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ABSTRACT

This study examined overall job satisfaction among college faculty in Mexico. The study used data from a 1992-93 Carnegie International Faculty Survey. Secondary multiple regression analysis identified predictor variables for several faculty subgroups. Results were interpreted by differentiating between work-related and intrinsic factors, as well as by relating particular predictors to conditions affecting the Mexican academic profession. The strongest predictor variables were work-related (management, job security, academic salary); academic climate (academic collaboration, intellectual atmosphere); and other intrinsic variables (teaching and governance issues) played a secondary role. The study found that while Mexican faculty were generally dissatisfied with the job situations in which they work on a day-to-day basis, on a long-term basis they hold the careers they have chosen in high regard. The results were strongest for full-time faculty and faculty holding doctorates; they were weaker for part-time faculty and full-time faculty with no graduate degrees. Eight tables summarize the data. (Contains 27 references.) (CH)

Job Satisfaction in Mexican Faculty: An Analysis of its Predictor Variables

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Abstract

Using the 1992-93 Carnegie International Faculty Survey, Mexican faculty's overall job satisfaction was studied through multiple regression analysis. With acceptable adjusted R^2s, common and different predictor variables were identified for several faculty subgroups. Results are interpreted by differentiating between work-related and intrinsic factors, as well as by relating the presence of particular predictors with the conditions under which the Mexican academic profession has evolved during the last three decades. In general, work-related factors (management, job security, academic salary, etc.) came out as strong predictors, while academic climate (academic collaboration, intellectual atmosphere, etc.) and other intrinsic variables (teaching and governance issues) played a secondary role. This was particularly the case for faculty subgroups who, like full-time and full-time with doctorate academics, are normally considered as closer to the core of the professoriate than their counterpart subgroups (part-time and full-time faculty with no graduate work).

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Job Satisfaction in Mexican Faculty: An Analysis of its Predictor Variables[1]

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Mexican higher education has changed dramatically since the 1960's. Despite the intense economic hardship of the 80's, the net result for the 1960-1990 period was growth. The expansion included number of institutions, size and composition of student body, number of faculty positions, participation of the private sector, decentralization of higher education services, and serving as a context for all the above, the corresponding federal-government policies and their associated financing formulas. So, for instance, between 1960 and 1992 enrollment at the licentiature[2] level, not including normal schools nor graduate programs, grew from 78 thousand to around 1.1 million students; the number of the corresponding institutions jumped from 50 to 372, and the number of faculty positions increased from 10,749 to 113,238 (Gil-Antón et al., 1994). Federal policies, on the other hand, went from a "benign neglect" position during the 1970's (Fuentes-Molinar, 1991; Levy, 1980), to a differential performance-based financing scheme in the 1990's (Mercado-del-Collado & Arredondo-Alvarez, 1994).

The conditions surrounding the expansion of Mexican higher education, including the absence of strong and sufficient graduate programs, made generating the faculty that the expansion needed difficult, and actually a great deal of improvisation took place in relation to faculty appointment and tenure. Gil-Antón et al. (1994), in their 1992 study of Mexican academics, report that 83.8 percent of their sample had a maximum of a licentiature degree when first hired, 4.7 percent held a master's degree, and only 1.8 had a doctorate. Moreover, only 33.7 percent saw their entrance to the academic market place as a vocational call. It is quite evident that the vast majority of this faculty cohort was hired to teach an increasing number of students and, to such an extent, Mexican faculty growth was "reactive" rather than "substantive" (Metzger, 1987). So, the Mexican faculty that emerged in this period had a "fragile" disciplinary base to begin with and, probably most important than the lack of specialized technical training, was that

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[2] The licentiature degree is the first four-to-five year higher education degree awarded in México. It contrasts with the U.S. bachelor's degree in that the licentiature program awards its recipient a "license" for professional practice. It is therefore a first professional degree.

the absence of the graduate experience also implied an absence of socialization into the academic *ethos*. Together with the development of faculty unionism during the 1970's, these factors have been associated to an image of faculty as employees of higher education institutions, rather than appointees or partners in a common knowledge-centered endeavor. It should be noted, however, that notwithstanding this not very appropriate initiation into the academic profession and to a great extent as a consequence of public programs supporting graduate work both in and out of the country, Mexican faculty have managed to increase their level of formal training, and so by 1994 5.1 percent of them held a doctorate (ANUIES, CONACYT, SEIT, y SESIC, 1997).

The depicted situation for academics during the higher education expansion period was complicated by the economic depression that México has gone through since the early 1980's. At the National Autonomous University of México, UNAM, the nation's public flagship institution, professors' real salary decreased around 70 percent between 1976 and 1990 (Martínez-della-Rocca & Ordorika-Sacristán, 1993). Such circumstance made the full-time appointment status loose precision, as many faculty members were forced to have more than one job in order to survive. It is in this line that Gil-Antón (1996a) has proposed to differentiate between full- and marginally-involved faculty, depending on whether a professor is entirely devoted to academic jobs and obtains more than 75 percent of her total income from her home institution, or has a non-academic job and obtains less than 50 percent of her total income from her academic activities. Chen, Gottlieb and Yakir (1996) have also spoken of an involvement dimension for Israeli faculty. Specifically, they speak of academics committed to their institution as those holding a tenure position exclusively at one institution.

Given the important transformation that Mexican higher education is still going through (Kent, 1996), the study of academics, including the consideration of their perspectives and job satisfaction issues, is strongly needed. In contrast to countries like the United States, where faculty have been surveyed at national levels since the late 1960's (Fulton & Trow, 1975), in México only recently have academics come under the attention of higher education researchers (García-Salord, Landesmann & Gil-Antón, 1993). In particular, three relatively large surveys have been carried out during the current decade (Gil-Antón, 1996; Gil-Antón et al., 1994; Grediaga-Kuri et al., 1997). The study to be reported here builds over the second of these surveys, and represents a first and exploratory step in addressing the issue of overall job satisfaction in Mexican faculty. By analyzing job satisfaction important insights can be gained regarding the identification of those aspects of academic work that higher education professors in México consider important when reporting their overall job satisfaction level. We believe that the information and insights thus generated can help uncover important aspects for the setting up of adequate working conditions for Mexican faculty, including the establishing of faculty development programs.

It is a common place to assert that higher education quality requires a competent and committed faculty. Assuming that academe constitutes a vocational calling, professors should obtain high job satisfaction when allowed and supported to perform their activities at their fullest potential. Indeed, the intrinsic rewards of academic work have been pointed out as a most

powerful incentive for U.S. faculty to pursue their careers despite harsh remuneration times (Bowen & Schuster, 1986).

As a general concept job satisfaction has been conceptualized as need satisfaction, perceptual discrepancies, fulfillment of values, and appraisals of equity conditions of work and consequences (Pinder, 1984). At a more specific level and despite the unclear relationships between faculty's job satisfaction and productivity, job satisfaction remains an important dimension for understanding faculty's profile. At an operational level, job satisfaction has been usually analyzed in terms of various constituent dimensions. Tack and Patitu (1992), for example, organized their literature review on faculty job satisfaction in terms of intrinsic and workplace-related factors. The former ones included teaching and research, prestige of colleagues and institution, student quality, student-teacher interaction, autonomy and responsibility, achievement and recognition, and promotion and growth. Workplace-related factors included salary, job security or tenure, faculty rank, supervision, interpersonal relationships, working conditions, administration of the institution, person-environment fit, and collective bargaining. Olsen (1993), on the other hand, has used the categories of inner rewards, conflict and balance issues, recognition and support, and compensation and security. A close look at these categories, however, shows that they could also be aligned along an intrinsic - workplace-related factors dimension.

