

**Examination of the Conceptualization and
Measurement of Career Plateau:**

A Comparative Analysis

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Executive Summary

The number of people likely to be passed over for promotion has increased dramatically in recent years, mainly because of restructuring within many organizations. The phenomenon of career plateaus has been examined, especially its antecedents and the possible career consequences. Research results, however, have not satisfactorily distinguished between plateaued and non-plateaued individuals.

Critiques of the research on plateaus have identified several problems: (1) the use of job tenure as the measure for a plateau; (2) the tendency to employ single-item ratings on the probability of future promotions; and (3) the lack of a continuum of "plateauness" -- usually the individual is considered plateaued or not plateaued (dichotomous variable). The purpose of this study is to examine how an individually-based measure of career plateau compares with the traditional job tenure conceptualization. Specifically we expected to find (1) that career plateaus would be negatively related to job attitudes and career planning; (2) that future career development will moderate the impact of career plateaus; and (3) that the perceptual measure of career plateau will account for more variance than job tenure in outcome measures.

Participants in this study were baccalaureate graduates from Michigan State University who participated in a career development study. Alumni represented 10 graduation classes selected between the years 1952 and 1985. The initial sample of 33,505 were randomly selected from a list stratified by college granting the degree. Approximately 7,848 surveys were returned for a response rate of 23.4%.

A perceptual measure of career plateau was obtained from three items related to opportunities for promotion and career future. The traditional measure of plateau, job tenure, was also available. Career growth was measured by six items related to promotional aspirations and job responsibilities. The outcome measures that interested us included: job satisfaction, satisfaction with the organization, career planning, and career involvement.

Results can be summarized as follows:

- (1) The perceptually-based measure of career plateaus accounted for significantly more variance in job satisfaction, organizational identification, career involvement, and career planning than the job tenure measure.
- (2) Career plateaus were associated with lower levels of job satisfaction, career planning, and career involvement.
- (3) Importance measures of career growth and promotion opportunities did not add to the explanation of job satisfaction and organizational identity, but did have an impact on career planning and career involvement.

If these results can be replicated, the current thinking on career plateaus can be influenced. It appears that career plateaus may not be as damaging to one's career as initially expected. The negative effects of career plateaus may be overstated.

Introduction

The number of people who are unlikely to receive future promotions has increased dramatically, highlighting the need to better understand individual and organizational reactions and interventions to those in career plateaus (Fisher, 1988; Nowlin, 1988). Recent advances in career development research have examined antecedents and consequences associated with the career plateau. However, the research evidence has been mixed. Although some studies found significant differences between plateaued and nonplateaued people in terms of absenteeism (Near, 1985), job history tenures (Veiga, 1981), and career strategies (Gould & Penley, 1984), other studies did not find many significant differences in terms of the work environment, job satisfaction (Slocum, Cron, Hansen, & Rawlings, 1985), and satisfaction with need fulfillment and organizational rewards, (Evans & Gilbert, 1984).

The failure to identify systematic differences between plateaued and nonplateaued people may be due to the nature of career plateaus themselves. Stoner, Ference, and Warren (1977) defined the career plateau as "The point in a career where the likelihood of additional hierarchical promotion is very low" (p. 602). Feldman and Weitz (1988) noted that a hierarchical promotion may not be the key to career plateaus. Many people can enrich their jobs without promotions, whereas others who are promoted may not have new responsibilities. Thus, they expanded the definition to include individuals who are unlikely to obtain future job assignments with increased responsibility.

From a conceptual perspective, what is essential to the definition of a career plateau is the individual's perceptions of his or her career future. Both the original definition by Ference, Stoner, and Warren (1977) and the expanded definition by Feldman and Weitz (1988) are concerned with the individual's future career promotions and job assignments. The subjective evaluation is the appropriate focal point because it emphasizes how the individual perceives, assesses, and reacts to the work situation. Thus, even if the perception is not prescient of future events, if an individual believes that the likelihood of future promotions or enriching job assignments is very low, it will be that perception, and not the eventual reality of the future, that will affect current attitudes, behaviors, and future plans. Furthermore, the perception of the career plateau is individually-based. Although others may form their own opinions of the likelihood of promotion for the individual, these opinions are only relevant to the extent that they are shared and used by the individual to form his or her own evaluation.

