

Changes in Academics' Identity, Job Satisfaction, and Job Stress between 1992 and 2018 in South Korea

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Abstract. This study analyzed the association between academic identity, job satisfaction and stress over the last three decades. This study found that most Korean academics have a dual identity as researcher and teacher but tend to prefer research to teaching. In addition, we found that performance-based management practices at universities have strengthened the researcher identity during last three decades. Finally, this study found that while academic identity is not associated with academics' job satisfaction, those who identify as researchers are likely to experience higher stress. This study has implications for studying academic identity in relation to the critical topics of job satisfaction and job stress, which are core concepts of organizational studies.

Keywords: academic identity, job satisfaction, job stress, performance-based management, South Korea

Introduction

Changes in academic work environments impact academics' identities, their roles, job satisfaction, and job stress. Shin and Jung (2014) found that managerial reforms have increased university faculty's workloads and administrative work, and affect academics' job satisfaction and job stress. In South Korea, neoliberal policies such as the Brain Korea 21 (BK21) Project, which was launched in 1999, have fostered research-oriented universities since the 1990s. The BK21 Project changed the research environment of Korean universities, leading to new expectations for academics' research performance (Shin & Lee, 2015). The emphasis on research as a criterion in faculty appointment and promotion is also tied to increased competitiveness and attention to global rankings. Such performance-based management can force academics to focus on research over teaching (Deem, 2006). As Billot and King (2015) observed, "how academics perceive and react to their environment has an impact on their academic identity and their actions in the workplace" (p.833).

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Previous studies have focused on the changes in academic identity in changing academic environments (Billot & King, 2017; Clegg, 2008; Henkel, 2000, 2002; Levin & Shaker, 2011), but fewer have focused on the association between academic identity, their job satisfaction and job stress. Academic identity is influenced not only by individuals' values and beliefs, but also by institutional environments and cultures. In addition, identity affects individual job satisfaction and stress (Day et al., 2006). Identity confusion is a product of an environment in which one is not recognized in the area most important to oneself (Bess, 1977), with effects on one's work, job satisfaction, and stress level. Although various studies have explored academic identity from personal, environmental, and institutional perspectives (e.g., Billot, 2010; Billot & King, 2017; Clegg, 2008; Fitzmaurice, 2013; Henkel, 2002; Levin & Shaker, 2011), few studies have offered in-depth discussions on the differences in behavioral patterns, job satisfaction, and stress associated with academic identity. This study analyzes that how academic identity has changed during the rapidly changing academic environments, and whether academic identity is associated with job satisfaction and stress in South Korea. The two main research questions are as follows.

Research question 1:

How have academics' identities changed in the changing academic environment during last three decades?

Research question 2:

Is there an association between academic identity, job satisfaction and job stress?

Theoretical background

Changes in academic identity

This study defines identity as "individuals' continuing efforts to understand who they are in the past, present, and future" borrowing from Geijsel and Meijers (2005, p.423). "Identity" incorporates people's sense of who and what they are in relation to others, and their interactions in social relations between themselves and others (Giddens, 1991). Thus, identity is not fixed but formed and changed through dynamic processes, varying according to context (Billot, 2010; Fitzmaurice, 2013; Henkel, 2002).

In professional contexts, identity is influenced, modified, and transformed by past experiences and present conditions related to the norms of the professional society surrounding the individual. Education and research, the core activities of academia, tend to be defined as academics' identities (Baldwin, 1990; Boyer, 1990; Henkel, 2000; McAlpine et al., 2014), with variations depending on specific local professional and institutional contexts, such as the mission and goals of a particular university (Billot & King, 2017).

Universities have been represented by the groups of academics, whose lives are closely related to

their universities (Clark, 1987). Shared governance, collegiality, and academic freedom are traditional values defining the identity of academics (Winter, 2009). With the emergence of neoliberalism, however, competition among universities and individuals has led to the rising importance of evaluations and rankings (Leišytė, 2016). In particular, university policies based on economic value, efficiency, and the logic of competition, such as performance-based management, external resource generation, and strategic resource investments, have fundamentally changed the traditional values of universities.

In the domain of education, professors are now expected not only to teach but to participate in service and administrative activities (Diamond & Adam, 1995; Kreber & Cranton, 2000). In the domain of research, the publication of journal articles over a short period of time tends to be more highly valued than the slower production of a quality academic book (Deem & Brehony, 2005; Shin & Jang, 2013). Furthermore, as the educational and research activities of universities become more complex, professors are also increasingly evaluated by their success in obtaining external research funding, and their service and administrative activities. This shift in institutional priority has been driven by increased government initiatives in higher education (Clegg, 2008), which in turn have forced universities and academics to compete in order to gain external resources while simultaneously subjecting them to government control and surveillance (Henkel, 2005).

