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Daniel Martin and Donna Wiley and Peter Legree

California State University, East Bay

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Ethnocentrism and Internal Compensation Structuring: An Experimental Examination of Point Factor Job Evaluation

Daniel E. Martin¹, Donna Wiley¹, Peter J. Legree²
California State University, East Bay¹, U.S Army Research Institute for Behavioral and Social Sciences²
daniel.martin@csueastbay.edu

Abstract

“Comparable Worth” represents the concept that men, women, minorities, and whites should receive equal pay for work of equal value from their employer [8]. Much research and many articles have been written in regards to overall pay inequities between men and women; however information regarding internal compensation strategies and perceived labor pools (percentage of minority applicants) has not been explored in depth. A total of 381 individuals participated in an experimental study that manipulated perceived labor market composition in order to establish the relative impact of ethnocentrism on the evaluation of compensable factors and salary. Results strongly supported the authors’ hypotheses, indicating that (a) significant discriminatory weighing of compensable factors by the perceived ethnicity and gender of labor pools occurs, (b) individual participant demographics (ethnicity and gender) contribute significantly to discrimination between perceived labor pools, and (c) participant individual differences significantly contribute to discriminatory weighing. Implications and directions for future research are considered.

Introduction

The United States provided for the protection of women and minorities against pay discrimination by enacting the Equal Pay Act (EPA) of 1963 and Title VII of the 1964 Civil Rights Act (Title VII). EPA prohibits sex-based discrimination between men and women working for the same establishment in jobs that are substantially equal in terms of compensable facts such as effort, skill, responsibility, and working conditions. The essence of this act is that employees must be given equal pay for equal work. Title VII protects against discrimination, including but not limited to sex, race, color, and/or national origin, across all employment-related matters, including pay [26]. If a company has been found in violation of the

law they may be ordered to correct the inequity by issuing wage adjustments.

Supporters of Comparable Worth state that female-dominated jobs are underpaid compared to male-dominated jobs of equal value or worth as measured through traditional job evaluation procedures [3]. This concept grew out of the widely held belief that social and historical factors acting in the marketplace tend to depress the wages of those jobs that have traditionally been held by whites and minorities [6]. From 1960 to 1999 the median wages for women have risen from 60.7 percent of men’s median wages to 76.7 percent [1]. At this rate, it is estimated that full time women will not catch up to the wages of men until 2030 [22]. Some of these disparities can be attributed to differences in occupations, skills and experience, as well as differences in other legitimate factors; however there is still an unexplained 12% gap between the pay of men and women found by the EEOC Council [26].

Compensation discrimination impacts other protected groups as well. According to the EEOC,[26] in 1999 the median earnings for African Americans was 75.9 percent the median for whites, Hispanics’ median income was 65.9 percent of the median for whites and 86.8 percent the median for African Americans. Additionally, only half of the wage gap between African American and white women are explainable by legitimate differences.

It has been hypothesized that because of stereotypes and sex bias, jobs which are female dominated are systematically undervalued on job evaluation instruments [3]. To remedy potential discrimination, comparable worth programs (CWPs) have been developed. CWPs assign jobs a cumulative point value, representing the “worth” across a number of job evaluation factors such as tasks, duties, responsibilities, worker requirements, and worker conditions descriptive of the jobs. The jobs are then classified as either female dominated or

male dominated (one gender reflects 70% of job incumbents). If classification falls below 70% of incumbents in one classification, then it is considered to be sex-balanced. Regression methods are used to determine the relations between existing wage rates and the point values for each subgroup of jobs. If the estimated regression lines are found to be statistically different between the male and female dominated positions then sex discrimination is said to have existed [3]. If bias has been established, general practice has been to raise the wages of the female dominated jobs up to the rate of the male-dominated jobs (typically 20%).

The job evaluation process may be subject to sex bias as associated factors and weights are inherently subjective, with evaluator points unreliable due to individual differences and rater bias [3]. Significantly, the problems of subjectivity begin earlier in the basis for the job evaluation process, job analysis. For example, in 1979 Blumrosen stated [6], "The value system and related perceptions of the job analyst influence what information is collected and therefore what is available in later stages of the process." Male and female evaluators that receive similar information emphasize different aspects such as working conditions [3]. However, in a more recent study, Grinder & Toombs [12] found that average job-evaluation scores set by male and female evaluators were not significantly different.

Research on comparable worth began focusing on job evaluation in the mid 1980's. As job evaluation is an administrative tool for establishing a hierarchy of jobs for purposes of pay, it is a logical place to assess comparable worth because it arrays jobs in terms of internal job requirements and related values.

More recent research [2] has shown that inherent job worth is a difficult construct to define objectively or to measure reliably. The study had three separate commercial job evaluation firms independently rate 27 jobs that represented 22% of the total employment from one company. They used separate evaluation methods and the resulting evaluations did not rate the same traits, suggesting that comparable worth will depend on the evaluator chosen.

