

Returning Home after Studying in the USA: Reverse Brain Drain in Taiwan

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"In New Brain Drain, Skill Asians Are Leaving U.S. for High-Tech Homelands," wrote Ashley Dunn of The New York Times. This thought-provoking article has inspired a great deal of discussion all over the United States since its publication on February 21, 1995. San Jose Mercury News reprinted the story on the same day of its publication in The New York Times. And the World Journal (世界日報) immediately printed its commentary on the front page, together with a significant piece of editorial which has been reprinted on page 4 of this current issue. Mr. Ashley Dunn who interviewed this writer three times before writing this story. Its publication also reflects the views of my study on international education as well as the interesting issues of reverse brain drain.

1. "Packing Up and Going Back Home" - Introduction

During the span of four decades between 1950 and 1990, pursuing advanced studies in the universities in the United States was the dream of tens of thousands of foreign students. Many young potential students successfully fulfilled their dream, and yet there were others failing to do so for one reason or another. It is fair to say that advanced studies in the higher learning institutions has had a positive and direct impact on helping transform and modernize all the Asian nations. Indeed, the United States has provided the best learning environment as well as the most desirable and sophisticated research facilities for advanced level students, which few Asian countries can afford. Moreover, many of the higher learning institutions in this country have produced not only internationally recognized scholars and professionals, but also well trained leading diplomats of other countries (Rentz 1987:10). This stark reality has accounted for the reason why so many foreign students were anxious to flock into the United States. They used to get endorsement or subsidy from their governments as well as substantial support from their families. As a result, the number of foreign students pursuing advanced studies in the United States has been on the steady rise.

Take Figures 1 and 2 for examples. In these two charts we can clearly see the steady annual increase of foreign students in general, and Taiwan in particular. Aside from this basic phenomenon, social stability, unsurmountable envious research environment plus economic booming in North America have lured a large number of foreign students to choose to stay and work in this country upon successful completion of their studies. Some of them have become neutralized American citizens eventually, taking challenging and

impressive positions in various sectors here, ranging from higher learning institutions, research organizations to recognized business corporations. This situation is mutually beneficiary to both the foreign students and the United States.¹ If one turns open the "Who Is Who in America" nowadays, one will not be surprised to find the sharp increase of former Asian students becoming Asian Americans and their names are listed for their significant contribution to this country in various area, particularly in science and technology. Situation as such was a big concern to many developing nations, and the fear of brain drain became increasingly discernible outside the United States. This was true to all developing Asian nations between 1950 and 1980, including the Republic of China on Taiwan. And yet many people considered it a unique honor to have a family member graduating with a Ph.D. degree from an American university. Ph.D. and Master's degrees from the United States were also helpful to youngsters in seeking employment in the future when they go back to home countries.