Despite the theoretical underpinnings of the career plateau concept that emphasize the individual's perceptions, most of the empirical research has operationalized plateaus by other means, typically using categories of job tenure. Some studies have defined people as being plateaued when their current job tenure is greater than or equal to five years (Slocum, Cron, Hansen, & Rawlings, 1985; Stout, Slocum, & Cron, 1988), seven years (Gould & Penley, 1984; Veiga, 1981), or ten years (Gerpott & Domsch, 1987). Other studies have used age as the basis for defining career plateaus (Evans & Gilbert, 1984) or single-item ratings on the likelihood of future promotions (Carnazza, Korman, Ference, & Stoner, 1981; Near, 1985).

Current empirical research is limited in two major respects. First, all of the studies have treated the concept of a career plateau as a dichotomous status. An employee is either plateaued or nonplateaued; there are no degrees of "plateauness" acknowledged by the data analyses. To treat people with 5, 10, 15, 20, and 25 years of job tenure as a homogeneous "plateaued" group may confound results examining the relationships between career plateaus and other individual and organizational variables. Research on life-career roles (Super, 1986) emphasizes the dynamic nature of the career as an individual ages. Thus, hypothesized outcomes of career plateaus such as job dissatisfaction, relative lack of career planning, and limited job success may be affected by the extent to which the individual perceives a plateau and the duration of this plateau. Furthermore, the awareness of a career plateau may be a gradual process. Most likely, the probability of future promotions or challenging job assignments is judged within the entire range of probabilities and not just 0 and 1. Thus, just as there may be differences among people who are grossly categorized as being plateaued, there may also be substantial differences among people who are defined as nonplateaued but have various non-zero probabilities for their future career progress.

Secondly, the current research on career plateaus does not differentiate a plateau from a career pinnacle. If a career pinnacle is defined as the highest organizational level or job an individual aspires to, then the achievement of this goal also conforms to the definition of a career plateau. Furthermore, the few people who do make it to the top of the organizational hierarchy also may qualify as being plateaued, as the likelihood of future promotions is zero. Some qualitative research (Stoner et al, 1980) and conceptual articles (Near, 1980) recognize plateau differences between those who choose to be plateaued and those who are forced into plateaus. However, the empirical research has not yet effectively dealt with this issue and the studies using only job tenure as the operationalization of career plateaus would mask these conceptual differences entirely.

The purpose of the present study is to examine how an individually-based measure of a career plateau compares with job tenure defined measure of career plateau in their relationships with hypothesized plateau outcomes. With regard to specific hypothesized outcomes of career plateaus, Stoner et al. (1980) found frustrated plateauees had lower performance and more negative attitudes toward their jobs, and Feldman (1988) suggested that plateaued people may not be involved with their job or engage in career planning to the same extent as nonplateauees.

Hypothesis 1. Perceptions of a career plateau will be negatively related to job attitudes such as job satisfaction, company identification, and career involvement. In addition, perceptions of a career plateau will be negatively related to career planning.

In order to further refine the concept of career plateaus, a career development measure will be examined to determine to what extent it will differentiate among plateaued people who perceive future advancements and career growth as relatively important or unimportant. Relationships between a career plateau and job attitudes and career planning may be moderated by the perceived importance of future career development. Thus, plateaued people who still value career advancement or new responsibilities may be frustrated and dissatisfied with their present positions; however, plateaued people who do not value new opportunities may not view their current position negatively (Near, 1980)

Hypothesis 2. The importance of future career development will moderate relationships between career plateau and outcome measures. Specifically, the interaction between perceptions of a career plateau and perceptions of the importance of further career development will enhance the main effects prediction of job attitudes and career planning.

The relationship between job tenure and career plateaus is a complicated one. Gould and Penley (1985) found job tenure to be positively related to willingness to relocate but Noe, Steffy, and Barber (1988) found it to be negatively related to willingness to accept another job. Since job tenure is related to other time-based variables that may affect career decisions, a measure that directly taps the conceptual definitions of a career plateau may offer a better test of the career plateau-job attitudes relationships.

