

DRIVING FORCES WHICH ENTHUSE THE CONTINUOUS GROWTH OF CHINESE STUDENTS IN U.S. COLLEGES: A PRELIMINARY STUDY ON CHINESE STUDENTS' MOTIVES

Chiang-nan Chao, Professor

Tobin College of Business
St. John's University
Queens, New York

Niall Hegarty, Assistant Professor

Tobin College of Business
St. John's University
Queens, New York

ABSTRACT

This study examines the presence of Chinese students in U.S. universities and colleges. Due to the large number of Chinese students in the United States this research attempts to explore the reasons why so many Chinese students choose to study abroad and why the United States is their preferred destination. This population is a vital component of university life at many colleges and a much needed source of financial revenue. A total of 200 students completed a questionnaire yielding 87 usable responses. Specifically, the motivation behind Chinese students' reasons for attending college in the U.S. is explored. The results indicate that Chinese students are seeking education with a world view and opt to break from the Chinese system of learning. Although choosing to study in the U.S. is an academic endeavor the reasons behind that choice is not solely for academics. This article seeks to offer academicians and university administrators a deeper understanding of the motivation of these Chinese students and contribute to the knowledge area extant on this population.

INTRODUCTION

The number of international students worldwide rose from a mere 0.8 million in 1975 to 4.1 million in 2010, according to the International Organization for Economic Co-operation and Development. (Sood, 2012). The U.S. is the leading destination for international students, and attracted 764,495 international students during the 2011-12 school year, which is about 3.7% of the total number students enrolled in the U.S. and spent about US\$21.81 billion in 2011/12. United States Immigration and Customs Enforcement informs that their Student Exchange and Visitor Program (SEVP) in July 2013 already had 894,826 registered international students. By any measure, international education makes a significant contribution to the U.S. economy. In New York State for example, the portion of this contribution was about US\$2.6 billion, which accounts for over 10% of the national total contribution of international students. The economic impacts are not limited to the spending of these foreign students, but also their families residing in the host country (NAFSA, 2012). International students can also boost a country's higher education standards, with universities doing their best to attract the world's best and brightest in their chosen fields of specialization (Sood, 2012).

Conversely, countries that see their students study abroad normally hope that these students return home and contribute to their home economy.

The U.S. has maintained its position as the leading destination worldwide, however its share of international students has been shrinking, attracting 16.6% in 2010 (Marmolejo, 2012). Undoubtedly, China is too big to ignore as the second largest economy in the world; the country is also the heavyweight with regards to outbound international student mobility. China has emerged as the leading source of international students for the U.S. schools in the recent years. Recent statistics from the U.S. Immigration and Customs Enforcement (USICE) show that the number of active Chinese students on F-1 or M-1 visas at Student and Exchange Visitor Approved schools at the end of 2011/2012 academic year increased by about 23% to nearly 194,029 versus the previous year (Choudaha and Chang, 2012). Educators and researchers seek to understand this phenomenon and identify better ways to serve this population. This research, through an empirical setting intends to explore the motives of Chinese students who choose to study in the U.S. in order to provide insights and direction for both educators and university administrators.