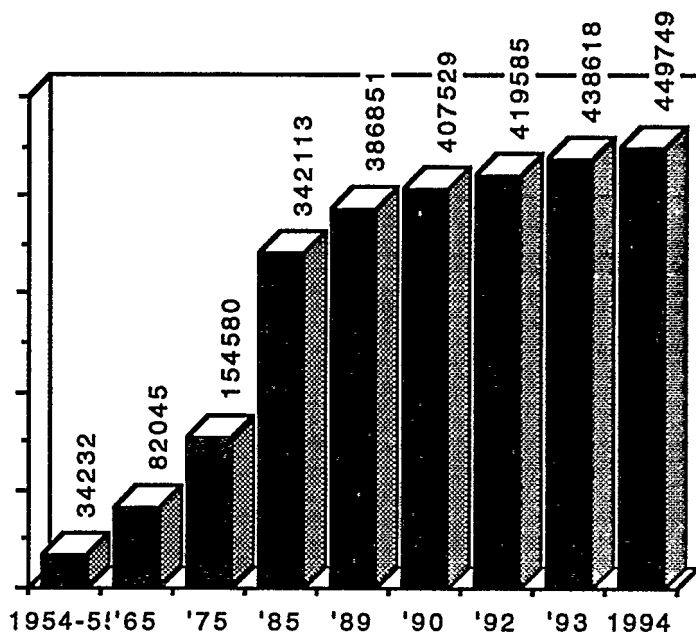


Figure 1: Foreign Students in US

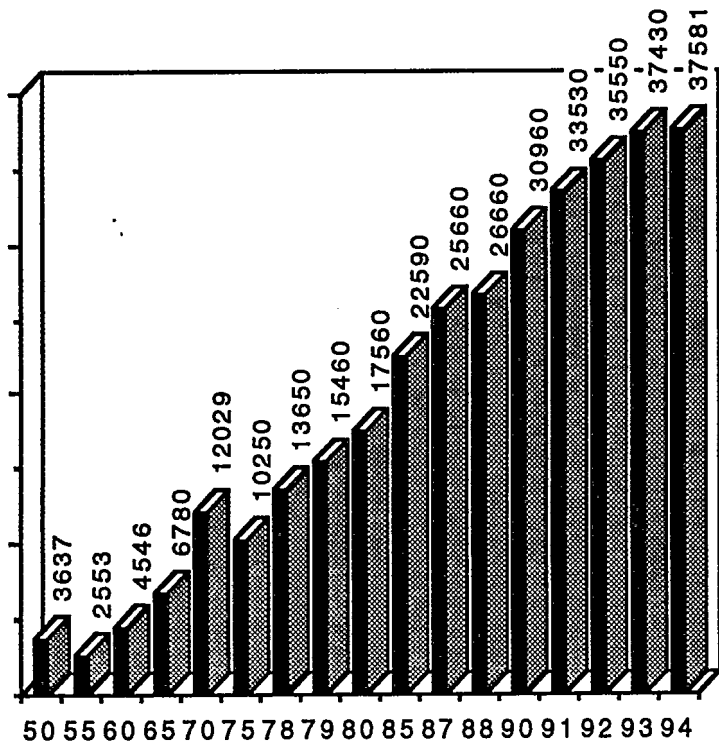


Figure 2: ROC (Taiwan) Students in US

Unfortunately, his picture did not remain rosy forever. On March 4, 1993, the Los Angeles Times published a thought-provoking report, entitled "Packing up and going back home." This article asserted an unprecedented truthful story that "immigrants who return home are nothing new.... What is unusual now is that so many immigrants from a wide range of countries are leaving the United States." Indeed, "with stubbornly high unemployment, more immigrants are returning to their homelands. Many of them no longer believe in the American dream," asserted the Los Angeles Times. Similar stories were printed in US News & World Report (September 22, 1993) and The Wall Street Journal (1993). And now The New York Times article asserts that U.S.-trained professionals are discovering opportunities galore in Asia. And as these talented intellectuals help gain entry into high-tech powerhouses of the Far East, they find they can go home again (Dunn 1995).

There are a number of social, cultural and economic variables that can be used to account for the reason of why more and more students and professionals are going home than before. The new trend reflected from Figure 3 has partially pinpointed the decline of job markets in the United States. However, it is more justifiable to say that it is primarily due to the economic booming of the Asian countries that constituted this change of picture. The data reflected from Taiwan in Figure 3 can serve as one of the most striking phenomena, since Taiwan's economic upturn as well as its modernization has served as one of the key factors to attract a large number of degree students to go back either to work for various institutions or to start their own businesses.

Many jobs are thus created, and priority has been given to students going back from leading universities with sound training and advanced knowledge. Christian Science Monitor's Linda Feldman (May 19, 1994) was rather impressed by the fact that there were so many factors instigating the change of picture in such a dream land. However, this merely coincided with the teaching of the Buddha: All laws are subject to change depending on the surrounding factors: zhufa wuchang 諸法無常.

Statistics shown in Figure 3 has indicated the drastic change of students' attitude from trying to find jobs in the United States to beginning to explore new careers in Taiwan. In the 1970s, it was not difficult for a college graduate with a Ph.D. degree, but foreign passport, to be employed in this country. Also, political climate then discouraged some from going back to Taiwan. In the 1971-72 period, there were 367 students with advanced degrees going back. And yet, the so-called "Nixon Shock" of 1972 caused the number to drop from 367 to 276 the next year as a consequence.² This political impact lingered for almost a decade. The effect was even more acute when former President Jimmy Carter announced normalization of relations between the United States and People's Republic of China on December 15, 1978. Thus, the number of returning students dropped immediately in that year from 431 to 331. It was two important factors later that enabled the number to rise gradually. The first factor was the economic rejuvenation and later viability of Taiwan. And the second is the Taiwan Relations Act enacted by the United States Congress which has helped safeguard the safety of Taiwan psychologically.

