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**Determinants of Turnover Intent in Higher Education:
The Case of International and U.S. Faculty**

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University.

by

Jaehee Park

Master of Public Policy, University of Kentucky, 2008

Master of Public Administration, Seoul National University, 2006

Bachelor of Public Administration, Sungkyunkwan University, 2004

Director: Myung Hun Jin, Ph.D.

Assistant Professor of Public Administration

L. Douglas Wilder School of Government & Public Affairs

Virginia Commonwealth University

Virginia Commonwealth University

Richmond, Virginia

April, 2015

Acknowledgment

“O God, now is the time for me to bring your gifts to fruition, not for myself but for you, for the Church, for others. Help me always increase goodness in the world and not to turn in on myself, burying my own talents, my spiritual, intellectual and material riches, everything that you have given me, but rather to open myself, to be supportive, to be attentive to others”

(I CORINTHIANS 14:12).

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ABSTRACT

DETERMINANTS OF TURNOVER INTENT IN HIGHER EDUCATION: THE CASE OF INTERNATIONAL AND U.S. FACULTY

By Jaehee Park, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2015.

Major Director: Dr. Myung Hun Jin, Ph.D

Assistant Professor of Public Administration

L. Douglas Wilder School of Government and Public Affairs

In spite of the increase in the number of the international academic workforce and their potential benefits, international status has been relatively under-studied in Public Management and Higher Education literature in comparison with studies of age, gender, and race. Given these realities, the present study identifies characteristics of internal and external variables that influence international and U.S. faculty turnover intentions in a large public South Eastern research university.

To understand the variations in short-term and long-term turnover levels while controlling for various demographic, structural, and external variables, eight Ordinary Least Square (OLS) regression analysis were performed using turnover intentions as the dependent variables. Distributive justice has the strongest negative effect on short-term turnover, and communication openness has the strongest negative effect on long-term turnover. After controlling for job satisfaction and organizational commitment, the effect of communication openness on short-term turnover and the effect of distributive justice on long-term turnover are not statistically significant. This suggests that communication openness and distributive justice might affect turnover through job satisfaction and/or organizational commitment. Job satisfaction has the strongest negative effect on short-term turnover and organizational commitment has the strongest negative effect on long-term turnover after controlling for internal and external variables.

In addition, this study aims to analyze the differences in internal and external factors that impact faculty turnover by international status. In achieving this aim, international faculty were compared to the U.S. faculty on the afore-mentioned internal and external factors that were shown in the literature to impact turnover. The result shows that structural variables such as autonomy, communication openness, and procedural justice play a bigger part in how international faculty evaluate their career with the current university than it does for U.S. faculty. On the contrary, kinship ties and job opportunity have stronger effects on U.S. faculty turnover than international faculty turnover. The implications of this study and areas of future opportunities are discussed.

Chapter I

INTRODUCTION

Research motivation

The issues of employee turnover have received substantial attention from many human resource managers and organizational theorists (Allen, Bryant, & Vardaman, 2010). Turnover is a curse for institutions (Johnsrud, & Rosser, 2002). For example, employee turnover can decrease organizational productivity and simultaneously increase hiring, training, “socialization investments, and disruption and replacement” costs (Brown, Garino, & Martin, 2009; Caillier, 2011; Moynihan & Landuyt, 2008, Rosser, 2004, p.291). Moreover, turnover may bring other hidden costs to the organization such as skill drain and poor morale among the remaining employees (O’Keefe, 2000). However, turnover is not always bad for institutions (Griffeth & Hom, 2001; Johnsrud & Rosser, 2002). It can create “promotion opportunities, reorganization and restructuring of reporting lines and decision making, and the infusion of new people with new ideas” (Rosser, 2004, pp.291-292). Further, turnover among low performing employees or overpaid employees who are replaceable can even be beneficial to the organization (Dalton, Krackhardt, & Porter, 1981; Jackofsky, 1984; Schwab, 1991). Nonetheless, organizational-level research shows that high turnover rates generally worsen organizational effectiveness (e.g., Alexander, Bloom, & Nuchols, 1994). Particularly, if employees who leave are high performers, the consequences can be disturbing (Allen & Griffeth, 1999).

Therefore, colleges and universities have implemented human resource management strategies that include retaining talented professors (Lawrence *et al.*, 2013) as well as searching for new faculty members who best fit the organization’s culture (Ryan, Healy, & Sullivan, 2012). To assist human resource managers further, higher education and organizational theorists have developed models directed toward understanding why faculty

members intend to leave their institution or academia (Ambrose, Huston, & Norman, 2005; Barnes, Agago, & Coombs, 1998; Johnsrud & Heck, 1994; Johnsrud & Rosser, 2002; Manger & Eikeland, 1990; Matier, 1990; Smart, 1990; Zhou & Volkwein, 2004).

Faculty turnover

According to a horizons workforce consulting report, about 65 percent of professors have considered leaving their institution and almost 45 percent of those surveyed said they could see themselves leaving academe entirely (English, 2012). Faculty turnover can bring the significant financial and educational consequences for the students, the department, and the institution (Heckert & Farabee, 2006; Kim, Twombly, & Wolf-Wendel, 2012).

Since universities spend heavily in the faculty recruitment, high faculty turnover rates can be translated into lost on investment (Zhou, & Volkwein, 2004; Kim, Twombly, & Wolf-Wendel, 2012). For example, according to Eهرانenberg, Rizzo, and Condie (2003), universities invest an average of \$390,000 to \$490,000 at the assistant professor level and about \$700,000 to \$1.44 million at the senior faculty level as of start-up funds in Science, Technology, Engineering, and Math (STEM) fields. Some researchers estimate that the turnover cost for faculty employed at the professional level is roughly equivalent to their annual salary (Olsen, 1992). In addition, faculty turnover can give rise to cost of recruiting and mentoring new faculty members (Kim, Twombly, & Wolf-Wendel, 2012). Outside of the financial costs, the loss of faculty members can bring educational consequences such as discontinuity in institutional research and educational program (Olsen, 1992). Faculty turnover can also lead to morale erosion, commitment loss to the institution, and further turnover (Olsen, 1992).

On the other hand, faculty turnover can provide professional advancement opportunity for professors (McKenna & Sikula, 1981). For example, McKenna and Sikula

(1981) noted “business faculty members may mature and develop as the result of moving from job to job rather than by advancing through the ranks at a single educational institution” (p.74). Faculty turnover can also feed an influx of fresh ideas and perspectives to departments and universities (McKenna, & Sikula, 1981).

International faculty

International faculty members comprise a substantial portion of higher education workforce in the United States. Of the 1.5 million faculties in the U.S. colleges and universities in the 2010-2011 academic year, there were 115,313 international scholars teaching or conducting research (Open Doors, 2012). The number of foreign-born faculty members has continued to increase in the past forty years. Foreign-born faculty members increased from 28,200 in 1969 to 74,200 in 1998 and reached 126,123 in 2007(Kim, Twombly, & Wolf-Wendel, 2012; Mamiseishvili, & Rosser, 2010; Schuster and Finkelstein, 2006). During 2006, about 31,400 noncitizens and temporary visa holders and 31,300 naturalized United States citizens were employed in U.S. academic institutions (National Science Board, 2010). The top 5 places of origin (China, India, South Korea, Germany, and Japan) account for 54% of international scholars in the U.S. (Open Doors, 2012).

International scholars are concentrated in the biological and biomedical sciences, health science, engineering, physical sciences and agriculture fields (Open Doors, 2012). About 75 % of international scholars specialize in science, technology, engineering, and math (STEM) fields (Open Doors, 2012). Foreign-born doctoral scholars have accounted for more than 50% of all academic researchers in engineering and math fields (National Science Board, 2012). Foreign-born scholars in other fields represent about 21% of full time faculty researchers (National Science Board, 2012).

Kim, Twombly, and Wolf-Wendel (2012) noted that the growth in the proportional representation of foreign born faculty exceeded the representation of domestic racial/ethnic minority groups (Mamiseishvili, 2013). According to their calculation with Integrated Postsecondary Education Data System [IPEDS], in 2009, “of the 11,599 new tenure-track faculty at four year degree granting institution in 2009, 11.5 percent (1,332) were nonresident aliens, higher than Asian American (10.5 percent), African Americans (0.5 percent), and Hispanic (0.4 percent) representations” (Kim, Twombly, & Wolf-Wendel, 2012, p.28).

Other national data also show that international faculty members are increasingly represented at U.S. higher education institutions. The 2003 Survey of Doctorate Recipients (SDR) shows that international faculty were more likely to be employed at doctoral granting institutions than U.S. native faculty (Kim, Twombly, & Wolf-Wendel, 2012; Mamiseishvili, 2013). In addition, the 2004 National Study of Postsecondary Faculty (NSOPF) shows that international faculty were more likely to be employed at research universities than U.S. native faculty (Mamiseishvili & Rosser, 2010; Mamiseishvili, 2013).

Perhaps, one of the reasons of the increasing number of international faculty is that foreign-born students earned a larger share of doctoral degrees in U.S. higher education. For example, foreign born students earned half or more of doctorates in engineering, computer science, and economics (National Science Board, 2014). In the fields of psychology and social science, foreign born students earned relatively lower proportions of doctoral degrees (e.g., 7% in psychology , between 11 % and 38% in social science) (National Science Board, 2014). The top three places (China, India, and South Korea) account for more than 50% of the doctorates awarded to temporary visa holders from 2002 to 2012 (National Science Foundation, 2014)

The importance of international faculty is not only in their increasing numbers, but also they can make potential contributions to U.S. higher education and economy. First, international scholars might bring different viewpoints and create a more diverse campus (Kim, Wolf-Wendel, and Twombly, 2012). Their diverse viewpoints can be beneficial for tasks requiring creativity and judgment (Tsui, Egan, and O'Reilly, 1992). Second, an international academic workforce can help to build global partnerships between academic communities of their home country and the United States (Corley and Sabharwal, 2007). The 21st century higher education institutions are increasingly functioning in a global context. Third, international scholars might play an important role to break down cultural barriers (Welch, 1997). They can prepare future generations of scholars and practitioners who can successfully serve not only within the national boundaries but also across borders (Nerad, 2010). For example, they can train students to improve cultural competencies, which are vital for communicating with foreign scholars and working in multinational companies (Mamiseishvili, 2013). Fourth, an international academic workforce contributes greatly to the research missions of U.S. colleges and universities and the U.S. economy (Levin and Stephan, 1999; Stephan and Levin, 2003). The U.S. human capital accumulation has grown from the educational benefits made by foreign born faculty (Stephan and Levin, 2001). Furthermore, international faculty members can have a positive impact on ethnic minority and international students in the classroom, laboratory, and other campus-based activities as role models due to their similar backgrounds (Corley and Sabharwal, 2007; Mamiseishvili, 2013, Webber, 2012).

International faculty in higher education can be desirable because of the concept of vicarious efficacy. According to Bandura (1986), self-efficacy refers to one's judgment regarding their capacity to produce a desired result or effect. Bandura (1997) lists four sources of information to form self-efficacy beliefs: 1) authentic mastery experience, 2)

vicarious experience, 3) social persuasions, and 4) physiological indexes. Bandura believes that people collect information that contributes to their judgments about their own capabilities by observing the actions of others. People become more sensitive to the vicarious experience when they are uncertain about their own abilities or have limited prior experiences (Pajares, 1996). Racial minority and international students may not have confidence about their academic success on campus and their well-being in society. The role model of international faculty can be particularly relevant in this context. Vicarious learning can take place through the imitation of international faculty (Steers and Black, 1994). If international faculty can successfully integrate teaching, research, and service in higher education, then racial minority, international students and communities have a reasonable basis for increasing their own self-efficacy. Strong self-efficacy beliefs enhance personal accomplishment and well-being (Pajares, 1996), since the belief that one has the ability for producing a desired result is essential for motivation (Vroom, 1964) and performance is a function of motivation and abilities (Steers & Black, 1994).

Purpose of the study

The overall purpose of this study is to examine the internal and external factors influencing faculty turnover, with particular attention to international status. In spite of the increase in the number of international academic workforce and their potential benefits, a few studies have investigated international faculty and little is known about who international faculty are, how they experience their institution, and how their satisfaction, commitment, and turnover are related. International faculty members are mistakenly ignored or invisible in the previous studies. For example, several faculty climate surveys have taken “international” as one of the racial categories. Thus, higher education policymakers and administrators do not receive adequate guidance on how to maintain a high level of job satisfaction among the faculty and reduce turnover intent. This dissertation tries to speak to these shortcomings and

contribute to the body of literature that examines faculty turnover in U.S. higher education. Understanding both international and U.S. faculty turnover is a critical step in extending our current knowledge of the higher education.

Practical implication of the study

As the student population becomes more diverse, colleges and universities have sought to diversify their faculty members (Seifert & Umbach, 2008). Given the increasing heterogeneity in the U.S. higher education labor force, and the importance of “diversity” in organizations, it is becoming more crucial for Human Resource Administrators to recruit and retain talented international faculty members. At many colleges and universities, international faculty accounts for a more significant source of “diversity” than U.S. born minorities of color (Theoblad, 2014). A study of international and U.S. faculty turnover intents can offer one perspective on the role of international faculty and their contribution to “diversity”, and what issues need to be addressed to improve the quality and competitiveness of U.S. higher education.

Explanation of key terms

Before introducing research questions, this section explains the key terms of the dissertation. The terms that will be used frequently throughout the study require explanation in order to provide a common understanding.

International faculty

The present study defines “international faculty” as those who were born in a foreign country with a foreign undergraduate degree. Kim, Wolf-Wendel, and Twombly (2013) propose that foreign-born faculty who earned undergraduate degrees in their home country may have different cultural and educational experiences that affect their life in higher

education than their foreign-born faculty who were educated in the United States. Other definitions of “international faculty” might obscure differences between U.S. and international faculty members. For example, studies using “citizenship” under-report the number of international faculty because many foreign born faculty members have become naturalized U.S. citizen (Kim, Wolf-Wendel, and Twombly, 2013). In addition, studies using “birthplace” do not consider foreign born faculty members who immigrated to the U.S. at a young age (Kim, Wolf-Wendel, and Twombly, 2013).

Turnover intention

Most turnover studies used “intention” to stay or leave as a proxy indicator for actual turnover behavior (e.g., Bluedorn, 1982; Lee and Mowday, 1987; Tett and Meyer, 1993; Xu, 2008; Zhou & Volkwein, 2004). One of the reasons that actual turnover is more difficult to study is because it is not easy to locate leavers and their response rate is often low (Johnsrud & Rosser, 2002). In addition, several studies show that there is a significant and positive relationship between leaving intentions and actual leaving behavior (Bluedorn, 1982; Lee & Mowday, 1987).

Autonomy

Hackman and Oldham (1975) define autonomy as “the degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out” (p.162). Faculties with autonomy have the freedom to choose the methods to use in carrying out their work. In addition, faculties with autonomy can control more of their work scheduling and modify what their job objectives are.

Communication openness

Communication refers to “the degree to which information is transmitted among the members of an organization” (Price and Mueller, 1986, p.83). Communication openness for faculties means they are feeling comfortable to talk to other co-workers in their university.

Distributive justice

Folger and Konovsky (1989) defines distributive justice as “the perceived fairness of the amounts of compensation employees receive” (p.115). Employees compare their outcome/input ratios with those of others to gauge distributive justice (Adams, 1965). In the present study, distributive justice means the perceived fairness of faculty rewards considering their effort, experience, and responsibility.

Procedural justice

Procedural justice refers to perceived fairness of the means by which an allocation decision is made (Croppazano & Ambrose, 2001; Lind & Tyler, 1988). In the present study, procedural justice means the perceived fairness of the decision making procedures about performance feedback, pay increase, and promotion.

Role conflict

Role conflict is defined as “a condition in which role expectations are contradictory or mutually exclusive” (Hardy & Conway, 1978). Teaching, research, and service are the main roles where faculty members might encounter conflicts (Bess, 1988). Dedicating to one activity might limit opportunities to engage in other activities (Daly and Dee, 2006). Particularly, in this study, faculty role conflict means conflicting job requests from different administrators and department chairs.

Workload

Price and Mueller (1986) define workload as “the amount of performance required in a job” (Price and Mueller, 1986, p.254). Allen (1997) defines faculty workload as a “composite of all professional tasks performed by faculty: teaching or instructional activities, class participation, research, administration, and public service” (p.27). In the current study, workload is the amount of perceived job tasks regarding time, burden, and speed.

Job satisfaction

Job satisfaction is a faculty member’s response to a single Likert-scaled item that stated, “Think about your principal job held during Spring semester 2014, and rate your satisfaction with overall job satisfaction?”

Organizational commitment

Mowday, Porter, and Steers (1982) define organizational commitment as “the relative strength of an individual’s identification with an involvement in a particular organization” (p.226). In the current study, the focus of organizational commitment is on the university as a whole rather than on the specific job (Neumann and Finaly-Neumann, 1990).

Kinship responsibility

Kinship responsibility refers to “involvement in kinship groups in the community” (Price & Mueller, 1986, p.15). In the current study, kinship responsibility were used interchangeably with kinship ties.

Job opportunity

Job opportunity refers to “the availability of alternatives jobs in the organization’s environment” (Price & Mueller, 1981, p.13). In the current study, it means perceived academic job opportunity.

Research questions

This paper aims to address the following questions and consider the potential implications of the results for research on international faculty turnover. The major research question is *whether there are differences in internal and external factors that impact turnover intention of faculty employed in a 4-year urban research university in the United States.*

The secondary questions that are associated with the major question are:

- (a) Are there differences in the effects of internal factors that impact turnover intention of faculties employed in 4-year research universities in the United States depending on international status?
- (b) Are there differences in the effects of external factors that impact turnover intention of faculties employed in 4-year research universities in the United States depending on international status?

To answer these questions, the study employed descriptive analyses that provide cross tabulations and means of various demographic, internal, and external characteristics of faculty across the various groups (e.g., international vs U.S.). To test for the differences in the effects of internal and external factors, the second phase employed inferential statistics such as t-tests and Ordinary Linear Squares (OLS) regressions to understand the differences in international and U.S. faculty.

Overview of the chapters

The following chapter provides a detailed description of studies that have examined internal and external factors that influence faculty turnover. In addition, studies that explore these factors for international faculty will be discussed within the purview of this research.

Chapter II provides research frameworks and hypotheses. This chapter reviews various variables that have been shown in the literature to impact faculty turnover, within a conceptual model developed by Daly and Dee (2006). Several hypotheses are developed for international and U.S. faculty members based on the previous studies.

Chapter III provides information on data and methodology of the study. Sampling information, description of the survey, a description of variables that fit the framework, along with the methods employed are discussed at length in this chapter. A detailed description of the construction of the dependent variable is provided and several independent variables used in the study are explored. The design of the study along with the statistical tests, and data limitation are explained in detail in chapter III.

Chapter IV illustrate analysis results. The analyses include OLS regression and Moderator analyses. Chapter V summarizes the main findings of the research and discuss some of their implications. The chapter also discusses the limitations of current research and suggests several opportunities for future research.

Chapter II

LITERATURE REVIEW AND CONCEPTUAL FRAMEWORK

The following section provides a detailed description of studies that have examined factors that might influence faculty turnover. It is worthy to note here that because of the dearth of literature that examines turnover intention for international faculty, occasionally extrapolations are made from turnover studies of faculty in general and satisfaction studies of international faculty in detail.

Turnover

Several nationally representative sample data were used to measure faculty intention to leave (e.g., NSOPF, COACHE). Recently, Kim, Twombly and Wolf-Wendel (2012) examined faculty turnover intention and its relationship with faculty satisfaction and perception of fit. Most recently, Kim, Twombly, and Wolf-Wendel (2013) employed a national sample of untenured, tenure-track faculty at 4-year colleges and universities to examine the role of citizenship status in influencing faculty mobility intentions.

One of their interesting findings is that non-U.S. citizen faculty is more likely to leave their institution than U.S. citizen faculty. For example, assuming faculty achieve tenure, about 79 percent of non-U.S. citizen faculty plan to stay at the same institution while about 83 percent of U.S. citizen faculty plan to do so (Kim, Twombly, and Wolf-Wendel, 2012). After obtaining tenure, about 68 percent of U.S. citizen faculty plan to leave for another academic institution within five years, while about 80 percent of non-U.S. citizen faculty plan to do so (Kim, Twombly, and Wolf-Wendel, 2012). Another data shows that non-U.S. citizen faculty were not sure about whether they wanted to remain or leave their current institution (Kim, Twombly, and Wolf-Wendel, 2012).