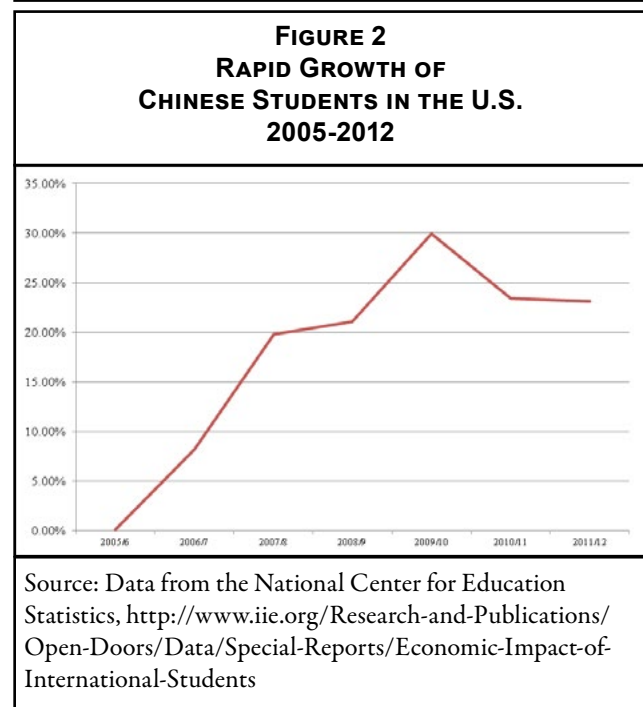
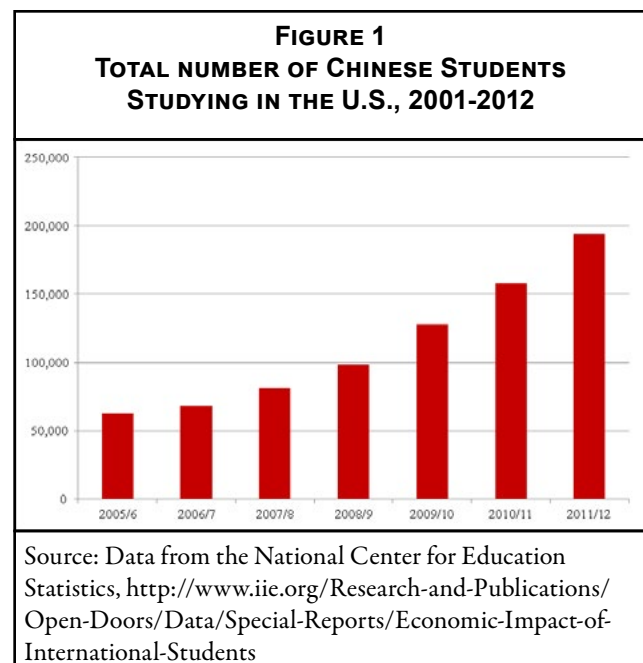
REVIEW OF LITERATURE

Education has been a high priority in China for thousands of years. On average, the country's high-net-worth individuals spend 170,000 yuan (about \$27,000), to educate each of their children. This was the third-highest area of their spending, after travel and luxury goods.

American businesses, management know-how, and capital have been flowing to China for the past 30 years, but it is education that reverses the tide. Studies show that an overwhelming majority of China's wealthiest want to send their children to foreign universities and the United States is their first choice. Ninety percent of the country's richest people have plans to send their children abroad to study, according to independent research by China's Industrial Bank Co. and the Hurun Report. Their Chinese Luxury Consumer White Paper (2012) reports that 9 of out of every 10 Chinese with assets of more than 100 million yuan (\$16 million) plan to send their children abroad, while 85% of those with at least \$1 million said they would send their children overseas for education.

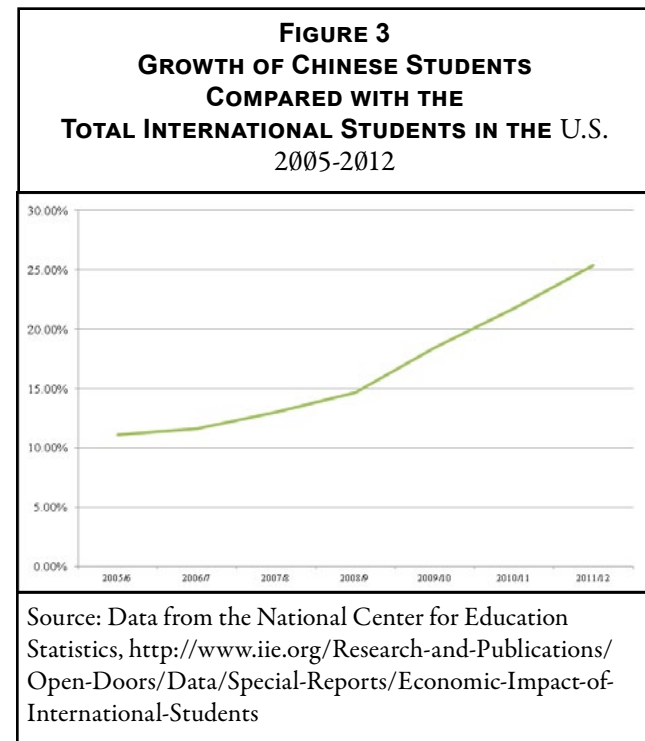
The first graduate from China may well have been Yung Wing, who had graduated from Yale in 1850. By 1880 there were 70 Japanese and 108 Chinese students studying in American universities, compared with a dozen Japanese and almost no Chinese in European universities (*The Chinese-American Museum of Chicago*, 1880). Noticeably, since then China has become the largest source of international student source for the U.S. schools in the recent years. Figure 1 shows the growth of the total number of students from China.

