

The Role of Information on Overseas Higher Education in East Asia: The Views of Mainland Chinese High School Students

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Abstract

Since late 1990s, more and more mainland Chinese high school students go and study abroad. Based on a questionnaire survey of 12,961 high school students in mainland China in 2007, the study investigates students' demand for overseas higher education in East Asia as well as their evaluation of relevant information on and information channels for overseas higher education. It is found that high school students have demands for overseas higher education in East Asia, and they tend to choose popular majors in either home country or host countries/regions. Students tend to focus on the important information on overseas higher education such as the quality and cost, and they evaluate internet, family and relatives, educational administration departments as helpful channels in the search of information.

Keywords: overseas study, mainland China, East Asia, information

1 Introduction

China has become the largest sending countries of overseas students all over the world (Organisation for Economic Co-Operation and Development [OECD], 2011; United Nations Educational, Scientific and Cultural Organization [UNESCO], 2009). In 2007, 421,148 overseas students at tertiary education worldwide are from China, and the number is still growing. From 2000 to 2011, it grew from 38,989 to 339,700, with mean annual growth rate of over 23% (National Bureau of Statistics of People's Republic of China, 2012, p. 753), and the top five host countries are USA, Japan, Australia, United Kingdom and Germany (UNESCO, 2009, p. 143).

Besides a rapid growth rate, the pattern of demand for overseas higher education in mainland China has also been changing from elite to mass education since the early 21st century (Wang, Miao, & Cheng, 2009). Before the 21st century, especially in the 1980s and early 1990s, students who were able to study abroad were intellectual elites or/and wealthy elites. Intellectual elites were excellent in

academic so they could obtain state-sponsored scholarship or scholarship offered by overseas universities. Wealthy elites were those from a small number of wealthy families. In the 1980s and 1990s, only several thousand students annually were able to study abroad with financial support from the state. Most of them finished their domestic undergraduate study before going abroad for postgraduate degrees. Since the end of the 20th century, more and more students have studied abroad self-financedly and many of them came from ordinary middle and lower social classes. In 2011, 314,800 mainland Chinese studied abroad at their own expense, covering 92.67% of the total population of overseas mainland students at the same year (Ministry of Education, People's Republic of China, 2012). Age cohort is also changing; more and more high school graduates go abroad directly for undergraduate education. In 2009, about 26,000 students from mainland China went to USA for undergraduate study; the number is about twice more than that in 2008 (Wang & Guo, 2012).

In higher education market, there is a world trend of marketization and internationalization. In East Asian region, national leaders, education ministers and university presidents call for the building of world-class universities and they also use higher education to open and cross borders. Border-crossing, including flow of international students, becomes part of the strategy to offset demographic effects, strengthen statehood, and deepen international alliance (Chapman, Cummings, & Postiglione, 2010, p. 3; Mok, 2000; Yonezawa, 2002).

Facing an international higher education market, students need to search for and select useful information for their rational choice. This paper attempts to investigate the demand for overseas higher education in East Asia by high school students in mainland China, especially how they perceive various kinds of information and different channels of obtaining related information during their search for overseas higher education. There are six sessions in this paper. Following the introduction, the second session discusses theoretical framework of relationship between information and choice of higher education. The third session describes some public channels for people in mainland China to search and obtain information on

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overseas education. After describing data and method in the fourth, findings and discussion are presented in the fifth session. Finally conclusions and implications are drawn.

2 Theoretical Framework: Information and Choice of Higher Education

2.1 Information Failure in Higher Education Market

Information is costly; it takes time, energy and money to acquire information. The uncertainty of information leads to the incompleteness and failure of information market (Stiglitz, 2001). In higher education, there are two kinds of information market failures. The first one is embedded within the nature of higher education. Individuals are willing to invest in higher education when they assume that education may bring them better monetary and non-monetary benefits (Becker, 1993). However, it is impossible for individuals to accurately predict their learning experience in higher education institutions and future labor market they are going to enter. In a segmented labor markets, it is even harder to predict private return of education (DeFreitas, 1995; Rosen, 1995). Such information failure is embedded within individual choice of higher education since individual has to make a decision on whether to pursue higher education before they have exact information on their personal experience of higher education learning and future labor market.

