



National Intellectual Capital

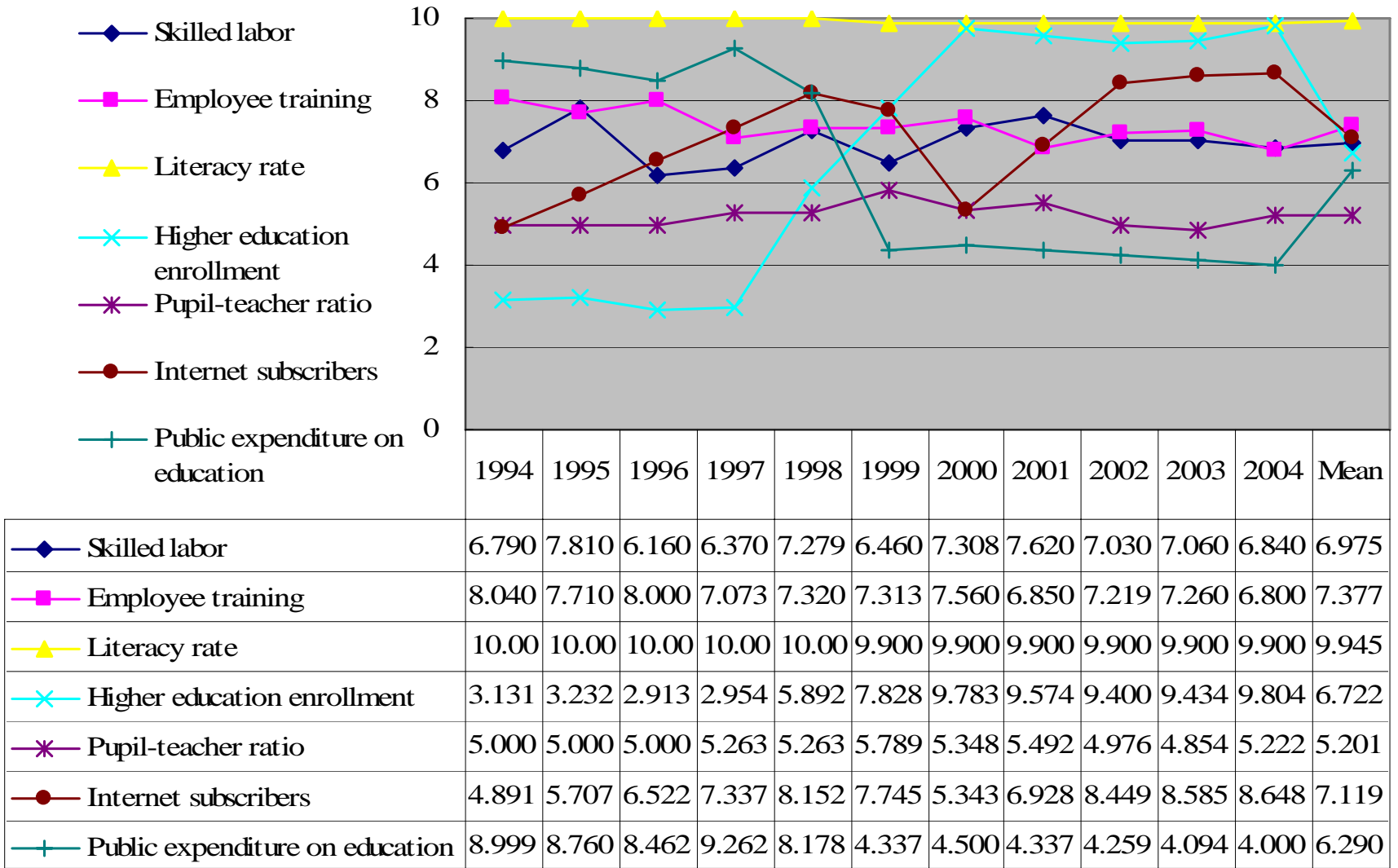
- A 40-country comparison
- Based on OECD and IMD data covering 11 years from 1984 to 2004
- This presentation focuses on the national human capital of Taiwan and Japan only

