

FACTORS INFLUENCING CAREER CHOICE OF AFRICAN AMERICAN AND HISPANIC GRADUATES OF A LAND-GRANT COLLEGE OF AGRICULTURE

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Abstract

The purpose of this study was to identify and describe the factors that were related to African American and Hispanic graduates' decisions to choose (or not to choose) a career in agriculture or a related field prior to or after college. The population for this study was all African American and Hispanic graduates who received a baccalaureate degree in an agriculture-related field at Texas A&M University between May 1990 and December 1997 ($N = 551$). The responding sample was 139 (26%). Various commonalities and differences existed among the two groups. When respondents enrolled in their first agriculture-related course did not have a major effect on their probability of choosing an agriculture-related career. However, the role of significant others and specific job-related factors is validated in this study.

Introduction/Theoretical Framework

Agriculture is the United States' largest employer, with more than 22 million people employed in some phase from growing food and fiber to selling agricultural products at the retail level (American Farm Bureau, 1998). However, the demand for graduates, particularly ethnic minority individuals, in this field continues to exceed the supply. Foster and Henson (1992) stated that the agricultural sector is the foundation of any society, but in the U.S., ethnic minority participation in agriculture and related fields is scarce. Demographic trends indicate that ethnic minority populations are increasing; and more of these students must be recruited into agriculture careers in order to sustain the agricultural industry for the future and to help ensure that the U.S. remains competitive in the global economy (Agriculture Fact Book, 1998; Mitchell, 1993).

By 2006, the labor force in the United States will become increasingly diverse in that the number of Hispanics and African Americans in the labor force is expected to increase faster than Whites, but overall, Whites still will outnumber Hispanics and African Americans. Whites will comprise 73% of the workforce in 2006, compared to 80% in 1986 and 75% in 1996 (Bowman,

1997). To sustain agriculture at its current status, recruitment of outstanding individuals must be enhanced. To enhance recruitment, more effective recruitment strategies must be implemented. To develop effective recruitment strategies, it is necessary to research students' decision-making processes and their images of agriculture (Lucas, 1993).

Current literature addresses the anticipated dilemma of a shortage of individuals adequately and appropriately educated in agriculture and related fields. Opportunities in agriculture-related fields are continuing to expand; but the number of individuals, particularly people of color, pursuing agricultural careers through college is declining continuously. To reverse this trend and to dispel the myths about the field, educational leaders must understand the motivational factors and rewards that lure people to a particular career (Zoldoske, 1996).

Purpose and Objectives

The purpose of this study was to identify and describe the factors related to African American and Hispanic graduates' decisions to choose (or not to choose) a career in an agriculture-related field prior to or after college. This study examined the decision-

making processes that individuals use in choosing a career in agriculture or a non-related field.

The following objectives were identified to accomplish the purpose of the study:

1. To identify the personal characteristics (e.g., ethnicity, age, gender) of the population.
2. To identify the reasons that individuals enrolled in agriculture-related educational programs and why they chose to select or not to select a career in agriculture or a related field.
3. To identify the degree to which significant others influenced individuals' career decisions.
4. To identify the degree to which enrollment in a high school agriculture-related course is considered significant in the decision to choose or not to choose an agriculture-related career.
5. To identify the degree to which one's college experience influenced the decision to pursue or not to pursue a career in an agriculture-related field.
6. To compare individuals by ethnicity in terms of factors influencing their career choice.
7. To determine if interrelationships existed among the graduates' personal and situational characteristics, their reasons for enrolling in educational programs in agriculture or a related field, and their reasons for selecting or not selecting a career in agriculture or a related field.

Methods/Procedures

The research design applied in this study was ex post facto. This design is preferred in situations where experimental manipulation is not feasible (Gall, Borg, & Gall, 1996).

The population for the study was all African American and Hispanic graduates who received a baccalaureate degree in an agriculture-related field at Texas A&M University between May 1990 and December 1997 ($N = 551$) as identified by the institution's alumni association (Texas A&M University Association of Former

Students, 1999). This population was selected because we desired to study a group that may have similar characteristics to prospective students today in terms of career interests, background, motivation, and perceptions of agriculture-related fields. Also, we sought graduates who would have had at least one year in the job market. The ethnic breakdown of the responding sample ($n = 139$) somewhat mirrored the ethnic breakdown of the target population: Hispanic ($n = 95$ or 68%), African American ($n = 29$ or 21%), and Biracial ($n = 14$ or 10%) and undisclosed ($n = 1$ or 1%).