As part of the First International Survey of the Academic Profession sponsored by the Carnegie Foundation for the Advancement of Teaching (Boyer, Altbach & Whitelaw, 1994), Gil-Antón (1996a) directed the Mexican survey. In relation to overall job satisfaction, Gil-Antón noted that Mexican academics could not be considered satisfied with their job (only 46.3 percent responded that they were satisfied or very satisfied with their job situation, while 27 percent reported that they were actually very dissatisfied). However, when asked about their agreement or disagreement with the assertion "if I had to do it over again, I would not become an academic," 73 percent strongly disagree with it. So, it appears that Mexican faculty are dissatisfied with the concrete job situations in which they work on a day-to-day basis, but it appears that they hold in high regards, on a long-term basis, the career they have chosen to work in.

Our study starts up with the finding that Mexican faculty reported, according to the International Carnegie Survey and generally speaking, not satisfied with their job situation as a whole. Given such result, we wanted to see what issues, and with what relative weight, were taken into account by Mexican academics in order to report a particular overall job satisfaction level. So, using data gathered by Gil-Antón (1996a) in the context of the First International Survey of the Academic Profession, this study performed a secondary analysis targeted at identifying, through a multiple regression analysis, predictor variables of overall job satisfaction in Mexican faculty. Although specific job satisfaction levels are mentioned throughout the paper, the central purpose of our study was not to describe and discuss them, but rather to identify those variables able to statistically predict overall job satisfaction.

Method

Gil-Antón (1996a) directed the Mexican survey of the Carnegie Foundation for the Advancement of Teaching 1992-1993 International Study of the Academic Profession (Boyer, Altbach & Whitelaw, 1994). Of an approximate universe of 372 higher education institutions functioning in 1990, and from an estimate of 113,238 academic positions in 1992, the survey sampled 20 institutions, and 1,200 academics were given the survey questionnaire by an interviewer. Of all academics contacted, 1,027 answered the questionnaire (86 percent response rate). The questionnaire consisted of 72 general questions (230 specific items) organized in five sections: demographics, working conditions, professional activity, international dimension of academic work, and opinions about higher education and societal issues. Though not always the case, a good number of questions were in a Likert format.

Although not targeted at studying job satisfaction, the questionnaire had questions dealing directly with such work dimension, including one on overall job satisfaction (up to what point are you satisfied with your job situation in general?). On the other hand, the survey instrument contained a considerable number of items that have been described in the literature to be relevant for our understanding of job satisfaction. So, a multiple regression analysis was performed over an overall job satisfaction measure in order to identify items or variables that could be related to Mexican faculty's overall job satisfaction.

The categories and items used by Tack and Patitu (1992) and by Olsen (1993) served us to identify and organize the particular variables (items) to include in our secondary analysis. The 140 items selected to participate in the analysis were considered individually. Several of them were closely related, but it was decided not to build composite variables in order to retain the specific information provided by each item. However, items were organized for heuristic purposes before running the statistical procedures. Items were classified in the following categories: demographics (2 items), discipline (5 items), institutional factors (22 items), professional career (2 items), academic career (8 items), job attitudes (4 items), structural job characteristics (24 items), intrinsic job characteristics (35 items), job dissatisfaction (1 items), career satisfaction (2 items), and opinions on higher education (26 items) and social (9 items) issues (see Table 1). All items included in the analysis had to fulfill the following criteria for each multiple regression analysis run. First, items could not have more than 20 percent of missing cases. In addition, if the item in question was dicothomic, one of its value could not concentrate 90 percent or more of the valid cases. Finally, no two variables involved in any of the regression models were correlated more than .85.

A stepwise multiple regression analysis was performed on overall job satisfaction across all survey respondents using SPSS (1994). Given our n of 1,027 we decided to establish a stringent criterion for variables to emerge as significant predictors of our dependent variable. So, the probability for including a variable in the regression model was set at .01, while the criterion to discard a variable during the stepwise procedure was set at .05. Also, a minimum tolerance of .30 was imbedded in the regression procedure in order to diminish collinearity problems. To further elucidate the relevance of various predictor variables, four pair-wise additional regression analysis were performed; a first pair compared full- and part-time faculty; a second pair

contrasted full-time faculty with a first four-year degree or licentiature, and full-time faculty who have completed their doctoral training; a third pair involved full-time/fully-involved and full-time/marginally-involved faculty and lastly, a fourth pair compared full-time faculty in professional and academic disciplines. Other possible sample subgroups could have been created and compared (e.g., by gender), but we decided to start our analysis with the groups already mentioned.

Results

Table 2 presents the job satisfaction means for the entire faculty sample and for the four pair-wise additional subgroups considered. For the pair-wise subgroups Table 2 also presents a t comparison for their means. On a five-point Likert scale (1 = very dissatisfied, 5 = very satisfied),[3] all faculty reported a mean of 3.22 (sd = 1.33) of overall job satisfaction. From an optimistic perspective it can be said that Mexican faculty members are not dissatisfied with their jobs, but from another point of view it could also be maintained that they are not really satisfied either, as the range 2.5 - 3.5 can be interpreted as a neutral zone. In the context of the other 11 countries of the International Study for which comparative data are available, México occupies approximately the eight position in terms of overall job satisfaction. However, all countries above México in this measure have a higher education system with larger enrollments and, at the same time, strong research activity (Gottlieb & Yakir, 1995).

The overall job satisfaction means for the other four faculty subgroups considered were as follow. For part-time, 2.97 (sd = 1.36); for full-time, 3.38 (sd = 1.29); full-time with licentiature, 3.50 (sd = 1.26); for full-time with doctorate, 3.03 (sd = 1.52); for full-time, marginally-involved, 3.49 (sd = 1.32); for full-time, fully involved, 3.47 (sd = 1.25); for full-time in professional disciplines, 3.46 (sd = 1.29), and for full-time in academic disciplines, 3.21 (sd = 1.29). The difference between part- and full-time faculty was statistically significant ($t_{968} = -4.85$, $p < .000$), as well as that between full-time faculty with licentiature and those with doctorate ($t_{362} = 2.72$, $p < .007$). As it would be natural to expect, full-time faculty report being more satisfied than part-time faculty (3.38 versus 2.97). However, full-time faculty with only a licentiature degree report more satisfaction with their job than their doctoral counterparts (3.50 versus 3.03). Later, when we analyze the predictor variables for each of these subgroups, we will be able to understand why this is so. The comparisons of full-time faculty in terms of involvement (marginal- versus fully-involved) or discipline (professional versus academic) were not significant (see Table 2).