Numbers and Trend of Taiwan's Human Capital

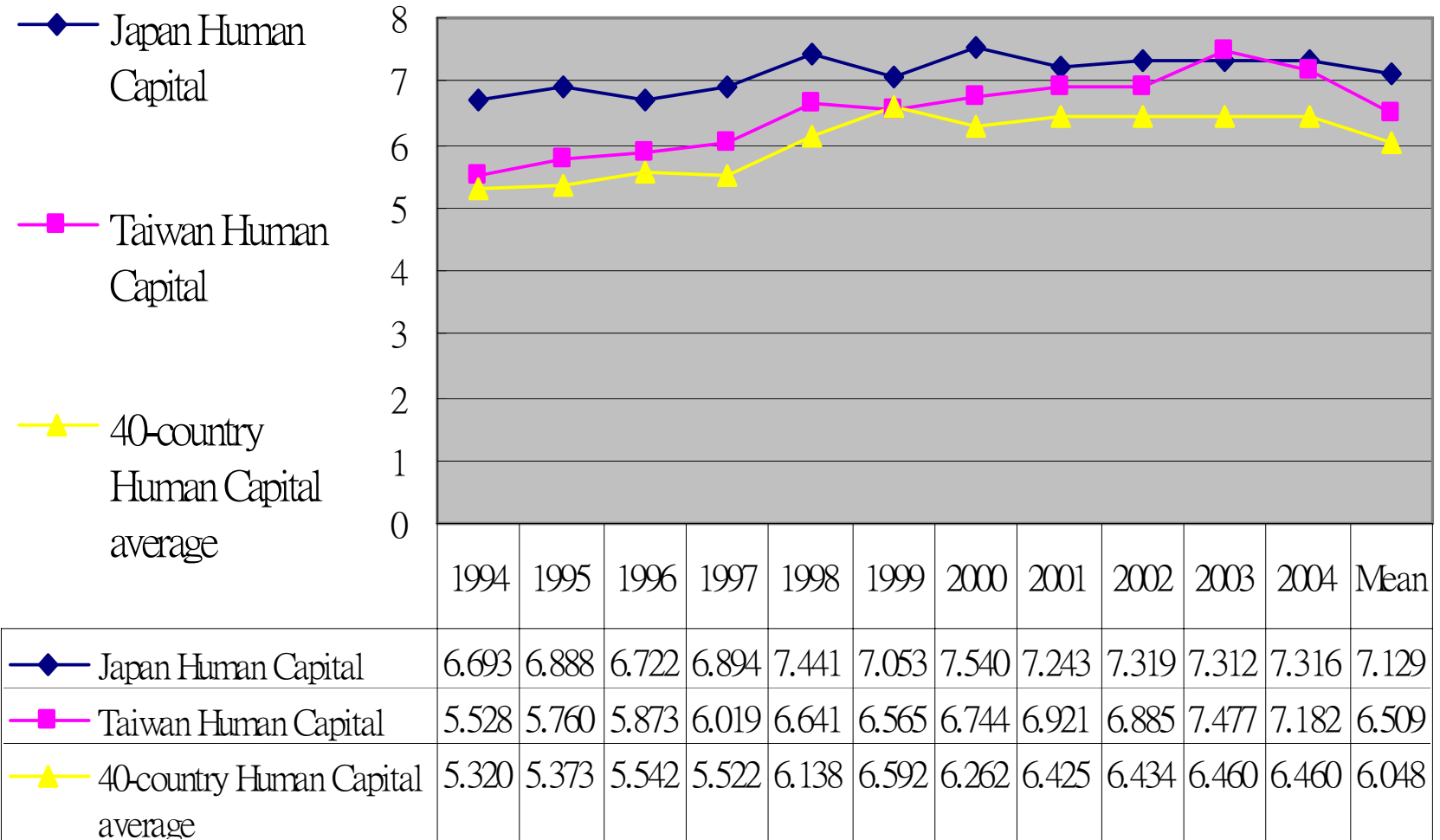


III. A Comparison with Japan

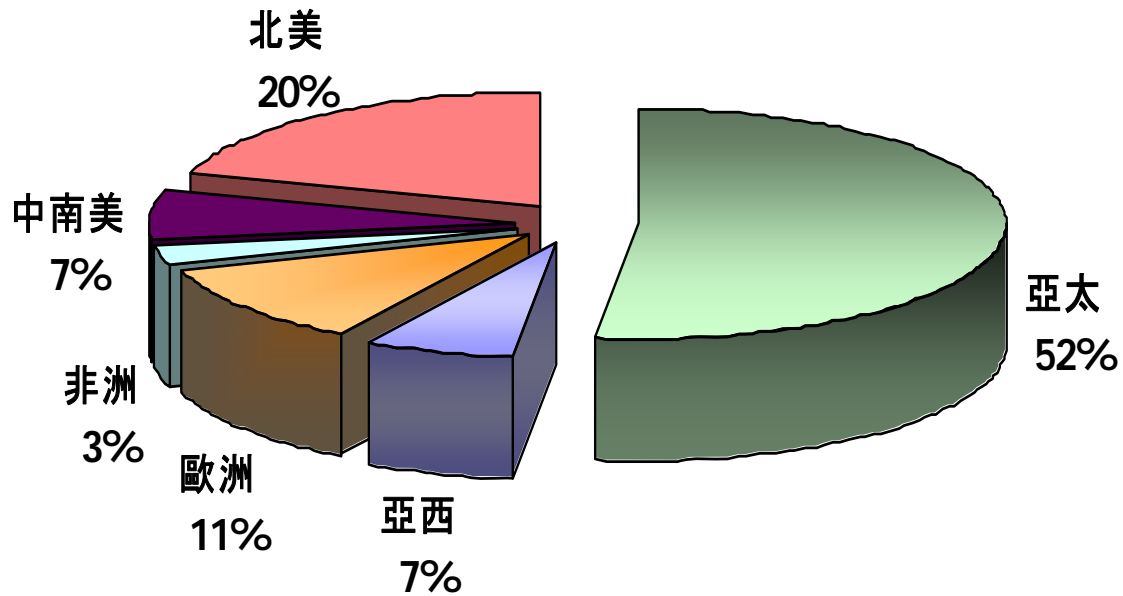
Numbers and Trend of Japan's Human Capital



Human Capital comparison of Japan, Taiwan, and 40-country average



2005 foreign students country of origin – National Chengchi University



Asian Pacific	West Asia	Europe	Africa	Central/South Am.	North Am.	Total
151 (52%)	19 (7%)	33 (11%)	8 (3%)	20 (7%)	59 (20%)	290

Firm Level Human Capital Indicators

(developed by TICRC HR group)

Employee competence

Job accountability

Employee commitment

Employee cooperativeness

Employee skills

Employee creativity

Employee professional knowledge

Organizational tenure

Professional tenure

Levels of education

	<i>Measures that facilitate Human Capital Creation and Accumulation</i>
Vision Strategy	Unleash brain power Effective human resource configuration Employees' emotional support
Employees: Individual Group	Motivation Effective leadership Team building
Technology	Continuous learning for technology advancement
Process: Structure System	Effective recruitment Training & development Job rotation Effective reward system Employee-management relations
Catalyst: Culture Leadership	Nurturing culture building Facilitating leadership Top management team value manifestation
External Stakeholders	Explore stakeholders to be organizational human capital Enlarge external partners

IV. Conclusion

- Human capital is the very foundation of other capitals
- The dynamics of human capital + structural capital + social capital
- Individual talent → firm level HC → industry level HC → national level HC → regional level HC

HC creation and accumulation

- Individual talent
 - Recruiting & selection
 - Training & development
 - Retention
- Firm level HC
 - Leadership
 - Policy
 - Reward system
 - Knowledge management

Intelligence flows

- Encourage students to study abroad and facilitate the environment for returnee.
- Attract foreign students from oversea.
- Improve the living environment and the convenience for foreign experts to live.
 - May start from specific community, like HSP.
- Promote various kinds of trade show.