To gather the responses in this study, we developed and used a three-part written questionnaire to identify and analyze factors related to minority student enrollment and retention in agriculture. Part I sought information about the respondents' personal characteristics, which focused mainly on demographic information (e.g., ethnicity, age, gender). Part II sought information about the respondents' professional characteristics as related to their career path, particularly a career in agriculture. Questions were both fixed-response and open-ended. Responses to open-ended questions were categorized and grouped to facilitate coding, analysis and reporting (Gall, Borg & Gall, 1996). Part III was a 30-item career factor survey using a five-point Likert scale to determine level of influence that selected factors had on the respondents' choice of their current career. Numeric values and levels of influence were (1) no influence, (2) slight influence, (3) moderate influence, (4) high influence, and (5) extreme influence.

A panel of five experts screened and reviewed the instrument for content and clarity; 15 master's and doctoral students pilot tested the instrument for readability and clarity. The panel and the students included individuals representing the ethnic groups to which the instrument was sent. The instrument was deemed to have content and face validity. The SPSS^x procedure RELIABILITY (SPSS, Inc., 1986) was used to determine the internal consistency of the instrument. Cronbach's coefficient alpha for the 30 career choice factors on the instrument was found to be .85, which made

the test sufficiently reliable (Cronbach, 1951).

Questionnaires were mailed to 551 graduates; 15 were returned as undeliverable because of an insufficient or incorrect address. A follow-up post card was mailed to non-respondents one month after the initial mailing. Also, we sent follow-up letters two months after the initial mailing to non-respondents. Follow-up correspondence yielded additional responses.

Of the 536 questionnaires presumably delivered to addressees, 139 completed questionnaires were returned, yielding a 26% return rate. According to Clausen and Ford (1947), non-respondents are assumed to be similar to late respondents. Thus, early respondents can be compared to late respondents to determine if any differences exist between respondents and non-respondents. Comparison of late respondents to early respondents in this study yielded no statistically significant differences. Therefore, the responding sample was deemed to be representative of the target population. Data were analyzed using the Statistical Package for Social Sciences

(SPSS^X) (1986). An alpha level of .05 was used to determine statistical significance.

Results / Findings

When respondents enrolled in their first agriculture-related course did not have a major effect on the probability that they would select an agriculture-related career. But having people of color to encourage respondents to consider an agriculture-related career increased respondents' likelihood of pursuing an agriculture-related career. Respondents were more likely to pursue an agriculture-related career if their father's occupation was agriculture-related. Parents' level of education did not play a critical role in the respondents' choosing an agriculture-related career. Salary was not considered to have an impact on respondents' choice of their current career nor on their choice of agriculture as a career. But having limited job opportunities in agriculture led respondents to choose other careers. Likewise, retirement plan and job opportunities impacted respondents' selection of a career. Tables 1 and 2 further describe these findings.

Table 1
Comparison of the importance of selected career factors on individuals currently employed in an agriculture-related career versus individuals not currently employed in an agriculture-related career

Group	n	Mean	Std. Dev.	t-value	Alpha
Factor: Societal Influence					
Not Employed	94	3.51	1.25	1.70	.09
Employed	42	3.10	1.45		
Factor: Salary					
Not Employed	94	3.43	1.16	1.76	.08
Employed	43	3.05	1.19		
Factor: Autonomy					
Not Employed	92	3.70	.97	.24	.81
Employed	43	3.65	1.07		

Table Continues

Table 1 Continued

Group	n	Mean	Std. Dev.	t-value	Alpha
Factor: Prestige					
Not Employed	94	3.27	1.13	-.03	.97
Employed	44	3.27	1.19		
Factor: Advancement Opportunity					
Not Employed	94	3.67	1.33	.14	.89
Employed	44	3.64	1.20		
Factor: Work Conditions					
Not Employed	94	3.95	1.09	.08	.94
Employed	44	3.93	.93		
Factor: Decision Participation					
Not Employed	94	3.87	1.03	.64	.52
Employed	43	3.74	1.22		
Factor: Merit Pay					
Not Employed	94	3.13	1.39	1.15	.25
Employed	44	2.84	1.29		
Factor: Retirement Plan					
Not Employed	94	3.45	1.37	2.17	.03*
Employed	44	2.91	1.31		
Factor: Personal Recognition					
Not Employed	94	3.33	1.25	-.26	.80
Employed	44	3.39	1.08		
Factor: Prior Work Experience					
Not Employed	94	2.88	1.45	-.53	.60
Employed	44	3.02	1.41		
Factor: Work Environment					
Not Employed	94	3.79	1.05	-.39	.70
Employed	44	3.86	1.15		