For Chinese students in the 2010 to 2011 term, the top field of study was business/management, with engineering following close behind. The benefits of studying abroad are felt both by individuals and entire nations. For this reason educators and researchers are interested in the motives and reasons that encourage Chinese students to study in the U.S. For thousands of years, education has been placed as a top priority by Chinese families and with China's economic reforms during the past decade leading a growth in wealth and a shrinking family size (only one child per family) sending children to international universities has become less burdensome. Currently, more than 92% of these students have their studies funded privately, according to CGG's report (Wang, 2012). Meanwhile, many U.S. universities are facing an increasingly tough financial situation with a shortage of domestic students, a decrease in corporate support, and declines in government subsidies. In such a situation, Chinese students with money to spend may fill that financial gap (Joseph, 2012). Besides economic well being, many Chinese students decide to study abroad because they believe there is a better



quality education in foreign countries. (Yan, 2012; Albrecht, Malagueno, Holland & Sanders, 2012).

The growth in Chinese students may also reflect a confluence of factors. First, more Chinese citizens are completing college and thus eligible to apply to graduate school. Second, many U.S. schools are recruiting more aggressively overseas and marketing their programs to a wider talent pool. Word of mouth then fuels the trend. Once some students attend a program, they recommend it to friends

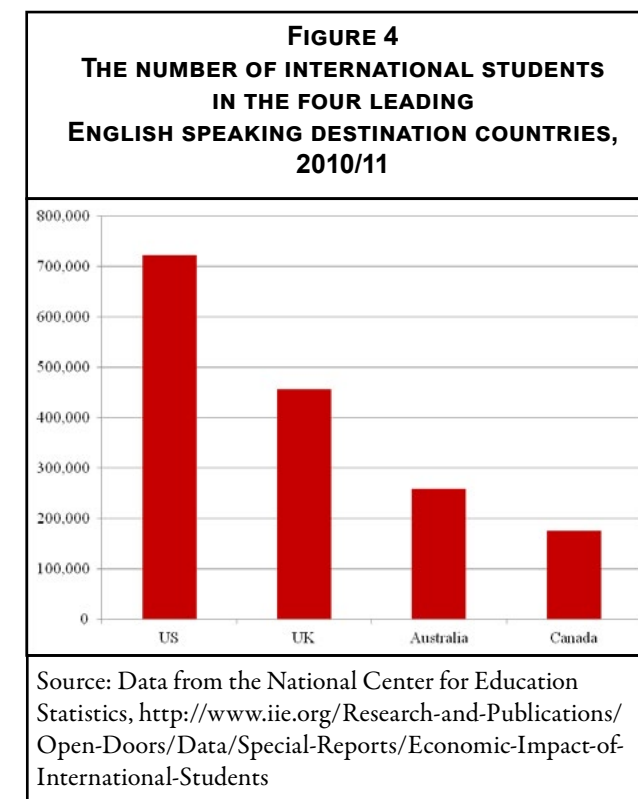


back home. Many schools have set up their gateway offices in China, i.e. Columbia University and Ohio State University. The latter saw the applications from China to the university's Fisher College of Business jump 30% between the 2010 and 2011 academic years. Meanwhile, new specialized master's programs appeal to students, particularly those from China, eager to delve deeper into a single subject and gain a credential to compete with the growing population of educated young adults, without taking much time out of the workforce. As previously stated, perhaps the most incredible figure is that some 90% of China's mega-rich want their children to study in the US, according to one recent study, not to speak of the top leaders' children, including the Party Chief, Xi, whose daughter studies at Harvard University. (Korn, 2012; Ark et al 2008; Casiano, 2011; Foadi, 2006; Lee, 2012; and Fischer, 2012).