HC creation and accumulation

- Industry level HC
 - Networking
 - Collaboration
 - Knowledge sharing
- National level HC
 - Public policy
 - Support of Ministry of Education
- Regional level HC
 -



TICRC
 Taiwan Intellectual Capital Research Center

HeadLines
 Welcome to TICRC website

The 8th Knowledge Sharing Semina has been held on Wednesday 2/23 successfully.
 Location: The first conference room, 8F, Commerce Building

Hot News
 (2004/2/19)The TICRC8th knowledge sharing seminar for 2nd year is scheduled on 2/19at 4-6 p.m. Related Information Downloads as follows: [Agenda](#)

TICRC has the honor of being Gold Sponsor of the 26th McMaster World Congress is held by McMaster University in Canada. Professor Cheng, Ting-Wong leads TICRC delegation which includes Professor Lin, Yeh-Yun, Professor Chang, Ai-Hua, Professor Lee, Li-Tsung, Dr. Chu, Kai-Ping and Mr. Lin, Liang-Yang participating in the conference. Prof. Cheng Ting-Wong has the main dedication at the conference. Moreover, Prof. Chang, Ai-Hwa's paper is selected for the best paper award. Pro. Lee Yi-Tsung and Dr. Chu, Kai-Ping have down great exchange of information and knowledge with professionals and scholars from all wide worlds at the conference. [more news>>](#)

Introduction
 Activity
 Article DB
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Customer Capital
 Intellectual Property
 Organization Culture Ca
 IT Application Capita
 Process Capital
 Relationship Capital
 Human Resource Capita

MEMBER SIGN IN
 ID
 PASS
 LOGIN RESET

Market Intelligence Center DoIT DEPARTMENT OF INDUSTRIAL TECHNOLOGY MINISTRY OF ECONOMIC AFFAIRS R.O.C.



TICRC
 Taiwan Intellectual Capital Research Center

台灣智慧資本研究中心 電子報

E-paper

CONTENT **THE FIRST ISSUE** NO. 1-2005/02/18

QUESTION TICRC Website <http://www.ticrc.nccu.edu.tw>

FEATURE Strategy thinking from Intellectual Capital -Se-Hwa Wu, MU-Yen Shu

INTRODUCTION Origins Of TICRC, Organizations Of TICRC, Missions Of TICRC, The TICRC Outlook

ACTIVITY **Incoming:** The 26th McMaster World Congress information
Retrospect: 2004 IC WORKSHOP and 2004 international conference on Intellectual Capital in Taiwan

FEATURE

Strategy thinking from Intellectual Capital

Se-Hwa Wu, Mu-Yen Shu

Strategy management is a critical function in organization. Because the knowledge become the key success factors for firms, the approach of strategy thinking already have changed from the theory of structure of industry to the knowledge-based view instead.

Strategy formation and analysis can be classified into two groups according to the analysis approach. First, strategy can be formulated by view of industrial economic, which is an approach of outside-in. This approach emphasizes that profits of firms come from the monopoly position in industry. Firms should always pursue a good monopoly position in industry structure to protect their profits and also build the entry barriers to refuse competitors coming.

Second, strategy can be viewed from inside-out approach based on firms' resources and capabilities. This approach argues that firms should be looked at as a receptacle of various resources and capabilities which including tangible assets and intangible asset such as manpower, knowledge

First issue:

Feb. 18, 2005