Tables 3 through 7 present a summary of the nine regression analysis performed. The multiple regression analysis for all faculty (n = 1,027) yielded an adjusted R^2 of .528 ($F_{11,1025} = 105.51$, $p < .0000$), with satisfaction with the way the institution is managed, job security and promotion prospects coming out as strong predictors (Beta > .20; see Table 3). Region of

[3] Actually the questionnaire item was phrased in the reverse order. We have changed the directionality of this and some other items in order to communicate more easily our results.

institution, rating of academic salary and sabbatical benefits came out as moderate predictors (.20 ≥ Beta > .10). Finally, opinions on protection of free intellectual inquiry, life-long learning for adults, satisfaction with relationship with colleagues, opinion on students doing only enough to get by, and size of institution were all weak predictors (Beta < .10). The three strong predictors (satisfaction with management, job security, and promotion prospects) and two of the moderate ones (rating of academic salary and sabbatical benefits) are part of what Tack and Patitu (1992) call work-related factors, and the direction of the relationship is the one to expect. That is, the greater the satisfaction or rating of these factors, the greater the overall job satisfaction reported. While the sample as a whole is satisfied with its job security (mean = 3.72 on a 5-point scale), and rightly so given the large proportion of tenure faculty in it (64 percent; Gil-Antón, 1996), itself a reflection of a not so difficult road to obtain it, satisfaction with the way the institution is managed and promotion prospects ware essentially neutral (means of 3.08 and 2.90, respectively, in a 5-point scale), but ratings of academic salary and sabbatical benefits were low (means of 1.61 and 1.91, respectively, in a 4-point scale). So, while job security pushes job satisfaction up, the way institutions are managed, promotion prospects and, more importantly, salary and sabbatical benefits, which are practically nonexistent in the public technological institutes and many private institutions, bring it down.

The other moderate predictor of job satisfaction for the entire sample was a contextual variable, region of institution, which indicated that faculty working in higher education institutions outside México City say that they are more satisfied with their jobs than those working in México City (3.41 versus 2.83, $t_{998} = 6.52$, $p < .000$). Regarding the weak predictors, two of the five were opinions on higher education priorities; a positive relation with giving priority to adults' life-long learning (mean of 2.42 on a 4-point scale), but a negative relation with prioritizing protection of free intellectual inquiry. In this respect, faculty assigning a highest priority to protect free intellectual inquiry, had significant lower satisfaction levels than those assigning medium priority to the same topic (3.12 versus 3.43, $t_{607} = -2.16$, $p < .031$). One could hypothesize that faculty that have in high regard academic freedom do not see it promoted as much as they would expect, and therefore that is why they report lower satisfaction levels. As might be evident, this reasoning follows the values fulfillment theory of job satisfaction. The rest of the weak predictors were satisfaction with relationships with colleagues (mean = 3.89 in a 5-point scale), opinion on whether students do only enough work to get by (mean = 3.78 in a 5-point disagree-agree scale), and size of institution (a 6-point scale with unequal intervals), all of which are in the expected direction.

In summary, job satisfaction for this group of Mexican academics was best predicted by work-related factors, although contextual and academic climate factors, as well as certain expectancies are also present as moderate and weak predictor variables. The relevance of such factors might reflect the general income depreciation of professors that occurred during the 1980's. Also, we must remember that data was collected in 1992, when public policies favoring differentiation on income and working conditions were still in their beginning. So, the emergence of these factors might reflect a certain inertia of a period in which, because of the absence of differentiation policies, everyone saw their income and working conditions

deteriorate.

To analyze the potential impact of appointment type on overall job satisfaction regressions were separately run for full-time and part-time faculty (see Table 4). For part-time faculty (n = 382; mean job satisfaction = 2.97) the adjusted R^2 was .542 ($F_{7,374} = 65.41$, $p < .0000$), and all of the predictor variables had a positive relation with the criterion variable. The only strong predictor was satisfaction with the way the institution is managed (mean of 3.06 in a 5-point scale), while moderate predictors were satisfaction with job security (mean of 3.59 in a 5-point scale), region in which the institution is located (faculty outside México City were more satisfied than those in it), satisfaction with promotion prospects (mean of 2.59 in a 5-point scale), the priority that higher education should give to life-long learning for adults (mean of 2.89 in a 4-point scale), retirement benefits (mean of 2.38 in a 4-point scale), and being kept informed of what happens in the institution (mean of 2.84 in a 5-point disagree-agree scale).

For full-time faculty (n = 609; mean job satisfaction = 3.38) the adjusted R^2 was of .511 ($F_{8,600} = 80.30$, $p < .0000$); strong positive predictors were satisfaction with job security (mean = 3.83), with the way the institution is managed (mean = 3.12) and with promotion prospects (mean = 3.11; see Table 4). The only moderate predictor was also positive, rating of academic salary, which presented a low general level (1.72 on a 4-point scale). Opinions on prioritizing protection of free intellectual inquiry (negative relation, mean of 3.38 in a 4-point scale), academic collaboration as a reason to leave/stay (positive relation, mean of 3.40 in a 5-point scale), the need for more student-faculty interaction outside the classroom (negative relation, mean of 4.06 in a 5-point disagree-agree scale), and the opinion on current students being more dedicated than students from 5-years ago (positive relation, mean of 3.59 in a 5-point disagree-agree scale), were all weak predictors. Reflecting their full-time status, this group of academics are highly sensitive to work-related factors, as they encompass both strong and moderate predictors. Weak predictors show that students, teaching and academic climate issues are also relevant, although the view that there is a need for more interaction with students outside the classroom has a negative relation with job satisfaction. The quality of students is positively related to job satisfaction, as well as collaboration with colleagues.

As in the case for the entire sample, variables having to do with management, benefits and pay are strong and moderate predictors for both part- and full-time faculty. However, among the weak predictors for full-time faculty a set of variables appear that have to do with intrinsic aspects of the academic job: academic freedom, academic collaboration among colleagues, student-faculty interaction and student dedication. Among part-time faculty the only intrinsic-related factor is the expectation on emphasizing adult's life-long learning. In addition, the expectation on prioritizing free intellectual inquiry has, although weak, some predictive power for full-time faculty. It is clear, then, that these two groups of academics are not only different in terms of their job satisfaction levels, but also on the factors, beyond the strong work-related ones that they share, that they consider and weight in reporting their level of satisfaction with their jobs. Full-time faculty are more, as would be expected, oriented towards the academic internal life of higher education institutions.

In order to analyze the potential differences introduced in overall job satisfaction by faculty's highest degree, separate regressions analysis were carried out for those full-time faculty with licentiature only and, on the other hand, for full-time faculty with doctorate (see Table 5). For full-time faculty with licentiature as their highest degree (n = 299; mean job satisfaction = 3.50), the adjusted R^2 was .519 ($F_{8,290} = 41.21$, $p < .0000$). Strong predictors were satisfaction with promotion prospects and job security; satisfaction with the opportunity to pursue own ideas, governance participation in the determination of budget priorities, rating of faculty morale, academic collaboration among colleagues as a reason to leave/stay, governance participation in determining teaching loads, and rating of academic salary were all moderate predictors. Except for one variable, all the rest of these predictors are related to overall job satisfaction in the expected direction. The one exception is administration-faculty control in determining teaching loads, which is negative. That is, those faculty who describe their working environments, in relation to this dimension, as more management-controlled, also report more job satisfaction levels. It is as if these academics, in this aspect, are more at ease with an "employee" position of being told what to do. It is also interesting to note that for these faculty academic salary is the least strong of its significant predictors (Beta = .134). Also, academic climate issues are quite evident.

