

Distinguished Faculty Transfer in Chinese Mainland Higher Education Institutions: Factors of Academicians' Job Mobility by CV Analysis

Shan Jiang

School of Educational Science, Anhui Normal University, Wuhu, China

Email: shanjiang@ahnu.edu.cn

How to cite this paper: Jiang, S. (2024). Distinguished Faculty Transfer in Chinese Mainland Higher Education Institutions: Factors of Academicians' Job Mobility by CV Analysis. *Open Journal of Social Sciences*, 12, 282-298.

<https://doi.org/10.4236/jss.2024.126015>

Received: May 17, 2024

Accepted: June 22, 2024

Published: June 25, 2024

Copyright © 2024 by author(s) and Scientific Research Publishing Inc. This work is licensed under the Creative Commons Attribution International License (CC BY 4.0).

<http://creativecommons.org/licenses/by/4.0/>



Open Access

Abstract

In today's global academic market there is fierce competition for attracting distinguished faculty. Job mobility gradually becomes popular in Chinese mainland higher education recent years. Members of Chinese Academy of Science are typical examples of distinguished faculty in China. Many universities and research institutes hope to recruit them to strengthen their talents corps. This study examined the mobility patterns of full 226 members of CAS selected more than four years to explore whether their mobility was correlated with professional and personal factors. Data sources included the curriculum vitae of subjects from different kinds of websites. Based on the coding criteria, statistical results indicate that variety of factors may correlate with academicians' job mobility, but it is influenced most by gender, age when selected into CAS, and education background. These results point to steps that higher education institutions can take to provide opportunities that distinguished faculty seek for their academic success.

Keywords

Job Mobility, Distinguished Faculty Transfer, Chinese Higher Education, Talent Competition

1. Introduction

An important strategy for higher education institutions that strive for excellence in an era of knowledge-driven economy is to strengthen their competitiveness by recruiting highly qualified faculty (Blau, 1974: p. 93; Stigler, 1993: p. 158; Musse- lin, 2018: p. 659). Almost all universities and colleges in China are putting every

effort to attract external star candidates while retaining their high-performing faculty. Within the framework of Chinese “World Class Excellency” strategic plan, the national government has clearly stated that the selection criteria for world-class universities and first-rate disciplines should include a number of first-class experts, academic leaders, and innovation teams that are active at the international academic frontiers (National Development and Reform Commission of China, 2015). This strategic dimension is seen as one force that has accelerated the internal mobility of Chinese academics in recent years. The present research was carried out with the object to determine the potential factors that may contribute to distinguished faculty mobility.

Being an academic is institutionally and socially distinct from other occupational fields. Academia has its own cultural capital, institutional infrastructure, professional hierarchies, career trajectories, and professional rules and conventions (Bauder, 2015: p. 8; Bauder et al., 2017: p. 2; Bourdieu, 1988: p. 36; Pankin, 1973: p. 97). The causes of faculty mobility are also different from transfers that happen in other occupations. Earlier scholars have used the term “pull-push mechanism” to explain general mobility in academia (Pankin, 1973). Lewis (1967: p. 641) asserted that faculty mobility was “the perception of not adequately participating in the university community and the expectation of finding an academic paradise”. More recent researchers have focused on categorizing different patterns of mobility in scientific fields and exploring reasons as to why faculty opt for alternative employment arrangements to that which they already have. These reasons range from more personal/demographic characteristics such as gender (Cao & Hu, 2007), and with the development of globalization and more research on transnational mobility, to being part of a research network and potentially being more productive (Bauder, 2000, unpublished manuscript, p. 22; Jonkers & Tijssen, 2008: p. 310; Leung, 2011: p. 478). In general, faculty mobility is quite normal in academic marketplace, which might be influenced by faculty’s personal choices that based on their career development, especially in the global transfer (Lee & Kuzhabekova, 2018). To sum up, a variety of personal, internal and external environmental factors can prompt faculty’s working choices in higher education institutions. These include job satisfaction, compensation or salary, relationship between colleagues, international experience and the potential to publish more or in more prominent journals (Allison & Long, 1987: p. 651; Bauder et al., 2017: p. 7; Manger & Eikeland, 1990: p. 288; Pankin, 1973: p. 101; Weiler, 1985: p. 274; Yan, Yue, & Niu, 2015: p. 529). Of these, female faculty are less likely than male to experience geographic career mobility at advanced career stages or beyond some fixed ages (Jöns, 2011: p. 205), because previous study found they were more likely to reside in large cities, in areas with many colleges, and in regions where doctoral production is heavily concentrated (Kulis & Sicotte, 2002: p.21), no matter they can achieve professional excellence.

More recently, faculty mobility at a larger scale, especially among distinguished groups in the academic market, has become a hotly debated and controversial topic in Chinese higher education. Faculty mobility in China typically

has two patterns: individual mobility, motivated by personal aspirations or reasons, and organizational mobility, initiated by bureaucratic reassignment. At the beginning of the founding of the People's Republic of China, there was almost no individually initiated academic mobility amongst faculty in universities or other research institutes, and very little occasional mobility due to "cadre transfer" by administration (Cao & Hu, 2007: p. 1539; Yan et al., 2015: p. 528). However, since the mid-90s, the traditional "institutional attachment" (Yan et al., 2015: p. 528) system has gradually disappeared in universities, and the competitive "contract-centered employment" appears instead (Li, Lai, & Lo, 2013: p. 307), so faculty members have become increasingly mobile, transferring to different universities and regions. Overall, however, in terms of mobility frequency and rate, "they are still less active than their counterparts in European and North American countries" (Yan et al., 2015: p. 528).