However, students may predict indirectly their higher education experience and their future competitiveness in labor market according to reputation and quality of higher education institutions they intend to enroll in. A study (Ding, 2004) on employment status of university graduates of 45 universities in seven provinces of mainland China finds that universities with better reputation/quality (for example key universities) may bring individuals more and better human capital and social networks, and thus better acquisition of labor market information and competitiveness than their counterparts in ordinary/non-key universities and colleges.

The other kind of information failure comes from ignorance of important information by both suppliers and demanders. From supplier side, some higher education institutions may not realize the importance of information dissemination, or not be able to do information dissemination for cost consideration, or try to hide some information or even provide false information for profit-making purpose. On the other hand, demanders, or students, may not realize the importance of information searching and cannot obtain accurate information from market. Studies in Cyprus and Greece (Menon, 2004; Menon & Saiti, 2007) investigate student's information searching activities before they make choice of private higher education. Both studies find that only half of students can be considered

as "information searcher," and the other half may not do any effective information search beforehand. Factors of social economic status and student's consideration of the importance of higher education decision have significant effects on their activities of information searching. Another study (Zhan & Chung, 2006) in mainland China also finds that high school students in general do not acquire accurate information of *mianban*/private colleges in mainland China though they intend to apply for *mianban*/private higher education after graduation. Family and individual characteristics, such as family income, parent educational levels, and student's academic levels, are found to have significant effects on student's acquisition of relevant information. A survey study on student's choice of overseas higher education in mainland China in 2007 (Zhan & Hung, 2010) finds that students' main concerns lie on the quality and cost, and student's acquisition of relevant information can significantly affect their demand for overseas higher education.

2.2 "Deterministic" or "Noisy" Information

In knowledge-based economy, besides the creation of knowledge, its diffusion and use is also of great importance for the success of enterprises and institutions. Nowadays, as access to information becomes easier and less expensive, selection and efficient use of information becomes more and more essential (Organisation for Economic Co-Operation and Development [OECD], 1996, p.13). Thus, what kind of information may help individuals to make a rational decision? It may be related to the purpose of individual choice. Individuals may make decision according to information signals. Some information may have a deterministic function, and thus is called "deterministic" or "noiseless information." Other information may not have such a function, but quite to the contrary disturb the decision-making process and therefore is called "noisy information" (McGuire, 1972). With different roles and purposes, individuals may have different choices and usages of various kinds of information.

2.3 Information Channel and Individual Choice in Education

Information searching is costly; individuals from various backgrounds may use different channels to search for information. In the field of education, Schneider (2001) investigates the relationship between information channels and parents' school choice for their children in four school districts in New York City and New Jersey State in USA. She classifies three main channels for parents' information searching. They are personal channels such as relatives and friends, intermediate channels like school teachers, school administration and community centers, and internet

channels. Schneider finds that parents with high educational levels are more likely to use personal information channels which are relatively cheap and accurate, while parents with low educational levels, for example black and some other ethnic minority families, may have to search for information through intermediate and public channels which may be more expensive and inaccurate. Especially for the use of internet in information searching, Schneider concludes that it may lead to social inequality and “digital segregation.” Borrowing Schneider’s research method, Zhan (2004) studies relationship between information and high school students’ choice of *minban* higher education in mainland China. With factor analysis, she classifies student’s information channels into two main types, namely 1) personal channel with information from family members and relatives, friends and classmates, schools and school teachers, and 2) institutional channel with information from public media, internet, university promotion activities and educational administration departments. It is also found that mainland students take into account information from institutional channels more than that from personal channels, and the more students consider the importance of the two channels, the more accurate information on *minban* higher education they may obtain. Therefore, it may be concluded that information channels are essential for individual choice in education; channels of information searching may have great impact on the costs and accuracy of information obtained.

In sum, information is important for individual’s decision making, including people’s choice of higher education. In higher education market, some information failure results from uncertainty embedded in the nature of information market, while some information failure may be overcome by student’s searching for and obtaining “deterministic information.” Information is costly. Facing an international higher education market, it is important yet challenging for students to become active information searchers so as to make rational choices. Besides student’s demand for overseas higher education in East Asia, this

study focuses on student’s perceptions about various kinds of information and information channels relevant to overseas higher education.