Hypothesis 3. The perceptual measure of career plateau will account for more variance in the outcome measures than a secondary plateau measure using job tenure.

If a perceptual measure of career plateaus has stronger relationships with hypothesized outcomes of plateaus, then the current research examining plateaus via age and job tenure measures represents only the exploratory phase and needs to be reevaluated for its contribution to the study of career plateaus.

Method

Sample and Procedure

The participants in this study were baccalaureate graduates from Michigan State University. Alumni from 10 graduation classes were selected to obtain data from a large cross-section of people who graduated between the years 1952 and 1985. Random selection among alumni resulted in 33,505 questionnaires mailed out and 7,848 returned for a response rate of 23.4%. This response rate is a conservative estimate because the questionnaires were sent via bulk mail. Thus, it was not possible to determine how many bad addresses never reached alumni, since no forwarding of mail was allowed with bulk mail, and the number of deceased alumni was also unknown. Of the 7,848 respondents, only 6,279 reported that they were employed full-time. The sample is predominately a white (96.8%), male (60.2%), upper middle-class group with a median family income between \$40,000-\$50,000. Most of the respondents were in professional/ technical occupations (50.4%) or managerial occupations (35.5%), although there were several respondents reporting jobs in clerical/sales (9.3%), service (2.3%), agricultural/natural resources (1.5%), and manufacturing/construction (1.0%). The respondents' ages ranged from 22 to 67, with a mean age of 37.14.

Measures

Career plateau. Perceptions of a career plateau were measured by three items related to promotion opportunities and career future. The first item requests a rating on the employee's promotion opportunities; the other two items are modifications of items from the Career Future scale of the Index of Organizational Reactions (IOR; Smith, 1976). The reliability of the three-item scale as measured by coefficient alpha was .77.

In addition to the perceptual measure of career plateaus, another measure of plateaus was defined by job tenure. Although the selection of a particular tenure level as the definition of a plateau is rather arbitrary, the identification of five or more years as a career plateau was selected for two reasons. First, the five-year mark has been used in previous research (Slocum, et al., 1985; Stout et al., 1988). Second, using the five-year mark resulted in 67.16% of the respondents classified as nonplateaued and 32.83% classified as career plateaued (Mean = 4.73 years). This tenure-based measure of career plateaus was dummy coded into the two plateau/nonplateaued groups. For purposes of clarification, the perceptual measure of career plateaus will be labeled "Plateau-P" and the tenure-defined measure will be labeled "Plateau-T".

Importance of career growth. The importance of career growth was measured by six items related to promotion aspirations and job responsibilities. The importance of promotions was tapped by four items typically related to promotions - advancement itself, prestige, salary, and professional recognition. Job responsibilities were tapped by two items dealing with leadership opportunities and participation in important decision-making. The reliability of this scale as measured by coefficient alpha was .79.

Outcome measures. Four outcome variables related to career plateaus were examined. Overall job satisfaction was measured by the 20-item Minnesota Satisfaction Questionnaire (MSQ; Weiss, Dawis, England, & Lofquist, 1967). Cronbach's coefficient alpha for this scale was .88. Satisfaction with the organization was assessed by the Company Identification scale of the Index of Organizational Reactions (Smith, 1976). This scale contained five items reflecting attitudes toward the respondent's organization and its treatment of employees. Cronbach's coefficient alpha for this scale was .86. Career planning and career involvement were assessed with two scales developed by Gould (1979). The career planning scale was composed of six items related to the respondent's career objectives, plans, and strategies for achieving career goals. The career involvement scale was composed of eight items related to the respondent's identity with his or her chosen career, pride and satisfaction with the career, and importance of the career within the larger context of the respondent's general life. Cronbach's coefficient alphas for the career planning and involvement scales were .88 and .84, respectively.

Analyses

The hypotheses were tested by hierarchical multiple regression analyses to assess the incremental explanatory power of the perceptual measures over the traditional measure of plateaus defined by job tenure. Four independent variables were used to predict each of the four outcome variables: in the first step each dependent variable was regressed on the Plateau-T measure; in the second step the Plateau-P scale was entered; in the third step the importance scale was entered; and finally, in the fourth step, the interaction term was entered to assess its additional explanatory power over the two main effects of the perceptual measures.

