Division-4 / Proposal Number-4084

Faculty

Title of Proposal
Job Mobility of Foreign-Born and U.S.-Born Faculty Members: Are the Pushes and Pulls the Same?

Abstract
This study seeks to understand the mobility patterns of faculty, with particular attention to foreign-born faculty members in the United States. Using the national longitudinal data from the Survey of Doctorate Recipients from NSF (2003 & 2006), this study was able to examine actual mobility, rather than "intention to leave."

Format
First Choice: F01- Research Paper
Second Choice: F02- Roundtable
Third Choice: F04- Poster Session

Content
Using the national longitudinal data from the Survey of Doctorate Recipients from NSF (2003, 2006, and 2008), this study seeks to understand the mobility patterns of faculty, with particular attention to foreign-born faculty members in the United States. Faculty mobility has long been a topic of interest to both higher education policymakers and researchers, due in part to the significant financial and educational consequences it has for institutions. As a result of turnover, institutions confront discontinuity in their research and educational programs, the additional cost of recruiting and mentoring new faculty members, and the investment of additional start-up funds for newly hired replacement faculty (Ehrenberg et al., 1991, 2003; Xu, 2008b).

In many STEM fields, foreign-born faculty make up a significant component of the academic scientific workforce, and up to one-third of all new faculty hires (Nelson & Rogers, 2005; NSF, 2012). These faculty members educate a large percentage of U.S. students, thus influencing the U.S.’s future scientific capacity. They also make significant contributions to scientific knowledge production and dissemination (Levin & Stephan, 1999). If universities are to maintain a high level of competitiveness in an increasingly global knowledge economy, especially in STEM fields, they must continue to attract and retain the best scholars from around the world (Johnson, 2006). In an effort to increase our understanding of this growing segment of the American professoriate, this study focuses specifically on the mobility patterns of foreign-born faculty. In short, do they move, and if so, why do they move, and where?

This study extends previous research on faculty mobility in two very important and unique ways. The central contribution is its focus on foreign-born faculty members. Although there is a growing body of research on the “stay-rates” or the tendencies of foreign born scientists to stay in the U.S. or return to their home countries (Finn, 2012), no research has examined the mobility patterns of this growing segment of faculty within American higher education institutions. The second contribution of this study is its focus on actual mobility. In much of the recent research on faculty mobility, mobility is operationally defined as the “intention to leave,” with little attention paid to the actual change of position or to the variety of post-departure options. It is one thing to express an intent to leave, but acting on that intent requires that the “push” to leave one position and institution and the “pull” to a new position are sufficiently great as to overcome the inertia to stay put (Matier, 1991). Faculty members who leave their positions may either move to administration (within their institution) or go to another higher education institution (e.g., to another faculty position or to administration), or move to industry, thereby leaving academia entirely. The lack of research on multiple post-departure patterns in actual mobility is largely due to the lack of limited data sets available: This study, by using longitudinal data sets (data are collected in 2003, 3-year later in 2006, and then, 2008) is able to provide a more comprehensive understanding of faculty mobility, clarifying not only why faculty members leave, but where they go after leaving their positions or
institutions. This is possible with the longitudinal components of data that provide the information about faculty mobility during the short (i.e., 3-year) and longer (i.e., 5-year) time periods.

Research questions

(1) What are the patterns of different types of faculty mobility (i.e., movement from one institution to another, movement out of higher education, movement to academic administration)? Are the patterns different for U.S.-born versus foreign-born faculty members?

(2) What are the individual, professional, and institutional factors that predict the different types of faculty mobility, and to what extent is foreign-born status a significant variable?

Conceptual Framework

Scholars who study professional mobility use the concepts of “push” and “pull” to categorize factors that influence decisions to seek out new opportunities and to actually move to a new job, institution or place (Ambrose, et. al, 2005; Kline, 2003). The concept of “push-pull” as related to faculty mobility was most fully developed by Matier (1990; 1991), who argues that the factors underlying faculty mobility decisions are complex. Consequently, in order to understand faculty mobility decisions, one must not only understand the internal pushes or characteristics of the current job or institution that would promote one to move, but also the pulls, or the things that attract an individual to move. The effect of the pushes and pulls is mediated by what Matier calls “ease of movement.” Spouse/partner work needs, and the propensity to seek new opportunities and professional viability are factors contributing to the ease of movement. In other words, a faculty member might want to move, but his or her opportunities to do so depend on how visible (i.e., productive) he or she is.