For full-time faculty with doctorate (n = 72; mean job satisfaction = 2.97) the adjusted R^2 was .831 ($F_{7,64} = 51.01$, $p < .0000$; see Table 5). Strong predictors were satisfaction with the way the institution is managed, protection of academic freedom in the country, governance participation in choosing new faculty, rating of academic salary, and opinions on whether students are well prepared in quantitative skills. On the other hand, opinions on political restrictions on publishing and membership status in the natural sciences were moderate predictors. As in the previous subgroup, except for one, all relations among predictor variables and job satisfaction are in the expected direction. The exception is that those faculty agreeing more strongly with the assertion that in this country there are no political restrictions for publishing, show at the same time lesser levels of job satisfaction. This relationship mirrors the one previously discussed between assigning priority to protect free intellectual inquiry and job satisfaction for all faculty. The weakest predictor, on the other hand, tells us that academics not working in the natural sciences fields report more satisfaction with their jobs. Why this is so can be variously hypothesized: greater job market for academics outside the natural sciences fields, lower social status for natural scientists, etc. Both this result and its interpretation deserve further research.

The comparison of full-time faculty with licentiature and with doctorate is informative from the perspective that we could expect that predictor variables for those faculty with doctoral training would be more of the intrinsic kind. In the first place, management and salary issues are strong predictors of job satisfaction in both subgroups. However, while satisfaction with promotion prospects, the strongest predictor for full-time faculty with licentiature, has a mean of 3.14 in a 5-point scale (Beta = .223), satisfaction with the way the institution is managed, the strongest predictor for full-time faculty with doctorate, has a mean of 2.87 (Beta = .713). If we assume that full-time faculty with doctorate are located at or near the top of their institutional

ranking system, and not so those full-time faculty with licentiature only, then it is natural to see that for the later promotion prospects is an important source of job satisfaction. It might also be natural to expect that those individuals at the top of the ranking system are now in position to be concerned more about the way the institution is managed. The rest of the seven significant predictors for full-time faculty with doctorate are intrinsic: academic freedom, faculty control over hiring faculty, student ability on quantitative skills, political restrictions on publishing, and academic discipline of membership. For full-time faculty with only a licentiature degree, eight variables came out as significant predictors. Of these three are extrinsic (management, job security and salary). As for their doctoral counterparts, governance issues are also important for this group. However, the issues and the direction at stake are different. So, while faculty with doctorate have choosing new faculty as a strong predictor, faculty with licentiature have control over budget priorities as a moderate predictor. Moreover, faculty control in determining teaching loads is negatively related to job satisfaction, which indicates that those faculty that report in this issue a stronger control by the administration are also reporting higher levels of job satisfaction. So, it would appear that the governance issues emphasized by this faculty group are more related to the administration, rather than to the academic functioning of the institution, what Clark (1983, quoted in Gottlieb, 1996) has called "knowledge-oriented" academic activities. Nonetheless, there are certain intrinsic variables that come out as important for full-time faculty with licentiature; opportunity to pursue own ideas, faculty morale, and academic collaboration among colleagues. So, it would appear that higher education institutions provide an environment for FT faculty in which even those without graduate work develop, although at a moderate level, expectations having to do with the *academic ethos*.

Following Gil-Antón (1996a) suggestion that involvement, whether full or marginal, is a relevant analytic dimension that can help us capture important aspects of faculty work and characteristics, we created two full-time subgroups according to the criteria of, for the fully-involved faculty, not having a non-academic job and obtaining more than 75 percent of their income from their home institution. For a full-time academic to be defined as marginally involved she had to have a non-academic job and obtain less than 50 percent of her total income from her home institution. It is convenient to note that these two groups did not differ in their reported overall job satisfaction (3.47 versus 3.49). For marginally involved full-time faculty ($n = 46$), the adjusted R^2 was .721 ($F_{3,42} = 39.70$, $p < .0000$; see Table 6). Given the size of this subgroup, only three regression equations were carried out, with satisfaction with job security and promotion prospects, and opinion on students doing only enough to get by, coming all as strong predictors. For fully involved full-time faculty ($n = 338$), the adjusted R^2 was .515 ($F_{7,330} = 52.11$, $p < .0000$; see Table 6). Satisfaction with job security and with promotion prospects were strong predictors, while satisfaction with the way the institution is managed, rating of academic salary, rating of intellectual atmosphere, opinion that students' opinion should be used in evaluating faculty, and opinion on the need to promote student and faculty international mobility, were all moderate predictors. Except for agreeing on using students' opinion in evaluating faculty, all relationships between predictors and job satisfaction are in the expected direction. It is interesting to note that faculty maintaining a more traditional position in relation to students' role in evaluating them, are the ones who reported to be more satisfied with their jobs. Another

issue that can be highlighted is the appearance of a "cosmopolitan" flavor in those faculty who report more satisfaction with their jobs (Gouldner, 1957).

In contrasting full-time faculty along an involvement dimension, extrinsic variables emerge once again as strong predictors for both groups. However, while for the marginally involved group there is only one strong predictor having to do with students, the fully involved group presents three moderate predictors that are intrinsic: intellectual atmosphere, use of students' opinion in evaluating faculty (this in an inverse relationship), and promotion of student and faculty international mobility, a variable that, as mentioned previously, reminds the cosmopolitan-local distinction among faculty (Gouldner, 1957).

Another dimension that Gil-Antón (1996a) and Gil-Antón et al. (1994) have considered highly relevant in differentiating Mexican faculty is the discipline in which the faculty works. The relevance of this dimension has already been seen in the case of the full-time faculty with doctorate, where being part of the natural sciences fields was associated with lower job satisfaction levels. So, we carried out a separate regression analysis for full-time faculty in professional and academic fields, where the critical dimension was the presence (engineering and computer sciences, business and health sciences) or absence (mathematics and natural sciences, fine arts and humanities) of a strong job market outside higher education institutions.[4] Full-time faculty in the professional disciplines (n = 191; mean job satisfaction = 3.46) presented an adjusted R^2 of .553 ($F_{7,183} = 34.63$, $p < .0000$), with satisfaction with the way the institution is managed and job security as strong predictors (see Table 7). Moderate predictors were rating of academic salary, opinions on lowering admissions standards to allow disadvantage students to get in the institution of the respondent, academic reputation as a reason to leave/stay, opinion on whether access to higher education should be facilitated to all those that fulfill the minimum entrance requirements, and opinion on whether current students are more dedicated than those 5-years ago. Beyond the familiar management and benefits issues, academic reputation of institution is now important, possibly due to the fact that professionally-oriented faculty don't want to be associated, because of their potential future professional practice, with a bad academic program. Also, the comparison between the competency of current and former students is important probably because they are more interested in training new members for their professions than in any other aspect of their job. Finally, those full-time faculty in the professional fields that are most satisfied with their jobs, think that higher education in general should be selective, although at the level of their institutions those agreeing that admission standards should be lowered to allow the entrance of students without the proper level of academic performance, report higher levels of job satisfaction.