These perceptions of distinguished faculty mobility, however, have not been validated empirically. Previous research suggests that the majority of Chinese faculty do not switch their working institutions frequently. You's (2014) research, for example, used data from 2613 full-time faculty in Chinese public universities to suggest that less one fourth (23%) of faculty had the intention to leave their job and the level of their job satisfaction was higher than average. Guo, Zhen and Wang's national faculty survey in 2016 reports similar results. Their data indicated that only 35.2% had mobility experience and the average frequency of job mobility was less than 2 times (Guo et al., 2016: p. 71). Since the distinguished faculty has now become a point of attention and contention amongst the public and in academia, the present study was conducted as an exploration to determine the actual reasons for mobility amongst distinguished faculty in the Chinese mainland context.

2. Research Design

Faculty mobility is considered as "a decisive mechanism for the diffusion of knowledge and the integration of research systems" (Cañibano et al., 2008: p. 17, cited in Commission of the European Communities, 2000: p. 16). The specific objective of the study was to examine whether certain professional and personal attributes or characteristics differentiated faculty who were mobile from those who did not move around.

2.1. Research Sample

In 2018, China had approximately 1.7 million full-time faculty members in regular higher education institutions, of which only .2 million people (11.8%) have been conferred senior professional titles¹ (Ministry of Education of The People's

¹In China, faculty belongs to professionals. Since the enactment of "title regulation of faculty's professional title" in 1986, it has divided full-time faculty into four categories: senior, sub-senior, middle, and junior. These titles correspond to the academic positions (e.g., full professor, associate professor, assistant professor, and lecturer) based on their professional performance and employment length of teaching and research. Faculty who get the senior professional title mean they obtain the highest academic position in higher education institutions, like the "full professor" title.

Republic of China, 2019). In this research, “distinguished faculty” refers to eminent scientists/academics/researchers with senior professional titles who are working in higher education institutions and are engaged in advanced academic work including research and whose scholarship contributes to academic productivity and the prestige of their affiliated institution. The sample for this study comprised all academicians in six departments in the natural sciences that have been selected into Chinese Academy of Science (hereinafter called CAS) between 2007 and 2015. This prestigious membership conferred by State is the highest academic accolade a Chinese academician can receive in the field of science and technology (CAS, 2014). Individuals who have been awarded this lifelong title remain affiliated with the institution they are employed at.

There were two reasons for choosing a subset of members in CAS as the sample of this study. First, a CAS title is a strong validation of expertise and an attribute that is valued highly. Influential academics today have extended their activities beyond the “Ivory Tower”. They are more present in the public sphere as “scientific authority”. As Altbach (2009) rightly contends, “at some Chinese universities, professors are expected to take consulting and other outside work”. As the distinguished representatives of academics in China, it has been asserted that CAS academicians engage in excessive social activities and the resulting social impact is unique compared to other countries in the world (Liu, Li, & Chen, 2005, p. 183). Based on the theory of scientific and technical human capital (Bozeman & Corley, 2004; Bozeman, Dietz, & Gaughan, 2001), faculty have ownership of their scientific and technical knowledge and social ties. These can be used to evaluate their individual market value. A CAS title not only represents an elite status of faculty, but may also raise their level of marketability, which gives them more opportunities to move around. For this reason, this sample is of particular relevance for studying mobility amongst distinguished faculty in China. Second, there are very few studies that have focused on the mobility of this distinguished group of faculty in the Chinese context, which now has the world’s largest higher education system (Zhao, 2017). The choice of the selected disciplines was also intentional and meaningful in the Chinese context. As Van Noorden’s (2012: p. 329) study suggests, more than 60% of scientists in both biological and physical sciences picked China as the country that would be producing the best science in their field by 2020, although the respondents themselves said they were less likely to do research in China. Thus, exploring career mobility of Chinese laureate faculty was deemed as meaningful for understanding both a Chinese domestic phenomenon from an international perspective and its potential impact on the global academic market.

2.2. Method

One potentially rich but largely unexploited data source for studying the career trajectory and job mobility of scientists is the curriculum vita (CV) (Dietz, Chompalov, Bozeman, Lane, & Park, 2000: p. 420). The CV includes self-reported information, depicting a complete and concrete self-portrait of the scholar’s ca-

reer. For example, it provides useful, concrete information “on the timing, sequence, and duration of employment, work outputs (e.g., articles, patents, papers), collaborative patterns, and scholarly lineage” (Dietz et al., 2000: p. 421). Faculty CVs also contain a rich source of longitudinal data, which can be used to track academic mobility and career flows (e.g., Fontes, 2007; Mangematin, 2000; Sabatier, Carrere, & Mangematin, 2006).

In order to find out the mobility patterns of distinguished faculty affiliated with Chinese higher education institutions, the present study used the CVs of faculty with a CAS member title. The study sample consisted of 226 CAS academicians in six natural science disciplines, who were selected into CAS for more than four years. The primary data source comprised the profiles of the CAS members and information available on the CAS website and the researchers’ home/main institution website. These data sources were combined to generate a more complete and accurate profile of CAS academics.

2.3. Variables

Information obtained from the CVs allowed us to assess each individual’s work-related mobility from a wider perspective than traditional methodologies, which have considered only personal intentions to stay or move. As in previous related studies, we compiled data on personal and professional factors as independent variables. The actual mobility situation was used as the dependent variable in the present study. We used these sets of variables to probe into the potential probable causes of distinguished faculty mobility in the Chinese mainland higher education context.