1. Point factor job evaluation systems, the Equal Pay Act, and Title VII of the Civil Rights Act of 1964

While the majority of human resources professionals are very familiar with the concept of an external salary survey, the main focus of our research is on what to value within the actual jobs, and how that value is determined for equal jobs. Based on the above, and because point factor plans are the most commonly used job evaluation method in the U.S. and Europe, we focused on aspects of the point factor job evaluation system for potentially similar discrimination in determining relative value within jobs [20].

Point factor job evaluations make the criteria for evaluating jobs explicit through the establishment of compensable factors. Compensable factors are work characteristics that the organization values, generally based on job analysis [20][15].

Our use of the point factor methodology presupposed several steps having been completed by the time study participants have received their instructions. Specifically, the job analysis of a benchmarked position (in our case, project manager) has been executed; compensable factors identified, and scaled, affording our subject matter experts (in our case students) the opportunity to weight the compensable factors relative to their importance in executing the job. [20][15].

The EPA specifically focuses on pay discrimination between employees on the basis of sex, considering equal work ("equal work on job the performance of which requires equal skill, effort and responsibility, which are performed under similar working conditions..." [27] as the basis for judging compensation discrepancies between the sexes. While the EPA spells out the use of compensable factors as grounds for the evaluation of job similarity, it does not address the potential differences in the way compensable factors are internally weighed. Compensable factors are strategically weighted to facilitate meeting organizational goals by placing an emphasis on specific compensable factors in relation to the overall pay or evaluations of employees. In point factor job evaluation, job evaluators are asked to consider the importance of the individual compensable factor, and to weight it (percentage) accordingly. This is usually done by managers or a job evaluation committee [19].

Based on the research findings above, a concern becomes apparent in the compensable factor weighting component of the point factor job

evaluation process. Specifically, as job evaluators bring their own experiences and references to the point factor process, it may be possible that, while knowing their task is to evaluate the relative importance of the compensable factor, they are considering incumbent and applicant manifestations of the specific factor, as opposed to objectively considering the factor alone [2][3][6].

Similarly, Title VII makes it unlawful to “limit, segregate, or classify employees or applicants for employment in any way which would deprive or tend to deprive any individual of employment opportunities or otherwise adversely affect his status as an employee, because of such individual’s race, color, religion, sex, or national origin.”[28]. Under Title VII, differential weighting of compensable factors based on perceptions of either incumbents, applicants, or potential labor pool might be construed as disparate impact. Disparate impact represents discrimination that is unintentional, but impacts protected employee groups unequally.

The previously referenced research does not address other potential factors that may impact job evaluators and compensation decision makers. With the demographics of the United States changing rapidly, the labor market is diversifying rapidly. The Bureau of the Census [25] notes the following workforce findings: Minorities and immigrants currently hold one out of every four jobs in America, with Asian and Hispanics labor pools growing fastest, followed by the African-American workforce. Minority Americans now comprise nearly 25 percent of the total population.

While there was a groundswell in interest regarding sex-related errors in job evaluation in the mid-80s, similar approaches to understanding the impact of perceived incumbent, applicant, and labor pool ethnicity and ethnocentrism have not been addressed. The current research investigated the impact of potential biases by manipulating the perceived gender and ethnicity of populations associated with the job being evaluated, as well as establishing potential significant differences related to the ethnicity and gender of the evaluator.

2. Ethnocentrism

Ethnocentrism may be an ingredient in the job evaluation process. As ethnocentrism is the tendency to believe or feel that one’s racial or cultural background is ethically and morally superior to that

of the out-group or other groups [30], it is a facet of human life that impacts every aspect of behavior. Sumner first defined ethnocentrism [23], noting the use of in-group standards when judging out-groups. The ethnocentric perspective is one that may lead to different judgments for the same behaviors depending on who enacted the behaviors.

Ethnocentrism involves using one’s own group as a basis for comparisons with similar groups regarded more favorably (or with more in-group bias) and dissimilar groups being regarded less favorably. Ethnocentrism guides distinctions made between groups, and can lead to racial polarization. “Racial polarization links racial differences to behavior, thereby channeling people into racially segregated job niches and opportunities for accomplishments” [17]. Individuals may identify with their cultural background, using out group standards for non-members, manifesting ethnocentric judgments during the weighting of the compensable factors.

3. Individual Differences

As acculturation plays an important role in individual/group identity, we will explore its relevance to the evaluation of compensable factors. Redfield, Linton and Herskovits [21] defined acculturation as “those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original culture patterns of either or both groups.” Berry, Kim, Power, Young, and Bujaki [5] have proposed a model to describe the ways the individual relates to the dominant culture. Their relational style is known as their acculturation strategy. We will use the categories in the Berry, et al. [5] analysis to assess the potential impact the four dimensions of acculturation above may have on weighting compensable factors.

The strategies formulated by Berry, et al. are:
Assimilation, which is when the individual adheres to the other culture’s values;
Separation, in which the individual adheres to their own cultural values, and rejects the other culture’s norms;
Integration, which is the acceptance of both sets of cultural norms to a greater degree;
Marginalization, which is the rejection of both sets of culture.