3 Formal/Public Channels of Information Searching for Overseas Higher Education in Mainland China

Information channels are important for individual information searching and decision-making (Schneider, 2001; Zhan, 2004). In addition to some informal and personal channels such as family members, relatives, friends and alumni, there are various formal and public channels that students in mainland China may use for their search of information on overseas higher education. Three kinds of public channels are to be described, including websites of host higher education institutions, intermediate agencies for overseas study, and education exhibitions organized by Chinese Service Center for Scholarly Exchange.

3.1 Websites of Host Higher Education Institutions

With development of internet technology, university website is one of the best ways for international universities and colleges to expose their information to potential students and their families. The university websites provide various kinds of information, especially on admission policies. The paper focuses on mainland Chinese students’ choice of overseas higher education in East Asian region, and four key universities are chosen (see Table 1). All four universities provide admission information on their websites.

Language of the website is also important for potential students. Language of instruction has already been considered one of the key factors that may affect student’s choice of overseas higher education. In many cases, English is assumed to be the most international language for higher education instruction, and many institutions in some non-English speaking countries also offer some, if

Table 1 Information Provided on Websites of Some Key Universities in East Asia

Universities	Admission Information for International Students	Languages of the Websites			
		English	Chinese	Native Language ^a	Other Language(s)
National University of Singapore	Yes	Yes	Yes	-	No
Seoul National University	Yes	Yes	No	Yes (Korean)	No
Tokyo University	Yes	Yes	Yes	Yes (Japanese)	Yes (Korean)
University of Hong Kong	Yes	Yes	Yes	-	No

Source: Websites of universities listed in the table.

Note: ^a If native language is other than English or Chinese.

not all, programs for international students (OECD, 2011, pp. 321-323). As shown in Table 1, all listed universities have English version websites. What is worth noting is that some universities also have Chinese version website even if Chinese is not their mother tongue (as the case of Tokyo University). In this case it is convenient for Chinese students and their families to learn and get relevant information on overseas universities they are interested in.

3.2 Intermediate Agencies for Overseas Study

For many mainland high school students and their families, intermediate agencies for overseas study may help them obtain useful information, not only on major choices, admission requirements, application procedure or more generally, life in receiving universities and host countries/regions, but also on visa application and many others. In particular, with more and more students studying abroad on their own within the past two decades, the number of intermediate agencies grows very fast. It is estimated that in 2004 about 60% of self-financed students went abroad for further studies through services provided by those intermediate agencies (Ministry of Education, People's Republic of China, 2004).

The size and quality of those agencies are different. In order to protect rights of students and their families, in August 1999, central government issued two regulations, including *Administrative Regulation of Intermediate Agencies for Self-financed Overseas Study* and *Implementation Rules for Administrative Regulation of Intermediate Agencies for Self-financed Overseas Study (Trial)*. Based on these two documents, intermediate agencies for self-financed overseas study should be approved by national authorities. By August 17, 2012, there are 448 legal intermediate agencies in mainland China, most of which are located in eastern and coastal regions (Regulating Information on Overseas Education, Ministry of Education, People's Republic of China, 2013).

However, despite government regulation, some intermediate agencies are still run without legal registration. Some of them may provide false information on overseas education and/or application procedure. As a consequence, a revised regulation titled "*Administrative Regulation of Intermediate Agencies for Self-financed Overseas Study (For Comments)*" has been released to the public for comments and feedbacks in October 2012 (Zhao, 2013).

Intermediate agencies provide detailed and individualized information service for students and their families who are interested in overseas higher education. However, some of them are also "noisy" or even false information providers. That said, how to regulate those intermediate agencies for a healthy information market becomes an emerging issue.

3.3 Education Exhibitions Organized by Chinese Service Center for Scholarly Exchange

Student mobility has become a global trend. Chinese government has been promoting overseas study since the 1980s. In the 1980s and 1990s governments directly support and send academic elites to study abroad. Since late 1990s, when family becomes a major supporter for individual overseas study, government becomes a platform provider of information exchange. In 1999, China International Education Exhibition Tour (CIEET) was firstly organized by Chinese Service Center for Scholarly Exchange (CSCSE), a direct subsidiary of the Ministry of Education, People's Republic of China. It is a platform for host higher education institutions and students (and their parents) to meet in person so that the latter may ask and get information needed directly from the former.