The professional role of academics and the freedom of academics are challenged by managerialism. As academic identity becomes more complex, academics have grown increasingly concerned with research rather than teaching because performance-driven evaluation is mostly based on research performance (Deem, 2006; Whitchurch, 2019; Whitchurch & Gordon, 2010). As a consequence, academics in corporate management environments experience dissonance and disengagement when they feel forced to compromise their values and professional roles as teachers and researchers, as Winter (2009) pointed out.

Academics' identity and their priority for work

Academic identity is closely related to professional activities and performance (Antony, 2002; Austin, 2002). Because identity is strongly tied to academics' past experiences, their identity is affected by their perception of the role of professional activities in their own doctoral and post-doctoral experiences. For instance, in the hard disciplines, academics are socialized into a culture that strongly emphasizes research competence.

Academics' responsibilities are classified by the three missions of education, research, and service (Arimoto, 2014), but their identities tend to be tied to education and research (Henkel, 2000). Which of these is preferred by a given individual will differ according to occupational and institutional contexts such as academic field and specific university mission, as well as individual values and beliefs (Billot & King, 2017). Academics who prefer research tend to invest more time in research and achieve higher research outcomes (Shin & Cummings, 2010; Stack, 2003). Those who prefer

teaching tend to spend their time mainly on teaching activities and pay more attention to the educational satisfaction of students (Leišytė et al., 2009; Schimank & Winnes, 2000).

The preference for teaching or research is influenced by academic career. In his study on a research-focused university in South Korea, Shin (2011) found that young academics prefer research while seniors prefer teaching. As they try to address conflicting priorities, young academics in particular may experience difficulty in allocating their time between teaching and research (Blackburn et al., 1991; Marbach-Ad et al., 2013). Such conflicts are more prominent if they consider their role and identity to be that of an educator rather than a researcher.

Academics' identity, their job satisfaction and stress

Academia has been recognized as a profession that offers a high degree of job satisfaction, with professional autonomy and academic freedom (e.g., Houston et al., 2006). "Job satisfaction" refers to individuals' positive attitudes or perception of value regarding a job, its role, and the associated work (Kalleberg, 1977), and role clarity is one of the best predictors of job satisfaction (Glisson & Durick, 1988). Highly satisfied academics have been shown to perform well in a wide range of academic activities and have been considered the most important resource of a university (Gappa et al., 2007). However, while academics were once relatively autonomous in the academic field, their academic freedom and job security began to be threatened as many higher education systems adopted corporate-style management (e.g., Halsey, 1992; Whitchurch, 2019). Mass higher education and neoliberalism both push universities to run efficiently, and as a result, managerialism has been emphasized in place of the collegiality that traditionally dominated universities.

Roles once undertaken mainly by tenured full-time professors are being allocated to contracted temporary employees (Bryson & Barnes, 2000; Shin et al., 2014). One effect of this is that more academics must make do with unstable employment in non-tenure-track positions (usually teaching-only or research-only). At the same time, publication plays a greater role in appointments and promotions, which has led to a climate that stresses research over teaching (Han & Kim, 2017). The 'Faculty Perception Survey in 2018' of Korean professors found that the major cause of the stress was 'the research burden' (26%), followed by future job prospects (36%) (Lee, 2018). A heavy emphasis on research reduces the amount of time and energy they can invest in their teaching (Leišytė, 2016). This change has led to a greater emphasis on the academic identity of a researcher which in turn means that academics with a teacher identity experience role conflict. The role conflict has negative influences on job satisfaction (Tarrant & Sabo, 2010).

In this academic environment, time constraints for both research and teaching become problematic and causes stress for academics (Murray, 2008). This is especially true for junior academics (e.g., Shin, 2011). Shin and Jung (2014) emphasized that a university managerial culture based on evaluation and accountability is the main source of job stress for academics. Hence, these changing academic work environments caused by managerialism affect academic identity, while

reducing job satisfaction and increasing stress (Houston et al., 2006; Olsen, 1993; Shin & Jung, 2014). It is clear that how individuals develop and maintain their academic identities in the changing academic environment will have a significant impact on their job satisfaction and stress, as well as their positioning in institutions.

