Student Preferences in the Selection of a Graduate Healthcare Management Program: A Conjoint Analysis Study

Matthew M. Anderson, PhD – Associate Dean for Administrative Affairs

Association of Schools of Health Professions (ASAHP)
Charleston, SC

October 16, 2019

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Objectives

- Identify relative importance of attributes in program choice of an allied health occupation (health care management)
- Evaluate sensitivity of attribute levels in relation to price
- Differentiate attribute importance between demographic groups
- Explain ways to leverage results in student recruitment/retention

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Acknowledgments

Committee Members:

Tricia J. Johnson, PhD

Andrew N. Garman, PsyD

Surrey M. Walton, PhD

Louis Fogg, PhD

Douglas Kuperman, PhD

Jeff Canar, PhD

Tim Reistetter, PhD

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INTRODUCTION

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Introduction

Changing healthcare landscape

- Reduce errors
- Improve value (Quality/Cost)
- Need for qualified leaders/managers
  - Graduate degree should be minimum requirement (ACHE, 2014)
  - No licensing or credential for healthcare managers
  - Difficult for employers to identify/select effective managers

Changing Education Landscape

- More specialized training (Beach, 2009)
- Limited institutional resources
  - Internal competition
  - Pressure to meet enrollment targets

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Introduction

Graduate Healthcare Management Education

- 106 programs accredited by the Commission on Accreditation of Healthcare Management Education (CAHME)
  - Competition to attract top student talent

- 59 programs across 33 universities utilize the Health Administration, Management, & Policy (HAMPCAS) system
  - More visibility
  - Application to multiple programs

- Publicly-available information, such as U.S. News and World Reports (USNWR) can directly contribute to an increase in applicants (Monks & Ehrenberg, 1999)

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Problem

- No studies have specifically investigated drivers of student choice in healthcare management programs
- Much existing research in college choice focuses on undergraduate education
- Lack of realistic evaluation of choice
  - Decision on school attendance requires evaluation of multiple alternatives
  - Trade-offs
- Research has not utilized realistic market analysis techniques

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Theoretical Underpinnings

Human Capital Theory – set of skills/characteristics that increase productivity (Acemoglu & Autor, 2017)

- Foregoing current earnings to improve skills and future earnings (Becker, 1962)
- Investing in education (undergraduate; graduate school)
- On-the-job training
- Firm's investment is associated with positive organizational performance (Bhattacharya et al., 2014; Crook et al., 2011; Delery & Shaw, 2001)

Education Factors

- School quality
- Training effects
- Peer-group effects

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Theoretical Underpinnings

Signaling Theory – Certain characteristics make a prospective employee more visible in the job market

- Higher levels of education
- Reputation of educational institution
- Perception vs. reality

GED example (Tyler, Murnane, & Willett, 2000)

GED TESTING SERVICE®

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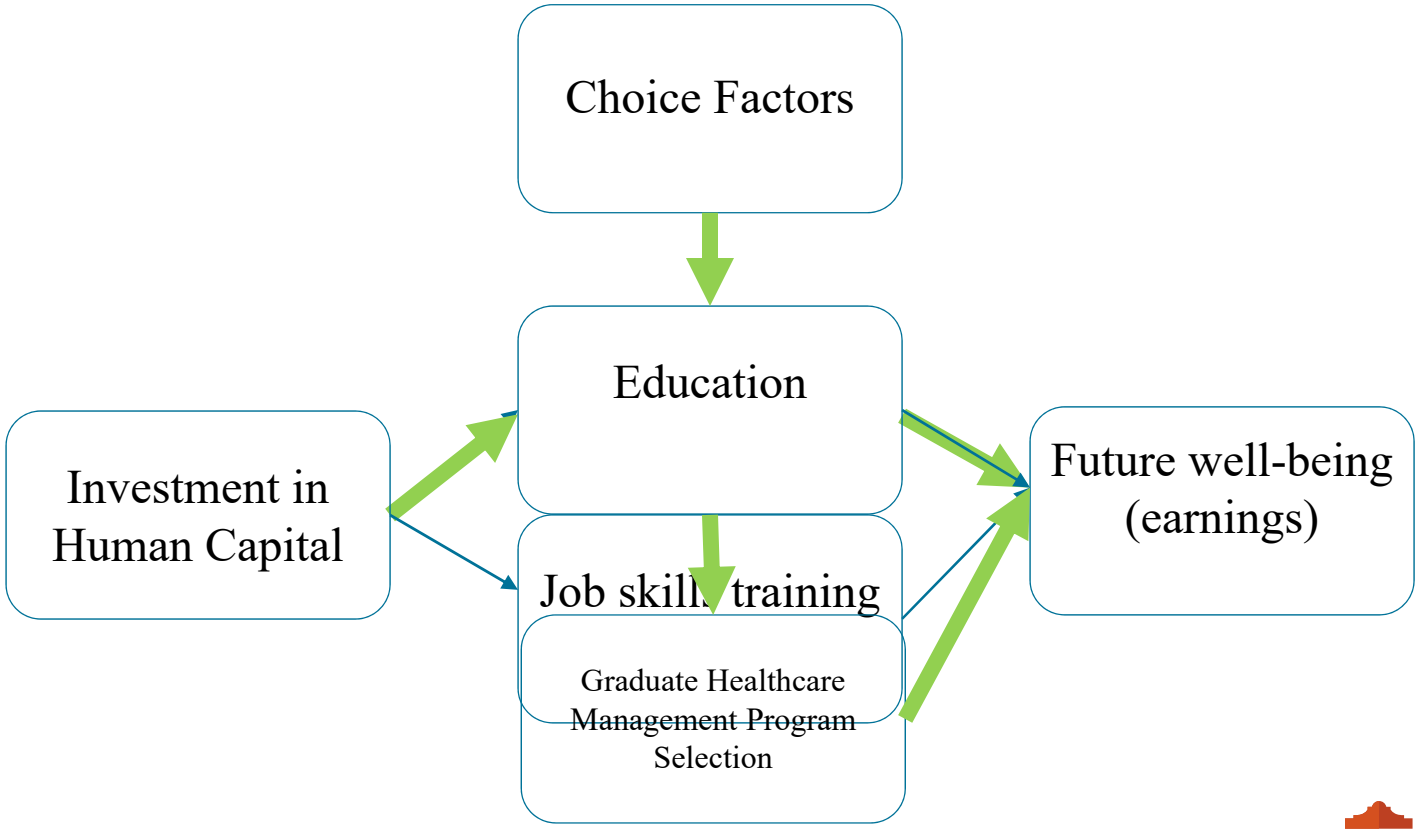
Conceptual Framework