For the past 13 years, 16 CIEETs have been held in over 30 cities in mainland China and over 1,300 overseas education institutions, mostly higher education institutions, participated. In March 2013 CIEET were held in seven cities, including Beijing, Shenyang, Xi'an, Shanghai, Hefei, Fuzhou and Guangzhou (see CIEET website: <http://www.cieet.com/en/zh.asp>). Among all the participants, there were many institutions from East Asia, including Japan, Singapore, South Korea, Hong Kong-China, Macao-China, Malaysia, and Thailand.

In sum, there are various channels students and their families use to access information on overseas higher education. These channels are either private intermediate agencies/companies, government-organized exhibitions, and host universities, or individual and personal networks. This research attempts to study how students who intend to study in other East Asian countries and regions evaluate various information channels, and on the basis of the findings provide a basic insight for regulating and improving information market of overseas higher education in mainland China, host universities and host countries and regions.

4 Data and Method

4.1 Data

The study is based on a quantitative survey. Data come from a project titled "Seeking Higher Education Abroad: Student's Choice and Reasons in Mainland China" (Hung, Lo, & Chung, 2007).

A stratified sampling method was used to select representative cases at city, school and class levels. First, three cities of Beijing, Shanghai and Shenzhen were selected for their rapid economic growth and large number of students who study abroad. Then the project selected representative cities from east, central and west

regions of mainland China, including Nanjing (capital city of an eastern province), Wuhan (capital city of a central province) and Xi'an (capital city of a western province). All the above six cities are either relatively economically and/or educationally well-developed within mainland China. Therefore, another western and poorer city, Guiyang (Capital city of a western province), was chosen for comparison. At school level, 15 schools were selected in each city, including six public key general high schools, five public non-key general high school, one (public) vocational school (there are few private vocational schools in mainland China), and three *minban*/private general high schools. 105 schools in total were selected for questionnaire survey. Finally three classes were selected within each school. All students in selected classes were asked to do the questionnaire survey. Curriculum tracking, class as well as school sizes in the aforementioned regions are quite different. The project tried to cover various types of classes; however, the final selections were subjects to negotiations between project team member and each participant school. Finally, the project conducted a student questionnaire survey to 12,961 senior high school students in 105 schools during March and April 2007. The student questionnaire survey was conducted within classroom under the supervision of class teachers and research project team members; all questionnaires filled out by participant students in the survey were effective for data analysis. If

all students in each class attended the questionnaire survey, the valid response rate can be considered as 100%.¹ Sample characteristics are shown in Table 2.

4.2 Method: Research Questions and Measures

Based on the data, the study uses descriptive statistics to answer research questions.

For the first research question on student's demand for overseas higher education, there is an item in student questionnaire, asking students "what is your priority choice of a host country or region if you have chance to go and study abroad for higher education," followed by a list of 16 countries and regions, together with a choice of "others" for students to choose from (see Table 3). Choices of study majors also matter, so there is another item asking students to select one favorite study major among 13 majors, together with a choice of "others" (see Table 4).

For the second research question on how students perceive the importance of various kinds of related information to overseas higher education, students were asked to rate a six-point scale (1 = very unimportant, 2 = unimportant, 3 = a little unimportant, 4 = a little important, 5 = important, 6 = very important) on various kinds of information (totally ten items are listed, see Table 5). A similar method is used for the third research question on student's evaluation of information channels (totally 11 items are listed, see Table 6).

Table 2 Sample Characteristics

Characteristic	% of Students	Characteristic	% of Students
City		School Type	
Beijing	14.0	Public, key and general ^a	53.8
Shanghai	13.6	Public, non-key and general	22.7
Shenzhen	14.5	Public and vocational	7.4
Nanjing	14.8	<i>Minban</i> and general	16.2
Wuhan	16.0	Class type	
Xi'an	14.1	Science	49.9
Guiyang	13.0	Liberal arts	38.8
Gender		Comprehensive/experimental	5.0
Male	46.7	Vocational/technical	5.3
Female	52.8	Missing	1.0
Missing	0.4	Total	100.0

Source: Hung et al. (2007).

Note: Total case number: 12,961.