The social and economical factors of Taiwan between 1980 and 1990 should not be ignored. It is the social consensus derived from the deep rooted Chinese cultural attachment that allowed the Chinese students and professionals in the United States to think very seriously about what to do after the United States severed the official relationship with the Republic of China (Taiwan) in January 1979. On the other hand, it

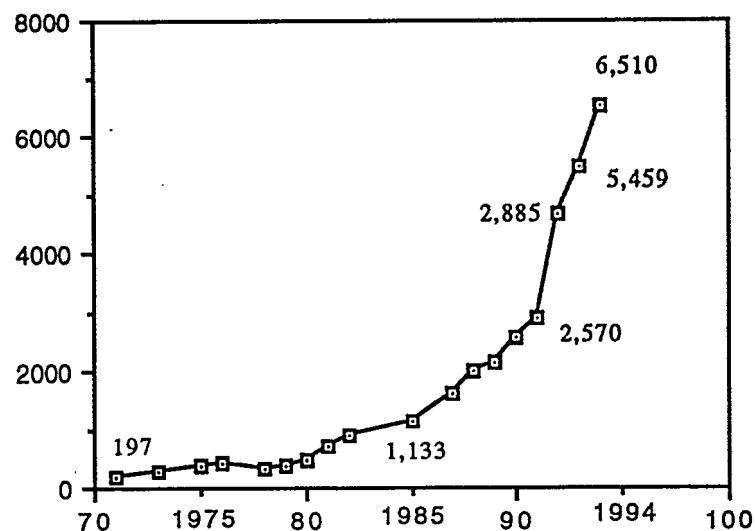


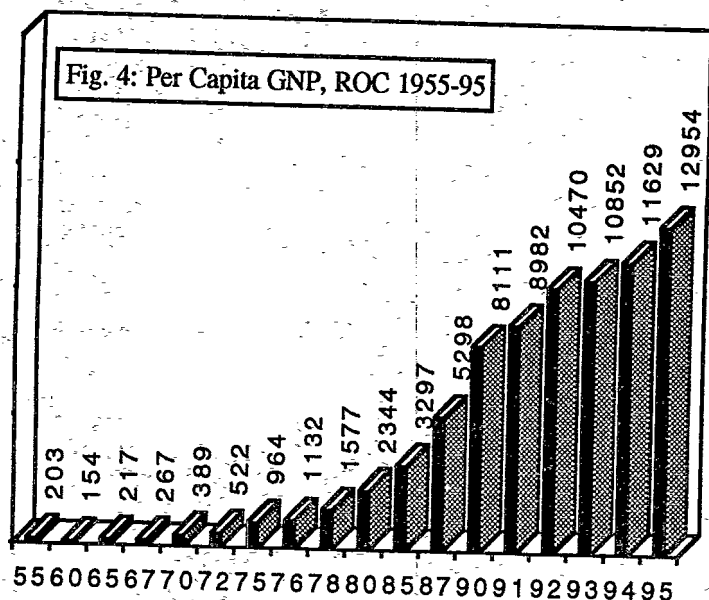
Fig. 3: Taiwan Students Returning from US 1971-1994

was through this Nixon shock that had prompted the government and people in Taiwan to fully realize that they had to depend on themselves for national development. Immediately after 1972, Taiwan announced its "Ten Construction Project," an unprecedented nationwide infrastructure development that had eventually altered the course of economy of Taiwan historically.

As Taiwan has created its economic miracle during the 1980s, we should attribute its success to international education as well as the returning students from the United States. The change figures indicated in Figure 3 has much to say about the impact of returning students.