Prospective Students/Applicants



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Specific Aims

- Specific Aim 1: To determine utility weights and relative attribute importance for prospective students of graduate health administration programs.

- Specific Aim 2: To determine the marginal rates of substitution within groups for prospective students relative to price.

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Hypotheses

- There will be differences in attribute importance in the applicant model
- All attribute levels will be inelastic relative to price

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METHODS

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Study Design

- Conjoint Analysis
  - Prospective students asked to choose the graduate healthcare management program they are most and least likely to select
  - Demographic Data

Multinomial Logit (MNL) Model

(McFadden, 1986)

$$P_c(i) = \mathrm{EXP}(V_i) / \sum_{j \in C} \mathrm{EXP}(V_j)$$

$$V_i = x_{i1}B_1 + x_{i2}B_2 + \ldots + x_{iK}B_K$$

- Market simulator
  - Demand curves
  - Marginal rates of substitution

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Attribute Selection

- Adapted Helter & Boehler (2016) discrete choice attribute selection methodology
  1. Brainstorming
  2. Data Reduction
  3. Removing inappropriate attributes
  4. Wording

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Attribute Selection

1. Literature review of student choice in higher education

Attribute	Sources
Program Cost	Dunnett & Moorhouse (2012), Clarke (2007), Carter & Curry (2011), Becker & Hecken (2009), Perna (2006)
Institutional Academic Reputation	Bersola et al. (2014), Dunnett & Moorhouse (2012)
Campus Size	Bersola et al. (2014),
Financial Support	Bersola et al. (2014), Perna (2006)
Geographic Location	Bersola et al. (2014), Dunnett & Moorhouse (2012)
Distance from Home	Dunnett & Moorhouse (2012)
Faculty Quality	Bersola et al. (2014), Dunnett & Moorhouse (2012)
Faculty Access	Bersola et al. (2014),
Future Salary	Brewer et al. (1998), Dunnett & Moorhouse (2012), Huntington-Klein (2016), Morgan (2002)
Program Reputation (Rankings)	Clarke (2007), Dunnett & Moorhouse (2012), Green et al. (2006), Hazelkorn (2014), Monks & Ehrenberg (1999), Silvernail et al. (2009), Soo (2013)
Social Opportunities	Dunnett & Moorhouse (2012), Huntington-Klein (2016)
Facilities	Dunnett & Moorhouse (2012)
Entry Qualifications/Competitiveness	Dunnett & Moorhouse (2012), Silvernail et al. (2009), Clarke (2007)
University Orientiation (Industry, Research, or Teaching)	Walsh et al. (2015)
Internship Opportunities	Soutar & Turner (2002), Raposo & Alves (2007)

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Attribute Selection

2. Expert panel
   - Department chair
   - Senior-level faculty member
   - Junior-level faculty member/alumnus
3. Final attribute selection
   - Program reputation
   - Program cost
   - Structure of experiential learning/work experience
   - Geographic location
   - Distance to home
   - Average starting salary
4. Attribute levels based on external review of actual program characteristics