Present mobility situation as dependent variable

As mentioned above, the main dependent variable was faculty members’ institution after being selected into CAS and their job mobility during the specified period. We created three categories associated with job mobility: 1) Non-mobility; 2) Organizationally initiated mobility; 3) Individually initiated mobility. The coding criteria are listed in **Table 1**.

Professional factors influencing distinguished faculty mobility

On professional factors, we collected data from profiles on three variables: educational background, working experience, and overseas experience.

Education background

It is particularly common in China that graduates of an institution secure employment in the same institution upon graduation. This pattern nurtures and sustains multi-generational networks, which also welcome external colleagues with whom an individual has worked during studies in other institutions (Leung, 2011: p. 485). The advantage of starting a career in this manner is familiarity with organizational and peer culture, values, norms and work routines (Horta, Sato, & Yonezawa, 2011: p. 36). While this is likely a situation that could help faculty become productive very quickly, there are also disadvantages associated with remaining in an institution from which one has obtained a degree. “Academic inbreeding” (Horta, Veloso, & Grediaga, 2010: p. 414) is one such disadvantage.

Table 1. Coding criteria of profiles' data.

Variables	Coding Criteria
Mobility situation	If a faculty member had remained in the same organization after he/she was selected into CAS membership, this was coded as category 1-Non-mobility. Categories 2 and 3 both indicated actual mobility, but prompted by different reasons. Category 2, organizationally initiated mobility, was associated with a move resulting from an administrative decision or appointment (such as being appointed as a principal/president of another university). Category 3, individually initiated mobility, included both moves, which followed the termination of a contractual agreement with the initial institution and the part-time affiliation with other institution or institutions.
Education background	If the institution where the individual was employed did not correspond with any of the institutions from which they had obtained a degree, this was coded as NON-COR. If the institution where they were employed corresponded with one of the institutions from which they had obtained a degree, this was coded as ONETIME-COR. TWOTIME-COR and THREETIME-COR were coded in the same manner.
Working experience	We coded years of employment in institution and its type (college/university, research/scientific institute, other institution) to determine whether these had any influence on faculty mobility. Meanwhile, if the individual was selected into CAS while he/she was employed by their first employment, this was labeled as "Yes". If the individual was selected into CAS membership while in another institution, this was coded as "No".
Overseas experience	We coded the variable as whether the individual had studied or worked abroad before settling in the institution at the time they were selected into CAS membership. If he/she has the studying or working experience abroad, this was coded as "Yes", and if vice versa, that would be "No".
Location	Based on socio-economic and cultural development, we categorized the location of the institutions selected by faculty into four regions: Four Municipalities plus Hong Kong, provincial capitals in East China, provincial capitals in West/Central China, and other cities. This was to test whether the location of the institution had any impact on faculty mobility. Also, we identified hometowns of CAS academicians to explore the possible causality of job mobility. Thus, if the location of a faculty member's selected institution was the same as his/her hometown, we coded it as "Yes", and if vice versa, we coded it as "No".
Other demographic factors	In order to examine whether these demographic attributes also affected Chinese distinguished faculty mobility, we coded for research discipline (math, Chemistry, Life Science, Earth Science, Information, Technology), gender (male/female) and age group (>65, 45 - 65, <45) when they had been granted CAS membership.

It perpetuates the same kind of research and research networks, and as such, can limit exposure to other academic traditions and research methodologies. In the study and for the purpose of examining the possible relationship between educational background and job mobility, we considered the correspondence between

the present institutions and all three levels of their education: Bachelor's degree, Master's degree, and Ph.D. degree.

Working experience

In China, job mobility in academic market may not be as common as in western countries because people are inclined to associate job transfer with the degree of loyalty to the institution (Lin, 2009: p. 91). In this traditional culture, “a strong sense of obligation, attachment and loyalty of employees towards the organization is often paramount” (Chow, 1994: p. 4), so individuals are more likely to stay and less likely to move. Past research findings suggest that “those employed at institutions of higher prestige and those who are in disciplines that are associated with low professional prestige are more ‘loyal’ than their counterparts” (Lewis, 1967: p. 629). However, one could argue that while loyalty to the affiliated institution may affect job mobility or lack thereof, there might be other confounding reasons for staying put such as not having an option to move. An important indicator to represent faculty loyalty to the institution they are affiliated with is the number of years employed at the same institution. Another consideration in this context was first occupational experience. The first few years of a faculty's working experience are likely to determine his/her future career development, especially the patterns of career success and failure that are set rapidly in the first few years (Boice, 2000: p. 2). This implies that the first job experience may have an effect on the entire academic career as it might affect later working choices, for example, job position and career development paths. We hypothesized that if faculty did well in their first institution, they were less likely to change their institution, assuming that staying would help achieve greater success. Further, if they were selected into CAS, they would be less likely to move from their institution on their own volition.

Overseas experience

Since 1978 when China initiated its economic reforms and opened its doors to the world, over one million students and scholars have gone abroad to study at various levels of education. Until 2010, an estimated one third of this group, informally referred to as “sea turtles” (Hao & Welch, 2012: p. 243), returned to China after completing their education abroad (Sun, 2013: p.1). With globalization, international brain circulation has become a common phenomenon. Faculty regard international experience and mobility instrumental in the production of scientific knowledge and a contributing factor to their reputation and prestige (Bauder et al., 2017: p. 1). While in western countries faculty mobility is a common phenomenon, until recently, this has not been the case in China. With the change of times and greater exposure to western perspectives, Chinese students and scholars have gradually accepted this viewpoint and the value of mobility, especially after they have gone abroad to study and work. When they return to China to find academic positions and adjust themselves to Chinese higher education context, they still may value mobility as a means to further advance knowledge and enhance their career development.