Why do international faculty show higher levels of turnover intention and unsureness than U.S. born faculty? Perhaps, one of the reasons is that international faculty have one more mobility option than U.S. counterpart; return to the home country or country of native language. (Kim, Twombly, and Wolf-Wendel, 2012, p.43). In addition to the mobility option, international faculty have additional concerns about their work and life which might make international faculty turnover intentions dissimilar from those of their native U.S. born colleagues. These include immigration rules and regulation, lack of family ties, language and

cultural differences, and difficulty in interaction and socialization with colleagues (Kim, Twombly, and Wolf-Wendel, 2012; Kim, Twombly, and Wolf-Wendel, 2013).

Theoretical framework for turnover

The theoretical frameworks for the study of faculty turnover can be found primarily within the business management, organizational research, and psychology literature on employee turnover (Ryan, Healy, & Sullivan, 2012).

Iverson and Roy (1994) introduce the economy perspective, the psychological perspective, and the sociological perspective to explain several major conceptual models of turnover (for a review, Iverson, & Roy (1994), pp. 16-17). March and Simon (1958), in one of the earliest psychological perspectives, proposed the theory of organizational equilibrium, specifying that employees' decisions to quit are influenced by "the individual's perceptions about the desirability and ease of movement" (Lee and Mitchell, 1994, p. 52). The theory of organizational equilibrium indicates that "an organization can continue to exist only so long as the payments, or inducements, it offers participants are sufficient to elicit continued contributions on the part of the participant, i.e. when the inducements and contributions are in equilibrium" (Allen, and Griffeth, 1999, p.531). According to the inducements-contributions framework (March, and Simon, 1958), the perceived ease and desirability of movement are "the most important theoretical precursors of turnover" (Allen & Griffeth, 1999, p.531).

The perceived ease and desirability of movement has been equated with job alternative and job satisfaction respectively (Lee and Mitchell, 1994). The desirability of movement is influenced by internal factors such as job satisfaction and organizational commitment. On the other hand, ease of movement is influenced by external factors such as job market conditions and labor market mobility (Kim and Park, 2014).

In the following section, expectancy theory, social exchange theory, and self-categorization theory are discussed to explain how perceptions of the work environment and the external environment explain faculty turnover intents and how international status moderate the relationships between internal, external factors and turnover intents.

Expectancy theory

Researchers in the organizational psychology fields have developed a range of causal turnover intention models based on expectancy theory (Lawler, 1994; Porter & Lawler, 1968; Vroom, 1964). Vroom (1964) was the first major scholar to apply expectancy theory to work organizations (Kim et al., 1996). Vroom's expectancy theory assumes that "the choices made by a person among alternative courses of action are lawfully related to psychological events occurring contemporaneously with the behavior" (1964, pp. 14-15). In other words, employees' behaviors "are systematically related to psychological processes, particularly perceptions and the formation of beliefs and attitudes" (Pinder, 1987, p.144).

The expectancy theory suggests that organizational members have certain expectations and values for the work conditions and environmental features (Kim et al., 1996; Daly and Dee, 2006). The basic idea of expectancy theory is that "if these expectations and values are met, the employees will likely remain members of the organization" (Kim et al., 1996, p. 949). On the other hand, if their expectations are not fulfilled, they are not satisfied with and not committed to the organization, which turn into turnover intentions (Daly and Dee, 2006). In a similar reasoning, faculty members have certain expectations for the work conditions and environments. If their expectations are not met, they are more likely to look for other job opportunities.

Social exchange theory

Social exchange theory explains how social relationships are dependent on the exchange of benefits between employees and the organizations. In the higher education context, faculty can form exchange relationships with colleagues, department head/program chair, students and communities. From the perspective of social exchange theory (Blau, 1964), faculty pursue equity in their exchange with the university. Faculty members make specific contributions (e.g, teaching, research, and service) to the university, for which they expect rewards (e.g., benefits, promotional opportunities).

Social exchange theory (Blau, 1964) suggests that international faculty might have less positive exchange relationships than U.S. faculty because international faculty members might experience discrimination and perceived inequity. International faculty members might experience inequity when their expectations of reciprocity were not fully carried out because their social exchange relationships contain fewer benefits. For example, international faculty with limited working visa status are not eligible for promotion, health insurance, and career development benefits. (Ang, Dyne, and Begley, 2003; Geurts, Schaufeli, and Rutte, 1999).

Self-categorization theory

Self-categorization theory is “the operation of the social categorization process as the cognitive basis of group behavior” (Hog and Terry, 2000, p. 123). “Social categorization of self and others into in-group and out-group” emphasizes “the perceived similarity of the target to the relevant in-group or out-group prototype” (Hogg & Terry, 2000, p.123). These categorization groupings are also used in defining an individual’s social identity (Turner, 1987). Social identity refers to “the individual’s knowledge that he belongs to certain social groups together with some emotional and value significance to him of this group membership” (Tajfel, 1972, p.292). Tajfel and Turner (1986) argue “individuals’ social

identities are relational and comparative” (p.16). Social identity is established and maintained through the process of assimilating oneself to the in-group prototype and differentiating oneself from individuals who are outside one’s reference group (Hog & Terry, 2000). People routinely classify themselves and others based on social categories such as age, gender, race, and status (Tajfel and Turner, 1986). Through the social categorization process, the individual locates him or herself in the social environment (Ashforth & Mael, 1989), and reinforces one’s self identity and self-esteem (Riordan, 2001). In addition, interacting with others with similar characteristics in the process results in increasing group integration and cohesiveness (Jackson et al., 1991), which in turn produces satisfaction (Jackson et al., 1991; Tsui, et al., 1992) and organizational attachment (Tsui, et al., 1992) and decreases turnover within homogeneous groups (Jackson, 1991; O’Reilly et al., 1989).

Social identity theory suggests that international faculty might have a difficulty in interacting with U.S. faculty because international faculty classify themselves “foreign” and “outsider.” On the other hand, U.S. faculty might interact with colleagues with similar backgrounds in the social categorization process, and this might bring different levels of job satisfaction and organizational commitment between international and U.S. faculty.

Taken together, the literature above suggests expectancy, social exchange, and self-categorization/social identity theories would predict that international status might moderate relationships between internal, external factors and turnover intention. In other words, international faculty might weigh structural environments (e.g., communication openness, and procedural justice) differently when they evaluate their institution comparing with U.S. faculty.

In the following section, Matier's model for turnover and Daly and Dee's model for intent to stay are discussed as research frameworks for turnover. A turnover model is proposed based on the theoretical and research frameworks.

Research framework for turnover

Matier's model for turnover

Matier (1990) examined both internal and external environmental factors which are important in an employee's turnover decision. In a case study of 239 tenure-track faculty at two universities, Matier (1990) investigated how the tangible, intangible, and non-work-related benefits influenced the faculty turnover decision.

Based on the previous studies, Matier (1990) suggests that faculty turnover studies should consider four points. First, faculty members' decision to stay or leave is influenced by a variety of factors. Second, considering only factors directly tied to the internal, micro work environment is not sufficient. Third, both internal and external factors play a part in the decision to leave. Finally, the ease of movement should be considered along with the perceived desirability of movement (Matier, 1990, p.41).

"The ease of movement" means visibility to the academic community and the propensity to seek out employment opportunities and "the perceived desirability of movement" include autonomy, satisfaction with fit, and wage (Matier, 1990). To determine faculty's "perceived desirability of moving", both internal and external environment factors were considered (Matier, 1990). The internal environmental factors include intangible benefits such as personal and institutional reputation, autonomy, influence, and sense of belonging and tangible benefits of the job such as wages, facilities, work rules, and fringe benefits (Matier, 1990). The external environmental factors are non-work-related benefits

such as quality of life, family, friends, and financial considerations (Matier, 1990). In Matier's framework, faculty with a perception of low internal and external benefits can lead to a decision to leave the institution (Ambrose, Huston, and Norman, 2005).

Matier's framework had been used in other turnover studies (Ambrose et al., 2005; Johnsrud & Rosser, 2002). For example, Ambrose et al. (2005) determined the internal and external factors which can improve faculty retention rates. Johnsrud and Rosser (2002) found that if faculty members were satisfied with their current positions, they did not intend to leave, but if faculty member were not satisfied, they explored other options.

This study uses both internal and external variables. In a similar line of research, Daly and Dee (2006)'s study use structural, psychological, and environmental variables. Daly and Dee (2006)'s framework is also relevant because it examines faculty intention to stay at urban public universities.

Daly and Dee's model for intent to stay

Daly and Dee (2006)'s model includes structural, psychological, and environmental variables. Their model employed many of the variables and measurements from Price's (1977) framework and extended the turnover models of higher education studies by examining different structural variables (e.g., communication) and adding intervening variables (e.g., organizational commitment).

Structural variables represent work conditions which include autonomy, communication, distributive justice, role conflict, and workload. Psychological variables include job satisfaction and organizational commitment. Environmental variables represent environmental features which include perceived job opportunity and kinship responsibility (Daly and Dee, 2006).

Proposed model

A review of the literatures reveals that scholars have taken two major approaches to study turnover intention. The first approach is to explain turnover intention by examining relationships among structural and psychological variables without controlling for environmental variables (e.g., Caillier, 2011; Moynihan and Landuyt 2008). For example, Moynihan and Landuyt (2008) examine individual characteristics and individual perceptions of work characteristics while controlling for agency factors. Moynihan and Landuyt (2008) do not control for geographical variation or variation across time for economic factors such as unemployment. A second approach has shown that turnover is a function of environmental, organizational, and individual factors (e.g., Daly & Dee, 2006; Selden & Moynihan, 2000; Zhou & Volkwein, 2004). The relationship between employee perceptions of organizational structure and their psychological attitudes toward work environment may be mitigated by environmental factors. For example, dynamics of the labor market or family responsibility may affect intentions to leave, independent of the effects of structure and psychological disposition (Daly, & Dee, 2006). In other words, faculty may remain in a current institution even though they are not satisfied with their work and organization if few alternative job opportunities are available or family responsibilities constrain mobility (Daly and Dee, 2006). On the other hand, faculty may depart even though they are satisfied and highly committed to the institution if they have strong job opportunities (Daly and Dee, 2006). This suggests that “internal” and “external” factors play a part in the decision to leave. For example, unsatisfying work environment (e.g., low job satisfaction) pushes a faculty member to leave and better job alternative (e.g., greater compensation) pulls him or her to change jobs (Lawrence et al., 2013). On the other hand, high salary from outside of the current institution might pull a faculty member to leave, but geographical location might push him or her to remain (Matier, 1990).

Drawing on this body of work, the present study aims to examine factors influencing faculty turnover intention. First, to determine faculty’s “the perceived desirability of movement”, this study includes autonomy, communication openness, distributive justice, procedural justice, role conflict, and workload. Second, to determine faculty’s “ease of movement”, this study considers job opportunity and kinship ties along with demographic variables such as age, gender and marital status. This study extends this line of research by adding different demographic variables (e.g., international status), and different structural variables (e.g., procedural justice)

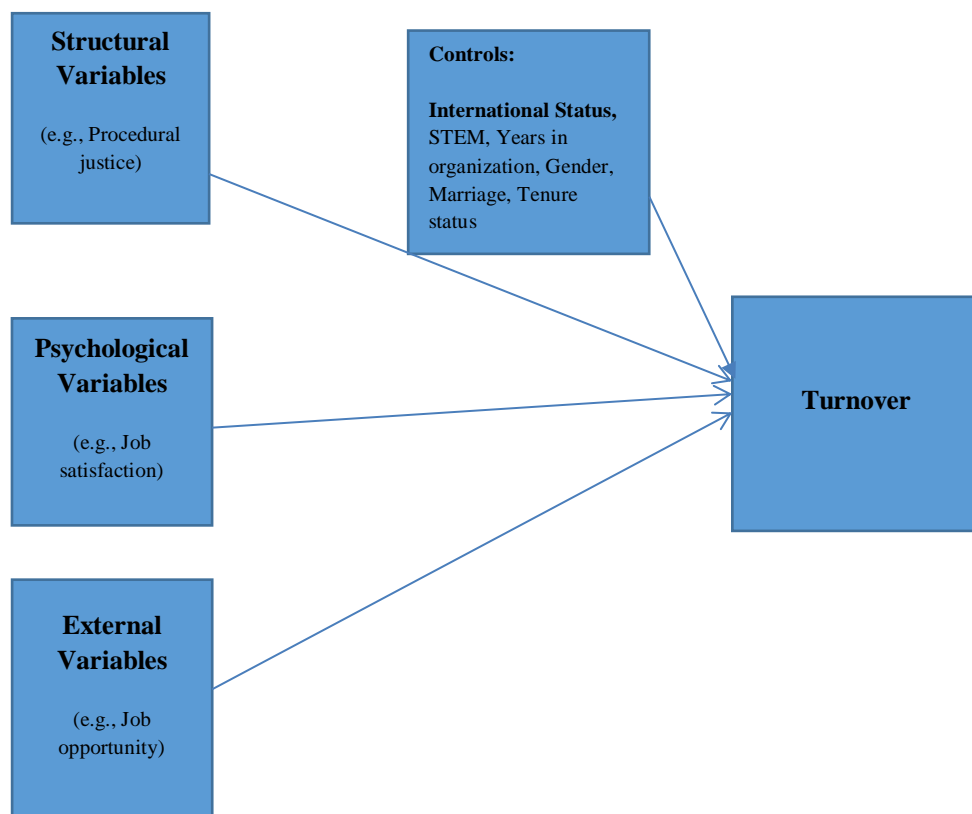


FIG. 1a. Conceptual framework for turnover intention

It is worthy to note that the variables examined in this study are not the only ones that could be studied in relation to faculty intent to stay or leave. Other variables may also

influence faculty intent to stay or leave. For example, department climate (Callister, 2006) and organizational culture (Lindholm, 2003) may influence faculty turnover intention.

Using the above conceptual framework, the study attempted to answer the following research questions: *Whether there are differences in internal and external factors that impact turnover intention of international and U.S. faculty employed in a 4-year urban research university in the United States.*

The next section provides operational definitions for each variable in the framework and explains how each variable is hypothesized to influence faculty turnover.

Structure: Autonomy

Autonomy is one of the most important job related characteristics (Naqvi, Ishtiaq, Kanwal, and Ali, 2013). Hackman and Oldham (1975) define autonomy as “the degree to which the job provides substantial freedom, independence, and discretion to the employee in scheduling the work and in determining the procedures to be used in carrying it out” (p.162). Professional autonomy refers to “the ability of professionals to decide work patterns, to actively participate in major academic decision making, to have work evaluated by professional peers, and to be relatively free of bureaucratic regulations and restrictions” (Baldrige, Curtis, Ecker, & Riley, 1973, p.536). Employees with autonomy have “the freedom to control the pace of work, and to determine work processes and evaluation procedures” (Dee, Henkin, & Chen, 2000, pp205-206).

The importance of professional autonomy has been well investigated (Hackman and Oldham, 1975; Lawler, 1973; Turner and Lawrence, 1965). Previous research show that autonomy is associated with professional success (Pavalko, 1988). If employee has a high

level of autonomy, they can feel responsible for the result of the actions and perceive the work outcome as depending on their efforts (Galletta, 2011).

Previous research show that autonomous work has been associated with high levels of performance, job satisfaction, and low levels of job stress, burnout and turnover (e.g., Spector, 1986; Miller, Ellis, Zook & Lyles, 1990; Ray and Miller, 1991). For example, Spector's (1986) meta-analysis revealed that high levels of control at work is associated with high levels of job satisfaction, commitment, motivation, performance and lower level of role ambiguity, conflict, and turnover intentions. Daly and Dee (2006) found that higher level of autonomy is positively associated with higher level of satisfaction and lower level of turnover intention.

Similar finding are expected in an urban public research university. However, given limited past literature in higher education, I am not sure whether international status moderate the relationship between job autonomy and turnover intent. It is more conservative to state that international faculty does not value job autonomy differently comparing with U.S. faculty when they evaluate their institution.

H1: Higher levels of autonomy will be associated with lower levels of intent to leave

Structure: Communication openness

Communication refers to “the degree to which information is transmitted among the members of an organization” (Price and Mueller, 1986, p.83). Communication is the lifeblood of the organization and the thread that ties employees together (Goldhaber, 1993). Openness has been described as one of the most important characteristics of an effective organization (Rogers and Kincaid, 1981). The communication openness may determine employee integration (Daly and Dee, 2006), job satisfaction and job performance (Giri and

Kumar, 2010). Conversely, exclusion from the communication network may contribute to employee turnover (Daly and Dee, 2006).

Open communication may manage faculty expectation for “participation, ownership, and collegiality”(Daly and Dee, 2006, p.794). As Daly and Dee (2006) pointed out, it is useful to assess if certain groups of the faculty population are not connected to communication structure and isolated from information source. For international faculty members at urban universities, ensuring open communication and fostering collegiality may be difficult because of language barriers and cultural differences.

Therefore, this study expects that communication openness is negatively associated with turnover intentions. In addition, international faculty might weigh communication openness stronger than U.S. faculty when they evaluate their institution.

H2: Higher levels of open communication will be associated with lower levels of intent to leave

Structure: Organizational justice

Literature on employees’ perceptions of organizational justice offers insights into how faculty members’ workplace experience may shape their attitudes and behaviors differently. The notion of justice, or fairness, is one of the most increasingly visible constructs (Colquitt, 2001). The term organizational justice is defined, “the individual’s and the group’s perception of the fairness of treatment received from an organization and their behavioral reaction to such perceptions” (Aryee, Budhwar, & Chen, 2002, p.269). Organizational justice is a multidimensional construct (Cohen-Charash & Spector, 2001). Three types of organizational justice have been identified; distributive justice, procedural justice, and interactional justice (Cohen-Charash & Spector, 2001).

Distributive justice refers to the perception of how proportional outputs (i.e., compensation, promotions, career development opportunities, etc.) are to inputs such as effort and education (Adams, 1965). Folger and Konovsky (1989) defines distributive justice as “the perceived fairness of the amounts of compensation employees receive” (p.115). Employees compare their outcome/input ratios with those of others to gauge distributive justice (Adams, 1965). Procedural justice refers to the fairness of the means by which an allocation decision is made (Croppazano & Ambrose, 2001; Lind & Tyler, 1988). Interactional justice focuses on “the way the management (or those controlling rewards and resources) is behaving towards the recipients of justice” (Cohen-Charash & Spector, 2001, p.281). Interactional justice relates to the aspects of the quality of interpersonal treatment employees received during the enactment of a decision making procedures (Tyler & Bies, 1990).

Several researchers suggest that employees’ perceptions of organizational justice can impact other work related variable. Research show that employees’ perceived injustice may lead to lower job satisfaction, organizational commitment (Dailey & Kirk, 1992; Folger & Konovsky, 1989; Martin & Bennett, 1996), lower performance (Earley & Lind, 1987), and higher turnover intent (Cohen-Charash & Spector, 2001; Dailey & Kirk, 1992; McFarlin & Sweeney, 1992; Naumann & Bennett, 2002).

Perception of fairness in salary levels, rather than the actual amount of salary, may determine faculty satisfaction (Hagedron, 1996). Equitable reward system also may affect a faculty member’s commitment to their university (Neumann & Finaly-Neumann, 1990). For example, Hagedorn (1996) showed that non-discrimination monetary compensatory policy may be important for increasing faculty satisfaction and retaining talented faculty. In a similar line of research, Daly and Dee (2006) found that distributive justice had a positive effect on organizational commitment, which increased intent to stay.

Prior research and theory on social exchange and distributive justice suggests that if employee perceives the ratio as equal across individuals, outcomes such as pay, and benefits will be perceived as fair and just (Adam, 1965; Greenberg, 1990). In contrast, if employee perceives the ratio as unequal, inequity exists for the person and distributive justice will become less (Adams, 1965; Daly and Dee, 2006). In addition, when employees perceive decision-making procedures as “consistent, free from bias, accurate, correctable, representative of all concerns, and based on prevailing ethical standards”, the procedures are considered as fair (Cropazano & Ambrose, 2001, p.123). In contrast, when the procedures are applied differently to employees “based on their demographic or employment status characteristics”, the procedural justice judgments are lower (Ang, Van Dyne, and Begley, 2003, p. 563).

In applying this to international faculty, I expect that their limited employment status would make them to feel that policies were differentially applied to them compared to U.S. faculty. When exchange relationships differ, performance feedback and pay decision making process will be less uniform and international faculty may feel they do not receive equal treatment.

H3: Higher levels of distributive justice will be associated with lower levels of intent to leave

H4: Higher level of procedural justice will be associated with lower levels of intent to leave

Structure: Role stress

Employees’ job related role stress has been continuously studied across multiple disciplines (Babin and Boles, 1996). Organizational roles can be defined as a set of behavioral expectation about what an individual should do (Kahn, Wolfe, Quinn, and Snoek, 1964). Characteristics of an individual role in an organization can contribute to workplace

stress (Kahn et al., 1964). Role stress is composed of two major related components: role ambiguity and role conflict (Babin and Boles, 1996).