The push and pull factors that make moving desirable or not are tangible (salary and benefits) or intangible, such as satisfaction with autonomy and a sense of belonging. In addition, Matier (1990) categories factors such as community, family, friendships, and quality of life as external factors that may push or pull on a faculty member. The actual decision to move, according to Matier (1990), involves a calculation that the pushes from the current position and the pulls from another are sufficiently great as to overcome the natural inertia that comes with a professional job and will result in a “gross return.”

Prior research suggests that international faculty members are less satisfied than their U.S.-born colleagues, while at the same time, are more productive (Mamiseishvili & Rosser, 2008a; Kim, Wolf-Wendel & Twombly, 2011). Thus, we might expect that 1) foreign-born faculty want to move because they are less satisfied; and 2) foreign-born faculty are more able to move because they are more productive. Given our limited understanding about the mobility of foreign-born faculty, this study asks whether foreign-born faculty are motivated by the same pushes and pulls as their U.S.-born counterparts. There are a number of factors that might make foreign-born faculty mobility patterns significantly different from those of their native U.S.-born faculty colleagues. Some of these factors, such as a lack of family ties in the U.S. or perceptions of institutional climate might promote or reduce mobility.

While the majority of the literature on faculty mobility mainly focuses on inter-institutional mobility, there is another dimension of faculty career patterns to consider: faculty mobility from the professoriate to administration within and across higher education institutions. As faculty have expanded their role in campus decision-making (Cowley, 1980), those who take on administrative responsibilities are rewarded for their efforts with promotion and salary increases (Finkelstein, 2006). Therefore, the perceived power or status associated with administration is a strong motivation factor for faculty to make the decision to move into administration (Finkelstein, 2006). Conversely, Etzioni (1964) argues that highly successful professionals are more committed to professional values, and thus, are not motivated to become administrators. In the same context, the literature suggests that those who are inclined to accept administrative jobs are often less committed to professional academic values, and thus, are less likely to publish, even before they take on administrative roles, compared to their colleagues (Gouldner, 1957; Wilson, 1979). Given that foreign-born faculty are more likely to be research oriented and more productive than U.S.-born faculty, and that they are likely to experience difficulties in U.S. higher education institutions, due to a lack of familiarity with the academic, cultural and social aspects of U.S. universities, it is assumed that the career mobility, particularly in terms of the professoriate to administration may present different patterns by foreign-born versus US-born faculty.

Research Methods
This study used data from the Survey of Doctorate Recipients (SDR: 2003, 2006, & 2008), sponsored by the National Science Foundation. The SDR data provide information on individuals who received a doctoral degree from U.S. higher education institutions in the fields of science, engineering, health, and social science. Of the respondents to the survey, we selected individuals who work at 4-year colleges and universities in the U.S. who held tenure-track faculty positions as assistant, associate, and full professor in 2003. In this study, foreign-born faculty refer to those working in U.S. higher education institutions who are not United States citizen at birth (Migration Policy Institute, 2013). Of the selected faculty at 4-year institutions (n=5,840), about 18% (n=1,044) were foreign-born faculty.

**Dependent Variable**

The dependent variable was measured by whether or not faculty changed their employer within the U.S. between 2003 and 2006 and then, again between 2003 and 2008. The longitudinal component of SDR 2003; 2006; 2008 data allowed us to determine actual mobility, beyond intention to move, as other studies have used (e.g., Xu, 2008a; Zhou & Volkwein, 2004). The three dependent variables were whether or not faculty members (1) moved to another higher education institution; (2) moved to administration; and (3) left academia and moved to industry. These three types of mobility were compared to non-mobility, indicating faculty stayed in the same institution they were in 2003 and did the same job they did in 2006 and 2008.

**Independent Variables – Demographic**

Individual demographic variables included gender, foreign-born status, marital status, and family responsibility (Mobley, 1982; Smart, 1990). Foreign-born faculty are not a homogenous group, but rather a mixture of different subgroups who have different statuses due to their historical, cultural, or economic backgrounds and relationships with the majority group (Lee, 2004; Moody, 2004). Due to the small sample sizes of foreign faculty by countries of origin, however, this study only included the place of birth region of foreign-born faculty—Canada/Europe, Asia, and other areas (reference category).