Personal factors influencing distinguished faculty mobility

On personal factors, we coded two variables: factors related to location and other demographic information.

Location

Colleges and universities in China are mainly located in a few developed cities, such as Beijing and Shanghai (Yan et al., 2015: p. 545), where opportunities for professional development and access to favorable living conditions and cultural activities are greater and as such attractive to faculty and their families. For instance, more advanced locations will offer better basic education and are offer a better chance to their children to succeed in national college entrance examinations (Hu, Zhang, & Peng, 2006: p. 81; Yan et al., 2015: p. 545). Also in Agrawal, Cockburn, and McHale's (2006) study, based on social relationship and physical proximity, they found that a scientific inventor flowing back to prior location that they lived before to work are approximately half more than if they had never lived there.

Other demographic factors

Findings reported in the literature indicate that age, gender and research discipline might also influence mobility (e.g., Bauder et al., 2017; Cao & Hu, 2007; Cotton & Tuttle, 1986; Crespi, Geuna, & Nesta, 2007; Smart, 1990). For example, Smart's (1990) study suggested that younger faculty were more likely to be inclined to leave their institution.

In summary, the present study used data on professional and personal aspects of individual information collected from CVs of academics, using them as independent variables and job mobility track record after being selected into CAS as the dependent variable. These variables were examined to explore the hypothesized professional and personal factors that may affect their actual job mobility.

3. Data Analysis

Information gathered before February 2018 from the CAS official website, the website(s) of institution(s) with which the individual was affiliated, and Web of Science yielded 226 CAS academicians' CVs from six departments. It indicated that nearly one fourth (23.9%) of this elite group ($N = 54$) moved to another job. This included 21 moves initiated by administrative appointments (accounting for 9.3% of the total number of academicians in the same period) and 33 individually initiated moves (14.6%). Of these 226 distinguished academicians, 17 are female (7.5%), but there was no professional mobility among them. The detailed descriptive analysis of the data was previously presented with other qualitative data on another paper (Jiang & Liu, 2018).

In order to determine whether there were any statistical relationships between distinguished faculty job mobility and these independent variables, first Chi-Square (χ^2) analyses were conducted. **Table 2** shows that eight of ten hypothesized variables had significant correlations with job mobility after being inducted in CAS. Subsequent Kruskal-Wallis analysis, conducted to examine the influence of

Table 2. Chi-Square Tests of the correlation between faculty mobility and independent variables.

Independent Variables	Observed Value	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)
Education background	Pearson Chi-Square	20.512**	6	.002	/
Type of job institution	Pearson Chi-Square	14.859**	4	.005	/
Overseas experience	Pearson Chi-Square	7.082*	2	.029	/
First job experience	Pearson Chi-Square	5.821	2	.054	/
Discipline	Pearson Chi-Square	71.856***	10	.000	/
Hometown	Pearson Chi-Square	6.171*	2	.046	/
Location	Pearson Chi-Square	24.203***	6	.000	/
Working year	Fisher's Exact Test	.875	/	/	.665
Gender	Fisher's Exact Test	8.447*	/	/	.011
Selected age	Fisher's Exact Test	20.056***	/	/	.000

Note: * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 3. Kruskal-Wallis Tests of the influences of independent variables on faculty mobility.

Independent Variables	Chi-Square Value	df	Asymp. Sig.
Education background	17.391***	2	.000
Type of job institution	13.352***	2	.001
Overseas experience	7.392*	2	.025
First job experience	4.005	2	.135
Working year	.784	2	.676
Hometown	5.000	2	.082
Location	7.737*	2	.021
Gender	8.191*	2	.017
Discipline	1.153	2	.562
Selected age	14.815***	2	.001

Note: * $p < .05$. ** $p < .01$. *** $p < .001$.

the hypothesized variables on faculty choices of job mobility after selection into CAS membership, showed the following: education background, type of institution, overseas experience, gender, age at the time they were inducted into CAS, and location of the selected institution showed different significant effects on the choices of job mobility after selection (see **Table 3**). Variables that were highly-significant included educational background (χ^2 (df = 2) = 17.391, $p < .001$), age (χ^2 (df = 2) = 14.815, $p < .001$) and type of institution (χ^2 (df = 2) = 13.352, $p < .001$). These variables were correlated highly with mobility. Of lesser significance were, gender (χ^2 (df = 2) = 8.191, $p < .05$), location of the institution at the time of selection (χ^2 (df = 2) = 7.737, $p < .05$) and overseas experience (χ^2 (df =

2) = 7.392, $p < .05$). Considering the outcome of these two sets of analyses together, our conclusion was that the most significant variables that influence mobility of these distinguished faculty are educational background, type of institution, overseas experience, gender, age when selected in CAS and location of the selected institution.