When looking into the Chinese applicants' backgrounds, many schools find that Chinese applicants possess some outstanding characteristics. First, they are China's best students who are probably aware that if they attend universities in China, they may not be able to go to the best universities in the world. For example, the recent QS ranking listed just 7 universities out of the top 100 that were situated within China and Hong Kong. Another recently published list from the Times of London has just 3 in the top 100. Even the best universities have been hit by scandals. Second, their parents are rich, and it may make more sense to aim for a U.S. colleges, rather than letting

their children go through the highly competitive transition from high school to preferred universities in China where the road from secondary to post-secondary education involves the dreaded hurdle of the strenuous national university entrance examination. Unlike U.S. institutions that value candidates who present themselves as unique, their Chinese counterparts want students who excel on entrance exams that require years of rote learning and possess a strong grasp of math and science. Some critics say China's state-run education system—promoted as the hallmark of Communist meritocracy—are being overrun by bribery and cronyism. Such corruption has broadened the gulf between the privileged and non-privileged classes (Levin, 2012). Third, these young individuals are ambitious and many want to go to Ivy League schools, a symbol for those parents who raise their children successfully. Fourth, they desire to learn more about critical thinking, and very importantly, they want to be exposed to things aside from just test taking. (Mellman & Hilburn, 2012; Henze & Zhu, 2012; Taylor, 2012; and Zhang, 2012).

The four leading English speaking destination countries—the U.S., the UK, Australia, and Canada—all witnessed sizable growth from 2002 to 2011. Figure 4 shows the total number of international students in these four countries in the 2010/11 school year. It is a surprise that the UK with about a fifth of the U.S. population, had 455,600 international students compared to the 723,277



international students studying in the U.S. that same school year.

Despite the continued growth of international enrollments in U.S. schools, the country's share of globally mobile students has been steadily declining over the last decade, from the peak of 27% in 2002, to 20% in 2009, and a continued decline to 16.6% in 2010. Meanwhile, foreign students contributed more than \$21.8 billion to the U.S. economy in the 2011/12 academic year, through living and educational expenses (NAFSA, 2012). Although the majority goes to the United States, other English-speaking countries such as Britain, Canada and Australia attract most of the rest. This has caused some concern for those in the U.S. who worry that the country might be losing its appeal among international students. Chinese students comprise 25.38% of all international students newly enrolled in American schools, or about one in every hundred American college students, which means that they and their families contribute more than \$4 billion to the American economy, according to the U.S. Department of Commerce (Mong, 2012). How can the U.S. maintain its leadership position in this globally competitive market? Do American educators understand Chinese students?

METHODOLOGY

With the focal questions in mind, this research focused on Chinese students' motives for studying in the U.S. A survey was developed to investigate the issues related to the subject of this study, Chinese students' motives to leave their home country and study in the U.S. The following variables were based on literature reviews.

Variable Selection

The following variables serve as motives that affect Chinese students in their decision making for studying abroad from the literature review.

1. Gain a new perspective on my own country.
2. Can attend a better school overseas, but not able to attend the schools I want due to Gaokao.
3. It is easy to be admitted by a foreign school.
4. It is also costly if I study in my home country.
5. My friends have gone abroad, so I would.
6. I want to be away from my country.
7. I must study abroad because my parents' wish.
8. There are more fields of studies offered by foreign schools.

9. Political easiness in programs abroad.
10. Better living conditions, housing, eating, and environmental, i.e. clean air, etc.
11. The educational system is better overseas.

Hypothesis, test of hypothesis, and sampling

The hypotheses for this research are to find if there are any significant differences in the Chinese students' motives for choosing to study in the U.S.