Method variance. Since all the data in this study were collected from one survey, the possibility that the results could be due to method variance, e.g., variance attributed to factors other than the constructs of interest, represents a serious concern. This concern was addressed in two ways. First, two additional criteria were selected to measure the extent to which the plateau and importance measures predicted two

constructs that do not have any theoretically-based relationship to career plateaus. These two criteria were ratings of the extent to which the respondents had mastered the language, technical terms, jargon, etc., of his or her profession, (five-item scale, Cronbach's coefficient alpha = .82), and the extent to which the respondent's undergraduate academic program effectively developed certain skills and abilities (16-item scale, Cronbach's coefficient alpha = .86). These criteria, labeled Language and Academia, were also dependent variables in hierarchical regression analyses. Both scales were presented on the same questionnaire and both involved similar 5-point Likert type ratings that were used for the other dependent variables. If the plateau measures account for significant portions of variance in these measures that are comparable to the other outcome measures, then the issue of method variance cannot be discounted.

The second procedure used to examine method variance was Harman's one-factor test (Harman, 1967; Podsakoff & Organ, 1986). All scales used in the regression analyses were subjected to a principal axis factor analysis. If a one-factor solution best describes the relationships among the independent and dependent variables, then the results from the regression analyses were likely to be influenced strongly by method variance.

Results

Means, standard deviations, and correlations among the dependent and independent variables are presented in Table 1. The correlation between the two measures of career plateaus, although significant, was very small, ($r = .04$, $p < .01$) suggesting that the two measures are tapping different constructs. In addition, the correlations among all the independent variables, with the exception of correlations with the interaction term, were relatively low, suggesting that the potential problem of multicollinearity among the independent variables was not a major problem.

Correlations between Plateau-T and the dependent variables are smaller than comparable correlations with Plateau-P, the Importance scale, and the interaction term. In addition, correlations between the Plateau-P measure and the four hypothesized outcomes of career plateaus are significant and negative indicating that those respondents who perceived themselves to be plateaued were likely to report lower levels of job satisfaction, career planning, career involvement, and organizational identification than respondents who did not perceive themselves to be plateaued. Thus, Hypothesis 1 was supported.

Results from the hierarchical regression analyses were used to test Hypotheses 2 and 3. Using a listwise deletion of missing data, all regression analyses were based on a sample of 5,949 respondents. Table 2 shows a summary of the regression analyses for all four dependent variables.

When considering only the job tenure-defined plateau measure, Plateau-T accounted for only 0.6% of the variance in job satisfaction ($F(1,5947) = 34.28$, $p < .001$), 0.2% of the variance in company identification ($F(1,5947) = 15.25$, $p < .001$), 1.1% of the variance in career planning ($F(1,5947) = 67.57$, $p < .001$), and 0.2% of the variance in career involvement ($F(1,5947) = 10.91$, $p < .001$). When the perceptual measure of career plateaus was entered into the regression equations, Plateau-P significantly increased

the amount of explained variance in all four dependent variables. The increase in explained variance was 43.1% for job satisfaction ($F(2,5946) = 4558.25, p.001$), 44.5% for company identification ($F(2,5946) = 4785.64, p.001$), 11.6% for career planning ($F(2,5946) = 790.37, p.001$), and 16.4% for career involvement ($F(2,5946) = 1166.28, p.001$). These results provide strong support for Hypothesis 3; thus the explanatory power of the perceptually-based measure of a career plateau was significantly higher than the job tenure-based measure.