The adjusted R^2 for full-time faculty in academic disciplines (n = 172; mean job satisfaction = 3.21) was .532 ($F_{6,165} = 33.42$, $p < .0000$; see Table 7). Strong predictors were

[4] In México disciplines like social sciences and psychology have a more ambiguous academic-professional job market orientation.

satisfaction with the way the institution is managed, job security, research equipment and rating of academic salary. Rating of intellectual atmosphere and opinion on whether government priorities should be in basic education, were moderate predictors. Faculty in academic disciplines have management, job security and salary variables as strong predictors, but they also have research equipment as a strong predictor involved in a negative relationship, while intellectual atmosphere and opinion on what priority should the government give to basic education (a negative relation as well) were moderate predictors. The presence of a negative relation between the adequate presence of research equipment and job satisfaction is counter intuitive, and might reflect a conflict between having a certain research infrastructure, and lacking other working conditions that were not considered in this analysis (support personnel, research grants, etc.).

In general, the responses of faculty in the professional disciplines depicts them as professionals being interested in training professional in the context of an outside market, while faculty in academic disciplines appear to be more concerned with issues having to do more with the internal intellectual life of the institution. So, for example, while academic reputation, a dimension with clear external connotations, is positively related to job satisfaction in the professional areas, intellectual atmosphere, a dimension more directly having to do with the internal dynamics of institutional life, is positively related to job satisfaction in the academic fields.

As a way to synthesize the results of the multiple regression analysis performed over the entire sample and the four pair-wise groups already mentioned, Table 8 presents a list of all the 33 items that came out as significant predictors for overall job satisfaction in the various samples considered. Items are organized in terms of the following categories: contextual factors, resources, management, benefits and pay, discipline, academic climate, student and teaching issues, governance, and opinions on higher education and society in general. The table shows more evidently that strong predictors for all groups considered are concentrated in what Tack and Patitu (1992) call work-related factors. That is, aspects having to do with the management of the institution and benefits and pay issues, job security and promotion prospects specially. Intrinsic factors, on the other hand, are almost always present both in the entire sample and in the majority of the subgroups considered, but their contribution to job satisfaction prediction is usually moderate and weak, and is differentiated in the sense that different groups pay attention to different intrinsic aspects, with those groups more closely associated with the core of the academic enterprise (full-time faculty with doctorate) having more intrinsic job satisfaction sources.

Discussion

In summary, all of the adjusted R^2s obtained in the analysis were significant and high. They ranged from a low of .511 for full-time faculty, to a high of .831 for full-time faculty with doctorate, indicating that the identification of predictor variables of job satisfaction was satisfactory. Items having to do with issues of the way in which the institution is managed, and

benefits, including job security, promotion prospects and academic salary, came out consistently as strong or moderate predictors in all of the analysis. So, at this moment of time and for the sample of Mexican academics considered, job satisfaction is more a function of work-related factors, rather than variables more academic or intrinsic. The emergence of these factors as strong predictors might reflect both the economic hardship prevailing in México since the early 1980's and, on the other hand, the essentially "employee" attitude of the largest part of the sample, an attitude to a large extent resultant, we think, of the way in which this cohort of academics was incorporated to the job, including its relatively low level of specialized training and, therefore, its relative lack of an academic *ethos* more intrinsic in nature. In a very different context, however, salary has been described as an important correlate of job satisfaction in U.S. faculty (Locke, Fitzpatrick & White, 1983), so it might be that what the Mexican economic situation has done is increased the salience of such factor.

In the full- versus part-time faculty comparison, full-time faculty had academic collaboration, protection of free inquiry (although in a negative relationship) and various student issue factors as weak predictors, while part-time faculty had believing that higher education should promote life-long learning for adults as the only moderate predictor of a more intrinsic nature. Although neither of these factors was a strong predictor, it is indicative that more intrinsic predictors are found for full-time than for part-time faculty.

The comparison between full-time faculty with licentiature and full-time faculty with doctorate, allowed a clearer emergence of various intrinsic predictors. In particular, participation in governance issues arouse as strong and moderate predictors in addition to those of management and benefits. However, while for full-time faculty with licentiature not participating in the determination of teaching loads, and participating in the establishment of budget priorities were important, for full-time faculty with doctorate participation in choosing new faculty was important. So, it appears that while full-time faculty with licentiature only are more interested in the management side of governance, their counterpart with doctorate are more sensitive to "knowledge-oriented" management issues (Clark, quoted in Gottlieb, 1996).

The comparison between full-time faculty that are fully and marginally involved reinforces the idea, in general, that those academics that are fully involved as defined by their income and non-academic jobs, are more sensitive, beyond the strong importance granted to work-related factors by both groups, to intrinsic variables when determining their job satisfaction level. However, given the small size of the marginally involved group, these results should be seen as inconclusive, as more factors could have emerged with a larger group.

Full-time faculty in academic disciplines, which usually can only work in higher education environments, award a stronger relative importance to academic salary than their colleagues working in professional disciplines. Both groups of faculty, however, have intrinsic factors as moderate predictors of job satisfaction, the main difference being that the those in the professional disciplines appear to be more oriented to their teaching function, while faculty in the academic disciplines have rating of the intellectual atmosphere as a moderate predictor. In

remains to be seen if this difference can be find to be systematic. Also, it would be interesting to study disciplines in intermediate positions of a professional - academic continuum.

Mexican higher education has expanded tremendously during the last three decades. Under the pressure to attend such growth, Mexican academics have not usually had the traditional graduate training that provides both specialized expertise and a common ethos. In addition to this factor, difficult economic periods have made economic and work-related issues more salient for Mexicans in general and, in particular, for academics. So, both aspects contribute to emphasize extrinsic factors as sources of job satisfaction. Beyond the salience of such issues, our results show that full-time status and graduate training is associated with more intrinsic characteristics of the job. This picture is similar when we compare full- and marginally-involved faculty, but it is not so clear when contrasting faculty in the professional and academic disciplines.

Our results show that extrinsic job characteristics are important in predicting job satisfaction for Mexican faculty. In particular, satisfaction with institutional management, benefits and compensation appeared systematically as strong and moderate predictors for all the faculty subgroups studied. Chen, Gottlieb and Yakir (1996), in a qualitative assessment of the way Israeli academics responded to items dealing directly with job satisfaction, note that promotion, institutional management and salary are weighted more heavily than issues having to do with teaching, job security and collegiality.[5] Given the wide disparity in training conditions of Israeli and Mexican academics (86 percent of the Israeli faculty surveyed held a doctorate), it could be argued that for intrinsic factors to be weighted heavily in determining overall job satisfaction, there must be a minimum of satisfactory working conditions. Without them, even a highly trained body of scholars will not report high levels of job satisfaction.