Role ambiguity refers to “a lack of necessary information at a given organizational position” (Rainey, 2003, p.277). The information include clarity of objectives, responsibilities, amount of authority, and time allocation in the person’s job (Rainey, 2003). Role conflict is defined as “a condition in which role expectations are contradictory or mutually exclusive” (Hardy & Conway, 1978). Role ambiguity and role conflict occurs when role responsibilities compete and conflict, which lead to role strain (Gormley & Kennerly, 2010).

The relationships between role ambiguity, job satisfaction and job performance have been widely studied in organizational research (Abramis, 1994). Abramis (1994)’s meta-analysis found there is a negative relationship between role ambiguity and job satisfaction. A high level of role ambiguity can increase dissatisfaction in workgroups and may influence employees to detach from the workgroup (Hassan, 2013).

Role ambiguity and conflict may characterize the work of faculty because institution of higher education do not have “clearly defined lines of authority, clearly differentiated functions, and responsibilities established at each level within the organization” (Manger & Eikenland, 1990, p.288). As Cohen and March (1974) characterize university as being ‘organized anarchies’, complex social interaction among faculty members and staffs may influence faculty’s turnover process (Manger & Eikenland, 1990).

Previous research on foreign employees’ role stress strongly suggest that foreign workers experience high level of role ambiguity and role conflict (Showail, Parks, and Smith, 2013; Soryu, 2007). Foreign employees are more likely to experience role ambiguity because of “cultural misfit” (Showail, Parks, and Smith, 2013), unfamiliar workplace practice and

limited language competency (Soryu, 2007). Foreign employees might not understand the informal or cultural rules that guide the workplace (Soryu, 2007). Role ambiguity and conflict has not been extensively studied in relation to international faculty in higher education.

H5: Higher levels of role ambiguity will be associated with higher levels of intent to leave

H6: Higher level of role conflict will be associated with higher levels of intent to leave

Structure: Workload

Workload is one of the important types of stress in faculty careers (Barnes, Agago, & Coombs, 1998; Witt & Lovrich, 1988). Price and Mueller (1986) define workload as “the amount of performance required in a job” (Price and Mueller, 1986, p.254). Allen (1997) defines faculty workload as a “composite of all professional tasks performed by faculty: teaching or instructional activities, class participation, research, administration, and public service” (p.27). According to Gmelch, Wilke, and Lovrich (1986)’s five factor stress model, faculty career stress includes having insufficient time to stay current in one’s field of study and feeling lack of preparation time. For example, heavy teaching load may make faculty less committed to the institution (Daly and Dee, 2006). Barnes et al. (1998) found that a sense of frustration due to time commitments was one of the strongest predictors of faculty turnover intention. Therefore, this study expects that levels of workload is positively associated with turnover intention.

H7: Higher levels of workload will be associated with higher levels of intent to leave

Psychological: Job satisfaction

Although job satisfaction and turnover are both job characteristic outcomes in the model of work motivation (Hackman & Oldham, 1976), job satisfaction is commonly used in research to predict turnover intention (e.g., Hom & Kinicki, 2001; Spector, 1997; Tett &

Meyer, 1993). For example, Tett and Meyer (1993)'s study showed that job satisfaction correlates more strongly with turnover intention than commitment. Therefore, the significance of faculty job satisfaction should not be ignored in the faculty turnover studies (Daly & Dee, 2006; Smart, 1990).

Previous studies show that faculty satisfaction is an important predictor of faculty turnover intention (Caplow and McGee, 1958; Kim, Wolf-Wendel, and Twombly, 2013; Rosser, 2004; Zhou and Volkwein, 2004). Caplow and McGee (1958), in their seminal study on faculty mobility, argued that faculty members are more likely to attract to outside offers because of dissatisfaction with their present institution than they are to be allured to leave simply by better conditions. Similarly, when looking at international faculty turnover intention, Kim, Wolf-Wendel, and Twombly (2013) show that satisfaction with professional experience, research, and perception of the clarity of the tenure process were important indicative of turnover intention.

Generally, there is a negative relationship between job satisfaction and turnover intention (e.g., Manger & Eikeland, 1990; Tett & Meyer, 1993). If employees become more dissatisfied, then they are more likely to consider other employment opportunities (Helman, 1997). Recent studies have showed that international faculty members are less satisfied than their U.S. born colleagues (Corley & Sabharwal, 2007; Mamiseishvili & Rosser, 2010; Sabharwal, 2011). Corley and Sabharwal (2007) found that "foreign-born scientists were less satisfied than U.S. born scientists for all nine variable measures of work satisfaction "including advancement opportunities, job benefits, intellectual challenge, independence, location, level of responsibility, salary, job security, and contribution to society"(p.935).

The lower job satisfaction of international faculty members can imply that they have not been able to meet institutional value or expectations and some of them are in the process

of leaving the institution (Moore & Gardner, 1992; Johnsrud & Heck, 1994; Zhou, 2004). However, the lower job satisfaction can also indicate institutional problems that may force a highly productive international faculty members to pursue outside opportunities (Nicholson & West, 1988). This suggests that international faculty might be more likely to leave than U.S. faculty because work satisfaction is a significant component of faculty retention. This study examines how faculty satisfaction translates into turnover intention and whether international status moderate the relationship between satisfaction and turnover intention.

H8: Higher levels of job satisfaction will be associated with lower levels of intent to leave

Psychological: Organizational commitment

Commitment is “loyalty to the organization” (Price and Mueller, 1986, p.70). Mowday, Porter, and Steers (1982) define organizational commitment as “the relative strength of an individual’s identification with an involvement in a particular organization” (p.226).

Although organizational commitment is modeled as a mediating variable with job satisfaction in the turnover intention model (e.g., Daly and Dee, 2006; Smart, 1990), researchers find that organizational commitment and job satisfaction may have two different effects (Currivan, 1999). It takes relatively more time for an employee to determine his or her commitment to the organization than job satisfaction (Porter, Steers, Mowday, & Boulian, 1974). Changes in organizational commitment occurs slowly while changes in job satisfaction occur rapidly from changes in working condition (Currivan, 1999; Holtom et al., 2008). An employee can maintain his or her organizational commitment even though he or she is not satisfied with his or her job (Lawrence, 2013). Therefore, organizational commitment might be more stable construct than job satisfaction.

A widely tested hypothesis is that high level of employee commitment reduces turnover intention (Cohen, 1993; Mathieu & Zajac, 1990; Griffeth, Hom, & Gaertner, 2000). In higher education setting, organizational commitment was the strongest predictor of faculty intention to stay (Daly and Dee, 2006; Lawrence et al., 2013). From the individual faculty perspective, attachment to the university provides not only psychological rewards (e.g., intrinsic motivators) but also economic rewards (e.g., salary) (Neumann, and Finaly-Neumann, 1990). From the university point of view, committed faculty members are actively involved in innovative research, prepare new teaching materials, and participate in academic governance (Neumann, and Finaly-Neumann, 1990).

Particularly, international faculty members may be less committed to their university than U.S. faculty. Tsui, Egan, and O'Reilly (1992) found that individuals who are different from the majority in the organization tend to be less psychologically committed to their organizations, less integrated with others in the majority, and more likely to be absent and leave their organizations.

H9: Higher levels of organizational commitment will be associated with lower levels of intent to leave

Environment: Job opportunity

Opportunity refers to “the availability of alternatives jobs in the organization’s environment” (Price & Mueller, 1981, p.13). Economists emphasizes the importance of opportunity under diverse labels such as “pull,” “supply-demand,” and “state of economy.”(Price & Mueller, 1981). Environmental opportunity has been found to have a positive relation with turnover (e.g., March and Simon, 1958).

In higher education studies, job opportunity was positively related to faculty turnover (e.g., Al-Omari, Qablan, and Khasawneh, 2008; Daly and Dee, 2006; Weimer, 1985). For

example, Al-Omari, Qablan, and Khasawneh (2008) found that job opportunity had a negative direct effect on intent to stay. This result is consistent with Daly and Dee (2006)'s study. More interestingly, both studies found that the effect of job opportunity did not have any indirect effect through job satisfaction or organizational commitment. This suggests that even if faculty members are satisfied or highly committed to the institution, they still may leave if they are having better opportunities outside (Al-Omari, Qablan, and Khasawneh, 2008; Daly and Dee, 2006).

H10: More job opportunity will be associated with higher levels of intent to leave

Environment: Kinship responsibility

Kinship responsibility refers to “involvement in kinship groups in the community” (Price & Mueller, 1986, p.15). As Price and Mueller (1986) pointed out, original concern with kinship responsibility in the turnover studies was invigorated by demographers who stressed the impact of kinship ties on migration patterns.

Kinship responsibility may pull faculty members to stay or leave at a given institution based on two assumptions. First, kinship ties in local community influence an employee's decision to terminate (Mueller, Boyer, Price, & Iverson, 1994). Kinship ties provide a social and family networks, which can deal with work stress and challenging situation (Daly and Dee, 2006; Soylu, 2007). Second, kinship ties can increase commitment to the organization and diminish geographical mobility (Daly and Dee, 2006). Turnover decision can involve changing places of residence (Mueller et al., 1994). Therefore, caregiving responsibilities for an ill family member may prevent job mobility decision (Daly and Dee, 2006)

One of the interesting questions regarding kinship responsibility is whether kinship responsibilities applies equally to international and U.S. faculty members. Foreign employee usually have less extensive family and social network than permanent residents and citizens

(Soylu, 2007). Family in their home country may pull international faculty to leave a given institution. For example, faculty members who considered staying in the U.S. eventually returned to their home country for family reasons such as “having spouse in the home country, returning home to care for an ill family member, and desiring to live close parents and other immediate family members” (Lee & Kim, 2010, p.636). So, kinship responsibilities in home country may enhance international faculty’ turnover intention.

H11: *More kinship ties will be associated with lower levels of intent to leave*

Chapter summary

This chapter reviewed internal and external factors as they influence faculty turnover intention. Internal factor includes structural and psychological variables, and external factor includes environmental variables. Structural variables include autonomy, communication openness, distributive justice, procedural justice, role conflict, and workload. Psychological variables include job satisfaction and organizational commitment. Environmental variables include job opportunity and kinship ties.

In addition, this review help the current study aim to examine different levels of turnover intents between international and U.S. faculty. This review has illustrated that very few studies investigate the topic of turnover of international faculty. The next chapter explains the methods of data collection and analysis.

Table. 2.1

Research hypotheses

<i>Internal factors (Structural variables and Psychological variables)</i>	
<i>Structural variables</i>	
Autonomy	<i>H1: Higher levels of autonomy will be associated with lower levels of intent to leave</i>
Communication openness	<i>H2: Higher levels of open communication will be associated with lower levels of intent to leave</i>

Distributive justice	<i>H3: Higher levels of distributive justice will be associated with lower levels of intent to leave</i>
Procedural justice	<i>H4: Higher levels of procedural justice will be associated with lower levels of intent to leave</i>
Role ambiguity	<i>H5: Higher levels of role ambiguity will be associated with higher levels of intent to leave</i>
Role conflict	<i>H6: Higher levels of role conflict will be associated with higher levels of role conflict</i>
Workload	<i>H7: Higher levels of workload will be associated with higher levels of intent to leave</i>
<i>Psychological variables</i>	
Job satisfaction	<i>H8: Higher levels of job satisfaction will be associated with lower levels of intent to leave</i>
Organizational commitment	<i>H9: Higher levels of organizational commitment will be associated with lower levels of intent to leave</i>
<i>External factors</i>	
Job opportunity	<i>H10: More job opportunity will be associated with higher levels of intent to leave</i>
Kinship responsibility	<i>H11: More kinship ties will be associated with lower levels of intent to leave</i>

Chapter III

METHODOLOGY

Research design

This study employs a cross-sectional design for a fixed point in time in a specific organization that allows us to examine the effects of internal and external factors on faculty turnover intentions. This study does not control for variation across time for economic factors

such as employment rate. The cross-sectional design is perhaps the most suitable design in this study, because this study is more concerned with describing correlations between independent variables and dependent variable than establishing causal relationships.

Data and Sample

The target population is faculty employed at an urban public research university. Urban universities are defined as “institutions that were founded or achieved university status following World War II to address the needs of growing metropolitan populations” (cited in Daly and Dee, 2006, p.787). Urban university environment provides unique opportunity and place to understand faculty members’ experience and predict organizational behavior at work. Particularly, urban institutions provides “access to diverse student population, engage in applied and interdisciplinary research, and address the complex economic, social, political, and environmental challenges of urban life”(Daly and Dee, 2006, p. 776).

The provost was contacted to obtain a list of all faculty members’ e-mail address. In order to maximize the response rate, total design method (TDM) was conducted (Frankfort-Nachmias & Nachimas, 2008). Questionnaires were e-mailed to sample (N = 2713) of teaching, research, administrative, and adjunct faculty in July 2014. After one week, non-respondents received an email reminder to take the survey. Three weeks after the survey was distributed, a reminder was e-mailed to all non-respondents. A final email reminder was sent to non-respondents one month after the initial mailing. These procedures yielded an overall useable response rate of 35.8% (N = 970). Overall, the sample of participants was very similar to the entire university faculty population in terms of sex, rank, and tenure status. However, it is not known if non-respondents varied from respondents in turnover intentions.

Measures

Dependent variable

Our dependent variables are faculty turnover intentions. Turnover intention refers to “individuals’ own estimated probability that they are permanently leaving the organization at some point in the near future” (Vandenberg & Nelson, 1999, p.1315). Turnover intention is a much stronger predictor of turnover behavior than job satisfaction and organizational commitment (Vandenberg & Nelson, 1999). There are several studies using intention to leave rather than actual turnover (e.g., Wise & Tschirhart, 2000; Mor Barak et al., 2001; Moynihan & Pandey, 2008; Moynihan & Landuyt, 2008).

I used the measurements of Moynihan and Pandey (2008)’s study. Moynihan and Pandey (2008) measure both short term and long term turnover intentions. Two questions were asked to subjects. First question is “how often do you look for job opportunities outside this organization?” (1=never, 5=constantly). This measurement provides an advantage to distinguish an active search for alternative position from a more abstract statement of intention to leave at some point in the future (Moynihan & Pandey, 2008). The second question is “I would be very happy to spend the rest of my career with this organization” (1=strongly disagree, 5=strongly agree). This measurement reflects “the concept of lifetime employment and whether the employee perceives their workplace as an environment where they could spend the rest of their career” (Moynihan & Pandey, 2008, p.216). However, there is a validity concern about using turnover intention, because it does not perfectly measure actual turnover. The relationship between intention to quit and actual quits has been found to vary considerably across studies (Vandenberg & Nelson, 1999, p.1315). Dalton, Johnson, & Daily (1999) show a summary of five meta- analyses of turnover intention and actual turnover (p.1342). The correlation was reported at .32 (Carsten & Spector, 1987), .36 (Hom

et al., 1992), and .31 (Hom & Griffeth, 1995), .50 (Steel & Ovalle, 1984), and .515 (Tett & Meyer, 1993).

Nonetheless, the use of turnover intention as a surrogate for actual turnover provides several research advantages. First, researchers can use cross-sectional models; second, researchers can more easily access the perceptions of potential quits and relate them to their organizational context; third, researchers can examine a larger sample of employees, and identify differences between those who wish to stay in the organization and those intent on leaving (Moynihan & Landuyt, 2008, p.129).

Independent variables

Autonomy

This study uses Breugh's (1985) multi-dimensional measure of work autonomy. Breugh (1985) suggested that autonomy could be measured in terms of three distinct dimensions; Method, schedule, and evaluation. These dimensions refer to "content of work", "the timing of work", and "the assessment of work." (Dee, Henkin, & Hsin-Hwa Chen, 2000, pp. 206-207). This study uses three questionnaires taken from Breugh's (1985) study (e.g., "I am free to choose the methods to use in carrying out my work").

Communication openness

This study uses questionnaire adapted from Burchfield's (1997) five item communication scale (e.g., "It is easy to talk openly to all members of this group).

Distributive justice

This study uses three items from Price and Mueller's (1986) distributive justice index. These items ask faculty members to indicate the extent to which they have been fairly

rewarded in view of their effort and performance (e.g., “To what extent are you fairly rewarded considering the amount effort that you put forth?” (1= not at all fairly; 2 = very little fairness; 3 = some fairness; 4 = quite fair; 5 = very fair).

Procedural justice

This study uses four items from McFarlin and Sweeney’s (1992) study. These items ask faculty members to indicate “the extent to which the general procedures used to communicate performance feedback, determine pay increases, and evaluated performance and promotability were fair” (McFarlin and Sweeney, 1992, p.629).

Role clarity/ conflict

This study uses Task-Goal Attributes Scales to measure role clarity. Task-Goal Attribute Scales are composed of three items which capture the extent to which employees were clear about their responsibilities in their job and understood which of their job duties were more important than others (Hassan, 2013). In addition, this study use two questionnaires taken from Daly and Dee’s (2006) to measure role conflict.

Workload

This study uses questionnaire taken from Daly and Dee’s (2006) study (e.g., I do not have enough time to get everything done on my job).

Job satisfaction

Previous research shows that the job satisfaction of public employees is influenced by the intrinsic nonmonetary characteristics of their work (Borzaga & Tortia, 2006; Kim, 2005). This study uses Corley and Sabharwal (2007)’s nine measures about faculty satisfaction with opportunities for advancement, benefits, intellectual challenge, degree of independence,

location, level of responsibility, salary, job security, and contribution to society using a scale from 1 (*very dissatisfied*) to 5 (*very satisfied*).

Organizational commitment

This study use seven items taken from Daly and Dee's (2006) study. These items are: I speak highly of this university to my friends. I am not dedicated to this university. I am proud to tell others I am part of this university. This university inspires the very best job performance in me. This university is the best of all possible places to work. I don't care about the fate of this university. This university's values are not the same as mine (Daly and Dee, 2006, p.798)

Job opportunity

This study uses six items taken from Daly and Dee's (2006) study to measure "job opportunity" (e.g., There are plenty of good academic jobs that I could have inside my metropolitan area).

Kinship responsibility

This study uses Blegen, Mueller, and Price (1988)'s kinship responsibility index; Kinship responsibility = marital status + number of children + relatives in the community + spouse's relatives in the community (p.403).

Control variables

This study uses individual characteristics such as international status, gender, marital status, race/ethnicity, age, salary, tenure status, rank, years in organization, and discipline as control variables.

International status If a subject was born in a foreign country with a foreign undergraduate degree, he (she) was coded as 1 and otherwise were coded as 0.

Gender Interestingly, recent studies on gender challenge traditional hypothesis that female were more likely to quit (Moynihan, & Landuyt, 2008). For example, Kellough and Osuna (1995) show that age, education, promotion opportunity, experience, salary mediated the effect of gender on turnover. The gender of the subjects were collected from the following survey question: “What is your gender?” Female were coded as 0 and male were coded as 1.

Marital status The marital status of the subjects were collected from the following survey question: “What is your marital status?” Married were coded as 1 and never married, separated, divorced, and widowed were coded as 0.

Race/Ethnicity The race/ethnicity of the subjects were collected using the following two questions: “Are you Hispanic or Latino?” (A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race) and “How would you describe yourself?” (1 = American Indian or Alaska Native; 2 = Asian; 3 = Black or African American; 4 = Native Hawaiian or Other Pacific Islander; 5 = White). White and non-hispanic was used as a reference group.

Age As employees gets older, they are less likely to give up the benefits and credits associated with career status (Hellman, 1997). On the contrary, younger employees are more likely to have lower psychological attachment to the organization, and therefore are more likely to be mobile (Hellman, 1997). The age of the subjects will be measured using the following question: Please select the category that best indicates your age (1 = 21-30; 2 = 31 – 40; 3 = 41-50; 4 =51-60; 5 = 61 – 70; 6 = Over 70; 7 = Don’t know/ Refused).

Salary The salary of the subjects was collected from the following survey question: “What is your annual income level?” 1 = under \$40,000; 2 = \$41,000 to \$60,000; 3 = \$61,000 to \$80,000; 4 = more than \$80,000; 5 = “don’t know/refused.”

Non-Tenure The tenure status of the subjects was collected from the following survey question: “What is your tenure status?” 1 = Tenured faculty; 2 = on tenure track but not tenured; 3 = not on tenure track, 4 = “don’t know/refused.” Not on tenure track is the reference group, which was coded as 1 and otherwise were coded as 0.

Rank The rank of the subjects was collected from the following survey question: “What is your faculty rank?” Instructor/lecture or the equivalent (e.g., post-doctoral, teacher) was coded as 1, assistant professor or the equivalent (e.g., research associate or assistant) was coded as 2, associate professor or the equivalent (e.g., research fellow, scientists) was coded as 3, and professor or the equivalent (e.g., chairperson, director/head/coordinator/executive) was coded as 4.