As the weighting of compensable factors may tap into cognitive biases, and as resisting these biases necessitates effortful cognitive processes [10], an individual's need for cognition might play a role in the evaluation of compensable factors. The need for cognition (NFC) describes individual differences in one's likelihood to participate in effortful cognitive activities [7], and individual NFC scores express variations in one's attitudes, thinking, and behaviors. Importantly for our study, previous research has demonstrated a significant negative correlation between need for cognition and modern racism in college students [29]. As we are examining the effect of group membership (and group membership-related individual differences), as opposed to individual cognitive differences, we will use the need for cognition scale as a covariate in our multivariate analyses.

While legislation has been enacted to prohibit compensation discrimination based on race, color, religion, sex, national origin, age, disability, or protected activity, the current study is concerned with problems of both internal and external compensation discrimination. Specifically, given the prevalence of multinational and national organizations, we have not been able to identify the discriminatory impact of differential assignments of points to compensable factor based on perceived labor markets. While individuals are supposed to be evaluating jobs, not people, the evidence suggests the majority of evaluators are considering incumbents, applicants and labor pools, not the job itself in a job evaluation [2]. Given the paucity of literature regarding both the interaction between gender and ethnicity of perceived labor pools, and evaluator demographics in internal compensation decision making, we focused on the aforementioned factors in our current research.

4. Present Study

This study explored 1) the impact of the perceived ethnicity/nationality on internal compensation decision making, 2) strength of cultural identification on internal compensation decision making, 3) external compensation and the impact of the aforementioned independent variables.

4.1. Hypotheses

H1: Based on previous related findings, we anticipated significant differences in relative weighting of compensable factors and salary based on perceived ethnicity and gender of the labor pool.

H2: We anticipated significant differences to be found in the weighting of compensable factors and salary based on participant demographics.

H2a: Participant ethnicity

H2b: Participant gender

H3: We anticipated that individual differences may play a role in the weighting of the compensable factors/salary allocation and accordingly:

H3a: Assessed for the impact of participants' acculturation on the weighting of compensable factors and salary.

4.2. Method

4.2.1. Sample

The sample came from a medium-sized public university on the west coast. Participants were both graduate and undergraduate students in a college of business and economics. Student ages ranged from 20 to 56, with 75% being between the range of 20 and 30 years old. 55% of the participants were female, and 45% were male. 59% of the participants self identified as being Asian in ethnicity, with 15% self identifying as Caucasian. The majority of participants were undergraduates at 72%, with 28% of the participants being graduate students (see Table 1).

Table 1: Participant descriptive statistics

		Frequency	Valid Percent
Gender	Male	170	45.2
	Female	206	54.8
	Missing System	5	
Ethnicity	African	12	3.2
	African American	20	5.3
	Asian	223	59.5
	Caribbean	1	.3
	Caucasian	58	15.5
	Latin American	17	4.5
	Middle Eastern	9	2.4
	Native American	2	.5
	Other	33	8.8
	Total	375	100.0
	System Missing	6	
Student Status	Graduate	104	28.0
	Undergrad	267	72.0
	System Missing	10	
	Total	381	100.0

For the purposes of our analyses, participant ethnicity was condensed to Asian, Caucasian, and others.

4.3. Procedure

The survey instrument contained five sections. Following an introduction to the task, the first section exposed individuals to a stimulus job description that manipulated the labor pool (a majority-70% being of one gender), and ethnicity (African-American or Caucasian) of the position being evaluated (project manager). As such, there were four potential forms for the participants to receive. They were ordered one through four and passed out randomly in courses during the spring and summer quarter of 2005.

Table 2: Participation by version

Participant version	Frequency	Valid Percent
African-American female	92	24.1
African-American male	98	25.7
Caucasian female	98	25.7
Caucasian male	93	24.4
Total	381	100.0

The second section asked them to assign a percentage to compensable factors (knowledge/education/experience, responsibility, effort, and working conditions) indicating their relative importance to the organization, with the total percentage adding up to 100%. As the students had little or no exposure to compensation concepts, examples were given (see below, and Appendix A).

For example, if the person would only need to perform basic tasks or need basic knowledge in the area, then you should have 10% assigned to that compensable factor. In order to assign a high percentage, the person would need to be able to perform complex duties requiring significant knowledge and skills in the compensable factor.

A third section had students consider a range of salary for the position based on external salary surveys. They were asked to indicate what salary human resources should offer potential project manager candidates.

A fourth section had students respond to a Need for Cognition (NFC) scale [7]. The NFC scale consisted

of twenty (20) questions establishing preferences for cognitive effort in various situations (Appendix A).

As the student population is extremely diverse, and includes many foreign-born students, a fifth section had students respond to two questions that were designed to assess their level of acculturation into United States cultural norms. Finally, students were asked a series of demographic questions, specifically their ethnicity, age, sex, educational status (undergraduate or graduate) and number of years they have spent in United States.

4.4. Analyses

Before beginning the analyses the reliability of the NFC scale and the Berry Acculturation scale in our sample were established. Both scales (NFC and the Berry Acculturation scale) had acceptable Cronbachs alphas, .78, and .89, respectively.