2. Why ROC Students Rush Back to Taiwan

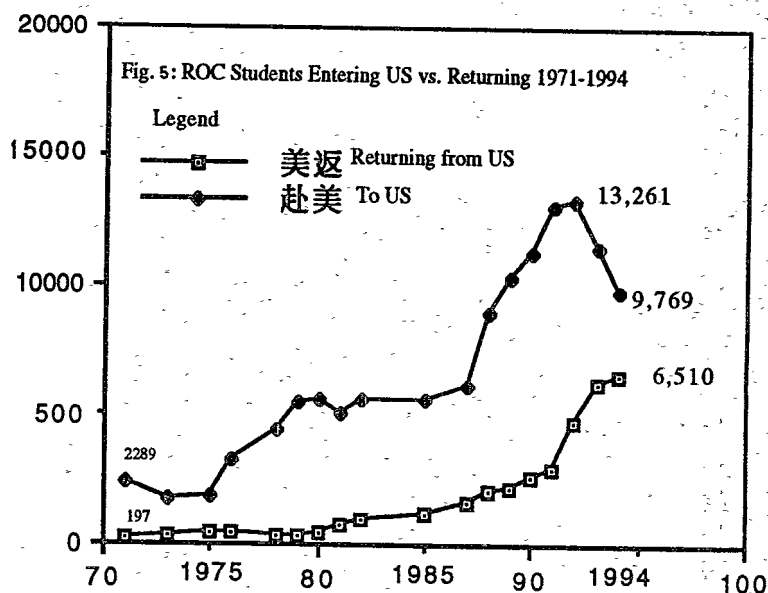
The nationwide Ten Construction Project infrastructure development together with the inauguration of the Hsinchu Science-based Industrial Park opened many new avenues for young college graduates, home and abroad, to start new challenging careers at the turn of the century. The whole national project had activated not only national economy but also lured a large number of Republic of China students to go back under different packages. The government even set up the National Youth Commission to recruit young college graduates with Ph. D. and Master's degrees to go back to join the national development. Evidence of its impact can be reflected from the drastic increase of per capita income shown in Figure 4.



Rapid economic development has offered a great number of job opportunities for returning students with advanced degrees and professional skills. The booming of both public and private sectors in Taiwan has also provided greater chance for these young men and women with potentials to go back to their home country to contribute what they have learned in the United States. An addition, the National Youth

Commission affiliated to the Executive Yuan also offered subsidy in airfare for both the graduating student and his/her spouse, plus up to two children to go back, if they decide to go back to Taiwan for career development. Aside from that, the Commission even set up computer network linking higher learning institutions, industrial establishments and business corporations all over the country to solicit job opportunities for potential candidates. This type of assistance is of great help to all parties. Contribution of the National Youth Commission was highly acclaimed by our NAFSA colleagues.

In addition to such effort exerted by National Youth Commission, the National Science Council and the Ministry of Economic Affairs also joined the recruiting effort in offering special grants to assist returning students and professionals to either take teaching positions in the higher learning institutions, or to start industrial establishment in the Hsinchu Science-based Industrial Park. Internationally recognized corporations such as Acer Computer, United Microelectronics Corp., Microtek International, Inc. and other 150 companies, were established in such fashion. Many other companies proliferated under diversified projects supported by the government and various foundations. According to the 1994 Annual Report of the Science-based Industrial Park, 1.05% of the employees hold Ph.D. degrees, 10.08% have Master's degrees, and 17.92% of them have Bachelor's degrees.³ In 1994, 34,564 employees were hired to work in the Science-based Industrial Park. Among them, a large number of junior professionals are from the United States.



Such joint efforts have helped both domestic industrial and economic as well as returning students in large scale. Thus, the Hsinchu Science-based Industrial Park which was inaugurated in December, 1980, and exemplified the Triangle Research Park in North Carolina, has gained its reputation as the Silicon Valley of Taiwan. And the system of R&D has thus been established to complement with the overall national development.

Accelerated by the industrialization and modernization leading to the development of high technology production and research, more and more students and professional with majors in science and technology have been well received with competitive pay since 1980. To cope with the need technological production and sales, many professionals in business have been needed. Thus, MBA was a hot field in the decade between 1980 and 1990. It is fair to say that students graduating with Ph.D. degrees can easily find jobs in Taiwan.