Methodology

Data

The data used in this study were obtained from the data collected by a Korean research team as part of the International Survey of the Academic Profession (Carnegie survey) in 1992, the Changing Academic Profession (CAP) Survey in 2008, and the Academic Profession in the Knowledge Society (APIKS) Survey in 2018. All three surveys employed a similar basic comparative questionnaire, covering academics' career and professional situations, general work situations and activities, teaching and research, management, and personal background. However, some questionnaire items were revised or added in each subsequent survey. Table 1 shows the population and response rate for the three surveys. The data were collected through stratified sampling for the 1992 survey, and random sampling for the 2008 and 2018 surveys. The sample is broadly representative of the population of full-time professors affiliated with four-year universities in South Korea by discipline, gender, and academic rank.

Table 1. Population and response rate

	1992	2008	2018
Population	26,365	52,763	66,795
Sample	3,295	6,827	12,714
Full-time academics response	902	900	847
Response rate	27.37%	13.18%	6.66%
Survey method	Paper survey	On-line survey	On-line survey

Variables and analytical strategy

This study applied two analytical strategies in accordance with its research purposes. The first strategy employs descriptive statistics to explore changes in academics' identity, job satisfaction, and job stress in the changing academic environments over the last three decades.

First, changes in academics' identity are examined in terms of preferences for teaching or research, as measured by the question, "Regarding your own preferences, do your interests lie primarily in teaching or research?" Of the four choices of responses given, we consider "primarily in

teaching” to indicate a teacher identity, and “primarily in research” to indicate a researcher identity. We classify the remaining two choices, “in both but leaning towards teaching” and “in both but leaning towards research,” as a dual identity.

Second, the job satisfaction of academics was measured by the question, “How would you rate your overall satisfaction with your current job?” in the case of the 1992 and 2008 surveys. For the 2018 survey, it was measured as the mean of ratings on three 5-point Likert-scale survey items: satisfaction with current employment situation, current work situation, and current overall professional environment. Job stress was measured by ratings on 5-point Likert-scale item: “My job is a source of considerable personal strain.”

The 1992 survey questionnaire items on academic governance were different from those in the 2008 and 2018 surveys; therefore, to examine changing academic environments, this study uses data from the two later surveys (2008 and 2018 surveys), conducted one decade apart. Changes in shared governance and managerialism were assessed by ratings on 5-point Likert-scale survey items. Two survey items address shared governance: “at my institution, there is good communication between management and academics” and “at my institution, there is collegiality in decision-making processes.” This study considers two aspects of managerialism: top-down management and performance-based management. The item addressing the former is: “at my institution, there is a top-down management style.” For the latter, the 2008 survey had one item: “at my institution, there is a strong performance orientation” while the 2018 survey had two items: “at my institution, there is a strong teaching performance orientation” and “at my institution, there is a strong research performance orientation.”

This study applied ordinary least squares (OLS) regression analysis based on the 2018 survey data to explore the association between academic identity and academics’ job satisfaction and stress.

For the regression models, the dependent variables were job satisfaction and stress. The independent variable was academic identity, classified as dual identity, researcher identity, or teacher identity. Teacher identity was used as a criterion variable.

Demographic background, academic background, affiliation, empowerment, shared governance, managerialism, and institutional characteristics were controlled. Details of variables and measures are reported in Table 2, and the research models are represented as follows:

$$Y (\text{Job satisfaction, Job stress}) = f (\text{academic identity, demographic background, academic background, affiliation, empowerment, shared governance, managerialism, institutional characteristics})$$

Table 2. Variables and measures

Variables		Measurement
• Independent Variables		
Academic identity		Dual identity (both research and teaching preference), Researcher identity (research preference), Teacher identity (teaching preference; criterion variable)
Demographic background	Gender	Male = 1; female = 0
	Age	2018 – birth year
	Marriage	Married = 1; single = 0
Academic background	Rank	Professor, Associate professor, others (criterion variable)
	Tenure track	Tenure track = 1; non-tenure track = 0
	Country of PhD training	Overseas university = 1; Korean university = 0
	Postdoctoral fellowship	Yes = 1; No = 0
	Discipline	Hard discipline = 1; soft discipline = 0
Affiliation		Mean of three APIKS survey items on respondents' feeling of affiliation to their (1) academic discipline/field, (2) department, and (3) institution (5-point Likert scale)
Empowerment		Mean of three APIKS survey items on respondents' perception of their own level of influence to shape key academic policies at the (1) department level, (2) faculty level, and (3) institutional level
Shared governance	Collegiality	Mean of two APIKS survey items: (1) "at my institution, there is good communication between management and academics," (2) "at my institution, there is collegiality in decision-making processes" (5-point Likert scale)
Managerialism	Top-down management	"At my institution, there is a top-down management style" (5-point Likert scale)
	Performance-based management	Mean of two APIKS survey items: (1) "at my institution, there is a strong teaching performance orientation," (2) "at my institution, there is a strong research performance orientation"
Institutional characteristics	Sector	Public = 1; private = 0
	University ranking	Within 200 in the World University Rankings = 1; other = 0
• Dependent Variables		
Job satisfaction		Mean of three APIKS survey items on satisfaction with (1) current employment situation, (2) current work situation, (3) current overall professional environment (5-point Likert scale)
Job stress		"My job is a source of considerable personal strain" (5-point Likert scale)