Multivariate analysis of covariance (MANCOVA) was used to test the hypotheses, with compensable factors (knowledge, responsibility, effort, and working conditions) and salary serving as the dependent variables. Participant gender, questionnaire version, participant ethnicity and level of acculturation, served as fixed factors [24]. Adjustment was made for the covariate of need for cognition.

Using Wilks' criterion, we found modest (acculturation partial $\eta^2 = .09$) to small associations (version partial $\eta^2 = .05$) between the combined dependent variables and the main effects. Associations between the combined dependent variables and the interactions were modest. Table 3 provides a summary of the significant Multivariate Wilk's Lambda test.

Table 3: Significant MANCOVA Multivariate Test (Wilk's Statistic)

Effect	Λ	F	df	Error df	p.	Partial η^2	
Version	.851	2.15	15	538.71	.007	.052	
Acculturation	.908	3.96	5	195.00	.002	.092	
Sex	*						
Ethnicity	.879	2.60	10	390.00	.004	.063	
Version	*						
Acculturation	.881	1.68	15	538.71	.050	.041	
Sex	*						
Ethnicity	*	.905	1.99	10	390.00	.033	.049
Acculturation							
Sex * Version							
* Ethnicity * Acculturation	.940	2.50	5	195.00	.032	.060	

To further identify significant main effects and interactions found in the MANCOVA, the results of the MANCOVA between-subjects effects tests were analyzed further (see Table 4).

Table 4: Significant MANCOVA between-subjects effects tests.

Source	D.V.	Type III SS	df	F	p.	Partial η ²
Version	Resp.	605.4	3	2.84	.039	.041
	Salary	18.99	3	2.90	.036	.042
Acculturation	Effort	452.12	1	6.46	.012	.031
Sex * Ethnicity	Know.	1343.8	2	4.52	.012	.044
	Effort	870.97	2	6.22	.002	.059
Sex * Version * Ethnicity	Effort	938.56	6	2.23	.041	.063
Sex * Acculturation	Salary	12.80	1	5.87	.016	.029
Sex * Ethnicity * Acculturation	Effort	553.07	2	3.95	.021	.038
Sex * Version * Ethnicity * Acculturation	Salary	20.62	1	9.46	.002	.045

Mean differences are presented in Appendix B. For the purposes of comparison, two new variables representing either an African American or White labor pool (New Race), or a Female of Male (New Sex) labor pool were constructed. A subsequent MANCOVA was run with the inclusion of the two new variables, and the removal of the version (manipulated labor pool composition) variable. Significant MANOVA multivariate test (Wilk's Statistic) are presented in table 5.

Table 5: Significant MANCOVA Multivariate Test (Wilk's Statistic)

Effect	Λ	F	df	Error df	p.	Partial η ²
Sex (New Labor Pool)	.944	2.32	5	195.00	.045	.056
Acculturation * Sex (New Labor Pool)	.940	2.47	5	195.00	.034	.060

To further identify significant main effects and interactions found in the MANCOVA, we interpreted the results of the MANCOVA between-subjects effects tests (see Table 6). Mean differences are presented in Appendix B.

Table 6: Significant MANCOVA between-subjects effects tests.

Source	D.V.	Type III SS	df	F	p.	Partial η ²
Sex (New Labor Pool)	Resp.	325.94	1	4.59	.033	.023
	Salary	10.29	1	4.72	.031	.023
Acculturation * Sex (New Labor Pool)	salary	9.99	1	4.58	.033	.023

5. Results

Perceptions of the degree to which compensable factors account for the successful completion in a job are subject to a host of subtle and rarely acknowledged biases. We manipulated two variables in this study: ethnic salience and sex, which (either as main effects or interactions) had significant impacts on the way participants weighted compensable factors. We also established the impact of acculturation on the perceived value of the compensable factors. Our findings were consistent with the existing literature, and directly support our hypotheses. Some of the findings point to promising further research, while others confirmed well-established research findings. Specific results and their relationships with our hypotheses are presented below.

H1: Significant differences in the relative weighting of compensable factors and salary based on perceived ethnicity and gender of the labor pool.

Significant differences were found for perceived ethnicity and gender in the weighting of the responsibility compensable factor (see Figure 1). Specifically, when considering the project management position, participants weighed responsibility as more important (31.61) for White females than in the other ethnicity/gender mixes.

This can be potentially interpreted as a stereotyped expectation that white females will manifest more responsibility in a project management position than the other ethnicity/gender manipulations. Alternatively, the finding may suggest a perceived need for more responsibility for White females in the project management position. In either circumstance, the valuation itself manifests significant differences in the amount of weighting between the ethnicities and genders.

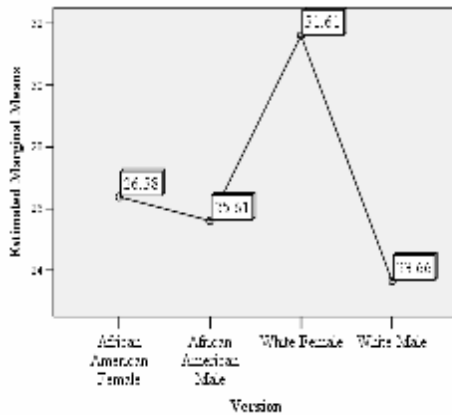


Figure 1: Estimated Marginal Means of Responsibility

Our finding that the labor pools' perceived ethnicity and gender impacts salary allocation represents the traditional discrepancy between males and females in salary, we find that African-American males (4.84) and white males (4.76) are being offered salaries of greater magnitude than females, with the largest distinction made between African-American females (3.87), and African-American males. The findings also expended previous research by demonstrating that within women, ethnicity differences also result in differential salary allocations. White females (4.23) in our sample were offered salaries far greater than African American females (3.87). However, both perceived female labor pools were offered salaries much lower than either African-American males or white males (see Figure 2 below).