**Independent Variables – Professional**

Career-related experiences included faculty satisfaction with work conditions and satisfaction with pay and benefits, productivity, academic discipline, academic rank, primary work responsibility, and salary. Faculty satisfaction is of particular interest, given that it is the “personalized perceptions” of the work environment, rather than “objective institutional characteristics” that have a direct impact on one’s turnover decisions (Johnsrud & Heck, 1994). Both objective factors (e.g., salary) and subjective factors (e.g., satisfaction with salary) should be considered in mobility studies (Xu, 2008a). Since SDR offers no teaching-related variables, faculty productivity in this study focused on research activity and was measured as the number of articles (authored and co-authored) that were published in peer-reviewed journals between October 2003 (reference point) and October 2006 (the time of the recent survey). Academic disciplines were included as engineering (reference category), computer sciences, biological, physical, and social sciences. Academic rank has consistently been identified as a key factor in faculty mobility and the tendency to be mobile is highest among experienced assistant professors (Finkelstein, 2006).

**Independent Variables - Institutional**

Faculty experiences are influenced not only by personal factors, but also by the organizational context in which they work (Johnsrud & Heck, 1994). We included the Carnegie Classification of higher education institutions: Faculty who worked at institutions categorized as research universities, doctorate granting universities, and comprehensive universities were compared to those who were at liberal arts institutions.

**Statistical Models**

A series of logistic regression analyses was conducted to examine if foreign-born faculty present different patterns of mobility from their U.S. counterparts. Logits from the logistic regression model were converted into odds ratios [Exp(B)].

**Brief Overview of Findings**

Due to the limited space, we present findings mostly about the mobility between 2003 and 2006. The five-year mobility pattern between 2003 and 2008 will be fully discussed in the final paper.
Of the total sample (n=5,840), 94% stayed in the same institution between 2003 and 2006. Foreign-born and U.S.-born faculty present very similar institutional stay rates (94% and 93%, respectively). In terms of faculty movement to industry, nearly everybody (98.6% of foreign-born versus 98.3% of U.S. born) stayed in academia. On the other hand, a significantly larger percentage of U.S.-born faculty (18%) moved to administration than foreign-born faculty (10%).

In terms of demographic characteristics, while both foreign-born and U.S.-born faculty had very similar characteristics, significant differences by foreign-born status emerged in professional experiences. Regardless of the type of satisfaction measure, foreign-born faculty were significantly less satisfied than U.S.-born faculty. Foreign-born faculty were more productive than U.S. faculty. The log-transformed salary rates were not statistically different for foreign-born versus U.S.-born faculty. A higher percentage of U.S. faculty were full professors than foreign-born faculty. In terms of the Carnegie classifications of the institutions where the faculty were employed, foreign-born faculty were more likely to work at research and doctoral granting institutions than U.S. faculty. Of the foreign-born faculty, more than 50% were from countries in Asia, nearly 30% were from Canada and European countries, and the remaining 20% were from other regions. The regional differences of foreign-born faculty did not make any significant differences in the patterns of their mobility.

Factors predicting the patterns of faculty mobility: Does foreign-born status matter?

Foreign-born faculty were significantly less likely to move to administration than U.S.-born faculty. For those who moved to other higher education institutions and for those who left academia for industry, foreign-born status was not a significant predictor. In terms of faculty mobility to another higher education institution, no individual demographic or family-related variables were significant predictors. On the other hand, career-related experiences—satisfaction with workplace conditions and salary and benefits and productivity—were all independently related to faculty mobility within the academy: faculty who were more satisfied with workplace conditions were less likely to go to other higher education institutions; in contrast, faculty who had higher satisfaction with salary and benefits were more likely to go to other institutions. Faculty who were more productive in terms of publications were more likely to move to other higher education institutions.

Discussion/Implications

One of the most interesting findings of this study is that there is not a substantial amount of mobility within and out of the academic labor market—at least for this population of faculty and in the relatively short time period discussed in this proposal (3-year time period). As the Martier (1990) study on intention to move shows, faculty members seem to have greater intentions to leave than are actually realized. This is particularly true among female and foreign-born faculty: while they were more likely to indicate intentions to leave than their counterpart male and U.S. citizen faculty (Xu, 2008a, 2008b), they were not necessarily different from their counterparts in terms of actual mobility. A second finding of interest is that during the time span covered, foreign-born faculty were less likely to move to administration than their white counterparts although this may be changing (Wiley, 2013).

It is, however, important to recognize that the mobility in this proposal is measured in the 3-year time period between 2003 and 2006. As discussed, we use two different time periods in examining mobility patterns—3-year and 5-year time periods. We are currently conducting the second stage of analyses focusing on mobility during the 5-year time period. With this finding, the full paper will discuss the changes in mobility patterns over 3-year and 5-year time periods and if the mobility patterns present significant differences by foreign-born faculty status.

Attached File

ASHE 2015 (tables).docx

Reference(s)

References