Results

Descriptive statistics

Table 3 presents the descriptive statistics of the samples in this study. The total number of respondents was 902 in 1992, 900 in 2008, and 847 in 2018, respectively. Between 1992 and 2018, the proportion of female professors among respondents increased from 13.00% to 28.52%, and the proportion of professors in the hard disciplines increased from 46.90% to 54.55%.

Table 3. Descriptive statistics of the three survey datasets

Variables		1992	2008	2018
Gender	Male	767 (87.00%)	734 (81.56%)	594 (71.48%)
	Female	116 (13.00%)	166 (18.44%)	237 (28.52%)
Age	60 or more	10 (1.11%)	51 (5.67%)	129 (15.67%)
	50 to 59	397 (44.16%)	270 (30.03%)	295 (35.84%)
	40 to 49	305 (33.93%)	435 (48.39%)	313 (38.03%)
	Below 40	187 (20.80%)	143 (15.91%)	86 (10.45%)
Rank	Professor	323 (36.01%)	362 (40.22%)	381 (44.98%)
	Associate professor	319 (35.56%)	210 (23.33%)	198 (23.38%)
	Assistant professor	221 (24.64%)	233 (25.89%)	205 (24.20%)
	Lecturer and others	34 (3.79%)	95 (10.56%)	63 (7.44%)
Discipline	Hard discipline	423 (46.90%)	405 (45.15%)	462 (54.55%)
	Soft discipline	479 (53.10%)	492 (54.85%)	385 (45.45%)
Total		902 (100.00%)	900 (100.00%)	847 (100.00%)

Table 4 shows descriptive statistics for the regression model based on data from the 847 respondents to the 2018 survey.

Table 4. Descriptive statistics for the regression model of the 2018 survey data

Variables		No	%
Academic identity	Dual identity I (both, but leaning towards teaching)	251	29.63
	Dual identity II (both, but leaning towards research)	460	54.31
	Researcher identity	86	10.15
	Teacher identity	50	5.90
Gender	Male	594	71.48
	Female	237	28.52
Marriage	Married	731	88.18
	Single	98	11.82
Rank	Professor	381	44.98
	Associate professor	198	23.38
	Others	268	31.64
Tenure tack	Tenure track	754	89.02
	Non-tenure track	93	10.98
Country of PhD training	Overseas PhD	304	37.39
	Domestic PhD	509	62.61
Postdoctoral fellowship	Yes	281	34.48
	No	534	65.52
Research preference	Research preference	546	64.46
	Teaching preference	301	35.54

Discipline	Hard discipline	462	54.55
	Soft discipline	385	45.45
Sector	Public university	261	30.81
	Private university	586	69.19
University ranking	Within 200 rankings	204	24.14
	Other	641	75.86

	N	Mean	SD	Max	Min
Age	824	50.25	7.97	66	31
Affiliation	847	4.13	0.62	5	1
Empowerment	737	2.97	0.91	5	1
Shared governance	737	2.50	0.89	5	1
Top-down management	737	3.66	1.06	5	1
Performance-based management	737	3.75	0.75	5	1
Job satisfaction	847	3.02	0.90	5	1
Job stress	847	3.63	1.00	5	1

Changes of academic identity and academic environments

Table 5 presents the data on changes in the academic environment in terms of shared governance and managerialism during the decade from 2008 to 2018. Faculty members' perceptions of shared governance were slightly decreased but their perceptions of top-down management and performance-based management at their affiliated university remained high at 3.66 and 3.75 in 2018.

Table 5. Changes in the academic environment

Academic environment	2008	2018
	Mean (SD)	Mean (SD)
Shared governance	2.65 (1.08)	2.50 (0.89)
Top-down management	3.48 (0.99)	3.66 (1.06)
Performance-based management	3.74 (0.86)	3.75 (0.75)

As shown in Table 6, the majority of Korean academics prefer both teaching and research, but lean towards research (dual identity II), and the number of those with a researcher identity (i.e., their primary preference is research) has increased over the past three decades. In short, most Korean academics prefer research to teaching.