Another major factors motivating the economic downturn in the United States. Many engineers in Silicon Valley near San Jose, California, have expressed their intention to work in Taiwan, if proper positions are offered. They have envisioned the possible intimidating layoff sooner or later. Insecurity in job situation in the United States have caused some professionals to plan to leave for a better and more secured working environment. This social pattern can be reflected from Figure 3 in which we can readily notice the big jump of number of students returning from the United States for Taiwan. In 1980, there were only 455 students leaving the United States for Taiwan. Whereas, the figure expanded from 455 in 1980 to 928 in 1982, and 1,977 in 1988. By the year of 1992, there were 4,674 college graduates and professionals packing and going back to Taiwan. In 1993, the figure grew from 4,674 to 5,459. And in 1994, the figure climbed up to 6,510. This fact has coincided with the report of Ashley Dunn (1995) in the New York Times.

While more and more students are going back to Taiwan upon completion of their advanced studies and post doctoral research in the United States, the number of students interested in leaving Taiwan for the US higher learning institution seems to have dropped. As a matter of fact, the volume of students applying to the US J-1 visa had been rising until 1973 when there was an international energy crises. This can be used to account for the reason why the number of students from Taiwan began to drop significantly in 1980 to 1982. Starting from 1988, the ROC government lifted the restriction governing students going overseas, and allowed high school graduates to go abroad to undertake undergraduate studies. As a result, the number began to go up again. According to statistics provided by American Institute in Taiwan (AIT),³ the number rose from 6,382 in 1988 to 9,175 in 1989, 13,033 in 1991, and 13,261 in 1992. And yet it dropped from 13,261 to 11,477 in 1993, and 9,769 in 1994, due to the economic booming and increase of graduate colleges in Taiwan as well as tight job market in the United States.⁴

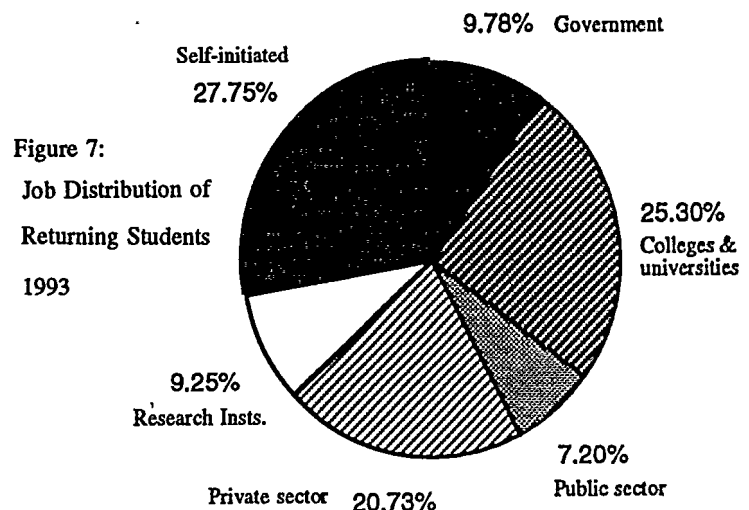
3. Jobs Distribution for Returning Students

As indicated in Figures 3 and 5, there were 6,150 students returning from the United States with Ph.D. and Master's degrees in 1994, in striking contrast with

those of 1990 (2,570) and particularly 1979 (359) when the United States severed its official diplomatic relationships with the Republic of China on Taiwan.

Following the great demand of well educated talents, all the returning students, plus some professionals, have been well accommodated. It is interesting, but quite understandable, the first choice of possible jobs offered to the returning students are teaching positions in the higher learning institutions (25.30%), and the second choice was in the research institutions (9.25%). This priority has much to do with traditional culture. In the Chinese society in Taiwan, professors entitle prestige and very high social status.

The third choice will be working for the governmental institutions (9.78%). However, those starting their own career such as operating industrial establishment in the Science-based Industrial Park, or initiating own business corporations through government loan constitute the largest percentage, e.g. 27.75%). This is the so-called "self-support" category in this paper. Figure 6 has provided a crystal clear description about this information.



Mushrooming private businesses have also accommodated a large number of returning students, particularly those with business background (20.73%). As for the public sector, it is limited in available positions comparatively (7.20%), although most students prefer the public to the private sector due to future development and financial reasons.