^a Public key general high schools include key schools at provincial, city, and district levels.

¹ The project team did not have total student number of each participant class. In some cases, if some students were not present during questionnaire survey, the actual response rate of the whole sample should be lower than 100%.

5 Findings and Discussion

5.1 Student's Intention for Overseas Higher Education in East Asia: Choice of Host Country/Region and Study Major

As shown in Table 3, countries and regions in North America and Western Europe are still the most popular host places of studying abroad for mainland students. USA is listed on the top; 17.7% students of the whole sample show their intention to pursue higher education in USA. Student's intention for studying in France, United Kingdom, Canada and Australia are also high, with respective percentages of 12.4%, 11.2%, 8.6% and 8.0%. As stated in the introduction of the paper, according to UNESCO statistics, the actual top five host countries for mainland overseas students in 2007 were USA, Japan, Australia, United Kingdom and Germany (UNESCO, 2009, p. 143). The findings of this research bear similarities in this regard. It implies a convergence trend of Chinese students' school choices when it comes to overseas study. But since not all high school students are able to go and study abroad, the ranking list may be a little different from the actual list. But still, with more families in mainland China capable of affording overseas study, a future trend for international higher education market for mainland students is to be seen.

Compared to those western and developed countries, student's intention for studying in East Asia is relatively small, but still quite a few of them choose countries and regions in this area. More than 6.0% of students choose Japan (6.7%), Singapore (6.7%) and Korea (6.3%) as their potential host countries. Also 3.8%, 0.5% and 0.2% of high school students in mainland China intend to study in Hong Kong-China, Malaysia and Macao-China, respectively. Though the percentage seems low, it is yet a large market concerning the large population of high school students in

mainland China.

For its close geographical and historical connection with mainland China, Japan has been a popular host country for mainland Chinese students to pursue their degrees since late 19th century. As UNESCO statistics shows (UNESCO, 2009, p. 143), Japan is the second largest host country, following USA. From 2005 to 2011, the number stays relatively stable with around 80,000 annually. Chinese students are also the main source for international students in Japan, covering about 60% (OECD, 2011, p. 335; Wang & Guo, 2012, p. 81). It is not surprising that most students in the sample choose Japan in comparison to some other countries and regions in East Asia.

The number of mainland students who study in Singapore is growing since the early 21st century. In 2008, about 39,000 mainland Chinese studied in Singapore, and about half of them were at the ages of 21 to 25 (Wang & Guo, 2012, p. 89). Chinese culture environment, high degree of internationalization, relaxing visa and employment policies may be important reasons for mainland students to choose Singapore. It is for these same reasons that some students choose Hong Kong-China as their host region. Working opportunities for overseas graduates and charming overseas scholarships also attract international students to study in Singapore and Hong Kong (Wang & Guo, 2012; Zhan & Hung, 2010).

Since the early 21st century, Korea has been trying to bring in more international students with diverse strategies, such as lower costs, more scholarships, relaxing working visa policy and so on. The popularity of "Korea fashion" in mainland China is also one of the attractiveness (Tang, 2010). In 2009, international students from mainland China covered 78.6% of all international students in Korean higher education system (OECD, 2011, p. 335).

Only a very few students intend to study in Malaysia

Table 3 First Choice of Host Country/Region by High School Students in Mainland China

Host Country/Region	% of Students	Host Country/Region	% of Students
USA	17.7%	HK SAR^a (China)	3.8%
France	12.4%	New Zealand	3.2%
UK	11.2%	Netherland	2.0%
Canada	8.6%	Finland	1.5%
Australia	8.0%	Malaysia	0.5%
Japan	6.7%	Russia	0.4%
Singapore	6.7%	Macao SAR^a (China)	0.2%
Korea	6.3%	Others	5.1%
Germany	5.8%	Total	100.0%

Source: Hung et al. (2007).

Note: N = 12,961.

^a SAR refers to "Special Administrative Region;" HK SAR (China) will be HK-China in the following tables, for space saving.

(0.5%) and Macao (0.2%), so the following sessions of data analysis will not include them and will focus only on Japan, Singapore, Hong Kong-China and Korea.