If México represents a country where ambiguous, undifferentiated and hard working conditions are associated with relatively low training levels of its faculty, and Israel a country where conditions are also perceived as hard by its faculty, which holds a much stronger specialized training, the U.S.A. represents a country where economic conditions are generally better off and, on the other hand, its faculty body has a relatively high training level, with 57 percent of them holding a doctorate degree according to the 1993 National Study of Postsecondary Faculty (Finkelstein, Seal & Schuster, 1998). What is the level of overall job satisfaction reported in this case? As in the Israeli case, Hass (1996) performed a qualitative analysis on several items of the survey questionnaire and concluded that U.S. faculty report substantial levels of overall job satisfaction (more than 75 percent of the respondents say they are satisfied or very satisfied with their job situation as a whole, as opposed to 46 percent in the case of Mexican academics, and of only 6 percent of Israeli faculty that say they are very satisfied)

[5] These authors did not perform a multiple regression analysis that would isolate the contribution of different variables. It would indeed be interesting, in order to compare job satisfaction predictor variables, to perform similar multiple regression analysis over the data of the other countries involved in the Carnegie International Study.

despite their dissatisfaction with certain working conditions. Hass (1996) considers that this is so because, on the one hand, certain positive working conditions serve to counterbalance negative ones (as fringe benefits may serve to attenuate the negative effects of a perceived low salary, for example) and, on the other hand, because issues having to do with professional autonomy, job security and respect are weighted more heavily in reporting overall job satisfaction. Supporting this interpretation, administrative support as part of a recognition subscale was identified to predict job satisfaction for full-time faculty in their first year of appointment at a U.S. public research university. The same study, however, failed to found any predictive value for compensation, whether in the first or in the third year of appointment (Olsen, 1993). It is important to remember, however, that compensation at public research universities is among the highest in relation to other types of U.S. higher education institutions (Lee, 1995). In summary, we believe that taken together, the results of these three countries speak of work-related factors being necessary, but not sufficient factors for faculty members to report high levels of overall job satisfaction. On the other hand, it cannot be said that only intrinsic factors, which are usually associated with graduate training, can determine by themselves a high level of job satisfaction on the part of the faculty. So, Mexican higher education cannot only be concerned with having more highly trained personnel, but it must also concerned itself with their working conditions.

As Olsen (1993) has described for U.S. full-time faculty of a research university in their third year of appointment, and as Hass (1996) has also described for the sample of American faculty that participated in the Carnegie International Study, inner rewards or intrinsic job characteristics are more relevant, although always as second to work-related factors, as predictors of job satisfaction for Mexican full-time faculty, specially those with doctorate. If one considers that doctoral studies constitute not only a technical training, but also a socialization process into the ethos of academe, then the small percentage of faculty with such training, around 5.1 percent in 1995 (ANUIES, CONACYT, SEIT & SESIC, 1997), can explain why certain factors are not found to be strong or moderate predictors when evaluated at the aggregate level of all faculty. Given the speed with which Mexican higher education grew since the 1960's, and specially during the 1970s (Gil-Antón et al., 1994), it was almost unavoidable to incorporate faculty without all the necessary credentials and who, because of their background were, and would be, more interested in structural or extrinsic characteristics of their new job.

The Mexican Federal Government has recently launched the "Program for the Improvement of the Professoriate of Higher Education Institutions." A central purpose of it is to increase the proportion of faculty with graduate degrees, specially doctorate. Given the conditions of the Mexican higher education system, particularly the state of its graduate programs (Pallán-Figueroa, 1998), Gil-Antón (1996b) has questioned whether obtaining a graduate degree under these conditions will assure the attainment of the specialized training and the socialization into the academic ethos that is expected, or whether the prevalence of these persons with higher degrees will lead us to the "kingdom of the imaginary academics." Monitoring the variables that best predict job satisfaction can constitute a way to disentangle such possibilities. At the least, this study speaks of the conditions current Mexican faculty consider relevant in stating their job satisfaction level. We think that their consideration could

inform policy making and the development of programs having to do with Mexican academics and the improvement of their working conditions.

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Table 1. Items used in the various multiple regression analysis targeted at identifying predictor variables of overall job satisfaction in Mexican faculty.

CATEGORY	ITEM	DESCRIPTION
DEMOGRAPHICS		
	q1	Gender
	age	Age
DISCIPLINE		
	q3b_prof	Discipline: Professions
	q3b_ntsc	Discipline: Natural sciences
	q3b_scsc	Discipline: Social sciences
		Discipline: Fine arts and humanities used as reference category for dummy variables
	arbasac	Discipline: Basic academic
	armext	Discipline: Those with external market (professions)
		Discipline: Those with a mix of academic and professional markets as reference cat
INSTITUTIONAL FACTORS		
Region of institution	geogra	Institution is at Mexico Metropolitan area or elsewhere in the country
Type of institution	sectortp	Type of institution: Public technological
	sectorup	Type of institution: Public university
		Type of institution: Private universities used as reference category for dummy variables
Department	dept_prf	Department: Professional schools
	dept_nts	Department: Natural sciences
	dept_scs	Department: Social sciences
		Department: Fine arts & humanities used as reference category for dummy variables
Size of institution	q8	Student enrollment
Leadership & management	q23b	Rating of faculty-administrators relationship
	q27f	Satisfaction: Way institution is managed
	q57a	Management: Top-level administrators are competent leaders
	q57b	Management: Being kept informed
	q57c	Management: Faculty-administration communication
	q57d	Management: Administration is often autocratic
	q57f	Management: Student should have more influence on policies that affect them
	q57g	Management: Administration supports academic freedom
Resources	q24a	Resources: Classrooms
	q24b	Resources: Technology for teaching
	q24d	Resources: Research equipment
	q24e	Resources: Computer facilities
	q24f	Resources: Library holdings
	q24g	Resources: Faculty offices
	q24h	Resources: Secretarial support
PROFESSIONAL CAREER		
Professional experience	q7	Years in professional work outside higher education
Nonacad. concurrent outside job	q14b	Non-academic paid position outside this institution
ACADEMIC CAREER		
Professional incorporation	periodo	Time period in which respondent came into the academic profession
Highest degree	q3ahdg	Highest degree
	q3c_mex	Country of highest degree: Mexico or other country
	q3d	Working toward a higher degree
	q4a_rc	Quality of training for teaching
Number of HEIs worked in	q5	Number of higher education institutions worked in
Years in higher education	q6	Years in higher education
	q12	Years in this institution
JOB ATTITUDES		
Importance of discipline	q17a	Affiliation to discipline
Importance of institution	q17b	Affiliation to institution
Importance of department	q17c	Affiliation to department
Teaching-Research preferences	q40	Teaching-Research interests
STRUCT. JOB CHARACTERISTS		

Table 1. Items used in the various multiple regression analysis targeted at identifying predictor variables of overall job satisfaction in Mexican faculty.