- H₁ There is no significant difference for Chinese students to gain a new perspective between China and the U.S.
- H₂ There is no significant difference for Chinese students to attend a better school either in China or in the U.S.
- H₃ There is no significant difference for Chinese students to be admitted by a foreign school either in China or in the U.S.
- H₄ There is no significant difference for Chinese students to attend schools either in China or in the U.S. as far as cost is concerned.
- H₅ There is no significant difference for Chinese students to attend school either in China or in the U.S. because their friends have gone.
- H₆ There is no significant difference for Chinese students to attend school either in China or in the U.S. as there is no difference between the two countries.
- H₇ There is no significant difference for Chinese students for where their parents wish them to study.
- H₈ There is no significant difference for Chinese students to find more fields of studies either in China or in the U.S.
- H₉ There is no significant difference for Chinese students to find political easiness in programs either in China or in the U.S.
- H₁₀ There is no significant difference for Chinese students living conditions, housing, eating, and environmental, i.e. clean air, etc. either in China or in the U.S.
- H₁₁ There is no significant difference for Chinese students between the educational systems in China and the U.S.

Alternatively, there are significant differences in each of these hypotheses.

Due to the nature of this empirical study, the questionnaires were distributed to Chinese students in a large university campus in the Northeast of the United States

for a convenient sampling. The respondents were asked to evaluate the selected variables in a five point Likert scale, with 5=most important, 4=important, 3=neutral, 2=not important, and 1=least important.

One sample Student's *t*-test. A *t*-test is any statistical hypothesis test in which the test statistic follows a Student's *t* distribution if the null hypothesis is supported. It is most commonly applied when the test statistic would follow a normal distribution if the value of a scaling term in the test statistic were known. When the scaling term is unknown and is replaced by an estimate based on the data, the test statistic (under certain conditions) follows a Student's *t* distribution. The estimate value for testing hypotheses in this study is 3 which are either important or not important. The one sample *t*-test requires that the dependent variable follow a normal distribution. When the number of subjects in the experimental group is 30 or more, the central limit theorem shows a normal distribution can be assumed. If the number of subjects is less than 30, the researcher should plot the results and examine whether they appear to follow a normal distribution. If the distribution appears to be non-normal, and/or if the number of test cases is significantly less than 30, then a one sample median test, which does not require a normal distribution, should be used to test the hypothesis. [Hamburg, 1977; Conover, 1980; Davis and Cosenza, 1985; SPSSX, 2002; Wikipedia, 2012]. Five percent of the *t*-tests one tailed probability level was selected to signify the differences between preferences.

RESULTS

Over 200 respondents were surveyed at a college campus in the eastern U.S., with 87 completed responded for analyses, representing 43.5 percent of the total surveyed. Table 1 presents the general background information of the respondents.

It is noticeable that roughly a third of the Chinese who took the survey has a family income over US\$75K a year equivalent, and most of the students were born after 1978 when one child per family policy was initiated (Source: <http://healthland.time.com/2013/01/10/little-emperors/>). Over 97 percent of the respondents took College entrance exams and stood at the top 50 percent, while currently, over 50 percent of Chinese high school graduates are able to go to college in China. In comparison, in the U.S. over 70 percent of the high school graduates go to college (Source:<http://www.bls.gov/news.release/hsgec.nr0.htm>;Source:<http://zhidao.baidu.com/question/57277001.html>). In other words, these respondents had alternatives for their college selections: either stay in China or go to the U.S.

Table 2 presents the test results of One-Sample *t*-Test, with means, *t* values, degrees of freedom, and significance of the tests.

MANAGERIAL IMPLICATIONS AND RECOMMENDATIONS

The test results of One-Sample *t*-Test reject eight null hypotheses: *Gain a new perspective on my own country, It is easy to be admitted by a foreign school, It is also cost-*

Variables		Groups	Valid %
1.	Age	<18	9.4
		18-35	90.6
2.	Gender	Male	58
		Female	42
3.	Family annual income	<\$30k	21.4
		\$30-50k	27.4
		\$50-75k	17.9
		>\$75k	33.3
4.	Education	College	83.5
		Graduate	16.5
5.	Marital status	Married	8.2
		Single	91.8
6.	Sources of financial supports	Parent	57.6
		Own saving	3.5
		Obtained scholarship/GA	18.8
		Combination of various sources	20
7.	Number years studied in the U.S.	<1 year	17.6
		1 year	9.4
		1-2 years	8.2
		>2 years	64.7
8.	How many schools did you apply to?	1 school	9.5
		2 schools	3.6
		3 schools	15.5
		>3 schools	71.4
9.	If you took Gaokao, you stood at	top ¼	45.5
		top ½	51.5
		lower ½	3

ly if I study in my home country, My friends have gone abroad, so I would, I want to be away from my country, I must study abroad because my parents' wish, Political easiness in programs abroad, Better living conditions, housing, eating, and environmental, i.e. clean air, etc. In other words, these eight variables present that they are either more important or less important in Chinese students' motivations to come to the U.S.