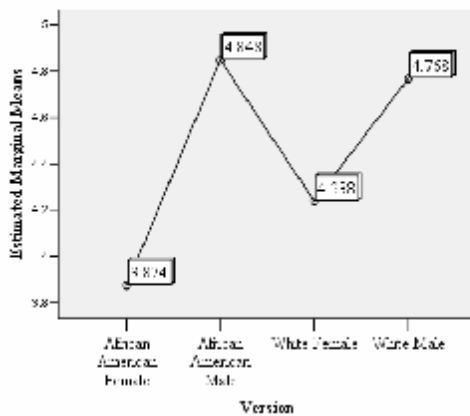


Figure 2: Estimated Marginal Means of Salary

H2: Significant differences in weighting of compensable factors and salary based on participant demographics.

H2a: Participant ethnicity

H2b: Participant gender

In the assessment of the importance of knowledge is a compensable factor in the project management position, Asian participants' perspectives were extremely stable (36.65 for Asian males, and 36.68 for Asian females) when compared to Caucasian participants. Caucasian males weighting the relative importance of knowledge at 29.72, whereas Caucasian females weighting the importance as 42.91.

The Other category was made up of several ethnicities (African, African-American Black, Caribbean, Latin American, Middle Eastern, Native American, and other) and consisted of 17% of the sample. While difficult to clearly establish specific characteristics of this conglomeration, the weighting was opposite to that made by the Caucasian sample. Specifically, Other males weighed importance of knowledge at 45.60, and Other females weighed the importance of knowledge at 33.16. See Figure 3 below.

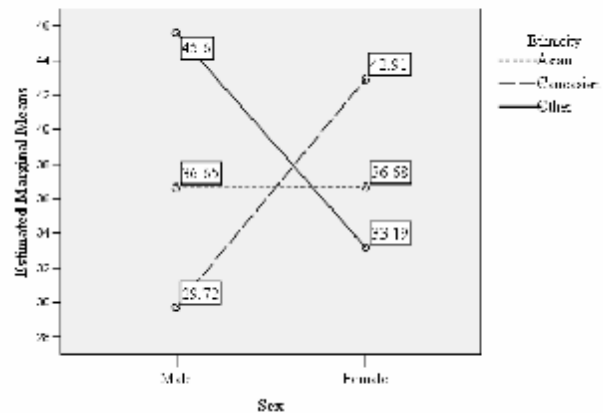


Figure 3: Estimated Marginal Means of Knowledge

In the assessment of effort as a compensable factor in the project management position, Asian and Caucasian male participants both perceived effort as being more important than did female participants in the respective ethnic groups. Again, the Other participant group had an opposite endorsement regarding the importance of effort as a compensable factor. Other males perceived the compensable factor of effort as being far less important (19.08) than

other female participants (27.65). See Figure 4 below.

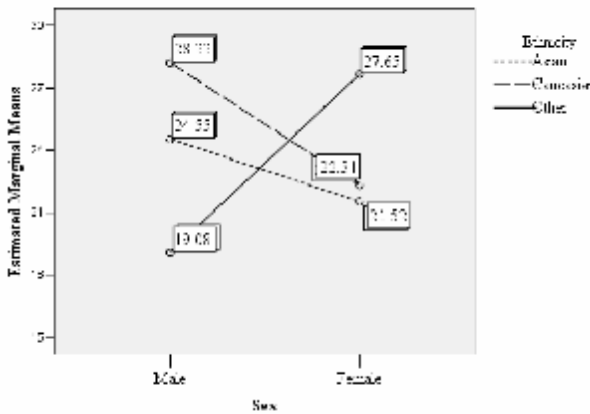


Figure 4: Estimated Marginal Means of Effort

H3: Individual differences play a role in weighting compensable factors/salary allocation and accordingly:

H3a: Impact of participant’s acculturation on the weighting of compensable factors and salary.

While the impact of group membership on salary discrepancies has been clearly established, little work has been performed on the impact of acculturation and the overall value associated with a specific occupation (in our circumstance, project manager). As such, the interaction between male and female participants and their relative acculturation status presents an important finding. Our sample represented only two of the four potential acculturation classifications (integrated and marginalized). Male participants classified as marginalized offered significantly less salary (3.81) compared to their counterparts in the integrated classification (4.67). Females classified as marginalized offered significantly more (4.95) than their integrated counterparts (4.35). See Figure 5 below.