As shown in Table 4, the study also investigates student's choices of study majors. It is found for all students who choose Japan, Singapore, Korea and HK-China, "Economics and Administration" comes to the first most popular study major. "Computer science and software engineering" is popular too; it is in fact either the second or the third popular study major with more than 10% of students considering it their first choice. In the 1980s, many Chinese students chose to major in science and technology; however, since late 1990s, with economic growth and social change, graduates in the fields of economics, administration and computer sciences were in great demand in mainland China, and "overseas returnees" (*Haigui*) in them enjoy relatively high salary and social reputation (Zhang, 2009). In 2009, more than half "overseas returnees" in mainland China majored in economics (33.4%) and administration (20.2%). However, with too many graduates in those majors from overseas and local universities and colleges in labor market, some returnees encountered salary reduction, if not unemployment, for a certain period of time (Li & Cheng, 2012; Zweig & Han, 2009).

Art and design are also popular among students who intend to study in Japan (13.9%) and Korea (16.4%), and social sciences are among students in favor of Singapore (13.1%) while medical science the first choice of many students who prefer to study in HK-China (9.1%). It seems that high school students in the sample consider majoring in the field with high reputation in host countries and regions. According to the information released by media or/and intermediate agencies, art/design are competitive study

majors in both Japan and Korea, while in Japan animation and clothing design stand out (Xu, 2013) and in Korea interior design and arts are related to movies and TV shows (Tang, 2010). In HK-China, medical science enjoys a high reputation because of its high competitiveness and good career future guarantee.

In sum, concerning major choice, mainland students are more likely to choose hot fields in their home country or in their intended host country or region in the hope of better salary and promising career future after graduation.

5.2 Student's Consideration of Information on Overseas Higher Education in East Asia

In the student questionnaire, students were asked to rate the importance degree of 11 items concerning quality, teaching and learning, costs, qualifications, and employments and life in host countries and regions (see Table 5). Students' high ratings (with all mean values of over 4.0) imply that the above listed information is important for their choices of overseas higher education.

There are also some differences among students' consideration of various kinds of information. With factor analysis, all 11 items of the whole sample (12,961 students) are run into two factors, with Factor One of "information on quality and cost of overseas higher education" and Factor Two of "information on life and work in host place." Student's ratings of items in Factor One are relatively higher than those of Factor Two. Students ratings of seven items in Factor One are mostly over 5.00 and some nearly 5.00, while those of two items in Factor Two are around 4.50. It implies that for mainland high school students, information on quality and cost of overseas higher education comes before that on daily life or future

Table 4 Major Choices of High School Students in Mainland China

	Japan	Singapore	Korea	HK-China
Most popular	economics and administration (16.5%) ^a	economics and administration (27.3%)	economics and administration (19.0%)	economics and administration (32.0%)
Second popular	computer science and software engineering (16.3%)	social sciences (13.1%)	art and design (16.4%)	computer science and software engineering (10.9%)
Third popular	art and design (13.9%)	computer science and software engineering (10.0%)	computer science and software engineering (11.7%)	medical science (9.1%)
<i>N</i>	606	633	609	375

Source: Hung et al. (2007).

Note: Fourteen choices of study majors in the questionnaire are: Fundamental Sciences (such as mathematics, physics, chemistry, biology), Engineering, Computer Science and Software Engineering, Social Sciences (such as sociology, psychology, anthropology), Economics and Administration (such as economics, accounting, marketing), Humanities (such as literature, history, philosophy), Foreign Languages, Education, Medical Science, Law, Art and Design, Architecture, Journalism and Mass Communication, Others.

^a number in the parentheses refers to percentage of students who share the same host country/region and same major choices.

Table 5 Importance Degree^a of Related Information on Overseas Higher Education

Factors ^b	Information on: ... of the host country/region	Japan	Singapore	Korea	HK-China
Factor One: Quality and cost of overseas higher education (52.20%)	(1) Educational quality	5.13	5.18	5.18	5.32
	(2) Educational characteristics/particularity	5.08	5.16	5.20	5.20
	(3) Admission requirement	4.92	4.99	5.04	5.04
	(4) Teaching methods	5.04	5.11	5.12	5.15
	(5) Tuition and other fees	4.97	5.17	5.17	5.10
	(6) Basic life expenditure	4.99	5.18	5.16	5.18
	(7) If qualification/degree obtained will be recognized equally with local students by host place	5.18	5.35	5.37	5.39
	(8) If qualification/degree obtained will be recognized by home country	5.20	5.36	5.39	5.40
Factor Two: Life and work in host place (10.50%)	(9) The possibility of employment in the host place	4.55	4.40	4.59	4.43
	(10) Life habits in host place	4.65	4.61	4.75	4.41
<i>N</i>		713	695	669	405

Source: Hung et al. (2007).