Table continues

Table 1 Continued

Group	n	Mean	Std. Dev.	t-value	Alpha
Factor: Job Opportunities					
Not Employed	92	2.97	1.51	4.71	.00*
Employed	43	1.74	1.16		
Factor: Academic Rigor					
Not Employed	93	1.92	1.30	.60	.55
Employed	43	1.79	1.01		
Factor: Exposure to Careers					
Not Employed	94	3.16	1.14	.11	.92
Employed	44	3.14	1.32		
Factor: Experimental Exposure					
Not Employed	94	2.44	1.21	.65	.52
Employed	44	2.30	1.13		
Factor: Work Environment					
Not Employed	94	2.41	1.36	-1.26	.21
Employed	44	2.72	1.34		
Factor: Creativity					
Not Employed	94	3.38	1.23	-.64	.53
Employed	44	3.52	1.15		
Factor: Interaction with Others					
Not Employed	94	3.73	1.02	1.90	.06
Employed	44	3.36	1.16		
Factor: Problem Solving					
Not Employed	94	3.55	1.19	-.49	.62
Employed	44	3.66	1.16		
Factor: Independent Work					
Not Employed	94	3.30	1.28	-.19	.85
Employed	44	3.34	1.19		

Table Continues

Table 1 Continued

Group	n	Mean	Std. Dev.	t-value	Alpha
Factor: Job Convenience					
Not Employed	94	1.81	1.21	.08	.94
Employed	43	1.79	1.17		
Factor: Influence by Others					
Not Employed	94	2.16	1.20	-1.39	.17
Employed	44	2.48	1.34		
Factor: Physical Challenge					
Not Employed	94	2.15	1.30	1.75	.08
Employed	44	1.75	1.10		
Factor: Mental Challenge					
Not Employed	94	1.50	.94	-.51	.61
Employed	44	1.59	1.06		
Factor: Proximity to Family					
Not Employed	94	2.45	1.50	-1.15	.25
Employed	44	2.77	1.65		
Factor: Fulfillment of Goals					
Not Employed	93	3.54	1.20	-.79	.43
Employed	44	3.70	1.07		
Factor: Use of Skills					
Not Employed	93	3.76	1.03	-1.05	.29
Employed	44	3.95	.91		
Factor: Political Involvement					
Not Employed	93	2.18	1.32	-.48	.63
Employed	44	2.30	1.21		
Factor: Use of Technical Skills					
Not Employed	93	3.47	1.17	-1.05	.30
Employed	95	3.68	.91		

*Significant at $p < .05$.

Table 2
Relationships between respondents' being employed in agriculture-related career and other variables

Variable	Agriculture-Related Career?		Correlation Coefficient ^a	Alpha
	Yes <u>n</u>	No <u>n</u>		
Gender				
Male	30	42	.22	.01*
Female	14	51		
Income				
<\$20,000	7	16	.15	.72
\$20,000-\$30,000	8	24		
>\$30,000-\$40,000	12	27		
>\$40,000-\$50,000	6	13		
>\$50,000-\$60,000	7	8		
>\$60,000	4	5		
Father's Occupation				
Agriculture	16	4	.43	.00*
Not Agriculture	28	90		
Supplemental Income				
Needed	13	41	.12	.16
Not Needed	27	49		
Spouse's Income				
<\$20,000	6	7	.31	.10
\$20,000-\$30,000	3	8		
>\$30,000-\$40,000	3	13		
>\$40,000	3	23		
First Agriculture Class Taken				
Pre-High School	5	6	.19	.08
High School	17	23		
College	21	64		
Ethnicity				
African American	5	23	.16 ^b	.16 ^c
Hispanic	35	60		
Biracial	4	10		

Table continues

Table 2 Continued

Variable	Agriculture-Related Career?		Correlation Coefficient ^a	Alpha
	Yes	No		
	<u>n</u>	<u>n</u>		
Father's Education				
None-Grade School	9	7	.28	.07
High School	15	26		
Associate	4	16		
Bachelor	9	15		
Master	3	20		
Doctorate/Professional	3	8		
Mother's Education				
None-Grade School	6	9	.26	.09
High School	23	28		
Associate	7	17		
Bachelor	4	17		
Master	3	16		
Doctorate/Professional	1	6		
Birth Place				
Texas	33	57	.25	.01*
U.S., Not Texas	1	20		
Outside U.S.	10	16		
Someone Encouraged Agriculture Career				
Yes	29	43	.19	.03*
No	15	51		

^aDepending on the scale of measurement of variable, the coefficient is Phi (2X2) or Cramer's V (2 x n). ^bThis value is .17 when Biracial ethnicity is not considered. ^cThis value is .06 when Biracial ethnicity is not considered.

*Significant at $p < .05$.