In One variable- *Gain a new perspective on my own country*, the respondents indicate that it is significantly more important as a motive. This would recommend that researchers should focus on this motive, and further explore the issues related to it.

With regard to the other seven variables: *It is easy to be admitted by a foreign school, It is also costly if I study in my home country, My friends have gone abroad, so I would, I want to be away from my country, I must study*

abroad because my parents' wish, Political easiness in programs abroad, Better living conditions, housing, eating, and environmental, i.e. clean air, etc., the respondents express that these are less important. The insignificances of these variables should advise researchers that these may not be their primary research focus on Chinese students' motives for studying in the U.S.

The test results of One-Sample *t*-Test accept three null hypotheses: *Can attend a better school overseas, but not able to attend the schools I want due to Gaokao; There are more fields of studies offered by foreign schools; The educational system is better overseas.* In other words, the acceptances of these hypotheses recommend that the Chinese students do not view these issues differently.

What comes through from this search is that non-academic reasons are primarily driving Chinese students to study in the U.S. Cultural aspects and a desire to gain a non-Chinese world perspective emerge as primary motives for study in the U.S. This may be due to the understanding and realization by the Chinese of a global economy and the need to understand the 'internationalization' of business. These attitudes could also be considered to be consistent with attitudes of all affluent middle classes who have moved beyond daily sustenance and have achieved long term security.

LIMITATIONS AND FUTURE RESEARCH

While this study is limited by sample size and confined to Chinese students studying at one university in the northeast United States it does provide direction and insight for future researchers to build upon. The sample size can be accepted as a good representation of the motives of Chinese students who wish to study in the U.S. as the northeast United States has a large number of Chinese students (as opposed to a state with very few Chinese students where such a sample would be non-representative).

However, due to the limited sample size and issues addressed in this study, we believe that there are additional issues which need to be explored. Academic research on the motives of international student populations (4% of the total US college students), particularly Chinese students (about 1% of the total US college students) in the U.S. is limited. While much has been written in terms of their numbers and how universities are accommodating international students there is limited primary research on the understanding of 'why' Chinese students choose to study in the U.S. It is imperative in servicing this population that universities first understand the motivation behind studying in the U.S. as only then can colleges and universities hope to build programs to cater to the long term facilitation of this population.

	Mean	t	df	Sig.
1. Gain a new perspective on my own country.	3.36	2.33	83	0.02
2. Can attend a better school overseas, but not able to attend the schools I want due to Gaokao.	2.94	-0.38	79	0.71
3. It is easy to be admitted by a foreign school.	2.54	-3.44	83	0.00
4. It is also costly if I study in my home country.	2.46	-3.91	83	0.00
5. My friends have gone abroad, so I would.	2.33	-4.48	83	0.00
6. I want to be away from my country.	2.38	-4.12	83	0.00
7. I must study abroad because my parents' wish.	2.23	-5.65	83	0.00
8. There are more fields of studies offered by foreign schools.	2.81	-1.24	83	0.22
9. Political easiness in programs abroad.	2.48	-3.77	82	0.00
10. Better living conditions, housing, eating, and environmental, i.e. clean air, etc.	2.64	-2.51	83	0.01
11. The educational system is better overseas.	3.07	0.45	83	0.66

Future empirical studies would better serve the advancement of knowledge in this area by increasing the sample size across numerous colleges, and broadening the scope by examining any differences in motivation in terms of major, public versus private colleges, and geographic location within the U.S. A further recommendation would be to look at any major differences between undergraduate and graduate Chinese students as well as differences between graduate Chinese who completed bachelor degrees in the U.S. and those who didn't.