Note: ^a The importance degree is based on student's self report. A six-point scale is used to rate the importance degree: 1 = very unimportant, 2 = unimportant, 3 = a little unimportant, 4 = a little important, 5 = important, 6 = very important.

^b The result is based on factor analysis of the whole sample of 12,961 students. Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization. Number in the parentheses refers to percentage of variance of each factor.

employment opportunities. Within Factor One, all students consider the information on the recognition of overseas qualifications by home country and host country most important. Recognition of qualifications is also a significant indicator of quality of overseas higher education.

As a whole, data analysis results suggest that high school students in mainland China consider information on quality of overseas higher education most important, then cost, and followed by life and future employment. During marketization and internationalization of higher education in East Asian countries and regions, quality assurance is always a key issue (Chapman et al., 2010; Mok, 2000; Yonezawa, 2002). For individuals and their families, educational costs and future benefits are important factors in their choice of further education (Becker, 1993). Reputation and quality of higher education institutions, to most extent, may guarantee students a higher salary and good social status in the near future (Ding, 2004). In international higher education market, "quality of programs" and "tuition fees and cost of living" are two important underlying factors in students' choice of a host country of study (OECD, 2011, p. 323). It may be concluded that high school students in mainland China seem quite rational concerning their consideration of information related to overseas higher education.

5.3 Information Channels for Overseas Higher Education

Information channel is also important for students

to obtain accurate and "deterministic" information. In the student questionnaire survey, they were asked to rate the importance of listed 11 channels for them to obtain information on overseas higher education. Similar to Zhan's study on information channels on *minban* higher education information (Zhan, 2004), with factor analysis, all 11 items are run into two factors. Factor One is named as "formal/public channels," including student's school, media, intermediate agency/company, internet, educational administration department, promotion advertisement by overseas higher education institutions and education exhibition, and Factor Two "informal/personal channels," with family and relatives, friends and classmates, school teachers, and overseas relatives included.

As shown in Table 6, students in general think both two factors help for their research of information on overseas study. Among all 11 channels, all students agree that internet is very important. As stated in session III, almost all universities and colleges with international students build their websites to expose information about themselves and also on admission policies to potential students. Some government agencies construct websites to upload policies related to overseas study and/or to regulate information market of international higher education (such as Website of Regulating Information on Overseas Education, Ministry of Education, People's Republic of China: <http://www.jsj.edu.cn>). Students also consider family and relatives and media good channels for information. Students intend to study in Singapore and Korea also think of educational

Table 6 Importance Degree^a of Various Information Channels

Factors ^b	Information on: ... of the host country/region	Japan	Singapore	Korea	HK-China
Factor One: formal/ public channels (48.50%)	(1) Introduction by student's secondary school	4.08	4.33	4.46	4.31
	(2) Media (broadcast/newspaper/TV)	4.35	4.33	4.56	4.56
	(3) Intermediate agency/company	3.76	3.85	4.00	3.72
	(4) Internet	4.53	4.48	4.69	4.61
	(5) Educational administration departments	4.33	4.68	4.75	4.43
	(6) Promotion advertisement by overseas higher education institutions	4.21	4.27	4.51	4.26
	(7) Education exhibition	4.15	4.35	4.50	4.12
Factor Two: informal/personal channels (11.61%)	(8) Family and relatives	4.40	4.33	4.49	4.48
	(9) Friends and classmates	4.27	4.30	4.47	4.40
	(10) School teachers	3.81	3.97	4.05	3.93
	(11) Overseas relatives	4.34	4.27	4.40	4.11
<i>N</i>		642	648	608	362

Source: Hung et al. (2007).

Note: ^a The importance degree is based on student's self report. A six-point scale is used to rate the importance degree: 1 = very unimportant, 2 = unimportant, 3 = a little unimportant, 4 = a little important, 5 = important, 6 = very important.