STEM The academic areas of the subjects was collected from the following survey question: “What is your academic area?” 1 = professional areas (e.g., Business, Health Science, Medicine), 2 = Arts and Humanities (e.g, English, Fine Arts, Religion), 3 = Social Science and Education (e.g., Sociology, Economics), 4 = Science, Technology, Engineering, Math (STEM) (e.g., Physical Science, Mathematics, Statistics). STEM discipline is the reference group, which was coded as 1 and otherwise were coded as 0.

Years in organization Previous research suggests that older and longer serving employees are less likely to leave organizations (Iverson & Currivan, 2003; Mor Barak et al., 2001). The length of time faculty has worked for the school were collected from the following open-ended survey question: “How many years have you been in the current organization?”

Chapter summary

This chapter reviewed research design, data, and measurements of main variables. This study employs a cross-sectional design to examine the effects of internal and external factors on faculty turnover intentions. This study uses survey of faculty members at an urban public research university. Dependent variables are faculty turnover intentions, which are composed of short-term and long term turnover intentions. Independent variables include autonomy, communication openness, distributive justice, procedural justice, workload, job satisfaction, organizational commitment, job opportunity, and kinship responsibility. Control variables include years in organization, age, gender, marital status, rank, salary, and discipline.

Table. 3.1

Summary of key variables

<i>Variables</i>	
<i>Dependent variable</i>	Faculty turnover intentions
<i>Independent variables</i>	
<i>Structural variables</i>	Autonomy, communication openness, distributive justice, procedural justice, role conflict, and workload
<i>Psychological variables</i>	Job satisfaction, organizational commitment
<i>Environmental variables</i>	Job opportunity, kinship responsibility (tie)
<i>Control variables</i>	International status, gender, marital status, Race/Ethnicity, age, salary, tenure status, rank, years in organization, and STEM

Table 3.2

Summary of survey measurements

Questions	Measurement items	Source
q87-88	Turnover intention	Moynihan and Pandey (2007)
q1-3	Autonomy	Breaugh (1985)
q4-8	Communication	Burchfield (1997)
q41-43	Distributive justice	Price and Mueller (1986)
q44-47	Procedural justice	McFarlin and Sweeney (1992)
q48-52	Role stress (role clarity / conflict)	Hassan (2013), Daly and Dee (2006)
q53-56	Workload	Daly and Dee (2006)
q64-73	Job satisfaction	Corley and Sabharwal (2007)
q74-80	Organizational commitment	Daly and Dee (2006)
q81-86	Job opportunity	Daly and Dee (2006)
q97-100	Kinship responsibility(tie)	Blegen, Mueller, and Price (1988)

Chapter IV

ANALYSIS

This chapter presents the results and findings of the study using a survey of faculty members at an urban public research university. The purpose of the study is to determine which internal and external factors impact the faculty turnover and examine whether the relationships between internal (external) factors and turnover depends on international status.

The first half of the chapter summarizes the results obtained from the descriptive data analysis for the following factors: 1) Internal (demographic, structural, and psychological variables) and 2) External (job opportunity and kinship ties). Independent sample t-test and ANOVA were run to determine if significant differences are found in internal and external factors when categorized by international status. The second part of this chapter presents results of the regression analyses for predicting faculty turnover, and moderation analysis for comparing international and U.S. faculty.

Results from descriptive statistics

Using descriptive statistics methods, this section attempts to answer the following questions: Who are faculty members? What characteristics do they have? What is the general level of internal and external factors? What is the general level of turnover intentions? Do the satisfaction, organizational commitment, and turnover levels vary by international status? In the following analyses, independent sample t-test and ANOVA were used to examine whether the mean values of internal factors, external factors, and turnover intentions differ by international status. The purpose of these tests was to create a baseline for regression analyses. The variables tested include gender, ethnicity, marital status, tenure status, academic rank, job location, academic discipline, and international status.

Faculty demographics characteristics

This section describes the faculty demographic characteristics. A majority of respondents were female (52%). Racial/ethnic identifications were predominantly White (86%). 78% of faculty members were married. Data by faculty rank showed that 33.7 % of respondents were assistant professor, 26% were associate professor, 22.1% were full professor, and 18.3% were instructor. Data by faculty tenure showed that 33.1% of respondents were tenured faculty, 57.1% were not on tenured track, and 7.6% were on tenure track but not tenured yet.

Table 4.1

Cross tab of academic rank and tenure status

Academic rank	Tenure		Non-Tenure
	Tenured faculty	On tenure track but not tenured	Not on tenure track
Professor	77.4%	1.3%	21.4%
Associate Professor	61.9%	0.5%	37.6%
Assistant Professor	1.7%	21.9%	76.4%

Instructor	0%	0%	94.8%
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Table 4.1 shows the distribution of the faculty by academic rank and tenure status. About 21.4% of full professors, 37.6% of associate professors, and 76.4% of assistant professors were not even on tenure track. On average, the faculty had been serving 12.1 years in the current institution (s.d. = 10.3). About 57 percent (n=428) of faculty were paid more than \$80,000 a year. Data by foreign born status showed that 84.2% were on native born and 15.8% were on foreign born. Of the foreign born faculty, 30.7 percent (n = 35) are foreign-born with U.S. undergraduate degrees and 69.3 percent (n=79) are foreign-born with foreign undergraduate degrees. Of the U.S. born faculty, only 1.5 percent (n=9) are U.S. born with foreign undergraduate degree. The present study defines *international faculty* as those who were born in a foreign country with a foreign undergraduate degree and *U.S. faculty* as those who were born in the U.S. or born in a foreign country with a U.S. undergraduate degree. Therefore, international faculty account for 10.8 percent (n = 79) of all the faculty. Of the international faculty, 55.7 percent (n=44) are U.S. citizens and 44.3 percent (n=35) are Non-U.S. citizens. Of the U.S. faculty, 99.5 percent (n = 644) are U.S. citizens and 0.5 percent (n = 3) are non-U.S. citizens.

Table 4.2 demonstrates percentage distributions of U.S. and international faculty. International faculty are more likely to be male than U.S. faculty. Among international faculty, more than half are White (50.7%), followed by Asian (41.3%), and African American (2.7%).

Table 4.2

Percentage distributions of U.S. and international faculty

Variable	Attribute	International	U.S.	Total (n)
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Gender	Male	67.1 %	45.7%	48.1% (344)
	Female	32.9 %	54.2%	51.8% (371)
	Total (n)	79	635	715
Race	American Indian or Alaska Native	0%	0.2%	0.1% (1)
	Asian	41.3%	2.7%	6.8% (48)
	Black or African American	2.7%	4.7%	4.5% (32)
	Hispanic	5.3%	2.4%	2.7% (19)
	Native-Hawaian or other Pacific Islander	0%	0.2%	0.1% (1)
	White	50.7%	89.9%	85.8% (608)
	Total	75	634	709
Age	21-30	0%	3.9%	3.4% (25)
	31-40	33.8%	20.4%	21.5% (156)
	41-50	23%	23.4%	22.9% (166)
	51-60	31.1%	27.7%	27.7% (201)
	61-70	12.2%	21.5%	20.1% (146)
	Over 70	0%	3.1%	2.8% (20)
	Total	74	638	725
Education	Bachelor's degree	0%	2.9%	2.6% (19)
	Master's degree	2.5%	26.3%	23.7% (172)
	Doctorate	75.9%	52.2%	54.8% (397)
	Other professional degree	21.5%	18.6%	18.9% (137)
	Total	79	646	726
Location	Monroe Park	35.4 %	52.6%	50.7% (368)
	MCV	64.6 %	47.4%	49.3% (358)
	Total (n)	79	649	728
Discipline	Professional areas (e.g., Business, health science, medicine)	57%	50.7%	51.4% (372)
	Arts and humanities (e.g., English, fine arts, religion)	7.6%	17.1%	16% (116)
	Social science and education (e.g., sociology, economics)	7.6%	16.9%	15.9% (115)
	Science, Technology, Engineering, Math (STEM) (e.g., physics)	27.8%	15.3%	16.7% (121)
	Total	79	645	724
Marriage	Married	86.1 %	77.1%	(78.0%) 566
	Never married, separated,	13.9 %	22.9%	(22.0%) 159

	divorced, widowed			
	Total (n)	79	645	724
Children	Two or more	51.9%	34.9%	36.7% (267)
	One	27.8%	16.4%	17.6% (128)
	No children	20.3%	48.8%	45.7% (332)
	Total (n)	79	649	728
Tenure status	Tenured	34.2%	33.6%	32.8% (240)
	On tenure track but not tenured	11.8%	7.4%	7.7% (56)
	Not on tenure track	53.9%	59.0%	57.2% (419)
	Total (n)	76	637	713
Rank	Instructor	6.4%	19.8%	18.4% (133)
	Assistant Professor	39.7%	32.7%	33.5% (242)
	Associate Professor	26.9%	26%	26.1% (189)
	Professor	26.9%	21.4%	22.0% (159)
	Total (n)	78	645	723
Salary	<\$41,000	1.3%	7.6%	6.9% (48)
	\$60,000	11.8%	12.6%	12.5% (87)
	\$80,000	18.4%	19.7%	19.5% (136)
	More than \$80,000	68.4%	60.2%	61.1% (425)
	Total (n)	76	620	696

Notes: For gender, Pearson Chi-Square = 12.951, $p < 0.01$; for discipline, Pearson Chi-Square = 14.986, $p < 0.01$; for race, Pearson Chi-Square = 163.112, $p < 0.001$; for age, Pearson Chi-Square = 26.763, $p < 0.000$, for education, Pearson Chi-Square = 26.774, $p < 0.001$, for location, Pearson Chi-Square = 8.238, $p < 0.005$, for discipline, Pearson Chi-Square = 14.986, $p < 0.01$, for marriage, Pearson Chi-Square = 3.32, $p < 0.1$, for children, Pearson Chi-Square = 23.278, $p < 0.001$, for rank, Pearson Chi-Square = 8.921, $p < 0.05$

More than half of international faculty (56.8%) are younger than 51 years of age, while more than half of U.S. faculty (52.3%) are over 51 years of age as represented in Table 4.2. About 76 percent of international faculty hold doctoral degrees while about 52 percent of U.S. faculty hold doctoral degrees. 65 percent of international faculty are located on MCV campus while 53 percent of U.S. faculty are located on Monroe Park campus. About 28 percent of international faculty work in STEM field while only 15.3 percent of U.S. faculty work in the STEM field. The number of international faculty working in STEM doubles the combined number of international faculty working in art and humanities, and social science and education. Compared to U.S. faculty, a higher percentage of international faculty are married (86.1% vs. 77.1%), as seen in Table 4.2. A majority of the U.S. faculty report not

having children (48.8%) while more than half of the international faculty (51.9%) report having two or more children.

Tenure data by international status in Table 4.2 shows that there is no statistical significant difference between U.S and international faculty. Interestingly, there are significant differences in the percentage of faculty employed in various ranks for U.S. and international faculty. A higher proportion of international faculty are full professors (26.9%) when compared with 21.4 percent of U.S. faculty. A higher percentage of international faculty hold assistant professor position (39.7%) in comparison to U.S. faculty (32.8%). On the contrast, a much higher percentage of U.S. faculty (19.8 %) hold instructor position in comparison to international faculty (6.4%). Salary data by international status in Table 4.2 shows that there is no difference between U.S. and international faculty (Pearson Chi-Square = 4.980, Sig=.289).

Internal factor

Internal factor includes six structural variables and two psychological variables. The six structural variables were used to characterize the faculty work environment: autonomy, communication openness, distributive justice, procedural justice, role conflict, and workload. Job satisfaction and organizational commitment were used as psychological variables.

Structural variables

Descriptive statistics for autonomy, communication openness, distributive justice, role conflict, job satisfaction, organizational commitment, and turnover intention are provided in Table 4.4. The entire faculty reported high levels of job satisfaction (mean = 3.81), and autonomy (mean = 3.70) but low levels of role conflict (mean = 2.43), distributive justice

(mean = 3.08), and job opportunity (mean = 3.18). These findings are consistent with Daly and Dee's (2006) study (Table 4.3).

Table 4.3

Descriptive statistics for work environment variables

		Mean	SD	Alpha Reliability
Autonomy	Park (2014)	3.70	.83	.72
	D.D.(2006)	3.93	.63	.82
Communication openness	Park (2014)	3.51	.74	.84
	D.D.(2006)	3.35	.86	.84
Distributive justice	Park (2014)	3.08	1.05	.95
	D.D.(2006)	2.97	1.15	.87
Role conflict	Park (2014)	2.43	1.92	.77
	D.D.(2006)	2.28	1.07	.76
Workload	Park (2014)	3.48	.89	.81
	D.D.(2006)	3.53	1.02	.81

Of the five structural variables, international faculty have higher levels of autonomy, communication openness, distributive justice, and lower levels of workload than U.S. faculty. The difference is not statistically significant.

Psychological variables

In terms of psychological variables, U.S. faculty have higher levels of job satisfaction and organizational commitment than international faculty. The difference is statistically significant ($p=.032$ for job satisfaction, $p=.088$ for organizational commitment).

Job satisfaction

Of the nine dimensions of job satisfaction identified earlier, the faculty were most satisfied with the degree of independence (with a mean value of 4.12 on a 1 to 5 scale), followed by intellectual challenge (mean = 4.09) and contribution to society (mean = 4.05). The faculty were least satisfied with salary (mean = 2.94) and opportunities for advancement

(mean = 3.26). Table 4.4 summarizes the mean and SD of nine dimensions of job satisfaction for all the faculty.

Table 4.4

Nine dimensions of job satisfaction of faculty by international status

Variable	Entire Faculty	International Faculty	U.S. Faculty	T- test	
				t-value	Sig.
Opportunity for advancement	3.26	3.41	3.26	1.17	.24
Benefits	3.67	3.62	3.68	-.55	.58
Intellectual challenge	4.09	3.96	4.13	-1.68	.09
Degree of independence	4.12	4.10	4.15	-.41	.69
Job location	3.98	3.86	4.00	-1.25	.21
Level of responsibility	4.02	4.09	4.03	.60	.55
Salary	2.94	3.10	2.92	1.26	.21
Job security	3.68	3.58	3.69	-.86	.39
Contribution to society	4.05	3.86	4.08	-2.58	.01
Overall job satisfaction	3.81	3.62	3.85	-2.15	.03

Comparison across international (Foreign-born and foreign undergraduate) faculty, and U.S. faculty members are not statistically significant at the 0.05 level except for “contribution to society” and “overall job satisfaction.” Results are in response to the following question. “Think about your principal job held during spring semester 2014, and rate your satisfaction with” Possible responses; 1 = very dissatisfied; 2 = dissatisfied; 3 = neither satisfied nor dissatisfied; 4 = satisfied; 5 = very satisfied.

The results of the t-test from the table 4.4 show that international faculty have lower levels of satisfaction as compared with U.S. faculty on all aspects of their job satisfaction except opportunity for advancement, level of responsibility and salary. In other words, international faculty have higher levels of satisfaction with opportunity for advancement, level of responsibility, and salary. However, the differences are not statistically significant. These results contradict the previous studies (e.g., Corely and Sabharwal, 2007) which show U.S. faculty are likely to express greater satisfaction with advanced opportunity, levels of responsibility, and salary than international faculty.

Organizational commitment

The organizational commitment questionnaire has seven items, which have high reliability (Cronbach's $\alpha = .90$). The results of the t-test from the table 4.5 show that international faculty have lower levels of organizational commitment as compared with U.S. faculty on all items except one (The university's values are not the same as mine).

Table 4.5

Seven items of faculty organizational commitment by international status

Items	International status	Mean	T-test	
			t-value	Sig.
I speak highly of this university to my friends	International	3.68	-2.89	.004
	U.S.	3.99		
I am not dedicated to this university (R)	International	3.71	-2.11	.036
	U.S.	3.98		
I am proud to tell others I am part of this university	International	3.77	-2.82	.005
	U.S.	4.01		
This university inspires the very best job performance in me	International	3.38	-.708	.479
	U.S.	3.46		
This university is the best of all possible place to work	International	2.81	-.555	.579
	U.S.	2.87		
I don't care about the fate of the university (R)	International	4.14	-2.195	.028
	U.S.	4.35		
This university's values are not the same as mine (R)	International	3.73	1.309	.191
	U.S.	3.57		

(R) = reversed scored item

External factor

Environmental variables

Environmental variables include job opportunity and kinship presences. International faculty have more job opportunity than U.S. faculty. The difference is statistically significant ($p < .001$). U.S. faculty has more kinship presences in the community than international faculty. The difference is statistically significant ($p < .001$).

Turnover

Turnover includes short-term turnover and long-term turnover. International faculty have higher short-term and long-term turnover than U.S. faculty. However, the differences are not statistically significant.

Short-term turnover

Table 4.6

Short-term turnover intention (How often do you look for job opportunities?)

Variable		N	Mean	SD	Std. Error	T-test		ANOVA	
						t-value	Sig.	F- value	Sig.
Total		740	2.43	0.99	.036				
Gender	Male	346	2.34	1.03	.055	2.01	.045		
	Female	372	2.49	.95	.049				
Race	White	608	2.43	.99	.040				
	Minority	103	2.41	.99	.098				
Age	21-30	25	2.44	1.04	.209			9.619	.000
	31-40	156	2.62	.94	.075				
	41-50	168	2.61	1.06	.082				
	51-60	201	2.49	.96	.068				
	61-70	144	2.05	.84	.069				
	Over 70	20	1.45	.60	.135				
Educational Attainment	Doctoral Degree	399	2.55	.99	.050	3.647	.000		
	Other Degree	329	2.28	.97	.053				
Marriage	Married	566	2.39	.99	.042				
	Not married	160	2.51	.95	.075				
Location	Monroe Park	371	2.44	1.01	.052				
	MCV	362	2.41	.97	.051				
Discipline	Professional area	376	2.29	.94	.05			5.346	.001
	Arts and Humanities	119	2.51	1.03	.09				
	Social Science and education	116	2.53	1.02	.09				
	STEM	120	2.66	1.02	.09				
Rank	Instructor	134	2.46	1.00	.086			2.290	.077
	Assistant professor	246	2.44	.99	.063				
	Associate professor	190	2.53	1.02	.074				
	Professor	160	2.26	.92	.073				
Tenure	Tenured faculty	243	2.42	.93	.060				
	On tenure track but not tenured	56	2.52	.97	.130				
	Not on tenure track	421	2.42	1.01	.049				

	Don't know/Refused	17	2.53	1.18	.286				
Income	<= \$41,000	49	2.61	1.11	.159			2.739	0.028
	< = \$60,000	88	2.58	1.09	.116				
	< = \$80,000	138	2.57	.85	.073				
	> \$80,000	427	2.33	.97	.047				
	Don't know/Refused	38	2.46	1.02	.164				
Foreign born	Foreign	116	2.52	1.05	.098				
	U.S.	614	2.41	.98	.039				
VISA status	Naturalization	71	2.41	1.04	.123				
	Permanent Resident	31	2.77	1.20	.216				
	Temporary Resident	7	2.43	.53	.202				
Citizenship	Non- U.S citizen	38	2.76	1.17	.190	2.154	.032		
	US citizen	691	2.41	.97	.037				
International status	International	79	2.53	1.13	1.271				
	U.S.	653	2.42	.97	.038				

Female faculty are more likely to look for job opportunities than their male colleagues, and the difference is statistically significant ($p < .05$). The faculty were categorized into six age groups, and the mean values of the groups were compared. Middle aged faculty (from 31 to 40, and from 41 to 50) are most likely to look for job opportunities. The difference is statistically significant ($p = .000$). Interestingly, faculty in different income groups show different levels of short-term turnover intentions. Lower income groups are more likely to look for job opportunities. The difference is statistically significant ($p < .05$). More interestingly, non-tenure track faculty are less likely to look for job opportunities than tenure track faculty, though the difference is not statistically significant.

All the academic disciplines were grouped into four categories. Faculty in STEM fields have the highest level of short term turnover (mean = 2.66), followed by social science and education, art and humanities, and professional area. The difference is statistically significant ($p < .01$). Non-U.S. citizens are more likely to look for job opportunities than U.S. citizens ($p < .05$). Among the foreign born faculty group, permanent residents are most likely to look for job opportunities, followed by temporary residents and naturalized citizens.

International faculty are more likely to look for job opportunities than U.S. faculty. However, the difference is not statistically significant.