In order to identify whether these correlated variables increased or decreased the probability of faculty mobility, binary logistic regression analyses were carried out. For the overall logistic regression analysis (which included the six predictor variables), all of the measures of model fit improved over the base model that contained only the intercept. The -2 LL value decreased to 366.121, χ^2 (df = 6) = 31.120, $p < .001$. The pseudo R^2 values ranged from .086 to .126, representing improvement over the base. The Hosmer and Lemeshow test showed non-significance, indicating no difference in the distribution of the actual and predicted dependent values, χ^2 (df = 8) = 6.047, $p > .05$, indicating a good model fit. Finally, the analyses revealed three significant predictors of scholars' move to another institution—education background, ($\beta = -.480$), Wald χ^2 (df = 1) = 5.465, $p < .05$; age when selected into CAS, ($\beta = .638$), Wald χ^2 (df = 1) = 3.910, $p < .05$; and gender, ($\beta = 2.322$), Wald χ^2 (df = 1) = 5.064, $p < .05$ (see **Table 4**). These coefficients suggest the following: 1) Those who move from their institution after being selected into CAS are more likely to be older scholars, whose place of employment is different from institutions where they had studied. 2) Those who do not move are younger, and are likely to end up being employed in an institution where they also studied. 3) Even though there are only a few females in the full sample, male distinguished faculty (25.4%) are more likely to move than female (5.9%) after selected into CAS membership. In sum, gender, age when selected in CAS, and educational background are significantly associated with the choice of this distinguished group's job mobility after being recognized for their accomplishments by being inducted in CAS.

Table 4. Effects on faculty mobility by independent variables.

Independent Variables	B	S. E.	Wald	Sig.	Exp (B)
Education background	-.480	.205	5.465	.019	.619*
Type of job institution	.250	.183	1.875	.171	1.284
Overseas experience	.105	.272	.149	.700	1.110
Location	-.006	.157	.001	.972	.994
Gender	-2.322	1.032	5.064	.024	.098*
Selected age	.638	.323	3.910	.048	1.892*
Constant	.128	1.498	.007	.932	1.137

Note: * $p < .05$. ** $p < .01$. *** $p < .001$. In binary logistic regression, dependent variable is divided into non-mobility and mobility, that is, type 1 means non-mobility, and type 2 and 3 both signify mobility, no matter whether the mobility is by self-meaning or appointed by other administrations. The tested independent variables are both shown significantly in the Chi-square and K-W test.

4. Discussion

There is an ancient saying in China that “A smart bird chooses a good tree to make its nest in”. Faculty, especially high performing faculty should be free and have the liberty to choose an institution that matches their career aspirations and personal priorities as well as for helping advance knowledge and research productivity (Azoulay, Ganguli, & Zivin, 2017: p. 573). In the meantime, it might significantly impact research quality and output in academics. For example, mobility often exposes star faculty to different academic disciplines or institutions, encouraging interdisciplinary research, which can lead to innovative solutions and new research methodologies, pushing the boundaries of conventional research paradigms. Also, students in the institutions may benefit from the diverse expertise of mobile faculty, gaining exposure to various tutoring styles and global perspectives that prepare them for the academic marketplace.

The prior publication of this research suggests that the situation of distinguished faculty academic mobility in China is not as controversial as the public opinion portrayed by the media (Jiang & Liu, 2018). Only less than 15% faculty of our sample chose to move after being selected into CAS, and most of these moves involved only part-time jobs in other institutions. This study showed that parts of the hypothesized factors are supported. Among them, faculty age, gender and education background, as personal and professional factors, were all associated with mobility situation for faculty who had received a CAS title in natural science disciplines. For brevity, only significant variables are elaborated further.

With respect to the age of distinguished faculty, this finding is interesting in light of Super and Jordaan’s (1973: p. 3) career development theory that refers to five stages: growth stage (birth-14), exploration stage (age 15 - 24), establishment stage (age 25 - 44), maintenance stage (age 45 - 64), and decline stage (age 65 on). From our study, the CAS members all belonged to the last three stages of professional development, and more than 80% of them were at the maintenance stage when they were selected into CAS. The Chi-Square analysis results suggest that the majority of individually prompted mobility occurred between the ages of 46 - 65 (67.6%) compared to other age groups (age > 66 (29.2%) and <45 (2.8%)). The regression analysis results also suggest that faculty age had a positive influence on the mobility situation. In other words, the chances that older star faculty move to other institutions are greater than the move of their younger counterparts. This result is different from Smart’s (1990) research referenced earlier and Laudel’s (2005: p. 392) study, which asserted that migration amongst scientists generally occurred at a younger age, before gaining an “elite” status. Overall, however, compared to faculty in western cultures, Chinese distinguished faculty are more likely to stay in their original institution in order to develop their expertise and to maximize their achievements as their goal is to reach the peak of their academic career as early as possible. In other words, if faculty do not reach a high threshold of achievement, they are likely to maintain

a relatively stationary career. Conversely, when their career success reaches a certain high level, most elder faculty will choose mobility (Liu, 2012: p. 32).

With respect to the gender of distinguished faculty, all individuals whose mobility was initiated based on personal reasons were male, and as would be expected, our regression analysis revealed being male significantly increased the probability of job mobility. Ceci et al. (2014: p. 77) reported that women comprise “only 25% to 44% of tenure-track assistant professors and 7% to 16% of full professors” in geoscience, engineering, economics, mathematics/computer science, and the physical sciences in 2010. This underrepresented proportion of females is similar to women’s ratio in CAS. Shauman and Xie (1996) have explained geographic mobility with respect to gender differences and family factors. They suggest that female scientists are much more likely to be in two-career marriages and after having children, family constraints on their career mobility appear more acute than amongst male scientists (Shauman & Xie, 1996: p. 457). Also distinguished women scientists “are more likely to move upward and less likely to move laterally vs. staying” (Azoulay et al., 2017: p. 580). These studies can help explain why female CAS members are less likely to move because all the female subjects in this study were, on average, 57 years old and likely to have already had their partners or children, and therefore less likely to have been influenced by this factor in their career choices at this stage. Furthermore, the majority of individual mobility patterns were part-time, downward, or parallel, which makes it less likely for women to fit in this category.