Table 6. Changes of academic identity

Preference between teaching and research	1992	2008	2018
	No. (%)	No. (%)	No. (%)
Dual identity I (both, but leaning towards teaching)	351 (39.75)	256 (28.51)	251 (29.63)
Dual identity II (both, but leaning towards research)	441 (49.94)	544 (60.58)	460 (54.31)
Researcher identity	50 (5.66)	67 (7.46)	86 (10.15)
Teacher identity	41 (4.64)	31 (3.45)	50 (5.90)
Total	883 (100.00)	898 (100.00)	847 (100.00)

Changes in academic identity and job satisfaction and stress

We analyzed the changes in job satisfaction and stress over the last three decades, and their relationship to academic identity. As shown in Table 7, job satisfaction increased from 1992 to 2008 but noticeably decreased in 2018. This indicates that current university faculty have relatively lower job satisfaction than their colleagues in the past. Job stress also increased from 1992 to 2008, but slightly decreased in 2018.

Table 7. Job satisfaction and job stress

Job satisfaction and job stress	1992	2008	2018
	Mean (SD)	Mean (SD)	Mean (SD)
Job satisfaction	3.55 (0.75)	3.95 (0.81)	3.02 (0.90)
Job stress	3.22 (1.24)	3.85 (0.98)	3.63 (1.00)

We also used OLS regressions to analyze the association between academic identity and job satisfaction and stress. As shown in Table 8, academic identity is not associated with academics' job satisfaction but a researcher identity is associated with job stress.

Among the control variables, academic background such as academic rank and employment contract style are also significant for explaining job satisfaction. For example, professors and associate professors have significantly higher job satisfaction than assistant professors, full-time lecturers, or research professors. Professors with tenure-track positions have higher job satisfaction than those in non-tenure-track positions. Affiliation and shared governance have statistically significant association with job satisfaction as well. Professors affiliated with highly ranked universities are more likely to have higher job satisfaction than others.

In terms of job stress, some demographic factors such as gender and age are important. Female professors are likely to have higher job stress than male professors, and younger professors have higher job stress than older professors. In addition, professors in hard disciplines are likely to have higher job stress than professors in soft disciplines. Shared governance has negative effects on job stress while it has positive effects on job satisfaction.

Table 8. Results of OLS regressions on job satisfaction and job stress

Variables		Job satisfaction		Job stress	
		Coef.	Std Err.	Coef.	Std Err.
Academic identity	Dual identity	-0.203	0.122	0.234	0.153
	Researcher identity	-0.142	0.158	0.482*	0.198
Demographic background	Gender	0.088	0.072	-0.214*	0.090
	Age	-0.001	0.005	-0.026***	0.007
	Marriage	0.029	0.102	0.034	0.127
Academic background	Professor	0.459***	0.100	0.053	0.125
	Associate professor	0.222*	0.088	0.155	0.110
	Tenure track	0.523***	0.125	-0.200	0.157
	Overseas PhD	0.026	0.063	0.034	0.079
	Postdoctoral fellowship	0.051	0.068	-0.068	0.085
	Hard discipline	0.005	0.065	0.199*	0.082
Affiliation		0.135*	0.052	0.029	0.065
Empowerment		0.046	0.039	0.006	0.049
Shared governance		0.318***	0.038	-0.198***	0.048
Top-down management		-0.045	0.029	0.059	0.037
Performance-based management		-0.008	0.041	0.075	0.052
Institutional characteristics	Public	0.068	0.065	-0.004	0.082
	University ranking	0.161*	0.076	0.152	0.095
Constant		1.057**	0.400	4.664***	0.502
<i>N</i>		682		683	
<i>R</i> -squared (Adj. <i>R</i> -squared)		0.296 (0.277)		0.135 (0.112)	
<i>F</i> value		15.47***		5.76***	

* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion and conclusion

This study focused on whether managerialism in higher education has led to changes in academic identity, job satisfaction and job stress during last three decades. The data show that performance-based management and top-down management has remained high while shared governance has not changed much over the last decade between 2008 and 2018. In South Korea, the policy initiatives to build competitive research capability through providing competitive research funding have affected the academic environments since the late 1990s. In response to these policy initiatives, many Korean universities rapidly changed from institutions primarily for teaching to institutions for both teaching and research (Shin & Lee, 2015). At the same time, universities adopted corporate-style management strategies such as performance-based management, performance indicators, professional management, competition, and quality assurance (Shin & Jung, 2014).

In this changing academic environment, this study analyzed how the change in academics' identity is associated with academics' job satisfaction and job stress. This study found that a

changing academic work environment is closely associated with academic identity as discussed in other studies (e.g., Billot & King, 2015; Clegg, 2008). In addition, this study found that academics with a researcher identity are more stressed when their identity is not associated with job satisfaction.