Long term turnover

Table 4.7

Long term turnover intention (I would be very happy to spend the rest of my career with this organization, reversed)

Variable		N	Mean	SD	Std. Error	T-test		ANOVA	
						t-value	Sig.	F-value	Sig.
Total		741	2.33	.95					
Gender	Male	345	2.27	.98	.053				
	Female	373	2.35	.91	.047				
Race	White	609	2.31	.95	.038				
	Minority	103	2.32	.91	.090				
Age	21-30	25	2.96	1.06	.211			9.136	.000
	31-40	156	2.49	.93	.074				
	41-50	168	2.44	.92	.071				
	51-60	201	2.27	.99	.070				
	61-70	144	1.99	.76	.063				
	Over 70	20	1.65	.75	.167				
Educational Attainment	Doctoral Degree	400	2.40	.97	.049	2.42	.016		
	Other Degree	328	2.23	.90	.050				
Marriage	Married	566	2.28	.93	.039	-2.067	.039		
	Not married	160	2.45	.99	.078				
Location	Monroe Park	371	2.31	.90	.047				
	MCV	362	2.33	.99	.052				
Discipline	Professional area	376	2.22	.92	.048			4.038	.007
	Arts and Humanities	119	2.39	1.00	.092				
	Social Science and education	115	2.35	.87	.081				
	STEM	120	2.66	1.02	.09				
Rank	Instructor	133	2.24	.87	.076			2.296	.077
	Assistant professor	246	2.41	.99	.063				
	Associate professor	190	2.40	.89	.065				
	Professor	161	2.21	.98	.077				
Tenure	Tenured faculty	244	2.36	.95	.061				
	On tenure track but not tenured	56	2.46	.91	.122				
	Not on tenure track	420	2.28	.94	.046				
	Don't know/Refused	17	2.59	1.06	.258				

Income	<= \$41,000	49	2.47	1.06	.152				
	< = \$60,000	88	2.39	.98	.104				
	< = \$80,000	138	2.43	.87	.074				
	> \$80,000	427	2.26	.96	.046				
	Don't know/Refused	38	2.34	.81	.132				
Foreign born	Foreign	116	2.40	.922	.086				
	Native	614	2.30	.947	.038				
VISA status	Naturalization	71	2.24	.89	.105			3.8	.025
	Permanent Resident	31	2.68	1.05	.188				
	Temporary Resident	7	3	1	.378				
Citizenship	Non- U.S citizen	38	2.68	1.07	.173	2.444	.015		
	US citizen	691	2.30	.93	.036				
International status	International	79	2.48	1.00	.112				
	U.S.	653	2.30	.93	.037				

Male faculty are more likely to spend the rest of their career with the current organization than female faculty, but the difference is not statistically significant. Older faculty agree more with the statement, "I would be happy to spend the rest of my career with this organization" than younger faculty. The mean difference between age groups is statistically significant ($p < .001$). Married faculty are more likely to spend the rest of their career with the current organization. The mean difference is statistically significant ($p < .05$). When testing the difference by campus location, t-test shows that the mean of long-term turnover does not vary by location. Faculty in STEM fields have the highest level of long-term turnover (mean = 2.66). Faculty in professional areas (e.g., Business and health science) are the least likely to leave, with a mean score 2.22. The ANOVA test shows the difference is statistically significant ($p < .01$).

In terms of rank, assistant faculty has the highest level of long-term turnover (mean = 2.41), followed by associate faculty, instructor, and full faculty. The difference is statistically significant ($p < .01$). When testing the differences by tenure status, non-tenure track faculty are the least likely to leave (mean = 2.28), followed by tenured faculty (mean = 2.36) and on tenure track, but not tenured faculty (mean = 2.46). However, the difference is not

statistically significant. As it would be expected, non-U.S. citizens are less likely to stay in the long-term than U.S. citizens. The difference is statistically significant ($p < .05$).

International faculty are more likely to leave in the long-term than U.S. faculty. However, international status does not make a significant mean difference in the long-term turnover.

Summary

Levels of turnover intentions for International faculty are higher than U.S. faculty. The differences are not statistically significant. International faculty has less years in rank and organization than U.S. faculty. The differences are statistically significant. International faculty is more likely to be Asian, work in STEM, and get married. These are statistically significant than U.S. faculty. International faculty have higher levels of autonomy, communication openness, distributive justice, procedural justice and lower levels of role conflict and workload than U.S. faculty. However, international faculty have lower levels of job satisfaction and organizational commitment than U.S. faculty. The differences are statistically significant. International faculty have more job opportunity and less kinship presence than U.S. faculty. The differences are statistically significant (See Table 4.8).

Table 4.8

International vs. U.S. faculty

Variables	International Faculty	U.S. Faculty	T-test	
			t-value	Sig.
Short-term turnover intention	2.53	2.42	.990	.323
Long-term turnover intention	2.48	2.30	1.627	.104
Female	0.33	0.54	-3.592	.000
Non-Tenure-Track Faculty	0.52	0.58	-1.015	.310
Years in rank	6.28	8.63	-2.373	.018
Years in organization	9.79	12.36	-2.039	.042
Asian	0.41	0.03	13.795	.000
STEM	0.28	0.15	2.837	.005

Marriage	0.86	0.77	1.824	.069
Autonomy (Cronbach's alpha = .72)	3.81	3.73	.844	.399
Communication openness (Cronbach's alpha = .84)	3.59	3.53	.636	.525
Distributive justice (Cronbach's alpha = .95)	3.12	3.08	.244	.807
Procedural justice (Cronbach's alpha = .87)	3.20	3.14	-.626	.531
Role conflict (Cronbach's alpha = .77)	2.34	2.42	-.680	.497
Workload (Cronbach's alpha = .81)	3.46	3.49	-.318	.750
Job satisfaction	3.62	3.85	-2.146	.032
Organizational commitment (Cronbach's alpha = .90)	3.60	3.75	-1.707	.088
Job opportunity (Cronbach's alpha = .80)	3.53	3.14	3.758	.000
Kinship presence	0.19	0.62	-4.711	.000

Regression analysis

The second half of the analyses presents results of regression analyses that will help predict the faculty turnover. The quest of this research is to predict the faculty turnover intentions controlling for internal and external factors.

The dependent variable is turnover, which is composed of short-term and long-term turnover intentions. The internal factors include 1) demographic variables: international status, gender, marital status, race/ethnicity, age, salary, tenure status, rank, years in organization, and academic discipline 2) structural variables: autonomy, communication openness, distributive justice, procedural justice, role conflict, and workload and 3) psychological variables: job satisfaction, and organizational commitment. The external factors include environmental variables: job opportunity and kinship ties.

Correlation matrix

The correlation matrix showed that each structural, psychological, and environmental variable had a statistically significant relationship with both short-term and long-term

turnover in the predicted direction. Autonomy, communication openness, distributive justice, procedural justice, job satisfaction, organizational commitment and kinship presence demonstrated negative correlation with short-term and long-term turnover. Role conflict, workload, and job opportunity demonstrated positive correlation with short-term and long-term turnover.

Table 4.9
Correlation matrix

	Long-term Turnover	Autonomy	Communication openness	Distributive Justice	Procedural Justice	Role Conflict	Workload	Job satisfaction	Organizational Commitment	Kinship ties	Job opportunity
Long-term Turnover											
Autonomy	-.237**										
Communication Openness	.414***	.394**									
Distributive Justice	-.306**	.195**	.370**								
Procedural Justice	-.346**	.334**	.468**	.611**							
Role Conflict	.234**	-.280**	-.360**	-.223**	-.403**						
Workload	.155**	-.075**	-.170**	-.228**	-.133**	.267**					
Job Satisfaction	-.511**	.381**	.480**	.488**	.507**	-	-.200**				
Organizational Commitment	-.637**	.212**	.474**	.368**	.383**	-.274**	-.112**	.550**			
Kinship Ties	-.176**	.032	.098*	.088*	.107**	-.034	-.089*	.126**	.175**		
Job Opportunity	.132**	-.053	-.005	-.080*	-.061	.076	.145**	-.073	-.049	-.055	

**P<0.01, *P<0.05

	Short-term Turnover	Autonomy	Communication openness	Distributive Justice	Procedural Justice	Role Conflict	Workload	Job satisfaction	Organizational Commitment	Kinship ties	Job opportunity
Short-term Turnover											
Autonomy	-.103**										
Communication Openness	-.291**	.394**									
Distributive Justice	-.348**	.195**	.370**								
Procedural Justice	-.328**	.334**	.468**	.611**							
Role Conflict	.233**	-.280**	-.360**	-.223**	-.403**						
Workload	.154**	-.075	-.170**	-.228**	-.133**	.267**					
Job Opportunity	-.397**	.381**	.480**	.488**	.507**	-	-.200**				

Satisfaction						.346**				
Organizational	-.331**	.212**	.474**	.368**	.383**	-	-.112**	.550**		
Commitment						.274**				
Kinship	-.180**	.032	.098*	.088*	.107**	-.034	-.089*	.126**	.175**	
Ties										
Job	.169**	-.053	-.005	-.080*	-.061	.076	.145**	-.073	-.049	-.055
Opportunity										

**P<0.01, *P<0.05

To understand the variations in short-term and long-term turnover levels while controlling for various demographic, structural, and external variables, eight ordinary least square (OLS) regression analysis were performed using turnover as the dependent variable. Although ordered logistic regression is the preferred statistical technique since the dependent variable is measured at the ordinal level (e.g., Moynihan and Pandey, 2008), estimated coefficients in the ordered logit model cannot be interpreted in a similar manner as in the OLS regression equation. For example, estimated coefficient do not represent the change in the dependent variable for a one-unit change in the explanatory variable, although it is generally the case that the sign of the estimated coefficient indicates the direction of the change in the dependent variable as the explanatory variable changes (Nowell et al. 2010). Since both OLS and ordered logit analyses produced results that were not substantially different from each other in terms of the direction and significance of effects, this study is based on the results of OLS regression for ease of interpretation.

The models one, two, three and four were used to predict short-term turnover and the models five, six, seven and eight were used to predict long-term turnover. In models one and four, only personal characteristics variables were examined. Then, structural variables were added in models two and five, psychological variables were in models three and six, and finally, external variables were entered in models four and eight. The change of R² was examined as each new block of variables was put into the models.

Table 4.10

Hierarchical regression results on turnover

Variables	Standardized Beta							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Independent Variables								
International	.050	.062	.034	.005	.048	.057	.010	-.002
Female	.007	.000	.015	.009	-.035	-.045	.010	.007
Marriage	-.042	-.028	-.026	-.011	-.074 ⁺	-.055	-.057 ⁺	-.052
Race/Ethnicity (White, non-Hispanic Reference Group)	-.099*	-.114**	-.103*	-.108**	-.038	-.043	-.027	-.029
Asian, non-Hispanic								
African American, non-Hispanic	.033	.032	.021	.026	.027	.017	.027	.028
Hispanic, all races	-.015	.013	.021	.009	-.044	-.018	-.010	-.015
Native Hawaiian	-.026	-.008	-.004	-.013	-.056	-.042	-.037	-.041
Age (51-60 Reference Group)	-.019	-.001	-.013	-.023	.133**	.147***	.116**	.111**
21-30								
31-40	.091	.078	.069	.056	.100 ⁺	.089 ⁺	.059	.054
41-50	.062	.047	.055	.039	.047	.029	.042	.036
61-70	-.190***	-.162***	-.152**	-.155**	-.116*	-.084 ⁺	-.060	-.060
Over 70	-.181***	-.154***	-.135**	-.126**	-.093*	-.066	-.022	-.019
Salary (more than \$80,000 Reference Group)	.057	.021	-.003	.025	.016	-.014	-.053	-.039
Under \$41,000								
\$41,000 to \$60,000	.080 ⁺	.010	-.008	.023	.025	-.056	-.080*	-.064 ⁺
\$61,000 to \$80,000	.106*	.052	.041	.065 ⁺	.065	.007	-.017	-.005
Non-tenure	-.024	-.003	.008	.020	-.052	-.032	.025	.028
Rank (Assistant Professor Reference Group)	-.007	-.003	.010	.012	-.027	-.016	.016	.016
Instructor								
Associate Professor	.084	.057	.047	.031	.029	.005	-.014	-.022
Professor	.121*	.098	.093	.066	.051	.030	.010	-.004
Years in organization	.025	-.011	-.012	.030	-.044	-.073	-.079 ⁺	-.060
STEM	.096*	.093*	.080*	.082*	.111**	.119**	.079*	.080*
Structural variables (Model 2-4, 6-8)								
Autonomy		.034	.065	.071 ⁺		-.061	-.028	-.024
Communication openness		-.121**	-.054	-.061		-.264***	-.078*	-.081*
Distribution justice		-.220***	-.163**	-.143**		-.121*	-.013	-.003

Procedural justice			-.083	-.048	-.043		-.086 ⁺	-.012	-.010
Role conflict			.111*	.082 ⁺	.091*		.037	-.020	-.017
Workload			.017	.005	-.010		.055	.047	.040
<i>Psychological variables (Model 3-4, 7-8)</i>									
Job satisfaction				-.177**	-.173**			-.156***	-.154***
Organizational commitment				-.104*	-.092*			-.501***	-.497***
<i>External variables (Model 4 & 8)</i>									
Kinship tie					-.101*				-.033
Job opportunity					.133**				.068*
<i>Model Summary</i>									
N	581	581	581	581	581	581	581	581	581
R ²	.116	.263	.296	.318	.107	.296	.515	.520	
Adj. R ²	.080	.225	.257	.277	.070	.259	.488	.491	
R ² Change	.116***	.147***	.033***	.022***	.107***	.187***	.220***	.005 ⁺	

Significant tests, with ***<.001, **<.01, *<.05, + = .1

The first two models (Model one and five) explain about 12 percent and 11 percent respectively of the variance in turnover with international status and STEM being positively associated with turnover. Female and years in organization are negatively associated with long-term turnover and positively associated with short-term turnover. Marriage is negatively associated with both short-term and long-term turnover. Non-tenure track status is negatively associated with both short-term and long-term turnover after controlling for other variables.

As structural variables were entered in the models (Model two and six), the increase in R² is significant. Of the six structural variables, communication openness, distributive justice, and procedural justice have a negative effect on both short-term and long-term turnover after controlling for demographic and structural variables. Distributive justice has the strongest negative impact on short-term turnover (Model two), and communication openness has the strongest negative impact on long-term turnover (Model six). Role conflict and workload have a positive effect on both short-term and long-term turnover after controlling for demographic and structural variables. STEM discipline still have a positive impact on both short-term and long-term turnover after controlling for structural variables.

In models three and seven, two psychological variables, job satisfaction and organizational commitment are examined. Job satisfaction and organizational commitment have a negative impact on both short-term and long-term turnover. Job satisfaction has the

strongest negative impact on short-term turnover (Model three) and organizational commitment has the strongest negative impact on long-term turnover (Model seven) after controlling for demographic and structural variables.

Communication openness and distributive justice have a negative impact on both short-term and long-term turnover; the strengths have been decreased after examining job satisfaction and organizational commitment. Particularly, the effect of communication openness on short-term turnover is not statistically significant (Model three) and the effect of distributive justice on long-term turnover is not statistically significant (Model seven). This suggests that communication openness and distributive justice might affect turnover through job satisfaction or organizational commitment. Job satisfaction and organizational commitment are potential mediators in the models.

In models four and eight, two environmental variables were entered. Kinship ties have a negative impact on both short-term and long-term turnover. Job opportunity has a positive impact on both short-term and long-term turnover. These two environmental variables have more impact on short-term turnover than long-term turnover after controlling for internal factors. Interestingly, autonomy is positively associated with short-term turnover after controlling for other variables (Model four). Communication openness, distributive justice, and procedural justice are still negatively associated with short-term and long-term turnover after examining kinship ties and job opportunity (Model four and model eight). Particularly, the effect of distributive justice on short-term turnover is statistically significant (Model four), and the effect of communication openness on long-term turnover is statistically significant (Model eight). Role conflict is positively associated with short-term turnover (Model four) and is negatively associated with long-term turnover (Model eight) after controlling for internal and external variables.

Job satisfaction has the strongest negative impact on short-term turnover (Model four) and organizational commitment has the strongest negative impact on long-term turnover (Model eight) after examining job opportunity and kinship ties.

Table 4.11

Regression results on turnover

Short-term turnover (Model 4) (How often do you look for job opportunities outside this organization?)				Long-term turnover (Model 8) (I would be very happy to spend the rest of my career with this organization, reversed)		
Independent Variables	B	SE B	β	B	SE B	β
Constant	3.445	.421		5.543	.333	
International status	.016	.128	.005	-.006	.101	-.002
Female	.019	.079	.009	.013	.063	.007
Marital status	-.029	.098	-.011	-.127	.077	-.052
Race/Ethnicity (White, non-Hispanic Reference Group) Asian, non- Hispanic	-.403	.154	-.108**	-.101	.121	-.029
African American, non-Hispanic	.124	.178	.026	.128	.140	.028
Hispanic, all races	.050	.216	.009	-.083	.171	-.015
Native Hawaiian	-.302	.865	-.013	-.919	.684	-.041
Age (51-60 Reference Group) 21-30	-.142	.245	-.023	.634	.194	.111**
31-40	.132	.117	.056	.118	.092	.054
41-50	.092	.109	.039	.080	.086	.036
61-70	-.390	.113	-.155***	-.142	.089	-.060
Over 70	-.764	.245	-.126**	-.107	.194	-.019
Salary (more than \$80,000 Reference Group) Under \$41,000	.119	.206	.025	-.174	.163	-.039
\$41,000 to \$60,000	.070	.133	.023	-.186	.105	-.064+
\$61,000 to \$80,000	.166	.102	.065	-.011	.081	-.005
Non-tenure	.041	.089	.020	.052	.070	.028
Rank (Assistant Professor Reference Group) Instructor	.034	.126	.012	.043	.099	.016
Associate Professor	.069	.105	.031	-.046	.083	-.022
Professor	.156	.135	.066	-.008	.107	-.004
Years in organization	.003	.005	.030	-.005	.004	-.060
STEM	.213	.098	.082*	.196	.077	.080*
Structural variables						
Autonomy	.087	.050	.071 ⁺	-.028	.040	-.024
Communication openness	-.083	.064	-.061	-.105	.050	-.081*

Distribution justice	-.135	.047	-.143**	-.003	.037	-.003
Procedural justice	-.053	.063	-.043	-.012	.050	-.010
Role conflict	.093	.044	.091*	-.017	.035	-.017
Workload	-.011	.045	-.010	.043	.036	.040
Psychological variables						
Job satisfaction	-.192	.058	-.173**	-.162	.046	-.154***
Organizational commitment	-.122	.061	-.092*	-.617	.048	-.497***
External variables						
Kinship presence	-.134	.051	-.101 ⁺	-.042	.041	-.033
Job opportunity	.149	.044	.133**	.072	.035	.068 ⁺
	R Square	Adjusted R Square	F value	Sig.	N	
Short term	.318	.277	7.746	1.169E-28	581	
Long term	.520	.491	17.948	5.3309E-67	581	

Significant tests, with ***<.001, **<.01, *<.05, +<.1

This section of the analyses focuses on the entire sample of faculty (N =581). The full model explained about 32 percent of the variance in short-term turnover, with a value of $F=7.746$, sig. $F=1.169E-28$ and explained about 52 percent of the variance in long-term turnover, with a value of $F=17.948$, sig. $F=5.3309E-67$.

The results of the model from Table 4.9 suggest that being international is positively related to short-term turnover and negatively related to long-term turnover when compared with U.S. faculty after controlling for various internal and external factors. Several demographic variables used in this study revealed some interesting results. Female faculty expressed lower levels of short-term and long-term turnover than male faculty after controlling for internal and external factors. Asian faculty are less likely to express turnover than White ($p=.011$ for short-term turnover) after controlling for internal and external factors. There are no significant differences between the turnover for White, Hispanic faculty of all races, and African American faculty. Faculty age impacts faculty turnover. The youngest group (age 21-30) is less likely to express short-term turnover than middle-aged group (51-60), but the youngest group is more likely to express long-term turnover than middle-aged group (51-60) ($p=.001$). The oldest group (age 61-70 and over 70) is less likely to express short-term turnover than middle-aged group (51-60) ($p=.000$ for group 61-70, $p=.002$ for group over 70).

Salary impacted the faculty short-term turnover. Comparing with faculty who earned more than \$80,000, faculty who earned less than \$80,000 are more likely to express short-term turnover after controlling for internal and external factors. However, the direction of the salary effect on long-term turnover is different from our expectation. Faculty who earned less than \$80,000 are less likely to express long-term turnover than faculty who earned more than \$80,000 after controlling for internal and external factors.