The growing number of the Chinese students in the U.S. has raised some challenging questions for both educators and researchers. In the future, researchers will need to know more about: what are the expectations of these Chinese students when they land in the U.S.? Are their expectations met during their studies or after their studies? If their expectations are not met, what educators in the U.S. schools need to do? A demographic of this size cannot be ignored and needs to be understood.

REFERENCES

- Albrecht, C, Malagueno, R. Holland, D., and Sanders, M. (2012). *Cross Cultural Management: An International Journal*, 19(4), 433-454.
- Ark, B. V., O'Mahony, M. and Timmer, M. P. (2008). The Productivity Gap between Europe and the United States: *Trends and Causes Journal of Economic Perspectives*, 22(1), 25-44.
- Casiano, M. A. (2011). U.S. Economy Shows Continuing Signs of Strength. *Caribbean Business*, March 3, 2012.
- Choudaha, R. and Li, C. (2012). Trends in International Student Mobility, *World Education News and Reviews*, 25(2), 1-20.
- The Chinese-American Museum of Chicago (1880)*. Comparing Japanese and Chinese Students at U.S. Universities.
- Conover, W. J., *Practical Nonparametric Statistics*, 2nd ed., New York: John Wiley & Sons, 1980: 213-337 & 344-384.
- Davis, D., & R. M. Cosenza, *Business Research for Decision Making*, Boston, Kent Publishing Company, 1985.
- Fischer, K. (2012). Chinese Students Account for About Half of All International Applicants to U.S. Graduate Programs, *the Chronicle of Higher Education*, April 3.
- Foadi, S. M. (2006). Key Issues and Causes of the Italian Brain Drain. *The European Journal of Social Sciences*, 19(2), 209-223.
- Hamburg, M. *Statistical Analysis for Decision Making*, 2nd ed., Harcourt Brace Jovanovich, Inc., New York, 1977, pp. 219-538.
- Henze, J., & Zhu, J. (2012). Current Research on Chinese Students Studying Abroad, *Research in Comparative and International Education*, 7 (1), 90-104.
- Joseph, F. (2012). Overseas colleges fight for Chinese students, *CNTV*, October 19.
- Korn, M. (2012). Change in GMAT Equation: Chinese Flock to the Test, *the Wall Street Journal*, September 23, 2012.
- Lee, E. (2012). Number of Chinese Students in US Dramatically Expands, *Voice of America*, October 12.
- Levin, D. (2012). A Chinese Education for a Price, *NY Times* November 21.
- Marmolejo, F. (2012). Trends in International Mobility of Students: a Wake-Up Call for the U.S.? *Chronicle of Higher Education Blog*, posted on September 25.
- Mellman, I. & Matthew H. (2012). Chinese Education System Lags, Expert says, *Voice of America*, July 05.
- Mong, A. (2012). Chinese applications to U.S. schools skyrocket, *MSN*, January 11.
- NAFSA (2012). The Economic Benefits of International Students to the U.S. Economy Academic Year 2011-2012, source: <http://www.nafsa.org>.
- Student and Exchange Visitor Information System, SEVP (2013). General Summary Quarterly Review. Retrieved from <https://www.ice.gov/doclib/sevis/pdf/by-the-numbers.pdf>
- Sood, S. (2012). The statistics of studying abroad, *BBC*, September 26.
- SPSS^x. *Advanced Statistics*, 7.5. Chicago, IL: SPSS Inc. 2002.
- Taylor, A. (2012). Three Reasons China's Students are Desperate to Study in America, *Business Insight*, October.
- Wang, J. (2012). China Sends More Students Abroad Than Any Other Country, *The Epoch Times*, September 21, 2012
- Wikipedia, 2012 http://en.wikipedia.org/wiki/Student's_t-test; Source: http://www-users.cs.umn.edu/~ludford/Stat_Guide/1_Sample_t.htm
- Yan, Y. (2012). Foreign Education, Chinese Dream, *Beijing Review*, March 1, 2012

Zhang, Y. (2012). 90% Of China's Super-Rich Want to Send Children Abroad, *International Business Times* (<http://www.ibtimes.com>), April 07.