Table 1
Means, Standard Deviations, and Inter-Scale Correlations

Variable	M	SD	1	2	3	4	5	6	7	8	9
<hr/>											
Independent Variables:											
1. Plateau - T	0.33	0.47	-								
2. Plateau - P	2.59	0.95	.4	-							
3. Importance	3.31	0.75	-.11	-.17	-						
4. Interaction	11.39	4.47	-.8	-.81	.68	-					
 Dependent Variables:											
5. Job Satisfaction	3.73	0.55	.8	-.65	.14	.55	-				
6. Career Planning	3.92	0.81	.10	-.34	.14	.32	.37	-			
7. Career Inv.	3.68	0.74	.4	-.40	.19	.39	.50	.54	-		
8. Company ID	3.54	0.76	.5	-.66	.13	.55	.72	.31	.40	-	
9. Language	4.20	0.58	.16	-.13	.12	.17	.20	.24	.21	.15	-
10. Academia	2.80	0.60	.4	-.11	.18	.18	.13	.10	.11	.10	.5

*Sample size ranged from 5976 to 6115. Decimal points have been omitted from correlation coefficients. All correlations are significant at $p < .01$.

Table 2
Summary of Hierarchical Regression Analyses Completed on Job Satisfaction, Company Identification, Career Planning, and Career Involvement

Dependent Variable: Job Satisfaction (MSQ)					
Independent	R a	Standardized regression weights			
Variable		Step 1	Step 2	Step 3	Step 4
Plateau - T	0.006	.08***	.10***	.10***	.10***
Plateau - P	0.437		-.66***	-.65***	-.52***
Importance	0.438			.04***	.07*
Interaction	0.439				-.19***

Dependent Variable: Company Identification					
Independent	R a	Standardized regression weights			
Variable		Step 1	Step 2	Step 3	Step 4
Plateau - T	0.002	.05***	.08***	.08***	.08***
Plateau - P	0.447		0.67***	-.66***	-.71***
Importance	0.448			.03**	.06
Interaction	0.448				.06

Dependent Variable: Career Planning					
Independent	R a	Standardized regression weights			
Variable		Step 1	Step 2	Step 3	Step 4
Plateau - T	0.011	.10***	.12***	.13***	.13***
Plateau - P	0.127		-.34***	-.32***	-.39***
Importance	0.136			.09***	.14*
Interaction	0.136				.09

Dependent Variable: Company Identification					
Independent	R a	Standardized regression weights			
Variable		Step 1	Step 2	Step 3	Step 4
Plateau - T	0.002	.04***	.06***	.07***	.07***
Plateau - P	0.166		-.40***	-.38***	-.53***
Importance	0.182			.13**	.25***
Interaction	0.184				.21**

The first R is based on the predictor in Step 1 (Plateau - T), the second R is based on the predictors in Step 2 (Plateau - T and Plateau - P), etc.
 *p<.05, **p<.01, ***p<.001

With regard to Hypothesis 2, the incremental explanatory power of the interaction term was negligible. Adding the Importance measure to the regression equations only increased the amount of explained variance by 0.1% for the two satisfaction measures, 0.9% for career planning, and 1.7% for career involvement. The final addition of the interaction term increased the amount of explained variance by only 0.1% for Job Satisfaction and 0.2% for Career Involvement. Although the standardized regression weights for the interaction term were statistically significant for these dependent variables, the increase in explanatory power was not judged to be meaningfully significant. The standardized regression weights for the interaction term were not significantly different from zero in predicting Company Identification and Career Planning. Thus, the results do not provide support for Hypothesis 2.

Method Variance

Hierarchical regression analyses using the Language and Academia scales as the dependent variables were conducted to determine how well the independent variables accounted for variance in measures that are unrelated to career plateaus. Results with all four independent variables entered in the analyses showed the amount of explained variance was 5.8% for Language ($F(4,5944) = 90.67, p.001$), and 3.8% for Academia ($F(4,5944) = 58.53, p.001$). Although the portion of explained variance was significant, the amount of explained variance in the four hypothesized dependent variables were larger indicating that method variance cannot be the sole determinant of the obtained results.

Results from the one-factor test also supported the argument that the results are not due entirely to method variance. A principal axis factor analysis was conducted for the six dependent variables, two plateau measures, and the Importance scale. Results from the unrotated factor solution showed a three-factor solution satisfied the Kaiser criterion and accounted for 61.1% of the variance. Three variables: Plateau-T, Language, and Academia had relatively low factor loadings with none above .40 on any factor. For the remaining six variables, each had one relatively high factor loading across the three factors indicating these variables were not describing one general factor.