Considering educational background, it revealed that almost 60% of individually mobile academics in CAS did not show convergence between their study places and institutions where they ended up working (Jiang & Liu, 2018). Similarly, the regression analysis showed the negative effects between academic relationship and actual job mobility. In Chinese academic institutions, it is common that a high percentage of faculty to continue employment in the institution from which they obtain their degree. The general view is that by retaining individuals who are deemed as belonging to them, these institutions strengthen ties and foster an “a society of acquaintances” (Yan et al., 2015: p. 544). In China, this is considered to be different from academic inbreeding which is considered to be detrimental to individual scientific productivity but widely practiced in western countries (Caplow, 2017: p. 49; Horta et al., 2010: p. 414). Today in the era of global brain circulation, Chinese society encourages professors to have international recognition and collaboration, even if these include short- or long-term mobility. This type of international mobility is seen to advance knowledge and help scientists bring new methodologies, approaches, and cutting-edge technology back to China. As such, this kind of professional mobility is seen as a worthwhile development for individuals as well as for higher education institutions. Similar to the United States, having the designation as a visiting professor has gradually become one of the common criteria for promotion (Payumo et al., 2017: p. 34).

5. Conclusions

Academic mobility is general in the development of distinguished faculty careers. It may be influenced by lots of professional and personal factors, not only salary. Thus, research universities and other equivalent institutions in China should make rational planning and reasonable choice in building their professorial corps. On the one hand, by providing robust administrative support, enhancing research opportunities, fostering community integration, and offering flexible arrangements, academic institutions might attract and retain top-tier faculty members who significantly contribute to the research excellence. For instance, universities can offer some programs to assist the families of distinguished faculty, including spousal employment support, educational opportunities for children, and community integration activities. On the other hand, rules and regulations should be formulated to facilitate the formal faculty mobility and safeguard their basic legal rights and interests. In accordance with the law of the long-term growth of scientific and technological talent, universities might emphasize more on cultivating today's graduates as tomorrow's distinguished faculty while paying more attention to the academic development of young faculty in the early stages of their career growth. Furthermore, the public and relative institutions should put more emphasis on female star faculty's career development. While this research is based on Chinese higher education context and a particular set of individuals, the findings may serve as an important example for other developing countries to explore similar phenomenon on faculty mobility in their own context.

The limitations of this study pertain to the sample size and methodology. The study has attempted to rely on the most recent and most representative distinguished faculty in China to explore the real situation concerning career mobility in the academic market. Results may be different with non-elite participants. Future research could extend the sample to a larger-scale and different faculty groups in China so as to get a more comprehensive picture of faculty movement, to find out the specific characteristics of the movement, and to render the types of analyses conducted in this study more robust. Furthermore, the framework of this study is mostly based on empirical studies carried out in the west and it is being used to study a phenomenon that has been brought into focus primarily by Chinese media. The reliability and validity of the research could be enhanced by adding more data sources such as survey or interview to verify the real job movement and investigate thoroughly the causes of mobility in Chinese mainland context. Results of these future studies may have great significance for policy-makers interested in the construction of high performing faculty clusters and academic hiring in tertiary education institutions as well as for individual faculty who independently make career choices to optimize their career development.

Acknowledgements

I would like to thank Prof. Liu Shaoxue for her expert advice and encouragement

throughout this work, as well as Prof. Alenoush Saroyan for providing language help and proof reading the article.

Funding

This work was supported by the Anhui Provincial Humanities and Social Sciences Research funding [grant numbers: 2022AH050212].

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

References

- Agrawal, A., Cockburn, I., & McHale, J. (2006). Gone but Not Forgotten: Knowledge Flows, Labor Mobility, and Enduring Social Relationships. *Journal of Economic Geography*, 6, 571-591. <https://doi.org/10.1093/jeg/lbl016>
- Allison, P. D., & Long, J. S. (1987). Interuniversity Mobility of Academic Scientists. *American Sociological Review*, 52, 643-652. <https://doi.org/10.2307/2095600>
- Altbach, P. G. (2009, April 30). *It's the Faculty, Stupid!* Times Higher Education. <https://www.timeshighereducation.com/features/its-the-faculty-stupid/406313.article>
- Azoulay, P., Ganguli, I., & Zivin, J. G. (2017). The Mobility of Elite Life Scientists: Professional and Personal Determinants. *Research Policy*, 46, 573-590. <https://doi.org/10.1016/j.respol.2017.01.002>
- Bauder, H. (2000). *The Transnational Mobility of Academics: A Labour Market Perspective*. Unpublished Manuscript, Ryerson University.
- Bauder, H. (2015). The International Mobility of Academics: A Labour Market Perspective. *International Migration*, 53, 83-96. <https://doi.org/10.1111/j.1468-2435.2012.00783.x>
- Bauder, H., Hannan, C. A., & Lujan, O. (2017). International Experience in the Academic Field: Knowledge Production, Symbolic Capital, and Mobility Fetishism. *Population, Space and Place*, 23, e2040. <https://doi.org/10.1002/psp.2040>
- Blau, P. M. (1974). Recruiting Faculty and Students. *Sociology of Education*, 47, 93-113. <https://doi.org/10.2307/2112168>
- Boice, R. (2000). *Advice for New Faculty Members: Nihil Nimus*. Allyn & Bacon.
- Bourdieu, P. (1988). *Homo Academicus*. Stanford University Press.
- Bozeman, B., & Corley, E. (2004). Scientists' Collaboration Strategies: Implications for Scientific and Technical Human Capital. *Research Policy*, 33, 599-616. <https://doi.org/10.1016/j.respol.2004.01.008>
- Bozeman, B., Dietz, J. S., & Gaughan, M. (2001). Scientific and Technical Human Capital: An Alternative Model for Research Evaluation. *International Journal of Technology Management*, 22, 716-740. <https://doi.org/10.1504/IJTM.2001.002988>
- Cañibano, C., Otamendi, J., & Andújar, I. (2008). Measuring and Assessing Researcher Mobility from CV Analysis: The Case of the Ramón y Cajal Programme in Spain. *Research Evaluation*, 17, 17-31. <https://doi.org/10.3152/095820208X292797>
- Cao, Y., & Hu, C.-Y. (2007). Gender and Job Mobility in Postsocialist China: A Longitudinal Study of Job Changes in Six Coastal Cities. *Social Forces*, 85, 1535-1560. <https://doi.org/10.1353/sof.2007.0065>