In this study, we found that the majority of Korean academics have a dual identity, preferring both teaching and research, but with a leaning towards research, or have a researcher identity, primarily preferring research. This preference for research has increased over the last three decades. We surmise that academic identity has been reshaped into researcher identity by the strongly performance-based managerialism in South Korea. This is because an academic's role is a combination of priorities between different functions (mostly, teaching, research, administration, and service), and their professional commitment to do their job has shifted according to the new academic environments as argued by Billot (2010). Research productivity has become a major criterion to measure academics' performance, especially for faculty hiring and promotion as well as university evaluation. As a result, Korean academics now pay more attention to research, and the idea that research is an academic's first priority has become generally accepted. This finding is in line with the view that most Korean academics have adopted the American norm of "publish or perish" (Shin & Jang, 2013).

We further examined the changes in academics' job satisfaction and stress over the last three decades in relation to academic identity. We found that job satisfaction increased from 1992 to 2008, but then dropped significantly in 2018. Job stress went up in 2008 and then down slightly in 2018. This finding suggests that academic jobs have become less satisfactory in the performance-based management system in South Korea. Shin and Jung (2014) concluded that Korean academics were both highly satisfied and highly stressed in their study on job satisfaction and stress based on the CAP survey data of 2008. But they also noted that Korean academics' job satisfaction might not be sustainable much longer in the face of strong managerialism. As expected, this study found that Korean academics are less satisfied with their jobs in 2018 because of worsening academic work environments. For example, there are growing publication requirements for faculty employment, promotion and tenure. In addition, academics are suffering from increased paper work and regulations required by assessment-based funding schemes. All these changing academic environments require more time and energy from professors and many of them experience an identity crisis as discussed.

According to this study, academic identity is not associated with job satisfaction, but academics with a researcher identity are likely to have higher levels of job stress than those who with a teacher identity. As Locke and Bennion (2013) pointed out, academics feel more stressed when their university emphasizes research performance over teaching quality. Research work is much stressful when the research standards for promotion and tenure are continuously rising. In addition, shared governance has a statistically significant association with job satisfaction and stress. As articulated in other studies (e.g., Bryson, 2004), academics are satisfied when they are more autonomous and when their accountability is based on their professional speciality. This finding proposes that

autonomous governance might bring higher job satisfaction, so that university will attract talented researchers with governance changes. A similar finding was reported by Shin et al. (2018) in their study on job satisfaction of Korean academics using the CAP data.

Our regression analyses also showed that academic rank, stable employment status, and affiliation with a highly ranked university are positive associated with job satisfaction. These findings imply that work conditions and a stable job are important factors in explaining job satisfaction. Other interesting findings in this study are that junior academics, female academics, and academics in the hard disciplines experience more job-related stress than those who are older, male, and in the soft disciplines. The finding that gender is an important factor in job stress is consistent with previous studies (e.g., Hendel & Horn, 2008; Thompson & Dey, 1998). These factors are closely related to increased standards for promotion and tenure in most Korean universities. For example, most research-focused universities require publications in international journals as a minimum requirement for promotion and tenure as well as faculty employment. These interaction effects could be tested and supported through follow-up analysis.

Despite these findings, this study has limitations. First, it classifies academic identity in terms of a single dimension, namely the preference between teaching and research. However, the teaching and research preference is only one dimension of academic identity which is a complex and multidimensional concept. We might further develop academic identity through various dimension of academic identity in our follow up study. Second, there are many different types of professor positions such as research-only or teaching-only professors as well as traditional professors whose responsibility is both teaching and research. Those who fill these positions might have different expectations for their professional identities and roles in universities than those in more traditional positions, and so it would be worthwhile to add position types as a factor in a future analysis of academic identity and job satisfaction and stress. Finally, taking an in-depth qualitative approach would provide different insights into how individual academics form and develop their academic identities. Follow up studies utilising in-depth interviews might uncover this critical issue in the study of academic identity.

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References

- Antony, J.S. (2002). Reexamining doctoral student socialization and professional development: Moving beyond the congruence and assimilation orientation. In J.C. Smart (Ed.), *Higher education: Handbook of theory and research, XVII* (pp. 349-380). Dordrecht: Springer.