Discussion

Current empirical research on career plateaus has been equivocal in its conclusions regarding job attitudes for people who are plateaued versus nonplateaued (Slocum et al, 1985; Stout, et al, 1988; Veiga, 1981). These results may be due to the operationalization of career plateaus based on a secondary measure, job tenure with questionable construct validity. This study compared a perceptually-based operationalization of career plateaus with the traditional dichotomous measure based on job tenure. Results on two affective measures: job satisfaction, and organizational identification, and two career dimensions: career involvement, and career planning showed the perceptually-based measure of career plateaus to account for significantly more variance than the job tenure-based measure.

When career plateaus are defined by self-ratings on the likelihood of future promotion opportunities, the range of additional variance explained in the dependent measures varied from 11.6% to 44.5%. The amount of incremental variance explained was greatest for the two affective measures. Thus, the perception of a career plateau is

associated with lower levels of reported job satisfaction and organizational identification. With regard to the career planning and career involvement scales, the perception of a career plateau is also associated with lower levels of these responses.

The addition of the Importance measure of career growth and promotion opportunities added relatively little to the prediction of job satisfaction and organizational identity; however, this measure did significantly add to the prediction of career planning and career involvement. Contrary to Hypothesis 2, the addition of the interaction term between Plateau-P and the Importance scale did not account for a meaningful portion of the variance for any of the four dependent measures. Thus, the Importance measure did not moderate the relationships between Plateau-P and the dependent variables.

The results supporting Hypotheses 1 and 3 indicate that a perceptually-based measure of career plateaus can account for a significant amount of additional variance in outcome measures over the traditional measure based on job tenure. If the results of the present study can be replicated with additional outcomes that are theoretically linked to career plateaus, the consequences of career plateaus may not be as equivocal as the existing research seems to indicate. Failure to find significant differences between plateaued and nonplateaued groups based on job tenure would represent only a preliminary step to exploring career plateaus, and not a conclusion that the negative effects of a career plateau may be overstated.

Methodological Issues

Results from the present study represent an important initial step in the development of appropriate measures of career plateaus. The study differs from previous research by using a reliable measure, based on the respondent's perceptions of promotion opportunities and career future. In addition, the study attempted to further explore the conceptualization of career plateaus by using a measure of the importance of career growth opportunities. Despite these contributions, the study is limited in two respects, which are discussed below.

The study was based on data from one questionnaire and the extent to which the relationships between career plateaus and dependent variables were due to method variance cannot be fully determined. Results from the hierarchical regression analyses using two criteria that are theoretically unrelated to career plateaus (e.g., Language and Academia) and results from the one-factor test indicate that the results are not entirely attributable to common method variance. Although the issue of method variance cannot be completely ruled out, the extent to which it accounts for the amount of explained variance may be roughly estimated at 5.8% -- this was the largest amount of variance the independent variables accounted for in the "unrelated" dependent variable, Language. These findings fall in line with research by Spector (1987) who reported that the evidence for method variance among self-report measures of job satisfaction was minimal. Secondly, it must be acknowledged that the results from the present study are based on a sample of predominantly white, middle-class college graduates. How these findings may generalize to a more heterogeneous workforce remains unknown.