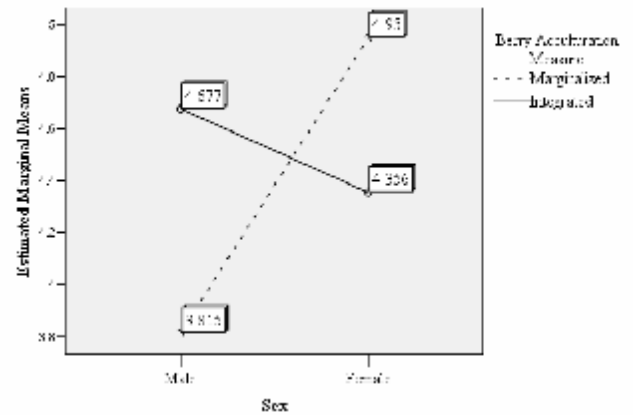


Figure 5: Estimated Marginal Means of Salary

The impact of acculturation also makes an important contribution in understanding the perceived value of compensable factors. Those who are classified as marginalized participants in our study perceived effort as being significantly more important (27.17) than their compatriots classified as being integrated (21.53). See Figure 6 below.

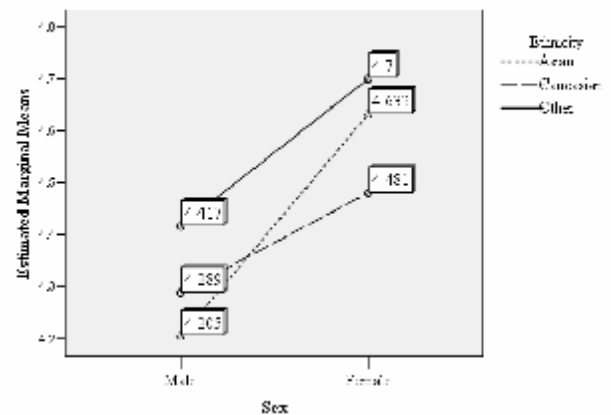


Figure 6: Estimated Marginal Means of Salary

Again the impact of acculturation across gender and ethnicity is shown to be an important factor in the salary decision-making process as exemplified in Figure 7. A most interesting interaction occurs between the African-American male and white male versions, in marginalized versus integrated populations. Those who are culturally marginalized offer African-American males a much higher salary than white males in the same group. This relationship is reversed in the white male version participants. The marginalized white female group offered the most salary, and close to least for

integrated group. Both marginalized and integrated groups offered African American women the least salary.

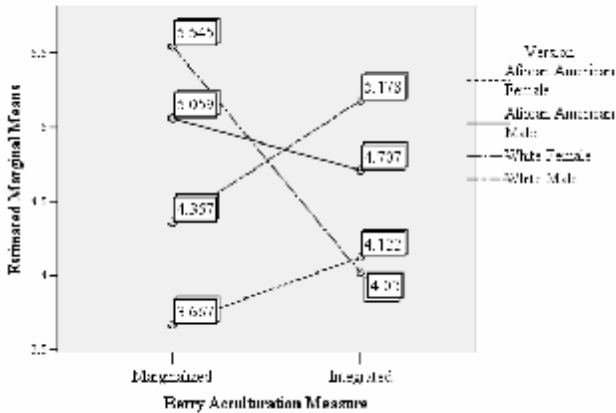


Figure 7: Estimated Marginal Means of Salary

6. Discussion

The ramifications of potential discrimination at the compensable factors weighting stage of defining compensation internal alignment are tremendous. The implications for pay structure, perceived fairness, and motivation can have a tremendous impact on overall organizational productivity and success. Internal equity discrimination can also have ramifications for litigation.

The most relevant and critical consideration based on our findings is that human decision-making is subject to a wide array of biases that cannot be controlled by the current loosely defined methods of establishing the relative value of compensable factors. Potential ways to defend one’s organization from inadvertent discrimination first need to go beyond the current compensation profession’s best practices [15][9] and potentially approach the topic from a prejudice-reduction perspective integrated from the beginning of the job evaluation (point factor or other method) through the implementation of the findings across locations [11].

While it is well-established that gender stereotypes do exist for female employees, and have a substantial impact on the way these female employees are perceived [14], there is sparse information on the interaction between gender and ethnicity in the arena of occupational stereotypes. Future research will concentrate on establishing the potential existence of occupational stereotypes for both gender and

ethnicity, as well as control for other related environmental considerations, such as cost of living, and perceived employee availability.

A limitation of the study could be our population (university students), who may reflect a lack of knowledge of and/or a potential interest in strategic compensation. While many of the undergraduates are likely to have had work experience, it is unlikely to be extensive. Even if extensive, the level of expertise or managerial response generally required to participate in a job evaluation committee is likely to have been representatives in our population. Though robust, our findings may have been impacted by a lack of knowledge in regard to overall compensation concerns. Therefore, further research with more experienced managers in a real-world setting is needed.