Conclusions and Recommendations

When the respondents enrolled in their first agriculture-related course did not affect the probability that they would select an agriculture-related career. Most of the graduates in this study (62%) did not enroll in their first agriculture-related class until college. The difference found between those who enrolled at an early stage and those who enrolled at a later stage was not found to be statistically significant; therefore, early enrollment would not have made a

difference in whether these graduates pursued an agriculture-related career. Also, the college experience was not determined to have an impact on one's choice of agriculture as a career.

This finding counters conclusions in the Fisher and Griggs (1994) and Gottfredson (1996) studies, which suggested that, in order to achieve and maintain the critical mass of minorities in agriculture and to enhance career decisions of minority students, introduction to various career

options must be made at an early age in youth's lives – as early as elementary and middle school.

This study supports Mitchell (1993) who suggested that minority students often decide to select an agriculture career at a later stage in their lives, and rather than choosing agriculture as a major in their college freshman year, they often transfer into the discipline. This sometimes puts minority students at a disadvantage in terms of acclimation to the basics of the field.

Parents' level of education did not play a role in the respondents' choosing an agriculture-related career. A low association existed between parents' level of education and employment in agriculture. Also, the differences between respondents employed in an agriculture-related career and those not employed in such a career were not found to be a factor when considering parents' level of education.

This finding counters Gehrt (1990) who found that a strong correlation exists between socioeconomic status and educational level of parents and student choice of curriculum emphasis. Also, Arbona (1990) suggested that socioeconomic factors such as parental education and occupational status play a critical role in the career development of Hispanics.

Having people of color in an agriculture-related profession to serve merely as *role models* did not increase respondents' likelihood of pursuing an agriculture-related career. However, having people of color, regardless of their profession, to *encourage* respondents to consider a career in an agriculture-related field increased respondents' likelihood of pursuing an agriculture-related career. The impact of having people of color who encouraged an agriculture-related career was found to be greater than the impact of having people of color who served merely as a role model. These conclusions are based on findings which reveal a statistically significant difference between those employed in an agriculture-related career and those not employed in an agriculture-related career when analyzing the impact of someone encouraging an agriculture-related career

versus someone merely serving as a role model.

Respondents were more likely to pursue an agriculture-related career if their father's occupation was in an agriculture-related field, and were more likely not to pursue an agriculture-related career if their father was not employed in an agriculture-related field. This finding adds credence to the Byler (1987), Fisher and Griggs (1994), and Shipp (1992) studies which found that support and influence of significant others played a vital role in students' career choices.

Salary was not considered to have an impact on the respondents' choice of their current career nor on their choice of agriculture as a career. However, Byler (1987) and Shipp (1992) found that salary was listed as an important consideration among individuals in selecting a career. Though respondents in this study identified low salary most often as a primary obstacle to pursuing an agriculture-related career, the differences between those employed in an agriculture-related career and those not employed in an agriculture-related career were not statistically significant regarding salary.

Having limited job opportunities in agriculture careers (unable to find suitable employment in one's previously selected "ideal" career) led respondents to choose a career other than one in an agriculture-related field. In terms of perceived job opportunities available, individuals employed in an agriculture-related job tended to be less affected (based on their mean score) by perceived job opportunities available than were those individuals not employed in such an agriculture-related career. Parsons (1909) indicated in his three-step formula that, in a wise choice of a vocation, knowledge of opportunities in different lines of work is one of the major factors that affect one's career decisions. Additionally, Herr (1970) supported the finding that one's career decision is affected by employment opportunities available.

Compared to those employed in an agriculture-related career, those not employed in an agriculture-related career tended to be influenced to a greater extent by retirement plan (being guaranteed a comfortable retirement income) and job

opportunities (unable to find suitable employment in one's previously selected "ideal" career).

This finding supports Henry (1992), who found that motivational factors ranked highest among respondents in choosing a teaching career were retirement plan, work conditions and advancement opportunities. Also, Zoldoske (1996) found that respondents ranked autonomy and retirement plan highest among motivational factors for choosing an agriculture-related career.

Recommendations for Action

Those charged with perpetuating the United States' leadership role in the area of agriculture-related fields should continue to find ways to enhance participation of ethnic minority groups, which are expected to increase in percentage in the next decade. People of color should continue to encourage individuals (at various stages of their career development) to pursue an agriculture-related career. Significant others should gain greater understanding and appreciation for agriculture-related careers, and should be involved to a greater extent in promoting people's of color involvement in agriculture-related fields at various stages of development.

Individuals responsible for hiring in agriculture careers should seek to ensure that their jobs are competitive with other career fields, and they should enhance agriculture graduates' exposure to the numerous "ideal" employment opportunities available in the field. Employers of agriculture graduates should seek to make retirement benefits in their organizations more competitive with jobs in other careers to enhance potential participation in agriculture-related careers.

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