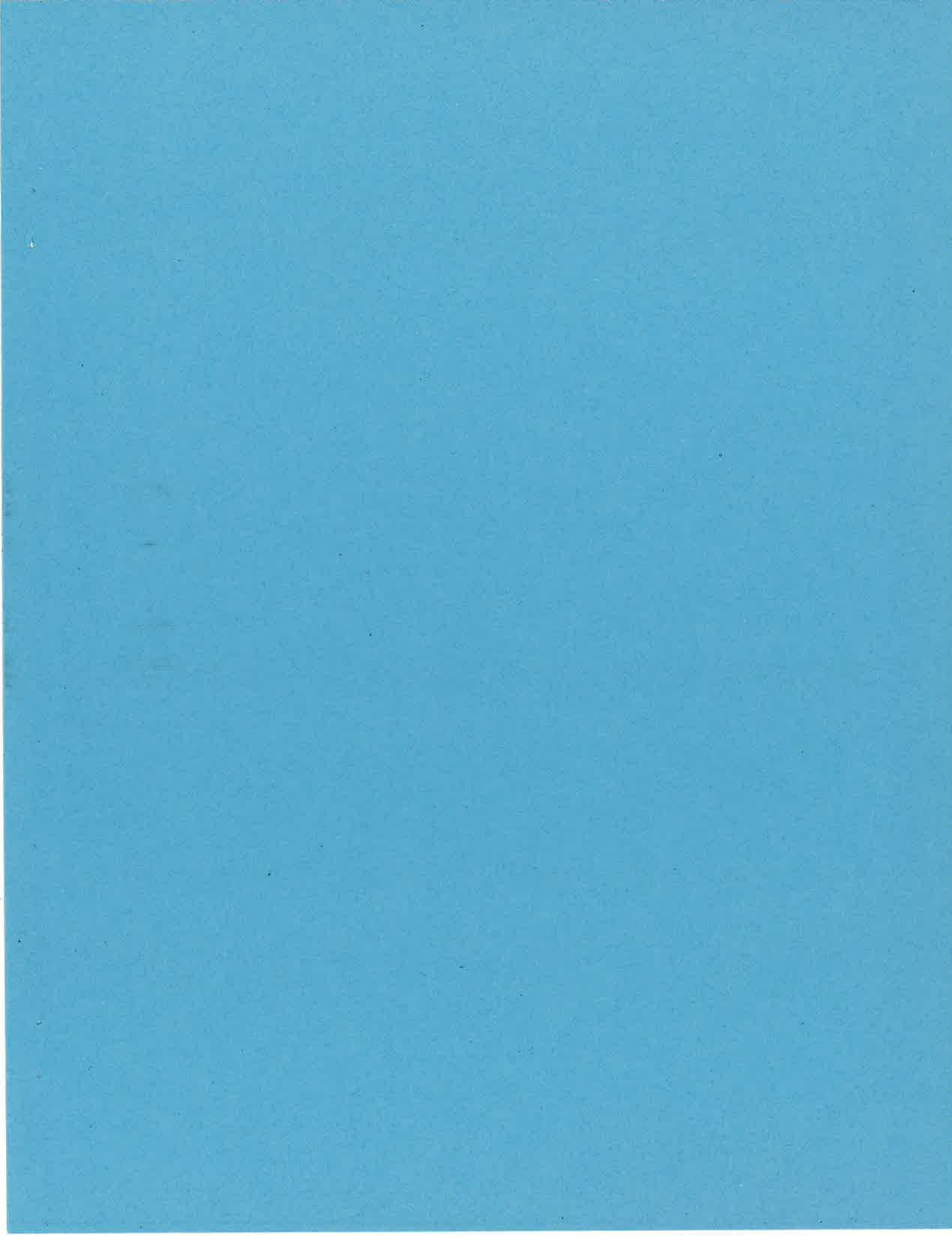
Future Research

Future research should move away from job tenure operationalizations and build on the concept of the career plateaus. Empirical research that utilizes the conceptual definition of plateaus should provide a better understanding of relationships between a career plateau and specific antecedents and outcomes. For example, if career plateaus are related to stagnation in one's position, future researchers should concentrate on those job characteristics that allow one to develop and grow within a job as well as across jobs. Organizational interventions, such as project management (Hall, 1985; Hall & Louis, 1988), and mentoring (Kram, 1985), as well as nonwork interests in family and leisure activities may need to be examined, or re-examined, in light of a more comprehensive definition of a career plateau. In addition, a better definition of career plateaus should allow for the possibility of an individual reversing the plateau. Feldman (1988) describes how certain managerial interventions may prevent or reverse career plateaus. The use of job tenure data would not be able to adequately capture how perceptions of a career plateau may intensify or change; however, an individual's perceptions about a career plateau could be used in longitudinal research to measure relationships between plateau antecedents and consequences.

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The Collegiate Employment Research Institute was established by Michigan's Legislature in 1984. The Institute is charged with the task of examining issues on career development and employment for college graduates. Various projects are underway, including the study covered in this report, to provide information to educators and counselors for program development. If you have any questions on this study or any Institute project, please contact the Institute directly.

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