Academic rank and tenure status also impact faculty turnover. Associate professors are likely to express higher level of short-term turnover, but lower level of long-term turnover than assistant professors after controlling for internal and external factors, but it is not statistically significant. Full professors are likely to express higher level of short-term and lower level of long-term turnover than assistant professors, but it is not statistically significant. Interestingly, non-tenure status is positively associated with short-term and long-term turnover, respectively, after controlling for internal and external factors. Discipline also impacts turnover. Particularly, STEM is positively associated with short-term and long-term turnover after controlling for internal and external factors ($p=.18$ for short-term turnover, $p=.012$ for long-term turnover).

In addition to studying the turnover by demographic status, this study also expected that faculty with high levels of autonomy, communication openness, distributive justice will have lower levels of turnover. The hypothesis was confirmed partially for the overall model. Higher levels of autonomy is associated with lower levels of long-term turnover after controlling for internal and external factors, but it is not statistically significant. Interestingly, faculty with higher level of autonomy are more likely to look for job opportunity in the short-term after controlling for internal, and external factors ($p = .076$).

Communication openness negatively influences both short-term and long-term turnover ($p=.028$ for long-term turnover). Distributive justice is negatively associated with short-term turnover and long-term turnover after controlling for various internal and external factors ($p=.000$ for short-term turnover). Role conflict is positively associated with short-term turnover ($p=.014$), but it is negatively associated with long-term turnover after controlling for internal, and external factors. Workload is negatively associated with short-term turnover, but it is positively associated with long-term turnover after controlling for internal, and external factors.

Job satisfaction and organizational commitment also impacted the faculty turnover. Faculty job satisfaction is negatively associated with both short-term and long-term turnover respectively after controlling for internal and external factors ($p=.000$). Organizational commitment is negatively associated with both short-term and long-term turnover after controlling for internal and external factors ($p=.045$ for short-term turnover and $p=.000$ for long-term turnover). Kinship ties are negatively associated with both short-term and long-term turnover after controlling for internal and external factors ($p=.009$ for short-term turnover). Job opportunity is positively associated with both short-term and long-term turnover after controlling for internal and external factors ($p=.001$ for short-term turnover and $p=.037$ for long-term turnover).

Results – comparison of international vs. U.S. faculty

To further test the differences in turnover for international and U.S. faculty members, four separate ordinary least square regression analyses were performed.

Table 4.12

Regression results on turnover (International vs. U.S. faculty)

International faculty		U.S. faculty
Independent Variables	Standardized Beta	Standardized Beta

	Short-term	Long-term	Short-term	Long-term
Female	.049	-.105	.028	.024
Marriage	.103	-.132*	-.025	-.045
<i>Race/Ethnicity (White, non-Hispanic Reference Group)</i>	-.262*	-.074	-.020	.014
Asian, non-Hispanic				
African American, non-Hispanic	.093	-.004	.027	.037
Hispanic, all races	.164	.062	-.002	-.032
Native Hawaiian			-.015	-.046
Age 21-30 (51-60 Reference Group)			-.031	.114**
31-40	.179	.186*	.052	.041
41-50	.021	.207**	.044	.019
61-70	-.378	-.067	-.140**	-.061
Over 70			-.135**	-.022
Salary (more than \$80,000 Reference Group)			.040	-.028
Under \$41,000				
\$41,000 to \$60,000	-.258	-.089	.031	-.057
\$61,000 to \$80,000	-.113	-.136*	.095*	.015
Non-tenure	.135	-.038	-.008	.025
Rank (Assistant Professor Reference Group)	.073	.023	.000	.017
Instructor				
Associate Professor	-.002	-.079	.021	-.010
Professor	.120	-.082	.058	.006
Years in organization	.361*	.111	.025	-.063
STEM	.073	.120	.072 ⁺	.057
Structural variables				
Autonomy	-.028	-.151*	.074 ⁺	-.020
Communication openness	-.148	-.084	-.042	-.085*
Distribution justice	-.366 ⁺	-.042	-.127*	.003
Procedural justice	.310	-.065	-.061	-.005
Role conflict	.193	-.037	.089 ⁺	-.019
Workload	-.020	.035	-.024	.034
Psychological variables				
Job satisfaction	-.193	-.088	-.176**	-.149**
Organizational commitment	-.269	-.568***	-.063	-.468***
External factors				
Kinship responsibility	-.126	-.051	-.099*	-.040

Job opportunity	-.046	-.053	.154***	.092*
Model Summary				
N	70	70	511	511
R ²	.648	.913	.300	.472
Adj. R ²	.407	.854	.253	.436
F value	2.690	15.431	6.403	13.344

Significant tests, with ***<.001, **<.01, *<.05, + <.1

This section of the analyses focuses on international faculty (N =70) and U.S. faculty (N = 511) separately, the results of which are presented in Table 4.10. The international faculty turnover model explained about 65 percent of the variance in short-term turnover, with a value of F=2.690, sig. F=. 002 and explained about 91 percent of the variance in long-term turnover, with a value of F=15.431, sig. F=.000. The U.S. faculty turnover model explained about 30 percent of the variance in short-term turnover, with a value of F = 6.403, sig. F=.000 and explained about 47.2 percent of the variance in the long-term turnover, with a value of F = 13.344, sig. F =. 000.

The results of the model from Table 4.12 suggest that several demographic variables used in this study revealed some interesting results. Female international faculty expressed lower level of long-term turnover than male international faculty after controlling for internal and external factors. Female U.S. faculty expressed higher level of short-term and long-term turnover than male U.S. faculty after controlling for internal and external factors. However, the effects of being female are not statistically significant.

Married international faculty are less likely to leave in the long-term than those who not married after controlling for internal and external factors (p = .037). Similarly, married U.S. faculty are less likely to leave in the short-term and long-term than those who not married after controlling for internal and external factors.

Asian international faculty are less likely to express turnover than white international faculty (p=.015 for short-term turnover) after controlling for internal and external factors.

Asian U.S. faculty are less likely to express short-term turnover than white U.S. faculty, but

they are more likely to express long-term turnover than white U.S. faculty. However, the differences are not statistically significant. There are no significant differences between the turnover for White, Hispanic faculty of all races, and African American faculty.

Faculty age impacts both international and U.S. faculty turnover. For international faculty, the age groups (31-40 and 41-50) are more likely to leave in the long-term than the reference age group (51-60) ($p=.035$ for the age group (31-40) and $p=.003$ for the age group (41-50)). For U.S. faculty, the age groups (61-70 and over 70) are less likely to leave in the short-term than the reference age group (51-60) ($p=.003$ for the age group (61-70) and $p=.002$ for the age group (over 70)).

Interestingly, salary impacted international faculty turnover positively. Comparing with international faculty who earned more than \$80,000, international faculty who earned less than \$80,000 are less likely to express short-term and long-term turnover after controlling for internal and external factors. Particularly, the international faculty who earned between \$61,000 and \$81,000 are less likely to leave in the long-term than the international faculty who earned more than \$80,000 after controlling for internal and external factors ($p=.025$). On the other hand, salary impacted U.S. faculty turnover partially and inconsistently. U.S. faculty who earned between \$61,000 and \$80,000 are more likely to leave in the short-term than U.S. faculty who earned more than \$80,000 ($p=.029$). U.S. faculty who earned less than \$60,000 are more likely to leave in the short-term and less likely to leave in the long-term than U.S. faculty who earned more than \$80,000. However, these effects are not statistically significant.

Interestingly, tenure status affects turnover in two different ways for international faculty and U.S. faculty. For international faculty, tenure status is negatively associated with short-term, but positively associated with long-term turnover after controlling for internal and

external factors. On the contrary, for U.S. faculty, tenure status is positively associated with short-term, but it is negatively associated with long-term turnover after controlling for internal and external factors. However, the effects of tenure-status is not statistically significant for both international and U.S. faculty turnover.

More interestingly, years in organization is positively associated with short-term and long-term turnover for international faculty after controlling for internal and external factors ($p = .048$ for short-term turnover). For U.S. faculty, years in organization is positively associated with short-term turnover, but it is negatively associated with long-term turnover after controlling for internal and external factors. However, the effects are not statistically significant.

For international faculty, STEM discipline is negatively associated with short-term turnover and positively associated with long-term turnover after controlling for internal and external factors ($p=.038$ for long-term turnover). For U.S. faculty, STEM discipline is positively associated with both short-term and long-term turnover after controlling for internal and external factors. However, the effects are not statistically significant.

For the structural variables, higher levels of autonomy is associated with higher levels of short-term turnover and lower levels of long-term turnover after controlling for internal and external factors ($p = .026$ for international faculty long-term turnover; $p = .093$ for U.S. short-term turnover). Higher levels of communication openness is associated with lower levels of short-term and long-term turnover after controlling for internal and external factors ($p = .038$ for U.S. faculty long-term turnover). Distributive justice is negatively associated with faculty turnover after controlling for internal and external factors ($p = .001$ for U.S. faculty short-term turnover). Distributive justice has stronger effect on short-term turnover than long-term turnover for both international and U.S faculty.

Role conflict is positively associated with short-term turnover, but it is negatively associated with long-term turnover after controlling for internal and external factors ($p = .018$ for U.S. faculty short-term turnover). On the contrary, workload is negatively associated with short-term turnover, but it is positively associated with long-term turnover after controlling for internal and external factors. However the effects of workload are not statistically significant for both international and U.S. faculty.

Job satisfaction is negatively associated with both short-term and long-term turnover for both international and U.S. faculty after controlling for internal and external factors ($p = .001$ for U.S. faculty turnover). Organizational commitment is negatively associated with both short-term and long-term turnover after controlling for internal and external factors ($p = .000$ for international and U.S. faculty long-term turnover).

Kinship ties and job opportunity have stronger effects on U.S. faculty turnover than international faculty turnover. Kinship ties are negatively associated with both short-term and long-term turnover after controlling for internal and external factors ($p = .016$ for U.S. faculty short-term turnover). Interestingly, job opportunity is negatively associated with international faculty turnover after controlling for internal and external factors. However, the effect is not statistically significant. On the contrary, for U.S. faculty, job opportunity is positively associated with both short-term and long-term turnover after controlling for internal and external factors ($p = .0002$ for short-term turnover and $p = .012$ for long-term turnover).

Moderator analysis

Autonomy

A hierarchical multiple regression was run to assess the increase in variation explained by the addition of an interaction term between international status and autonomy to a main effects model.

International status moderated the effect of autonomy on long-term turnover, as evidenced by a statistically significant increase in total variation explained of 0.6%, $F(1, 644) = 4.171, p < .042$.

International status did not moderate the effect of autonomy on short-term turnover, as evidenced by an increase in total variation explained of 0.00%, which was not statistically significant ($F(1, 645) = 0.169, p = .681$).

Simple regression lines analysis

The relationship between autonomy and long-term turnover depends on international status. There are two simple regression slopes I need to consider: (1) the relationship between autonomy and long-term turnover for international faculty; and (2) the relationship between autonomy and long-term turnover for U.S. faculty.

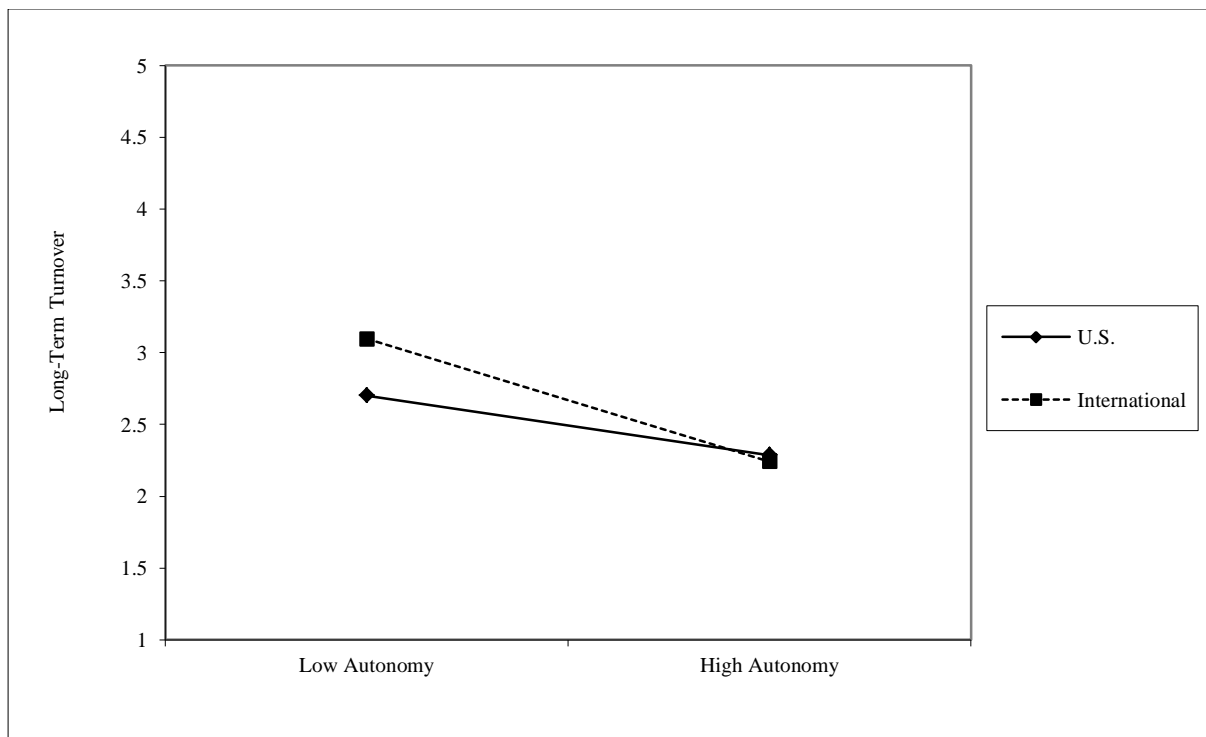


FIG. 4a. Autonomy and long-term turnover

Communication openness

A hierarchical multiple regression was run to assess the increase in variation explained by the addition of an interaction term between international status and communication openness to a main effects model. International status moderated the effect of communication openness on long-term

turnover, as evidenced by a statistically significant increase in total variation explained of 0.7%, $F(1, 641) = 5.749, p = .017$. International status moderated the effect of communication openness on short-term turnover, as evidenced by a statistically significant increase in total variation explained of 0.8%, $F(1, 642) = 6.066, p = .014$.

Simple regression lines analysis

The relationship between communication openness and long-term turnover and the relationship between communication openness and short-term turnover depend on international status respectively. There are two simple regression slopes I need to consider: (1) the relationship between communication openness and long-term turnover (short-term turnover) for international faculty; and (2) the relationship between communication openness and long-term turnover (short-term turnover) for U.S. faculty.

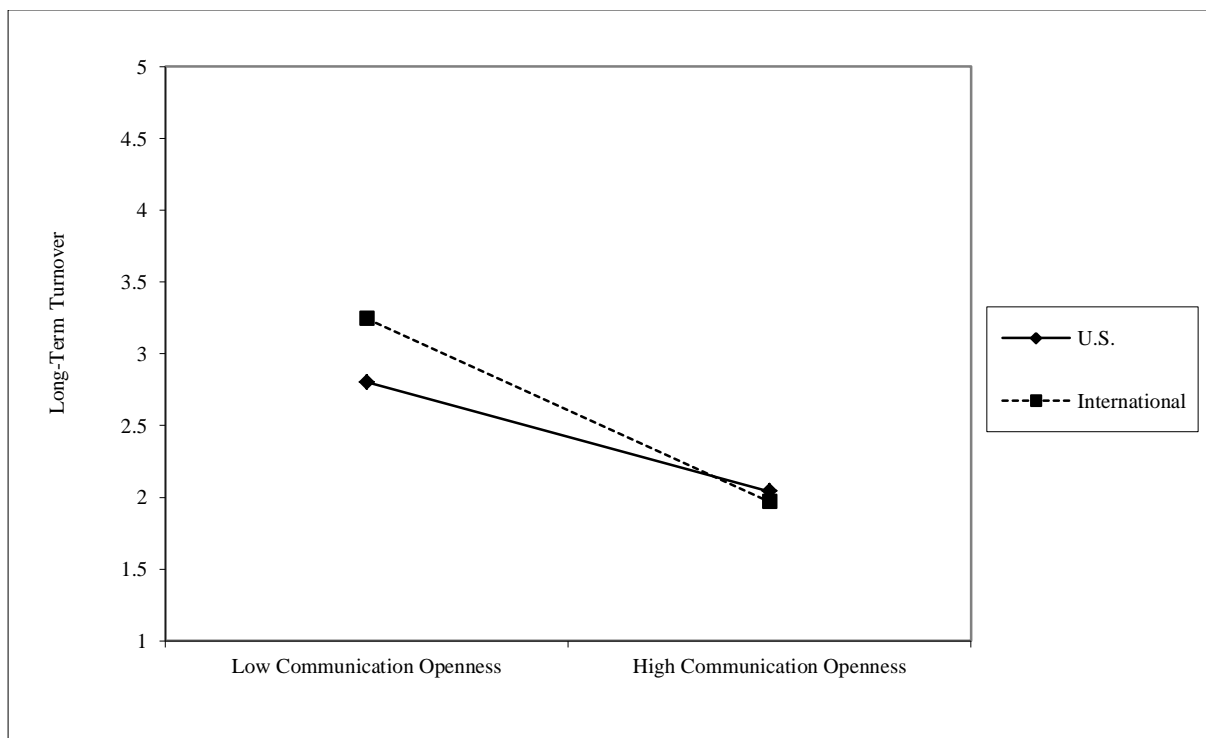


FIG. 4b. Communication openness and long-term turnover

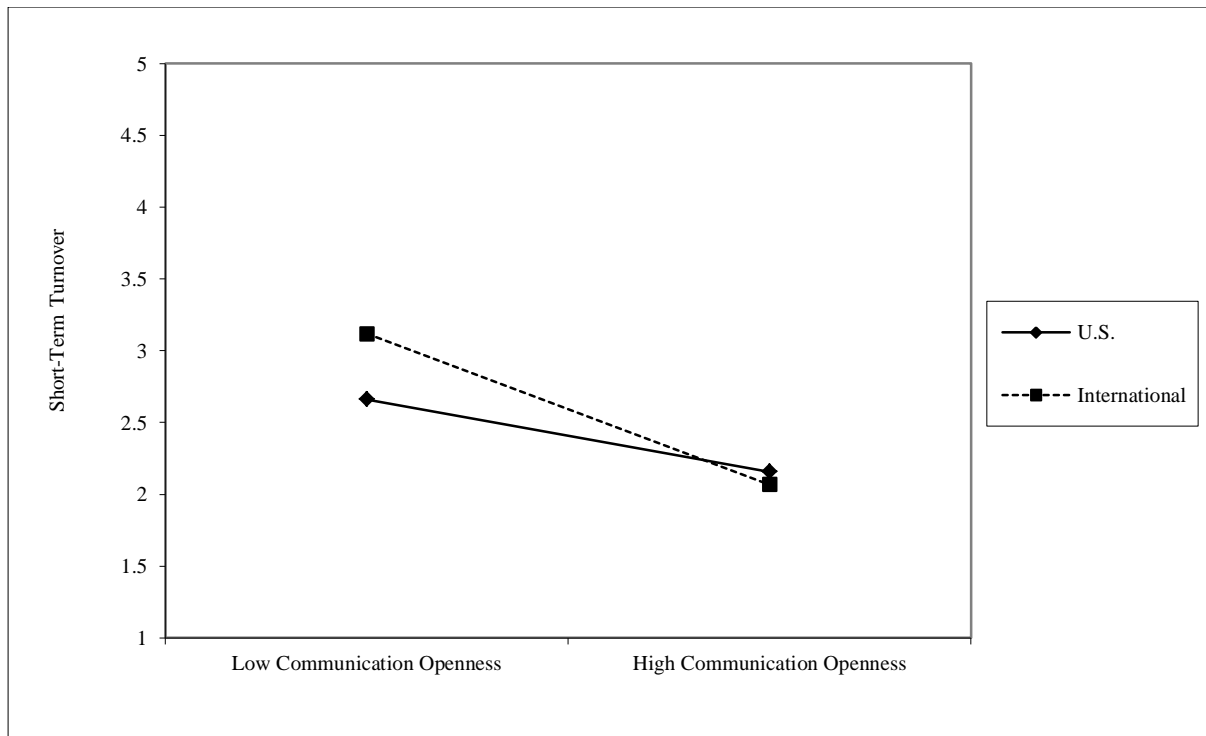


FIG. 4c. Communication openness and short-term turnover

Distributive justice

A hierarchical multiple regression was run to assess the increase in variation explained by the addition of an interaction term between international status and distributive justice to a main effects model. International status did not moderate the effect of distributive justice on long-term turnover, as evidenced by an increase in total variation explained of 0.4%, which was not statistically significant ($F(1, 646) = 3.008, p = .083$). International status did not moderate the effect of distributive justice on short-term turnover, as evidenced by an increase in total variation explained of 0.3%, which was not statistically significant ($F(1, 646) = 2.453, p = .118$).