^b The result is based on factor analysis of the whole sample of 12,961 students. Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization. Number in the parentheses refers to percentage of variance of each factor.

administration departments to be very important information channels. It is also interesting to note that students think intermediate agencies/companies are not that important for them to get information on overseas higher education. It may partly result from the bad reputation of some intermediate agencies (Zhao, 2013).

Among all the 11 channels for the search of information on overseas higher education, internet, media, family and relatives are considered important by all students. Students who intend to study in Singapore and Korea seem to look up upon information channel of educational administration departments. Is it because from student's experience and perception, governments in Singapore and Korea play a more important role in dissemination of information on overseas higher education than those in Japan and HK-China? More research need doing for further discussions and conclusions.

6 Conclusions and Implications

With massification and internationalization of higher education, students may have more choices but meanwhile they are also faced with a "noisy" information market. The search of and the acquisition of deterministic information on overseas higher education are important for student's rational choice of studying abroad. With previous analysis, the following conclusions and implication are secured.

First, there is a slow-growth of demand for overseas higher education in East Asia by high school students in

mainland China. Though universities in North America and West Europe are still favorite choices of many students, universities in some East Asian countries and regions, such as Japan, Singapore, Korea and Hong Kong-China, are becoming more popular. Especially since early 21st century, many countries in East Asia implemented various policies to attract international students, including scholarship provision, relaxing visa application, and opening of employment market to overseas students (Wang & Guo, 2012; Wang et al., 2009). Information exposure of universities to potential students is also an important strategy to attract potential students. With growing demand of overseas study in mainland China, various public information channels exist in the overseas study market to provide information and service to interested students. As shown in the study, internet, family and relatives, educational administration departments and education exhibitions are considered important information channels in their pursuit of overseas higher education. Besides providing quality teaching and good service to their international students, universities in East Asia may use those public channels to disseminate information as one of their internationalization strategies.

It is also found that students tend to choose study majors which are popular in local and foreign labor market. Information on higher education and labor market is uncertain in nature (DeFreitas, 1995; Rosen, 1995). Some students may have to adjust their expectation on future benefit of overseas study owing to labor market fluctuation

(Li & Chen, 2012; Zweig & Han, 2009). Students also need to keep balance between instrumentalism and personal interest on their choices of study major.

Third, students in mainland China intend to make rational school choice concerning their perception of “deterministic” information on overseas higher education. Quality and cost are important and deterministic information (Ding, 2004; OECD, 2011; Stiglitz, 2001). Students in the study in general consider quality information most important for their overseas study and then that on cost, especially on accreditation of degrees and qualifications by both home country and host countries. However, it should be noted that the study is based on self report of high school students who have not actually experienced overseas higher education. Information searching is costly (Schneider, 2001; Stiglitz, 2001; Zhan & Hung, 2010). In spite of their ambitious intention, students may not afford or forget to do information search finally. As shown in studies in Cyprus and Greece (Menon, 2004; Menon & Saiti 2007), only half of students are actual information searchers for their choice of private colleges. Meanwhile owing to complexity of quality criteria and unregulated information market, students may obtain “noisy” or false information (for example, Zhan & Chung, 2006). Further research is needed to study on student’s actual acquisition of information on overseas study.

Some well-designed regulations are needed for healthy development of information market on overseas higher education in mainland China. Intermediate agencies are found to share a large market for providing service and information to students for their overseas study (Ministry of Education, People’s Republic of China, 2004). However, students do not evaluate it as an important channel, partly owing to bad reputation of some agencies. Though Chinese government has tried to regulate them by issuing several administration regulations, more well-designed policies are needed.

It is also worth noting that governments of both host and home countries and regions play an important role in promoting flow of international students. According to data analysis, students consider information on recognition and accreditation of degrees and qualifications by home and host country most important for their overseas study. Recognition of degrees and qualifications is not only an indicator of higher education quality, but also a mutual understanding between home and host countries and regions. From 1983 to 2009, mainland China has signed contracts with more than 50 countries and regions with mutual recognition of degrees and certificates (Wang et al., 2009, pp. 460-463). It greatly promotes mobility of international students between mainland China and other countries and regions.

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