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Appendix A: Compensable Factors Questionnaire

As a Managing Director at ABC Corporation, you have just received the final draft of compensable factors (what tasks and behaviors you will pay employees to execute) from the Human Resources director to determine your internal compensation strategy for the Project Manager position. Your task is to assign points based on the relative importance of the compensable factors to the satisfactory completion of the overall job. Please consider the job description and position related material below to facilitate your assignment:

The Project Manager will be responsible for coordinating various projects for the Director and will have 1 full time assistant reporting to them. On average, they will have three separate projects at any given time that they are responsible for. Three years of relevant work experience is expected. Our labor pool for this position is comprised of 70% Black and 70% women, and we field applicants from three local newspapers.

Assign a percentage to the following compensable factors as relative in importance to the organization. The total percentage needs to add up to 100%. For example, if the person would only need to perform basic tasks or need basic knowledge in the area, then you should have 10% assigned to that compensable factor. In order to assign a high percentage, the person would need to be able to perform complex duties requiring significant knowledge and skills in the compensable factor.

Compensable Factors	Your Rating (Please assign % based on instructions above. The % must add up to 100%)
Knowledge/Education/Experience	
Responsibility	
Effort	
Working Conditions	

Finally, salary surveys have given a range of pay for this position ranging from \$50,000 to \$85,000. Based on your knowledge of the position, please indicate what salary Human Resources should offer potential Project Manager candidates.

What pay range should be offered for the project manager position? Please circle one.

- 1. \$50,000 - \$55,000
- 2. \$55,000 - \$60,000
- 3. \$60,000 - \$65,000
- 4. \$65,000 - \$70,000
- 5. \$70,000 - \$75,000
- 6. \$75,000 - \$80,000
- 7. \$80,000 - \$85,000

1. Age _____

2. Sex (Please circle): M

F

Appendix B: Estimated Marginal Means for Significant Main Effects and Interactions

To ensure economic use of space, the following abbreviations will be used:

African American Female: AAF

African American Male: AAM

White Female: WF

White Male: WM

Table 7: Estimated Marginal Means for Version

Dependent Variable	Version	Mean	Std. Error
Responsibility	AAF	26.381(a,b)	1.719
	AAM	25.607(a,b)	1.656
	WF	31.611(a,b)	1.686
	WM	23.658(a)	1.664
Salary	AAF	3.874(a,b)	.301
	AAM	4.848(a,b)	.290
	WF	4.238(a,b)	.295
	WM	4.768(a)	.292

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 8: Estimated Marginal Means for Acculturation

Dependent Variable	Berry Acculturation Measure	Mean	Std. Error
Effort	Marginalized	27.169(a,b)	1.664
	Integrated	21.529(a,b)	.812

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 9: Estimated Marginal Means for Ethnicity and Sex

Dependent Variable	Ethnicity	Sex	Mean	Std. Error
Knowledge	Asian	Male	36.654(a,b)	2.334
		Female	36.677(a,b)	2.076
	Caucasian	Male	29.716(a)	2.557
		Female	42.909(a,b)	3.781
	Other	Male	45.598(a,b)	3.632
		Female	33.193(a,b)	3.616
Effort	Asian	Male	24.546(a,b)	1.602
		Female	21.521(a,b)	1.425
	Caucasian	Male	28.218(a)	1.755
		Female	22.313(a,b)	2.595
	Other	Male	19.080(a,b)	2.493
		Female	27.654(a,b)	2.482

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 10: Estimated Marginal Means for Version, Ethnicity and Sex

Dependent Variable	Version	Ethnicity	sex	Mean	Std. Error	
Effort	AAF	Asian	Male	27.124(a)	3.255	
			Female	21.814(a)	2.185	
		Caucasian	Male	27.399(a)	3.500	
			Female	31.228(a,b)	8.388	
	AAM	Other	Male	19.833(a)	4.527	
			Female	36.551(a)	4.700	
		Asian	Male	30.722(a,b)	2.243	
			Female	23.244(a)	3.094	
	WF	Caucasian	Male	24.613(a)	2.889	
			Female	19.051(a)	4.700	
		Other	Male	18.812(a)	4.867	
			Female	29.617(a,b)	3.420	
	WM	Asian	Male	20.325(a,b)	2.331	
			Female	21.625(a,b)	1.559	
		Caucasian	Male	29.603(a)	2.875	
			Female	26.228(a,b)	5.948	
		Other	Male	16.228(a,b)	4.870	
			Female	15.020(a,b)	5.915	
		WM	Asian	Male	20.990(a)	3.127
				Female	19.452(a)	3.128
Caucasian	Male		31.256(a)	4.523		
	Female		19.159(a)	3.222		
Other	Male	20.020(a)	5.122			
	Female	24.093(a)	4.678			

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 11: Estimated Marginal Means for Acculturation * Sex

Dependent Variable	Berry Acculturation Measure	sex	Mean	Std. Error
salary	Marginalized	Male	3.815(a,b)	.398
		Female	4.950(a,b)	.434
	Integrated	Male	4.677(a)	.196
		Female	4.356(a,b)	.208

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 12: Estimated Marginal Means for Ethnicity * Acculturation * Sex