Procedural justice

A hierarchical multiple regression was run to assess the increase in variation explained by the addition of an interaction term between international status and procedural justice to a main effects model. International status did not moderate the effect of procedural justice on long-term turnover, as evidenced by an increase in total variation explained of 0.4%, which was not statistically significant

($F(1, 590) = .325, p = .569$). On the contrary, international status moderated the effect of communication openness on short-term turnover, as evidenced by a statistically significant increase in total variation explained of 0.7%, $F(1, 590) = 5.106, p = .024$.

Simple regression lines analysis

The relationship between procedural justice and long-term turnover depends on international status. There are two simple regression slopes I need to consider: (1) the relationship between procedural justice and long-term turnover for international faculty; and (2) the relationship between procedural justice and long-term turnover for U.S. faculty.

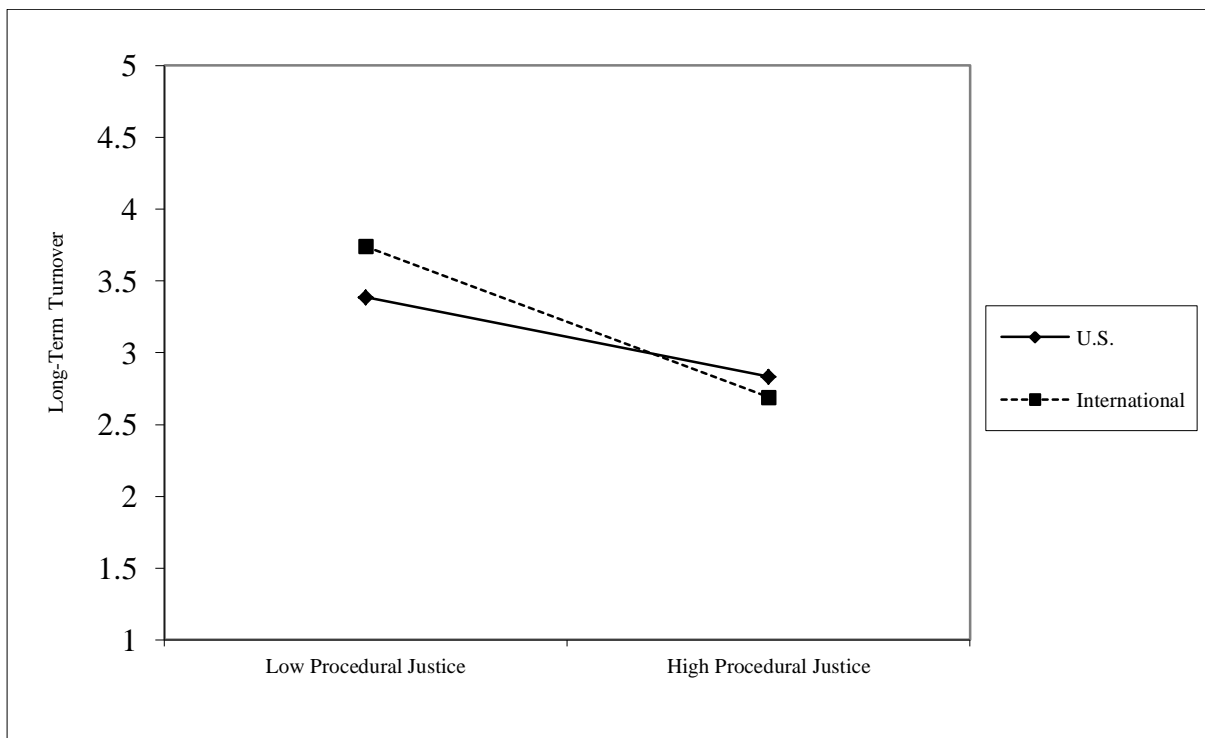


FIG. 4d. Procedural justice and long-term turnover

Role conflict

International status did not moderate the effect of role conflict on long-term turnover, as evidenced by an increase in total variation explained of 0.1%, which was not statistically significant ($F(1, 643) = 0.481, p = .488$). International status did not moderate the effect of role conflict on short-term turnover, as evidenced by an increase in total variation explained of 0.2%, which was not statistically significant ($F(1, 643) = 1.208, p = .272$).

Workload

International status did not moderate the effect of workload on long-term turnover, as evidenced by an increase in total variation explained of 0.3%, which was not statistically significant ($F(1, 645) = 1.902, p = .168$). International status did not moderate the effect of workload on short-term turnover, as evidenced by an increase in total variation explained of 0.3%, which was not statistically significant ($F(1, 645) = 2.210, p = .138$).

Job opportunity

A hierarchical multiple regression was run to assess the increase in variation explained by the addition of an interaction term between international status and job opportunity to a main effects model. International status moderated the effect of job opportunity on long-term turnover, as evidenced by a statistically significant increase in total variation explained of 1%, $F(1, 644) = 6.956, p = .009$. International status did not moderate the effect of job opportunity on short-term turnover, as evidenced by an increase in total variation explained of 0.4%, which was not statistically significant ($F(1, 644) = 2.708, p = .100$).

Simple regression lines analysis

The relationship between job opportunity and long-term turnover depends on international status. There are two simple regression slopes I need to consider: (1) the relationship between job opportunity and long-term turnover for international faculty; and (2) the relationship between job opportunity and long-term turnover for U.S. faculty.

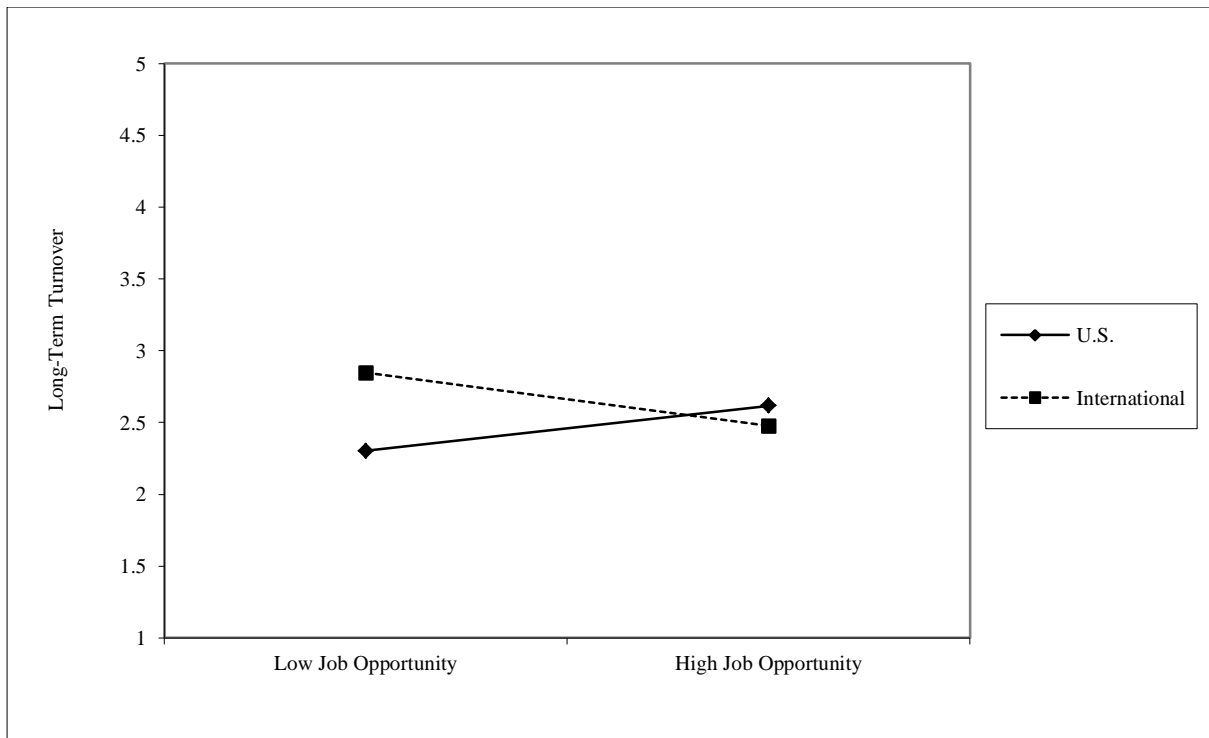


FIG. 4e. Job opportunity and long-term turnover

Kinship ties

A hierarchical multiple regression was run to assess the increase in variation explained by the addition of an interaction term between international status and kinship ties to a main effects model. International status did not moderate the effect of kinship ties on long-term turnover, as evidenced by an increase in total variation explained of 0.00%, which was not statistically significant ($F(1, 606) = 0.244, p = .622$). International status did not moderate the effect of kinship ties on short-term turnover, as evidenced by an increase in total variation explained of 0.3%, which was not statistically significant ($F(1, 606) = 2.096, p = .148$).

Hypotheses testing results

In chapter three, several hypotheses were made regarding the relationship between each independent variable and faculty turnover. This section summarizes the results of hypotheses testing. These hypotheses were derived from the research question, “whether there are differences in internal and external factors that impact faculty turnover in a 4-year urban research university in the United States.”

Table 4.13

Summary table of hypotheses

Number	Hypothesis	Verified or Falsified by Analysis?
1	International faculty have stronger intentions to leave than U.S. faculty	Partially verified for short-term turnover
2	Female faculty have stronger turnover than male faculty	Verified
3	Faculty in STEM disciplines have stronger turnover than faculty in other disciplines	Partially failed for international short-term turnover
4	Higher levels of autonomy will be associated with lower levels of intent to leave	Partially verified for long-term turnover
5	Higher levels of open communication will be associated with lower levels of intent to leave	Verified
6	Higher levels of distributive justice will be associated with lower levels of intent to leave	Verified
7	Higher level of role conflict will be associated with higher levels of intent to leave	Partially verified for short-term turnover
8	Higher levels of workload will be associated with higher levels of intent to leave	Partially verified for long-term turnover
9	Higher levels of job satisfaction will be associated with lower levels of intent to leave	Verified
10	Higher levels of organizational commitment	Verified

	will be associated with lower levels of intent to leave	
11	More job opportunity will be associated with higher levels of intent to leave	Partially verified for U.S. faculty
12	More kinship ties will be associated with lower levels of intent to leave	Verified

Table 4. 14

Summary table of moderation analysis

Attributes	Short-term turnover	Long-term turnover
<i>Internal variables</i>		
Autonomy	X	O
Communication openness	O	O
Distributive justice	X	X
Procedural justice	X	O
Role conflict	X	X
Workload	X	X
<i>Psychological variables</i>		
Job satisfaction	X	X
Organizational commitment	X	X
<i>External variables</i>		
Job opportunity	X	O
Kinship ties	X	X

Chapter summary

This chapter aims to understand the variations in short-term and long-term turnover levels while controlling for various internal and external variables. Distributive justice has the strongest negative effect on short-term turnover (Model two), and communication openness has the strongest negative effect on long-term turnover (Model six). After controlling for job satisfaction and organizational commitment, the effect of communication openness on short-term turnover is not statistically significant (Model three) and the effect of distributive justice on long-term turnover is not statistically significant (Model seven). This suggests that communication openness and distributive justice might affect turnover through job

satisfaction and/or organizational commitment. Job satisfaction has the strongest negative effect on short-term turnover (Model three & four) and organizational commitment has the strongest negative effect on long-term turnover (Model seven & eight) after controlling for internal and external variables.

In addition, this chapter aims to analyze the differences in internal and external factors that impact faculty turnover by international status. In achieving this aim, international faculty were compared to the U.S. faculty on the afore-mentioned internal and external variables that were shown in the literature to impact turnover. The result shows that structural variables such as autonomy, communication openness, and procedural justice play a bigger part in how international faculty evaluate their career with the current university than it does for U.S. faculty. On the contrary, kinship ties and job opportunity have stronger effects on U.S. faculty turnover than international faculty turnover.

CHAPTER V

DISCUSSION AND IMPLICATION

This chapter will recap the main findings of this study, discuss how the findings relate to other studies and the literature, present policy implications, and offer steps for future research.

Summary of the main findings

International status is positively related to short-term faculty turnover, but it is negatively related to long-term faculty turnover after controlling for internal and external factors. Female faculty expressed lower levels of short-term and long-term turnover than

male faculty after controlling for internal and external factors. However, female U.S. faculty expressed higher levels of short-term and long term turnover than male U.S. faculty after controlling for internal and external factors. Married faculty are less likely to leave in the short-term and long-term than those who are not married after controlling for internal and external factors. Asian are less likely to express short-term and long-term turnover than White. Faculty who are age 61-70 and over 70 is less likely to express short-term turnover than the middle aged group.

Interestingly, salary affects turnover in two different ways for international and U.S. faculty. For international faculty, salary impacts turnover intentions positively. On the other hand, salary impacts U.S. faculty turnover partially and inconsistently. More interestingly, years in organization is positively associated with short-term and long-term turnover for international faculty after controlling for internal and external factors. For U.S. faculty, years in organization is positively associated with short-term turnover, but it is negatively associated with long-term turnover after controlling for internal and external factors. However, the effects are not statistically significant.

Being in a Science, Technology, Education, or Math (STEM) discipline is positively associated with short-term and long-term turnover after controlling for internal and external factors. For international faculty, STEM discipline is negatively associated with short-term turnover and positively associated with long-term turnover after controlling for internal and external factors. For U.S. faculty, STEM discipline is positively associated with both short-term and long-term turnover after controlling for internal and external factors.

Higher levels of communication openness, distributive justice, and procedural justice are associated with lower levels of short-term and long-term turnover after controlling for internal and external factors. In addition, perceived structural conditions effect international

faculty turnover intentions more strongly than U.S. faculty turnover intentions. Job satisfaction and organizational commitment are negatively associated with both short-term and long-term turnover for both international and U.S. faculty after controlling for internal and external factors. Kinship ties and job opportunity have stronger effects on U.S. faculty turnover than international faculty turnover.

Discussion

This study sets out to examine the effects of internal and external factors on faculty turnover based on expectancy theory. The model in this study explains about 32 percent of the variance in short-term turnover and about 49 percent of the variance in long-term turnover. Daly and Dee's (2006) model was able to explain 53 percent of the variance in faculty members' intent to stay.

As it would be expected, job satisfaction is the strongest predictor of faculty short-term turnover while organizational commitment is the strongest predictor of faculty long-term turnover. This finding is consistent with previous studies (Currivan, 1999; Daly and Dee, 2006; Lawrence et al., 2013; Porter et al., 1974). Organizational commitment is more stable over time, while job satisfaction is influenced by work environment.

This study found that the faculty were most satisfied with the degree of independence. Generally, faculty allocate a high level of importance to autonomy (Lindholm et al., 2002). Autonomy might decrease faculty turnover because it provides the professional norms which prefer academic freedom (Lindholm et al., 2002; Pollicino, 1996). Faculty want to choose the method, control over the scheduling of their work, and modify their job objectives. Interestingly, autonomy had the strongest negative effect on international faculty long-term turnover. In other words, international faculty would be happy to spend the rest of their career with the current university when they have higher levels of autonomy.

On the other hand, communication openness had the strongest negative effect on U.S. faculty long-term turnover. This is consistent with Daly and Dee's (2006) study which found that communication openness had the largest effect on intent to stay. Communication openness can manage "faculty expectation for participation, ownership, and collegiality" (Daly and Dee, 2006, p. 794). A more interesting finding is that the relationship between communication openness and faculty turnover depends on international status. In other words, international and U.S. faculty members weigh communication openness differently. The relationship between communication openness and turnover intentions was stronger for international faculty than U.S. faculty. Apparently, communication openness plays a bigger part in how international faculty evaluate their career with an organization than it does for U.S. faculty. Communication openness, however, seems more closely tied to U.S. faculty perceptions of whether they stay the rest of their career with an organization.

In addition, international status moderated the effect of procedural justice on turnover intention, while international status did not moderate the effect of distributive justice on turnover intention. This finding raises an important question: why do international faculty seem to value procedural justice more than they value distributive justice? Perhaps, one of the potential reasons is that procedural justice "evokes stronger emotional responses from employees about their job and organization than distributive justice" (Hassan, 2013, p.552). Another possibility is that international faculty members have to depend on more formal procedures and systems to secure their status because of the cultural expectations and VISA/immigration procedures (Foote et al., 2008). Previous studies demonstrated that international faculty members experienced biased treatments on American college and university campus (Mamiseishvili, 2010; Seagren and Wang, 1994; Skachkova, 2007). They felt excluded from peer networks (Skachkova, 2007) and in-group membership (Seagren and Wang, 1994). This made it more difficult for them to engage in service tasks and feel a sense

of community and collegiality (Mamiseishvili, 2010). International faculty might rely on formal procedures and systems to obtain various organizational information because of these isolations from the informal mechanisms.

The result of this study does not necessarily imply that distributive justice is unimportant to faculty. As indicated in this study, distributive justice also plays a significant role in decreasing faculty turnover intention. For example, it had the strongest negative effect on U.S. faculty short-term turnover. This may suggest that U.S. faculty tend to take a short-term perspective about their status in the organization when they make judgments about distributive justice while international faculty tend to take a long-term perspective about their status in the organization when they make judgments about procedural justice.

Faculty members are facing conflicts among their teaching, research, and service roles (Bess, 1988). Faculty role conflicts might have a harmful effect on job satisfaction and organizational commitment (Daly and Dee, 2006). In this study, faculty role conflict is positively associated with short-term turnover, but it is negatively associated with long-term turnover. Role conflict can be diminished by elucidating “institutional priorities and expectations for faculty work” (Rice et al., 2000).

External variables such as kinship ties and job opportunities have more influence on U.S. faculty turnover than international faculty turnover. The smaller effect of kinship ties on international faculty turnover makes sense because kinship refers to the extent of involvement with relatives in the community in which faculty members live (Price & Mueller, 1981). If this study could measure international faculty’s kinship ties in their home countries, the result(s) might differ.

Implication for human resource management and public policy

This study of turnover intentions among faculty at an urban public research university compared international and U.S. faculty. The comparison of these two groups highlights micro human resource management and macro public policy issues.

The findings of this study underscore the importance of perceived structural conditions in the workplace among faculty members and a need for closing the perceived structural gap between international and U.S. faculty. The findings of this study suggest that autonomy, communication openness, and procedural justice play a bigger role for international faculty in evaluating their current institution than U.S. faculty. In other words, if the perceived structural gap between international and U.S. faculty is optimized, the difference of turnover intents might disappear. This result provides further insight into the interesting finding of Kim, Wolf-Wendel, and Twombly (2013), who demonstrated that citizenship matters for the difference between those who intend to leave and those who are undecided. They found that “non-U.S. citizen faculty members were less satisfied with departmental and institutional fit than U.S. citizen faculty members” (p.256).

Although many colleges and universities have placed a strong emphasis on a diverse campus climate (Philipsen, 2014), they do not pay attention to international faculty members. The lack of knowledge about “international faculty” and their concerns shows that they are “foreign” and “outsiders.” They feel isolated from “the social, professional, or academic aspects of departmental and institutional matters” (Kim, Wolf-Wendel, and Twombly, 2013, p.256). Human Resource Administrators need to examine how international faculty feel about their departments and institutions, and consider strategies to create an inclusive climate in which international faculty members feel connected to their departmental and institutional colleagues.

This study addresses not only micro human resource management issues but also macro policy issues. International faculty are imported talent from around the world. Their teaching and research has made a significant contribution to U.S. higher education and economy. On the other hand, research universities in other countries are competing for knowledge workers to strengthen their research production capacities.

This study argues that U.S. higher education needs to pay more attention to international faculty on campus and sustain talented international faculty. Retaining talented international faculty can be a strategy to maintain the quality and competitiveness of the U.S. higher education and economy.

The empirical evidences examined in this study support this argument.

First, international faculty members are more likely to leave their current institution than U.S. faculty. Even though the turnover intents does not mean turnover, it implies that some of international faculty members might leave for another institution or go back to their home country.

Second, internal factors play a bigger part in how international faculty evaluate their careers with an organization than external factors. International faculty do not consider job opportunities as much as U.S. faculty do when they are considering leaving their current institution. International faculty turnover intention is more influenced by structural conditions.

These empirical evidence imply that if international faculty members' structural expectations are met, they will likely stay in the current university. On the other hand, if their expectations are not satisfied, they are more likely to look for other options.