- Caplow, T. (2017). *The Academic Marketplace*. Routledge.
<https://doi.org/10.4324/9781351305969>
- Ceci, S. J., Ginther, D. K., Kahn, S., & Williams, W. M. (2014). Women in Academic Science: A Changing Landscape. *Psychological Science in the Public Interest*, 15, 75-141. <https://doi.org/10.1177/1529100614541236>
- Chinese Academy of Science CAS (2014). *Statutes for Membership of the Chinese Academy of Sciences*. <http://english.casad.cas.cn/au/re/>
- Chow, H.-S. (1994). Organizational Commitment and Career Development of Chinese Managers in Hong Kong and Taiwan. *International Journal of Career Management*, 6, 3-9. <https://doi.org/10.1108/09556219410066646>
- Commission of the European Communities (2000). *Making a Reality of the European Research Area: Guidelines for EU Research Activities (2002-2006)*. COM(2000) 6 Final.
- Cotton, J. L., & Tuttle, J. M. (1986). Employee Turnover: A Meta-Analysis and Review with Implications for Research. *Academy of Management Review*, 11, 55-70.
<https://doi.org/10.2307/258331>
- Crespi, G. A., Geuna, A., & Nesta, L. (2007). The Mobility of University Inventors in Europe. *The Journal of Technology Transfer*, 32, 195-215.
<https://doi.org/10.1007/s10961-006-9012-0>
- Dietz, J., Chompalov, I., Bozeman, B., Lane, E., & Park, J. (2000). Using the Curriculum vita to Study the Career Paths of Scientists and Engineers: An Exploratory Assessment. *Scientometrics*, 49, 419-442. <https://doi.org/10.1023/A:1010537606969>
- Fontes, M. (2007). Scientific Mobility Policies: How Portuguese Scientists Envisage the Return Home. *Science and Public Policy*, 34, 284-298.
<https://doi.org/10.3152/030234207X214750>
- Guo, H., Zhen, F., & Wang, F. (2016). Empirical Study on Talent Mobility in Higher Education. *Tsinghua Journal of Education*, 37, 69-77. (In Chinese)
- Hao, J., & Welch, A. (2012). A Tale of Sea Turtles: Job-Seeking Experiences of Hai Gui (High-Skilled Returnees) in China. *Higher Education Policy*, 25, 243-260.
<https://doi.org/10.1057/hep.2012.4>
- Horta, H., Sato, M., & Yonezawa, A. (2011). Academic Inbreeding: Exploring Its Characteristics and Rationale in Japanese Universities Using a Qualitative Perspective. *Asia Pacific Education Review*, 12, 35-44. <https://doi.org/10.1007/s12564-010-9126-9>
- Horta, H., Veloso, F. M., & Grediaga, R. (2010). Navel Gazing: Academic Inbreeding and Scientific Productivity. *Management Science*, 56, 414-429.
<https://doi.org/10.1287/mnsc.1090.1109>
- Hu, J. L., Zhang, S. B., & Peng, J. (2006). The Relationship between Regional Factors, Institutional Guarantee and Faculty Turnover in Central China. *Statistics and Decision*, 12, 80-83. (In Chinese)
- Jiang, S., & Liu, S. (2018). Exploring the Competitive Situation of Human Resource in Higher Education: Based on Job Mobility of Academicians in Chinese Academy of Science from 2007 to 2015. *Research on Higher Education*, 39, 38-45. (In Chinese)
- Jonkers, K., & Tijssen, R. (2008). Chinese Researchers Returning Home: Impacts of International Mobility on Research Collaboration and Scientific Productivity. *Scientometrics*, 77, 309-333. <https://doi.org/10.1007/s11192-007-1971-x>
- Jöns, H. (2011). Transnational Academic Mobility and Gender. *Globalisation, Societies and Education*, 9, 183-209. <https://doi.org/10.1080/14767724.2011.577199>
- Kulis, S., & Sicotte, D. (2002). Women Scientists in Academia: Geographically Constrained to Big Cities, College Clusters, or the Coasts? *Research in Higher Education*,