CATEGORY	ITEM	DESCRIPTION
Current appointment	q11a	Full- vs part-time status (appointment)
	q11bdef	Tenure vs non-tenured status
Working conditions	q18a1	Weekly hours of teaching activities when classes are in session
	q31_lic	Teaching at licentiature
	q31_lypg	Teaching at licentiature and graduate studies
	q31_pog	Teaching at graduate studies
		No teaching used as a reference category for dummy variables
	q32a	Weekly hours of instruction in classrooms and laboratories
	q38a	Teaching conditions: Use of students' opinion for evaluating faculty
	q38c	Teaching conditions: Need of better ways to evaluate teaching
	q38d	Teaching conditions: Teaching as primary criterion for promotion
	q39f	Undergraduates: Faculty should spend more time with them outside classrooms
	q50a	Strong record in research is important for evaluation at this institution
	q60	Regular evaluation of work
Pay	q19	Total earned yearly income
	q20a	Percentage of income from this institution
	q21a	Rating of academic salary
	q21b	Rating of prospects of improvement of academic salary in next five years
	q30a	Reasons to leave job: Income
Benefits	q22a	Benefits: Retirement
	q22b	Benefits: Sabbaticals
	q22c	Benefits: Travel funds
	q22d	Benefits: Other fringe benefits
	q27c	Satisfaction: Job security
	q27d	Satisfaction: Prospects for promotion
INTRINSIC JOB CHARACTERTS		
Academic climate	q23a	Rating of intellectual atmosphere
	q23c	Rating of faculty morale
	q23d	Rating of clarity of institutional mission
	q23e	Rating of sense of community
	q27b	Satisfaction: Relationship with colleagues
	q27e	Satisfaction: Opportunity to pursue own ideas
	q30c	Reasons to leave job: Academic reputation of institution/department
	q30d	Reasons to leave job: Academic collaboration
	q57e	Management: Lack of faculty involvement is problematic
Quality of students	q25	Quality of students in department
	q26	Quality of students in departament compared to five years ago
	q39a	Undergraduates: Prepared in written and oral skills
	q39b	Undergraduates: Prepared in mathematics and quantitative skills
	q39c	Undergraduates: Doing enough to get by
	q39d	Undergraduates: Willing to cheat
	q39e	Undergraduates: More studious than students five years ago
Courses taught	q27a	Satisfaction: Courses
	q58a	At this institution I'm free to determine course contents
Involvement in scholarship	q16a	Attendance to national disciplinary/scientific conferences in last three years
	q28a	Opinion: This time is creative and productive in my field
	q41a	Research productivity: Scholarly books in last three years
	q41c	Research productivity: Articles in academic books or journals in last three years
	q41d	Research productivity: Reports or monogrpahs for funded projects in last three years
	q41f	Research productivity: Professional articles for newspapers or magazines ....
Governance participation	q55a	Governance: Selection of key administrators
	q55b	Governance: Choosing new faculty
	q55c	Governance: Faculty promotion and tenure decisions
	q55d	Governance: Determining budget priorities

Table 1. Items used in the various multiple regression analysis targeted at identifying predictor variables of overall job satisfaction in Mexican faculty.

CATEGORY	ITEM	DESCRIPTION
	q55e	Governance: Determining teaching load
	q55f	Governance: Setting admission standards for undergraduates
	q55g	Governance: Approving new academic programs
	q56a	Influence: Department
	q56b	Influence: School
	q56c	Influence: Institution
Job strain	q28d	Opinion: Job as source of strain
SOCIAL ATTITUDES		
	q68a	Government priorities: Human rights
	q68b	Government priorities: Basic education
	q68c	Government priorities: World economy
	q68d	Government priorities: Environmental quality
	q68e	Government priorities: Population growth
	q68f	Government priorities: World food supply
	q68g	Government priorities: AIDS and other health issues
	q68h	Government priorities: Racial, ethnic, and religious conflicts
	q68i	Government priorities: Arm control
HIGHER EDUC. ATTITUDES		
	q50e	No political restrictions on publishing in this country
	q59	Protection of academic freedom in this country
	q63a	Government responsibility for determining higher education purposes and policies
	q63b	Too much interference of government in academic policies
	q67a	Contacts with international scholars is important for my professional work
	q67b	Need to read foreign-published book and journals
	q67c	Need to promote more student and faculty international mobility
	q67d	Curriculum at this institution should be more international
	q69a	HE priorities: Educating students for leadership
	q69b	HE priorities: Preparing students for work
	q69c	HE priorities: Life-long learning for adults
	q69d	HE priorities: Preserving the cultural heritage
	q69e	HE priorities: Protecting free intellectual inquiry
	q69f	HE priorities: Promoting scholarship and research
	q69g	HE priorities: Strenghtening nation's capacity to compete internationally
	q69h	HE priorities: Helping solve basic social problems
	q70	Percentage of young people capable of completing secondary education
	q71	Percentage of students completing secondary education that should be admitted to HE
	q72a	Access to HE to all who meet minimum entrance requirements
	q72b	Lowering admissions standards to allow disadvantaged students to enroll
	q72c	Academics are most influential opinion leaders
	q72d	Respect for academics is declining
	q72e	Public institutions should be free of tuition
	q72f	Individuals and businesses should contribute more to HE
	q72g	HEI are increasingly impacted by special interest groups
	q72h	Bureacucracies are threatening HE effectiveness
JOB DISATISFACTION		
Likelyhood of leaving job	q29	Likelyhood of leaving job in next five years
CAREER SATISFACTION		
	q28b	Opinion: Poor time to begin an academic career in my field
	q28c	Opinion: I would not become an academic again
OVERALL JOB SATISFACTION		
	q27g	Satisfaction: Job situation as a whole

Table 2. Mean job satisfaction of Mexican academics included in the study and of various of its constituent subgroups (t values are for contrasts between adjacent subgroups).

Group	n	mean[1]	s.d.	t	p <
All Faculty	1,027	3.22	1.33	------	-----
Part-Time Faculty	382	2.97	1.36	-4.85	.000
Full-Time Faculty	609	3.38	1.29		
FT with Licentiature	299	3.50	1.26	2.72	.007
FT with Doctorate	72	3.03	1.52		
FT - Maginally Involved[2]	45	3.49	1.32	-.10	.919
FT - Fully Involved[3]	333	3.47	1.25		
FT - Professional Disciplines[4]	191	3.46	1.29	1.81	.071
FT - Academic Disciplines[5]	172	3.21	1.39		

[1] Job satisfaction was measured through a Likert scale from 1 (very dissatisfied) to 5 (very satisfied).

[2] Marginally-involved faculty obtained less than 50 percent of their total income from their home institution and had a non-academic job outside their institution.

[3] Fully-involved faculty were those that obtained from their home institution more than 75 percent of their total income and did not have an additional non-academic job

[4] Engineering and computer sciences, business and health sciences.

[5] Mathematics and natural sciences, fine arts and humanities.

Table 3. Prediction of overall job satisfaction for the entire sample of Mexican faculty (n = 1,027).

All Faculty (n = 1,027)					
Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with the way the institution is managed	.263	9.885	p < .0000	.528	p < .0000
Satisfaction with job security	.232	8.928	p < .0000		
Satisfaction with promotion prospects	.212	7.888	p < .0000		
Region of institution (1-México City; 2-Other)	.116	5.041	p < .0000		
Rating of academic salary	.108	4.582	p < .0000		
Rating of sabbatical benefits	.108	4.599	p < .0000		
Priority that HE should give to protect free intellectual inquiry	-.097	-4.295	p < .0000		
Priority that HE should give to adults' life-long learning	.096	4.270	p < .0000		
Satisfaction with relationship with colleagues	.073	3.083	p < .0021		
Disagree - Agree that students do only enough to get by	-.059	-2.701	p < .0070		
Size of institution	-.059	-2.662	p < .0079		

Table 4. Prediction of overall job satisfaction for part- and full-time faculty.