- Arimoto, A. (2014). The teaching and research nexus in the third wave age. In J.C. Shin, A. Arimoto, W.K. Cummings, & U. Teichler (Eds.), *Teaching and research in contemporary higher education* (pp. 15-33). Dordrecht: Springer.
- Austin, A.E. (2002). Preparing the next generation of faculty: Graduate school as socialization to the academic career. *The Journal of Higher Education*, 73(1), 94-122.
- Baldwin, R.G. (1990). Faculty career stages and implications for professional development. In J.H. Schuster, D.W. Wheeler, & Associates (Eds.), *Enhancing faculty careers: Strategies for development and renewal*. San Francisco: Jossey-Bass.
- Bess, J.L. (1977). The motivation to teach. *The Journal of Higher Education*, 48(3), 243-258.
- Billot, J. (2010). The imagined and the real: Identifying the tensions for academic identity. *Higher Education Research & Development*, 29(6), 709-721.
- Billot, J., & King, V. (2015). Understanding academic identity through metaphor. *Teaching in Higher Education*, 20(8), 833-844.
- Billot, J., & King, V. (2017). The missing measure? Academic identity and the induction process. *Higher Education Research & Development*, 36(3), 612-624.
- Blackburn, R.T., Bieber, J.P., Lawrence, J.H., & Trautvetter, L. (1991). Faculty at work: Focus on research, scholarship, and service. *Research in Higher Education*, 32(4), 385-413.
- Boyer, E.L. (1990). *Scholarship reconsidered: Priorities of the professoriate*. Lawrenceville, NJ: Princeton University Press.
- Bryson, C. (2004). What about the workers? The expansion of higher education and the transformation of academic work. *Industrial Relations Journal*, 35(1), 38-57.
- Bryson, C., & Barnes, N. (2000). The casualisation of employment in higher education in the United Kingdom. In M. Tight (Ed.), *Academic work and life: What it is to be an academic, and how this is changing* (pp. 187-241). Amsterdam: JAI.
- Clark, B.R. (1987). *The Academic Life. Small Worlds, Different Worlds. A Carnegie Foundation Special Report*. NJ: Princeton University Press.
- Clegg, S. (2008). Academic identities under threat? *British Educational Research Journal*, 34(3), 329-345.
- Day, C., Kington, A., Stobart, G., & Sammons, P. (2006). The personal and professional selves of teachers: Stable and unstable identities. *British Educational Research Journal*, 32(4), 601-616.
- Deem, R. (2006). Changing Research Perspectives on the Management of Higher Education: Can Research Permeate the Activities of Manager-Academics? *Higher Education Quarterly*, 60(3), 203-228.
- Deem, R., & Brehony, K.J. (2005). Management as ideology: The case of "new managerialism" in higher education. *Oxford Review of Education*, 31(2), 217-235.
- Diamond, R.M., & Adam, B.E. (1995). *The disciplines speak: Rewarding the scholarly, professional, and creative work of faculty*. American Association for Higher Education.
- Fitzmaurice, M. (2013). Constructing professional identity as a new academic: A moral endeavour.

- Studies in Higher Education*, 38(4), 613-622.
- Gappa, J.M., Austin, A.E., & Trice, A.G. (2007). *Rethinking faculty work: Higher education's strategic imperative*. San Francisco: Jossey-Bass.
- Geijsel, F., & Meijers, F. (2005). Identity learning: The core process of educational change. *Educational Studies*, 31(4), 419-430.
- Giddens, A. (1991). *Modernity and self-identity: Self and society in the late-modern age*. Cambridge: Polity Press.
- Glisson, C., & Durick, M. (1988). Predictors of Job Satisfaction and Organizational Commitment in Human Service Organizations. *Administrative Quarterly*, 33, 61-81.
- Halsey, A.H. (1992). *Decline of donnish dominion: The British academic professions in the twentieth century*. Oxford: Clarendon Press.
- Han, J., & Kim, S. (2017). How Rankings Change Universities and Academic Fields in Korea. *Korean Journal of Sociology*, 51(1), 1-37. (in Korean).
- Hendel, D.D., & Horn, A.S. (2008). The relationship between academic life conditions and perceived sources of faculty stress over time. *Journal of Human Behavior in the Social Environment*, 17(1/2), 61-88.
- Henkel, M. (2000). *Academic identities and policy changes in higher education*. London: Jessica Kingsley.
- Henkel, M. (2002). Academic identity in transformation? *Higher Education Management and Policy*, 14(3), 137-147.
- Henkel, M. (2005). Academic identity and autonomy in a changing policy environment. *Higher Education*, 49(12), 155-176.
- Houston, D., Meyer, L.H., & Paewai, S. (2006). Academic staff workloads and job satisfaction: Expectations and values in academe. *Journal of Higher Education Policy and Management*, 28(1), 17-30.
- Kalleberg, A.L. (1977). Work values and job rewards: A theory of job satisfaction. *American Sociological Review*, 42, 124-143.
- Kreber, C., & Cranton, P.A. (2000). Exploring the scholarship of teaching. *The Journal of Higher Education*, 71(4), 476-495.
- Lee, H. (2018, April 16). Research achievement burden, administrative duties, stress... Job prospects are not bright. *Professor newspapers* (in Korean).
- Leišytė, L., Enders, J., & De Boer, H. (2009). The balance between teaching and research in Dutch and English universities in the context of university governance reforms. *Higher Education*, 58(5), 619-635.
- Leišytė, L. (2016). New public management and research productivity—a precarious state of affairs of academic work in the Netherlands. *Studies in Higher Education*, 41(5), 828-846.
- Levin, J.S., & Shaker, G.G. (2011). The hybrid and dualistic identity of full-time non-tenure-track faculty. *American Behavioral Scientist*, 55(11), 1461-1484.