The jobs that returning students and professionals hold have much to do with their academic background. Thus, Figure 7 has indicated that businesses (34.56%), engineering (25.67%) and liberal art (12.82%) and sciences (9.79%) are four major sources of job market for those returning from the United States.

These four fields have produced the graduates needed in Taiwan during the past decade. By 1993, there were 12,822 returning students graduated with business degrees, 9,521 in engineering, 4,756 in liberal art, and 3,631 in sciences. Figure 8 has clearly shown the whole distribution of these four fields. Information provided is useful to US higher learning

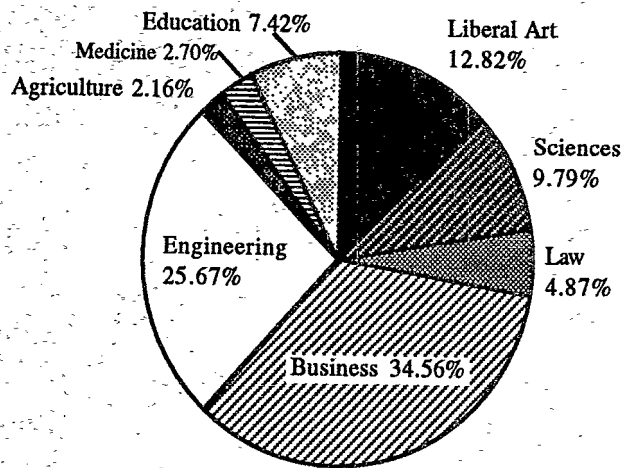


Figure 7: Academic Background of Returning Students

institution in designing programs to meet the challenge of international educational programs.

As more and more colleges and universities approach us for information regarding the need and interest of potential candidates from Asian countries, the above data will be of use to the redesigning of new programs. Also, it is useful to the review of the educational need outside the United States. As the whole world is becoming a global village, cooperation among academic institution is needed.

4. Implication and Conclusion

Due to differences in educational system between those in the Republic of China and their counterparts in the United States, a better understanding of the state of art of higher learning institutions in these two countries is essential. Many of our colleagues in the US colleges and universities are concerned about the declining enrollment of students from Taiwan. However, there is still steady increase of Taiwan students of 5.3% in the 1992-93 academic year (in contrast of 8.5% in 1991-92), and 0.4% in 1993-1994. An optimistic factor is that there are more and more graduates from junior colleges in Taiwan applying for undergraduate programs in the US higher learning institutions.

It is my belief that greater communication and enhanced academic exchange programs are essential. Although the job market for returning students is not as exciting as it was before 1992, still, there is a growing need of qualified Ph.D. and Master's degree holders as long as these returning students remain more flexible in their choice of jobs. In other words, there are still a lot of openings in the junior colleges. On the other hand, teaching positions in the universities has become more competitive.

While considering helping our students in the United States, other factors such as culture appreciation, adjustment, traditional value, etc., should be taken into consideration. The trend of higher education is changing fast, and foreign students in general should be assisted to better appreciate the whole academic environment of this country. After all, when they go back to their home countries, they have to compete with not only their peers at home, but many others who return from overseas.

Notes

¹Comments by former President James H. Young of SUNY Postdam and some other college/university presidents who attended the 1980 Sino-American Conference on Higher Education, Taipei, Taiwan. They explicitly expressed that each university would like to recruit new competent faculty members of high calibers, regardless their nationality.

²Under the arrangement of Henry Kissinger, former President Richard M. Nixon traveled to China in 1972, and signed the historical Shanghai Communique, stating that the United States acknowledges that there is only one China, and Taiwan is part of China. The abrupt US recognition of PRC shocked the whole world, especially Japan and Taiwan with unpredictable political impact. The Japanese thus called this political event "Nixon Shock." By all means, the Nixon legacy has lingered ever since 1972.

³The American Institute in Taiwan (AIT) is the de facto United States Embassy in Taiwan. It was established in 1979 to replace the original US Embassy which was closed after the United States recognized PRC.

⁴See the 1994 Annual Report of the Science-based Industrial Park.

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