Part-Time Faculty (n = 382)

Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with the way the institution is managed	.335	8.017	p < .0000	.542	p < .0000
Satisfaction with job security	.182	4.635	p < .0000		
Region of institution (1-México City; 2-Other)	.174	4.815	p < .0000		
Satisfaction with promotion prospects	.173	4.104	p < .0000		
Priority that HE should give to adults' life-long learning	.143	3.827	p < .0002		
Rating of retirement benefits	.134	3.500	p < .0005		
Disagree - Agree that I am kept informed of what happens at institution	.128	3.401	p < .0007		

Full-Time Faculty (n = 609)

Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with job security	.263	7.776	p < .0000	.511	p < .0000
Satisfaction with the way the institution is managed	.251	7.161	p < .0000		
Satisfaction with promotion prospects	.225	6.490	p < .0000		
Rating of academic salary	.194	6.495	p < .0000		
Priority that HE should give to protect free intellectual inquiry	-.091	-3.178	p < .0016		
Reasons to leave-stay: Academic collaboration among colleagues	.088	2.986	p < .0029		
Disagree - Agree that faculty should interact more with students outside of classes	-.086	-3.013	p < .0027		
Disagree - Agree that students are more dedicated than students from 5-yrs ago	.084	2.907	p < .0038		

Table 5. Prediction of overall job satisfaction for full-time faculty with licentiature and doctorate degrees.

Full-Time/Licentiature Faculty (n = 299)					
Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with promotion prospects	.223	4.565	p < .0000	.519	p < .0000
Satisfaction with job security	.220	4.653	p < .0000		
Satisfaction with opportunity to pursue own ideas	.197	3.910	p < .0001		
Governance: Administration - faculty control for determining budget priorities	.156	3.560	p < .0004		
Rating of faculty morale	.148	3.175	p < .0017		
Reasons to leave-stay: Academic collaboration among colleagues	.137	3.261	p < .0012		
Governance: Administration - faculty control for determining teaching loads	-.137	-3.191	p < .0016		
Rating of academic salary	.134	3.056	p < .0025		

Full-Time/Doctorate Faculty (n = 72)					
Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with the way the institution is managed	.713	10.702	p < .0000	.831	p < .0000
No - yes, academic freedom is protected in this country	.253	4.446	p < .0000		
Governance: Administration - faculty control on choosing new faculty	.245	4.572	p < .0000		
Rating of academic salary	.223	4.031	p < .0002		
Disagree - Agree that students are prepared in quantitative skills	.206	3.823	p < .0003		
Disagree - Agree that in this country there are no political restrictions for publishing academic products	-.197	-3.140	p < .0026		
No - yes, member of the natural sciences disciplines	-.151	-2.735	p < .0081		

Table 6. Prediction of overall job satisfaction for marginal- and fully-involved full-time faculty.

Full-Time/Marginally-Involved Faculty (n = 46)					
Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with job security	.561	6.366	$p < .0000$	.721	$p < .0000$
Satisfaction with promotion prospects	.469	5.197	$p < .0000$		
Disagree - agree that students do only enough to get by	-.319	-3.903	$p < .0003$		

Full-Time/Fully Involved Faculty (n = 338)					
Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with job security	.329	7.271	$p < .0000$	.515	$p < .0000$
Satisfaction with promotion prospects	.231	5.117	$p < .0000$		
Satisfaction with the way the institution is managed	.195	4.156	$p < .0000$		
Rating of academic salary	.168	4.161	$p < .0000$		
Rating of intellectual atmosphere	.158	3.714	$p < .0002$		
Disagree- agree that students' opinions should be used in evaluating faculty	-.147	-3.722	$p < .0002$		
Disagree - agree that universities should do more to promote student and faculty international mobility	.104	2.721	$p < .0069$		

Table 7. Prediction of overall job satisfaction for full-time faculty in professional and academic disciplines.

Full-Time/Professional Disciplines Faculty (n = 191)

Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with the way the institution is managed	.374	6.418	p < .0000	.553	p < .0000
Satisfaction with job security	.281	4.973	p < .0000		
Rating of academic salary	.198	3.868	p < .0002		
Disagree - agree that admission standards in this institution should be lower to allow disadvantage students to get in	.184	3.681	p < .0003		
Reasons to leave - stay: Academic reputation	.159	3.041	p < .0027		
Disagree - agree that access to HE should be open to all those that satisfy minimum entrance requirements	-.151	-3.072	p < .0024		
Disagree - agree that students are more dedicated than students from 5-yrs ago	.140	2.773	p < .0061		

Full-Time/Academic Disciplines (n = 172)

Variable	Beta	t	Signif.	Adj. R^2	Model Signif.
Satisfaction with the way the institution is managed	.402	6.347	p < .0000	.532	p < .0000
Satisfaction with job security	.335	5.788	p < .0000		
Rating of resources: Research equipment	-.226	-3.812	p < .0002		
Rating of academic salary	.203	3.751	p < .0002		
Rating of intellectual atmosphere	.174	2.879	p < .0045		
Priority that the government should give to basic education	-.156	-2.961	p < .0035		

Table 8. Items/variables with significant betas associated with the prediction of job satisfaction. For each group or subgroup the number associated with a particular item indicates its relative strength in the prediction equation, with 1 being the strongest. The associated letter indicates whether the correspondent beta is strong (s), moderate (m) or weak (w).

Item	All Fac	PT	FT	FT-L	FT-D	FT-PI	FT-FI	FT-PD	FT-AD
(CF) geogra: Region of institution	4m	3 m							
(CF) q8: Size of institution	11w								
(R) q24d: Research equipment									3s
(M) q27f: Sat w/way institution is managed	1s	1s	2s		1s		3m	1s	1s
(M) q57b: Mgmt: Been kept informed		7 m							
(B&P) q27c: Sat w/job security	2s	2 m	1s	2s		1s	1s	2s	2s
(B&P) q27c: Sat w/promotion prospects	3s	4 m	3s	1s		2s	2s		
(B&P) q22a: Benefits: Retirement		6 m							
(B&P) q22b: Benefits: Sabbatical	6m								
(B&P) q21a: Rating of academic salary	5m		4 m	8m	4s		4m	3m	4s
(Disc) q3b_ntsc: Discipline: Natural sciences					7m				
(AC) q27b: Sat w/relationships w/colleagues	9w								
(AC) q30d: Reasons to leave: acad collaboration			6w	6m					
(AC) q27e: Sat w/opportunity to pursue own ideas				3m					
(AC) q23c: Rating of faculty morale				5m					
(AC) q23a: Rating of intellectual atmosphere							5m		5m
(AC) q30c: Reasons to leave: Academic reputation								5m	
(S&T) q39c: Students, doing only enough to get by	10w					3s			
(S&T) q39f: More out of classroom fac-stud inter			7w						
(S&T) q39e: More dedicated than 5-yrs ago			8w					7m	
(S&T) q39b: Are prepared in quantitative skills					5s				
(S&T) q38a: Use of stud's opinion in evaluating fac							6m		
(Gov) q55d: Determining budget priorities				4m					
(Gov) q55e: Determining teaching loads				7m					
(Gov) q55b: Governance: Choosing new faculty					3s				
(HEA) q69e: Priorities, protection of intell inquiry	7w		5w						
(HEA) q69c: Priorities, life-long learning f/adults	8w	5 m							
(HEA) q59: Protection acad freedom in country					2s				
(HEA) q50e: No political restriction on publishing					6m				

(IIEA) q67c: Need for more stud/fac intern mobility							7m		
(IIEA) q72b: Lower adm stand t/allow disadvant stds								4m	
(IIEA) q72a: Access to all w/minimum entrance criteria								6m	
(SA) q68b: Government priorities: Basic education									6m

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