- 43, 1-30. <https://doi.org/10.1023/A:1013097716317>
- Laudel, G. (2005). Migration Currents among the Scientific Elite. *Minerva*, 43, 377-395. <https://doi.org/10.1007/s11024-005-2474-7>
- Lee, J. T., & Kuzhabekova, A. (2018). Reverse Flow in Academic Mobility from Core to Periphery: Motivations of International Faculty Working in Kazakhstan. *Higher Education*, 76, 369-386. <https://doi.org/10.1007/s10734-017-0213-2>
- Leung, M. (2011). Of Corridors and Chains: Translocal Developmental Impacts of Academic Mobility between China and Germany. *International Development Planning Review*, 33, 475-489. <https://doi.org/10.3828/idpr.2011.25>
- Lewis, L. S. (1967). On Prestige and Loyalty of University Faculty. *Administrative Science Quarterly*, 11, 629-642. <https://doi.org/10.2307/2391079>
- Li, L., Lai, M., & Lo, L. (2013). Academic Work within a Mode of Mixed Governance: Perspectives of University Professors in the Research Context of Western China. *Asia Pacific Education Review*, 14, 307-314. <https://doi.org/10.1007/s12564-013-9260-2>
- Lin, J. (2009). A National Survey on Professional Commitment and Organizational Loyalty of Higher Education Faculty. *Tsinghua Educational Research*, No. 2, 90-98. (In Chinese)
- Liu, S. (2012). Universities and Masters: Who Has Achieved by Whom?—From the Perspective of the Study and Work Experience of Nobel Prize Winners. *Research on Higher Education*, No. 2, 30-34. (In Chinese)
- Liu, Y., Li, Z., & Chen, H. (2005). Analysis and Implication of Academicians' Structure and Social Impact in Chinese Academy of Science. *Journal of CAS Members & Academic Divisions*, No. 3, 179-184. (In Chinese)
- Mangematin, V. (2000). PhD Job Market: Professional Trajectories and Incentives during the PhD. *Research Policy*, 29, 741-756. [https://doi.org/10.1016/S0048-7333\(99\)00047-5](https://doi.org/10.1016/S0048-7333(99)00047-5)
- Manger, T., & Eikeland, O.-J. (1990). Factors Predicting Staff's Intentions to Leave the University. *Higher Education*, 19, 281-291. <https://doi.org/10.1007/BF00133893>
- Ministry of Education of the People's Republic of China (2019, August 19). *Number of Educational Personnel in HEIs (Total)*. http://www.moe.gov.cn/jyb_sjzl/moe_560/jytjsj_2019/qg/202006/t20200610_464583.html
- Musselin, C. (2018). New Forms of Competition in Higher Education. *Socio-Economic Review*, 16, 657-683. <https://doi.org/10.1093/ser/mwy033>
- National Development and Reform Commission of China (2015, October 24). *Coordinate and Promote the Construction of World-Class Universities and First-Rate Discipline in China*. (In Chinese) http://www.gov.cn/zhengce/content/2015-11/05/content_10269.htm
- Pankin, R. M. (1973). Structural Factors in Academic Mobility. *The Journal of Higher Education*, 44, 95-101. <https://doi.org/10.1080/00221546.1973.11776850>
- Payumo, J. G., Lan, G., & Arasu, P. (2017). Researcher Mobility at a US Research-Intensive University: Implications for Research and Internationalization Strategies. *Research Evaluation*, 27, 28-35. <https://doi.org/10.1093/reseval/rvx038>
- Sabatier, M., Carrere, M., & Mangematin, V. (2006). Profiles of Academic Activities and Careers: Does Gender Matter? An Analysis Based on French Life Scientist CVs. *The Journal of Technology Transfer*, 31, 311-324. <https://doi.org/10.1007/s10961-006-7203-3>
- Shauman, K. A., & Xie, Y. (1996). Geographic Mobility of Scientists: Sex Differences and Family Constraints. *Demography*, 33, 455-468. <https://doi.org/10.2307/2061780>

- Smart, J. C. (1990). A Causal Model of Faculty Turnover Intentions. *Research in Higher Education, 31*, 405-424. <https://doi.org/10.1007/BF00992710>
- Stigler, S. M. (1993). Competition and the Research Universities. *Daedalus, 122*, 157-177.
- Sun, W. (2013). The Productivity of Return Migrants: The Case of China's "Sea Turtles". *IZA Journal of Migration, 2*, Article No. 5. <https://doi.org/10.1186/2193-9039-2-5>
- Super, D. E., & Jordaan, J. P. (1973). Career Development Theory. *British Journal of Guidance and Counselling, 1*, 3-16. <https://doi.org/10.1080/03069887308259333>
- Van Noorden, R. (2012). Global Mobility: Science on the Move. *Nature News, 490*, 326-329. <https://doi.org/10.1038/490326a>
- Weiler, W. C. (1985). Why Do Faculty Members Leave a University? *Research in Higher Education, 23*, 270-278. <https://doi.org/10.1007/BF00973790>
- Yan, G., Yue, Y., & Niu, M. (2015). An Empirical Study of Faculty Mobility in China. *Higher Education, 69*, 527-546. <https://doi.org/10.1007/s10734-014-9789-y>
- You, Y. (2014). The Intention to Leave: An Empirical Study of Job Satisfaction in Higher Education. *Peking University Education Review, 12*, 128-140 (in Chinese).
- Zhao, X. (2017, September 28). *China Has World's Largest Higher Education System*. ChinaDaily. http://www.chinadaily.com.cn/china/2017-09/28/content_32606890.htm