Limitations and opportunities

This study has a number of limitations that suggest future research opportunities. One of the major limitations is that this study may not be generalized to other colleges and universities. The study sample is comprised of faculty members at an urban public research university. Accordingly, the results do not apply to faculty members who are working in a different environment. Second, the collected data is cross-sectional. Thus, any causal interpretation would be not warranted. Future research could focus on longitudinal design to clearly examine directional relationship. Additionally, selection can be one of the major threats to internal validity. Survey participants are not randomly selected. So, the subjects' characteristics do not have the equal probability of being distributed. Third, intentions to leave do not mean actual leaving. Particularly, studies of job changing among staff in higher education do not show a strong relation between turnover intentions and actual turnover (Buck & Watson, 2002). Fourth, this study does not consider all the variables that could be studied in relation to faculty turnover. For example, perceived organizational support is missing in the study. Last, while results presented in this study represent a number of important faculty characteristics that may contribute to turnover intentions, an important next step would be to include additional interaction effects. For example, examination of interactions between international status, gender, and disciplines may provide additional insight. In addition, leadership style, and diversity management can be considered in examining faculty turnover in future studies.

Nonetheless, this study has a number of unique contributions. First, to the best of my knowledge, it is the first study that examines international faculty turnover at an urban public research university. Furthermore, it is the first comparison of job satisfaction, organizational commitment, turnover intentions of international and U.S. faculty. International faculty should not be ignored in the turnover intention model and university human resource policy considerations.

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APPENDICES

Appendix A: VCU IRB Approval Letter



Office of Research S
BioTechnol
800 East Leigh
Richmond, V

TO: Myung Jin, PhD
CC: Jaehee Park

RE: IRB [HM20001821_Ame1](#) Examining international faculty turnover intention

On 1/7/2015, the **change(s)** to the referenced research study were **approved** in accordance with 45 CFR 46.110(b)(2) by VCU IRB Panel B.

- The information found in the electronic version of this study's smart form and uploaded documents now represents the currently approved study, documents, informed consent process, and HIPAA pathway (if applicable). You may access this information by clicking the Amendment Number above.

As a reminder, the approval for this study expires on 5/31/2015. Federal Regulations/VCU Policy and Procedures require continuing review prior to continuation of approval past that date. A Continuing Review notice will be emailed to you prior to the scheduled review.

If you have any questions, please contact the Office of Research Subjects Protection (ORSP) or the IRB reviewer(s) assigned to this study.

Thank you for your continued collaboration in maintaining VCU's commitment to protecting human participants in research.

**VCU**

Office of Research Subjects
BioTechnology
800 East Leigh
Richmond, VA

TO: William Boshier
CC: Jaehee Park
FROM: VCU IRB Panel B
RE: William Boshier ; IRB [HM20001821](#) Examining international faculty turnover intention

On 6/24/2014, the referenced research study was ***approved*** by expedited review according to 45 CFR 46.110 category 7 by VCU IRB Panel B .

The information found in the electronic version of this study's smart form and uploaded documents now represents the currently approved study, documents, informed consent process, and HIPAA pathway (if applicable). You may access this information by clicking the Study Number above.

- **This approval expires on 5/31/2015.** Federal Regulations/VCU Policy and Procedures require continuing review prior to continuation of approval past that date. Continuing Review notices will be sent to you prior to the scheduled review.

If you have any questions, please contact the Office of Research Subjects Protection (ORSP) or the IRB reviewer(s) assigned to this study.

The reviewer(s) assigned to your study will be listed in the History tab and on the study workspace. Click on their name to see their contact information.

Attachment – Conditions of Approval

-
- ***Conditions of Approval:***

In order to comply with federal regulations, industry standards, and the terms of this approval, the investigator must (as applicable):

1. Conduct the research as described in and required by the Protocol.
2. Obtain informed consent from all subjects without coercion or undue influence, and provide the potential subject sufficient opportunity to consider whether or not to participate (unless Waiver of Consent is specifically approved or research is exempt).
3. Document informed consent using only the most recently dated consent form bearing the VCU IRB “APPROVED” stamp (unless Waiver of Consent is specifically approved).
4. Provide non-English speaking patients with a translation of the approved Consent Form in the research participant's first language. The Panel must approve the translated version.
5. Obtain prior approval from VCU IRB before implementing any changes whatsoever in the approved protocol or consent form, unless such changes are necessary to protect the safety of human research participants (e.g., permanent/temporary change of PI, addition of performance/collaborative sites, request to include newly incarcerated participants or participants that are wards of the state, addition/deletion of participant groups, etc.). Any departure from these approved documents must be reported to the VCU IRB immediately as an Unanticipated Problem (see #7).
6. Monitor all problems (anticipated and unanticipated) associated with risk to research participants or others.
7. Report Unanticipated Problems (UPs), including protocol deviations, following the VCU IRB requirements and timelines detailed in [VCU IRB WPP VIII-7](#):
8. Obtain prior approval from the VCU IRB before use of any advertisement or other material for recruitment of research participants.
9. Promptly report and/or respond to all inquiries by the VCU IRB concerning the conduct of the approved research when so requested.
10. All protocols that administer acute medical treatment to human research participants must have an emergency preparedness plan. Please refer to VCU guidance on <http://www.research.vcu.edu/irb/guidance.htm>.
11. The VCU IRBs operate under the regulatory authorities as described within:

- a. U.S. Department of Health and Human Services Title 45 CFR 46, Subparts A, B, C, and D (for all research, regardless of source of funding) and related guidance documents.
- b. U.S. Food and Drug Administration Chapter I of Title 21 CFR 50 and 56 (for FDA regulated research only) and related guidance documents.
- c. Commonwealth of Virginia Code of Virginia 32.1 Chapter 5.1 Human Research (for all research).

Appendix B: Research subject information and consent form

RESEARCH SUBJECT INFORMATION AND CONSENT FORM

TITLE: Examining international faculty turnover intention

VCU IRB NO.: HM20001821

PURPOSE OF THE STUDY

The purpose of this research study is to examine factors influencing international faculty turnover. International faculty members are further classified by their country of origin and citizenship status.

DESCRIPTION OF THE STUDY AND YOUR INVOLVEMENT

Data will be obtained from a questionnaire. The questionnaire will require approximately 10 minutes to be completed.

RISKS AND DISCOMFORTS

Several questions will ask about things that have happened in your workplace that may have been unpleasant. There are no possible psychological risks or discomforts.

BENEFITS TO YOU AND OTHERS

You may not get any direct benefit from this study, but, the information we learn from faculty members in this study may help VCU's Office of Planning Decision Support to improve the work environment.

COSTS

There are no costs for participating in this study other than the time you will spend in filling out questionnaires.

PAYMENT FOR PARTICIPATION

Ten participants will be randomly selected for \$25 Starbucks gift card for each.

ALTERNATIVES

The alternative is not to participate in the study.

CONFIDENTIALITY

Potentially identifiable information about you will consist of only survey. Data is being collected only for research purposes. Your data will be identified by ID numbers in a locked research area. All personal identifying information will be kept in password in a locked research area and these files will be deleted (January 1 2015). Access to all data will be limited to study personnel. A data and safety monitoring plan is established.

What we find from this study may be presented at meetings or published in papers, but any identifiable information will not ever be used in these presentations or papers.

VOLUNTARY PARTICIPATION AND WITHDRAWAL

You do not have to participate in this study. If you choose to participate, you may stop at any time without any penalty.

QUESTIONS

If you have any questions, complaints, or concerns about your participation in this research, contact:

*Jaehee Park, parkj37@vcu.edu
Dr. Myung Hun Jin, mhjin@vcu.edu*

The researcher/study staff named above is the best person(s) to contact for questions about your participation in this study.

If you have any general questions about your rights as a participant in this or any other research, you may contact:

Office of Research
Virginia Commonwealth University
800 East Leigh Street, Suite 3000
P.O. Box 980568
Richmond, VA 23298
Telephone: (804) 827-2157

Contact this number for general questions, concerns or complaints about research. You may also call this number if you cannot reach the research team or if you wish to talk with someone else. General information about participation in research studies can also be found at <http://www.research.vcu.edu/irb/volunteers.htm>.

CONSENT

Data are collected online. Therefore it would not be viable to collect signatures. The research presents no more than minimal risk of harm to participants.

Appendix C: Information sheet

Dear VCU faculty members,

I am a doctoral candidate at the Wilder School of Government and Public Affairs at Virginia Commonwealth University.

Under the guidance of Dr. Myung Hun Jin, I am examining factors contributing to faculty turnover in an urban public university for my dissertation. This study was IRB approved (VCU IRB NO.: HM20001821).

The survey questions are mainly about your satisfaction in, and commitment to your work at VCU. Participation or non-participation will not impact your relationship with Virginia Commonwealth University.

This survey should take about 10 to 15 minutes to complete.

Your participation in the survey is completely voluntary and responses will be kept anonymous. Data collected will be handled with the strictest confidentiality and no information reported will ever identify you based on your answers.

Your participation is valued and truly appreciated. Please feel free to contact me (parkj37@vcu.edu) or Dr. Myung Hun Jin (mhjin@vcu.edu) if you have any questions about my research project.

Thank you for taking the time to assist me in my educational endeavors.

Sincerely,

Jaehee Park

P.S.: Ten lucky participants will be randomly selected for \$25 Starbucks gift card for each.

Thank you in advance for your participation.

Appendix D: Survey

Survey Items

To what extent do you agree or disagree with the following statements?

Autonomy

Work method autonomy

1. I am free to choose the methods to use in carrying out my work

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Work scheduling autonomy

2. I have control over the scheduling of my work

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Work criteria autonomy

3. I am able to modify what my job objectives are (what I am supposed to accomplish)

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Communication

4. It is easy to talk openly to all of my co-workers in this university

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

5. Communication in this university is very open

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

6. I find it enjoyable to talk to other co-workers in the university

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

7. When people talk to each other in this university, there is a great deal of understanding
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

8. It is easy to ask for advice from any co-worker in this university
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Person - Organization Fit

9. My values and goals are very similar to the values and goals of my organization
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

10. I am not very comfortable within the culture of my organization
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

11. I feel a strong sense of belonging to my organization
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

12. What this organization stands for is important to me
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Similarity to work group

13. In my work group, my coworkers are similar to me in terms of age
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

14. In my work group, my coworkers are similar to me in terms of education
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

15. In my work group, my coworkers are similar to me in terms of lifestyle
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

16. In my work group, my coworkers are similar to me in terms of race and ethnic
background
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

17. In my work group, my coworkers are similar to me in terms of religion
1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Public Service Motivation

Self-sacrifice

18. Making a difference in society means more to me than personal achievements

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

19. I am prepared to make enormous sacrifices for the good of society

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Compassion

20. I am rarely moved by the plight of the underprivileged (R).

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

21. I am little compassion for people in need who are unwilling to take the first steps to help themselves

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Public interest

22. I unselfishly contribute to my community

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

23. I consider public service my civic duty

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Public-policy making

24. The compromises that are involved in public policy making don't appeal to me

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

25. I don't care much for politicians

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Followership

26. "My work help me fulfill some societal goal or personal dream that is important to me."

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

27. "I am highly committed to and energized by my work and my department, giving them my best ideas and performance."

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

28. "Instead of waiting for or merely accepting what my departmental chairperson tells me, I personally identify activities which are most critical for achieving my department's priority goals."

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

29. "When starting a new assignment, I promptly build a record of successes in tasks that are important to my departmental chairperson."

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

30. "I take the initiative to seek out and successfully complete assignments that go above and beyond my job."

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

31. "I independently think up and champion new ideas that will contribute significantly to the leader's or the organization's goals."

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

32. "I help out other coworkers, making them look good, even when I don't get any credit."

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

Please indicate how often each statement is true of leaders' behavior in your department

Leadership

33. Senior colleagues let subordinates know what is expected of them

1 = Never, 2 = Hardly ever, 3 = Seldom, 4 = Occasionally, 5 = Often, 6 = Usually, 7 = Always

34. Senior colleagues maintain a friendly working relationship with subordinates

1 = Never, 2 = Hardly ever, 3 = Seldom, 4 = Occasionally, 5 = Often, 6 = Usually, 7 = Always

35. Senior colleagues consult with subordinates when facing a problem

1 = Never, 2 = Hardly ever, 3 = Seldom, 4 = Occasionally, 5 = Often, 6 = Usually, 7 = Always

36. Senior colleagues encourage continual improvement in subordinates' performance

1 = Never, 2 = Hardly ever, 3 = Seldom, 4 = Occasionally, 5 = Often, 6 = Usually, 7 = Always

37. Senior colleagues ask subordinates for suggestions on what assignments should be made

1 = Never, 2 = Hardly ever, 3 = Seldom, 4 = Occasionally, 5 = Often, 6 = Usually, 7 = Always

38. Senior colleagues give vague explanations of what is expected of subordinates on the job

1 = Never, 2 = Hardly ever, 3 = Seldom, 4 = Occasionally, 5 = Often, 6 = Usually, 7 = Always

39. Senior colleagues consistently set challenges goals for subordinates to attain

1 = Never, 2 = Hardly ever, 3 = Seldom, 4 = Occasionally, 5 = Often, 6 = Usually, 7 = Always

40. Senior colleagues behave in a manner that is thoughtful of subordinates' personal needs

1 = Never, 2 = Hardly ever, 3 = Seldom, 4 = Occasionally, 5 = Often, 6 = Usually, 7 = Always

Distributive justice

41. To what extent are you fairly rewarded considering the responsibilities that you have?

1= not at all fairly; 2 = very little fairness; 3 = some fairness; 4 = quite fair; 5 = very fair

42. To what extent are you fairly rewarded considering the amount effort that you put forth?

1= not at all fairly; 2 = very little fairness; 3 = some fairness; 4 = quite fair; 5 = very fair

43. To what extent are you fairly rewarded considering the amount of experience that you have?

1= not at all fairly; 2 = very little fairness; 3 = some fairness; 4 = quite fair; 5 = very fair

Procedural justice

44. To what extent are the general procedures used to communicate performance feedback fair?

1 = very unfair, 2 = very little fairness; 3 = some fairness; 4 = quite fair; 5 = very fair

45. To what extent are the general procedures used to determine pay increases fair?

1 = very unfair, 2 = very little fairness; 3 = some fairness; 4 = quite fair; 5 = very fair

46. To what extent are the general procedures used to evaluate performance fair?

1 = very unfair, 2 = very little fairness; 3 = some fairness; 4 = quite fair; 5 = very fair

47. To what extent are the general procedures used to evaluate promotability fair?

1 = very unfair, 2 = very little fairness; 3 = some fairness; 4 = quite fair; 5 = very fair

To what extent do you agree or disagree with the following statement?

Role clarity

48. I know exactly what I am supposed to do my job

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

49. I understand fully which of my job duties are more important than others

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

50. My responsibilities at work are very clear and specific

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Role conflict

51. I get conflicting job requests from different administrators

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

52. I get conflicting job requests from my department chair

1 = strongly disagree, 2 = disagree, 3 = neither agree nor disagree, 4 = agree, 5 = strongly agree

Workload

53. I do not have enough time to get everything done on my job

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

54. My workload is too heavy for my job

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

55. I have to work very fast on my job

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

56. During a typical week on your principal job, how many hours did you work?

Number of hours worked per week ____

Productivity

57. During the past two years,

What is the total number of presentations and publications you have authored including both solo responsibility and joint responsibility? ____

58. What was your total credit hours per week teaching classes during the fall 2013 and spring 2014? ____

59. What was your total number of administrative committees a faculty member served on during the fall 2013 and spring 2014, including curriculum committees, personal committees, and governance committees at department, college and institution levels? ____

To what extent do you agree or disagree with the following statement?

60. I am very productive in research

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

61. I am very productive in teaching

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

62. I like teaching

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

63. I am very productive in service

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Job satisfaction

For question 64-73, think about your principal job held during Spring semester 2014, and rate your satisfaction with:

64. Opportunities for advancement?

1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied

65. Benefits?

1=very dissatisfied, 2=dissatisfied, 3=neither satisfied nor dissatisfied, 4=satisfied, 5=very satisfied

66. Intellectual challenge?

1= very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied

67. Degree of Independence?

1= very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied

68. Job location?

1= very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied

69. Level of responsibility?

1= very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied

70. Salary?

1= very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied

71. Job security?

1= very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied

72. Contribution to society?

1= very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied

73. Overall job satisfaction?

1= very dissatisfied, 2 = dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = satisfied, 5 = very satisfied

Organizational commitment

To what extent do you agree or disagree with the following statements?

74. I speak highly of this university to my friends

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

75. I am not dedicated to this university (R)

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

76. I am proud to tell others I am part of this university

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

77. This university inspires the very best job performance in me

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

78. This university is the best of all possible places to work

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

79. I don't care about the fate of the university (R)

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

80. This university's values are not the same as mine (R)

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Perceived Job opportunity

81. There are plenty of good academic jobs that I could have inside my metropolitan area

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

82. There are plenty of good academic jobs that I could have outside my metropolitan area

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

83. Given the state of the academic job market, finding a job would be very difficult for me

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

84. It would be difficult for me to find an academic job that I like as well as my job at the University

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

85. There is at least one good academic job that I could begin immediately if I were to leave the university

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

86. I have job opportunity outside of academia

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

Turnover intention

87. I would be very happy to spend the rest of my career with this organization

1=strongly disagree, 2=disagree, 3=neither agree nor disagree, 4=agree, 5=strongly agree

88. How often do you look for job opportunities outside this organization?

1 = never, 2 = not very often, 3 = sometimes, 4 = very often, 5 = constantly

Compensation

89. What is your annual income level?

1 = under \$41,000; 2 = \$41,000 to \$60,000; 3 = \$61,000 to \$80,000; 4= more than \$80,000; 5= "Don't know/Refused"

90. From the list below, please select the one option which best describes your positions with this organization.

1=Classified staff; 2= Administrative & Professional faculty; 3= Teaching & Research faculty; 4="Don't know/Refused"

91. What is your faculty rank?

1 = instructor/lecture or the equivalent (e.g., post-doctoral, teacher)

2 = Assistant professor or the equivalent (e.g., research associate or assistant)

3 = Associate professor or the equivalent (e.g., research fellow, scientist)

4 = Professor or the equivalent (e.g., chairperson, director/head/coordinator/executive)

92. How many years have you been in this rank/title? ____

93. What is your tenure status?

1= tenured faculty

2= on tenure track but not tenured

3= not on tenure track

4= "Don't know/ Refused"

94. How many years have you been in the current organization?

95. Where is your current job located?

1 = Monroe Park Campus, 2 = MCV Campus

96. What is your academic area?

1 = Professional areas (e.g., Business, health science, medicine), 2 = Arts and humanatics (e.g., English, fine arts, religion), 3 = Social science and education (e.g., sociology, economics), 4 = Science, Technology, Engineering, Math (STEM) (e.g., physical science, mathematics, statistics)

97. What is your marital status?

1 = Married

2 = Never married, Separated, Divorced, Widowed

98. How many children do you have at home

1 = Two or more children, 2 = one child, 3 = No children

99. Do you have kin in the community?

1 = Kin present, 2 = Kin not present

100. Does your spouse have kin in the community?

1 = Kin present, 2 = Kin not present

101. Were you born in the U.S.?

1 = Yes

2 = No

102. Are you a

1 = U.S. citizen

2 = Non-U.S. citizen

103. (If U.S. citizen)

Mark one answer

1 = Born in the United States, Puerto Rico, or another U.S. territory

2 = Born abroad of U.S. citizen parent(s)

3 = By naturalization

4= N/A

104. (If Non-U.S. citizen)

Make one answer

1 = With a permanent U.S. Resident Visa (Green Card)

2 = With a temporary U.S. Resident Visa

3= N/A

105. Country of citizenship _____

106. Are you originally from English speaking countries?

1 = Yes

2 = No

3 = N/A

107. What is your gender?

1 = Male

2 = Female

3= Transgender

108. Please select the category that best indicates your age

1 = 21-30, 2 = 31 – 40, 3 = 41-50, 4 =51-60, 5 = 61 – 70, 6 = Over 70, 7 = Don't know/ Refused

Please choose one choice

109. What is your highest educational level?

1 = Bachelor's degree (e.g., BS, BA, AB)

2 = Master's degree (e.g., MS, MA, MBA)

3 = Doctorate (e.g., PhD, DSc, EdD)

4 = Other professional degree (e.g., JD, LLB, MD, DDS, DVM)

110. Did you receive your Bachelor degree from a U.S. institution?

1 = Yes

2 = No

3 = N/A

111. Did you receive your doctoral degree from a U.S. institutions?

1 = Yes

2 = No

3 = N/A

112. Are you Hispanic or Latino? (A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race.)

1. No, not Hispanic or Latino. 2. Yes, Hispanic or Latino

113. How would you describe yourself?

1. American Indian or Alaska Native

2. Asian

3. Black or African American

4. Native Hawaiian or Other Pacific Islander

5. White

114. Please select the option that best indicates your sexual orientation

1 = Bisexual; 2 = Gay/Lesbian; 3 = Heterosexual; 4 = Questioning; 5 = Other; 6 = "Don't know/Refused"