- Locke, W., & Bennion, A. (2013). Satisfaction in stages: The academic profession in the United Kingdom and the British commonwealth. In P.J. Bentley, H. Coates, I.R. Dobson, L. Goedegebuure, & V.L. Meek (Eds.), *Job satisfaction around the academic world* (pp. 223–238). Berlin: Springer.
- Marbach-Ad, G., Ziemer, K.L.S., Thompson, K.V., & Orgler, M. (2013). New instructor teaching experience in a research-intensive university: Implications for professional development. *Journal on Centers for Teaching and Learning*, 5, 49-90.
- McAlpine, L., Amundsen, C., & Turner, G. (2014). Identity-trajectory: Reframing early career academic experience. *British Educational Research Journal*, 40(6), 952-969.
- Murray, J.P. (2008). New faculty members' perceptions of the academic work life. *Journal of Human Behavior in the Social Environment*, 17(12), 107-128.
- Olsen, D. (1993). Work satisfaction and stress in the first and third year of academic appointment. *The Journal of Higher Education*, 64(4), 453-471.
- Schimank, U., & Winnes, M. (2000). Beyond Humboldt? The relationship between teaching and research in European university systems. *Science and Public Policy*, 27(6), 397-408.
- Shin, J.C. (2011). Teaching and research nexuses across faculty career stage, ability and affiliated discipline in a South Korean research university. *Studies in Higher Education*, 36(4), 485-503.
- Shin, J., Arimoto, A., Cummings, W.K., & Teichler, U. (Eds.)(2014). *Teaching and Research in Contemporary Higher Education: Systems, Activities, Nexus, and Rewards*. Berlin: Springer.
- Shin, J.C., & Cummings, W. (2010). Multilevel analysis of academic publishing across disciplines: Research preference, collaboration, and time on research. *Scientometrics*, 85(2), 581-594.
- Shin, J.C., & Jang, Y.S. (2013). World-class university in Korea: Proactive government, responsive university, and procrastinating academics. In J.C. Shin, & B.M. Kehm (Eds.), *Institutionalization of world-class university in global competition* (pp. 147-164). Berlin: Springer.
- Shin, J.C., & Jung, J. (2014). Academics job satisfaction and job stress across countries in the changing academic environments. *Higher Education*, 67, 603-620.
- Shin, J.C., & Lee, S.J. (2015). Evolution of research universities as a national research system in Korea: Accomplishments and challenges. *Higher Education*, 70(2), 187-202.
- Shin, J., Lee, S.J., & Kim, Y. (2018). Does Governance Matter? Empirical Analysis of Job Satisfaction and Research Productivity. In Shin, J. (Ed.), *Higher Education Governance in East Asia: Transformations under Neoliberalism* (pp. 243-259). Springer.
- Stack, S. (2003). Research productivity and student evaluation of teaching in social science classes: A research note. *Research in Higher Education*, 44(5), 539-556.
- Tarrant, T., & Sabo, C.E. (2010). Role conflict, role ambiguity, and Job satisfaction in nurse executives. *Nursing Administration Quarterly*, 34(1), 72-82.
- Thompson, C.J., & Dey, E.L. (1998). Pushed to the margins: Sources of stress for African American college and university faculty. *The Journal of Higher Education*, 69(3), 324-345.
- Whitchurch, C. (2019). From a diversifying workforce to the rise of the itinerant academic. *Higher*

Education, 77(4), 679-694.

- Whitchurch, C., & Gordon, G. (2010). Diversifying academic and professional identities in higher education: Some management challenges. *Tertiary education and management*, 16(2), 129-144.
- Winter, R. (2009). Academic manager or managed academic? Academic identity schisms in higher education. *Journal of Higher Education Policy and Management*, 31(2), 121-131.