Dependent Variable	Ethnicity	Berry Acculturation		Mean	Std. Error
		Measure	Sex		
effort	Asian	Marginalized	Male	26.228(a,b)	4.229
			Female	21.962(a,b)	3.075
		Integrated	Male	23.705(a)	1.153
			Female	21.190(a)	.927
	Caucasian	Marginalized	Male	34.376(a)	2.892
			Female	21.515(a,b)	4.287
		Integrated	Male	22.060(a)	1.984
			Female	23.110(a,b)	2.837
	Other	Marginalized	Male	20.479(a,b)	4.867
			Female	40.020(a,b)	5.915
		Integrated	Male	18.031(a)	2.420
			Female	21.471(a)	2.262

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 13: Estimated Marginal Means for Sex * Version * Ethnicity * Acculturation

Dependent Variable	Version	Ethnicity	Berry Acculturation		Mean	Std. Error
			Measure	sex		
salary	AAF	Asian	Marginalized	Male	3.045(a)	1.050
				Female	4.410(a)	.661
			Integrated	Male	4.101(a)	.467
				Female	4.442(a)	.396
		Caucasian	Marginalized	Male	3.501(a)	1.044
				Female	3.045(a)	1.480
			Integrated	Male	2.792(a)	.661
				Female	.(a,b)	.
		Other	Marginalized	Male	3.956(a)	1.480
				Female	4.045(a)	1.480
			Integrated	Male	4.001(a)	.603
				Female	5.273(a)	.740

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 14: Estimated Marginal Means for Sex * Version * Ethnicity * Acculturation, continued

Dependent Variable	Version	Ethnicity	Berry Measure	Acculturation	sex	Mean	Std. Error
	AAM	Asian	Marginalized		Male	.(a,b)	.
					Female	5.956(a)	1.049
			Integrated	Male	4.513(a)	.396	
				Female	4.612(a)	.287	
		Caucasian	Marginalized	Male	3.280(a)	.558	
				Female	7.045(a)	1.480	
			Integrated	Male	4.986(a)	.853	
				Female	4.023(a)	.740	
		Other	Marginalized	Male	3.956(a)	1.480	
				Female	.(a,b)	.	
			Integrated	Male	4.956(a)	.859	
				Female	5.153(a)	.604	
	WF	Asian	Marginalized		Male	.(a,b)	.
					Female	.(a,b)	.
			Integrated	Male	4.368(a)	.411	
				Female	4.818(a)	.275	
			Caucasian	Marginalized	Male	5.545(a)	.746
					Female	.(a,b)	.
		Integrated		Male	4.845(a)	.669	
				Female	2.545(a)	1.050	
		9.00	Marginalized		Male	.(a,b)	.
					Female	.(a,b)	.
			Integrated	Male	5.045(a)	.860	
				Female	2.501(a)	1.044	
WM	Asian		Marginalized		Male	5.045(a)	1.050
					Female	3.456(a)	1.049
		Integrated	Male	4.158(a)	.349		
			Female	4.731(a)	.339		
		Caucasian	Marginalized	Male	4.045(a)	1.480	
				Female	4.682(a)	.853	
	Integrated		Male	5.319(a)	.604		
			Female	5.545(a)	.746		
	Other	Marginalized		Male	1.956(a)	1.480	
				Female	6.956(a)	1.480	
		Integrated	Male	7.045(a)	1.050		
			Female	4.273(a)	.740		

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 15: Estimated Marginal Means for Sex (New Labor Pool)

Dependent Variable	Sex (New Labor Pool)	Mean	Std. Error
Knowledge	Female	33.507(a,b)	1.805
	Male	40.321(a,b)	1.702
Responsibility	Female	28.415(a,b)	1.248
	Male	24.544(a,b)	1.177
effort	Female	25.295(a,b)	1.239
	Male	22.806(a,b)	1.169
Working Conditions	Female	13.276(a,b)	1.153
	Male	12.883(a,b)	1.088
salary	Female	4.015(a,b)	.219
	Male	4.804(a,b)	.206

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.

Table 16: Estimated Marginal Means for Sex (New Labor Pool)*Acculturation

Dependent Variable	Berry Measure	Acculturation Sex (New Labor Pool)	Mean	Std. Error
Knowledge	Marginalized	Female	31.531(a,b)	3.697
		Male	43.002(a,b)	3.222
	Integrated	Female	34.764(a,b)	1.747
		Male	38.087(a)	1.596
Responsibility	Marginalized	Female	24.270(a,b)	2.556
		Male	23.330(a,b)	2.228
	Integrated	Female	31.052(a,b)	1.208
		Male	25.556(a)	1.103
effort	Marginalized	Female	31.537(a,b)	2.538
		Male	24.111(a,b)	2.212
	Integrated	Female	21.322(a,b)	1.199
		Male	21.718(a)	1.095
Working Conditions	Marginalized	Female	12.893(a,b)	2.362
		Male	9.763(a,b)	2.059
	Integrated	Female	13.520(a,b)	1.116
		Male	15.482(a)	1.020
salary	Marginalized	Female	3.935(a,b)	.448
		Male	4.638(a,b)	.390
	Integrated	Female	4.066(a,b)	.212
		Male	4.943(a)	.193

a Covariates appearing in the model are evaluated at the following values: NeedforCognition = 1.49.

b Based on modified population marginal mean.