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Final Attributes/Levels

Healthcare Management Program Attributes - Prospective Student Perspective						
Attribute	**Demonstrated by:**	**Variable Level**	**Level1**	**Level2**	**Level3**	**Level4**
Program Reputation/Image	US News and World Report Ranking	Ordinal	1	10	25	Unranked
Program Cost	Total Program Tuition & Fees	Ratio	$50,000	$65,000	$80,000	
Required Work Experience During the Program	Description of experiential learning	Nominal	Fieldwork project only (no formal internship required)	Summer internship	Summer internship PLUS Part-time internship during the program	
Campus Geographic Location	Metro population (based on Metropolitan Statistal Area Data from the US Census Bureau)	Ordinal	Large metropolitan area	Mid-sized city	Small college town	
Distance to Home	Distance to home	Nominal	Not Local	Local		
Average Starting Salary post-graduation	Theoretical Starting Salary for New Graduate	Ratio	$45,000	$60,000	$75,000	

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Survey Example

All else being equal, which of these healthcare management graduate programs would you be most likely and least likely to attend?
Choose by clicking both your most likely and least likely selections below:

(1 of 12)

US News and World Report Ranking	10	Unranked	25
Total Program Tuition and Fees	$50,000	$65,000	$80,000
Required Work Experience During the Program	Summer internship PLUS part-time internship during the program	Summer Internship	Summer Internship
Campus Geographic Location	Large metropolitan area	Small college town	Mid-sized city
Distance to Home	Not Local	Not Local	Local
Average Starting Salary Post-Graduation	$45,000	$75,000	$60,000
Most Likely	☐	☐	☐
Least Likely	☐	☐	☐

0% 100%

Pilot Test – Validity/Reliability

- Student survey was sent to one cohort of second-year students at a local university
- Test was administered twice over a two-week period
- Test-retest reliability
  - Calculated statistical significance of differences between utility means
- Internal validity was assessed on the two fixed items
  - Percentage of respondents who answer “appropriately”

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Pilot Test – Validity

- 2 Fixed tasks for each survey
  - Clear "best" and "worst" choice
  - Allows us to assess internal validity of responses in the survey
  - Those who do not answer appropriately will be excluded

All else being equal, which of these healthcare management graduate programs would you be most likely and least likely to attend?
Choose by clicking both your most likely and least likely selections below:

(4 of 12)

US News and World Report Ranking	Unranked	10	1
Total Program Tuition and Fees	$80,000	$65,000	$50,000
Required Work Experience During the Program	Fieldwork project only (no formal internship required)	Summer Internship	Summer internship PLUS part-time internship during the program
Campus Geographic Location	Mid-sized city	Mid-sized city	Mid-sized city
Distance to Home	Not Local	Not Local	Not Local
Average Starting Salary Post-Graduation	$45,000	$60,000	$75,000
Most Likely	☐	☐	☐
Least Likely	☐	☐	☐

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Pilot Test – Validity/Reliability

		Pilot 1 (N=18)		Pilot 2 (Test-Retest) (N=10)				
	Average Utilities (Zero-Centered Diffs)	Average Utilities	Standard Deviation	Average Utilities	Standard Deviation	t	Sig (2-tailed)	Mann-Whitney sig.
USNWR Ranking	1	59.13624	34.83850	57.59551	19.74882	0.12800	0.89900	0.86900
	10	12.10985	19.13890	13.11558	21.68281	-0.12700	0.90000	0.75900
	25	-4.85068	20.34833	-2.51045	14.94166	-0.31800	0.75300	0.79600
	Unranked	-66.39540	39.14850	-68.20064	15.10444	0.13900	0.89000	0.98100
Program Cost	$50,000	38.52386	19.15148	30.67128	23.37048	0.96100	0.34500	0.26500
	$65,000	5.50527	21.21858	11.59928	17.20065	-0.77600	0.44500	0.49400
	$80,000	-44.02913	34.12084	-42.27056	16.38800	-0.15300	0.88000	0.72400
Structure of Work Experience	fieldwork	-42.02965	28.04363	-34.63443	31.87496	-0.63700	0.53000	0.46400
	summer	-19.70589	8.41957	-24.87676	22.60451	0.87800	0.38800	0.90600
	summer+parttime	61.73554	27.28507	59.51119	32.17842	0.19400	0.84800	0.55500
Campus Location	Large	6.20747	17.83780	7.41316	15.74278	-0.17800	0.86000	0.83200
	Medium	9.51188	12.20244	1.41075	7.96026	1.88100	0.07100	0.04000
	Small	-15.71935	21.60486	-8.82391	12.62466	-0.92100	0.36600	0.58800
Distance to Home	Not Local	-4.22195	10.51896	-9.94886	9.68737	1.41800	0.16800	0.19100
	Local	4.22195	10.51896	9.94886	9.68737	-1.41800	0.16800	0.19100
Average Starting Salary	$45,000	-122.17363	33.34061	-129.14554	32.71243	0.53400	0.59800	0.72400
	$60,000	29.04606	19.63567	24.25507	24.81318	0.56300	0.57800	0.68900
	$75,000	93.12757	25.84823	104.89047	23.99573	-1.18200	0.24800	0.30800
	Average Importances	Average Importances	Standard Deviation	Average Importances	Standard Deviation	t	Sig (2-tailed)	Mann-Whitney sig.
	USNWR Ranking	21.54563	10.73368	21.05802	5.55915	0.13300	0.89500	0.75900
	Program Cost	14.39868	7.99578	13.28629	5.82561	0.38500	0.70300	1.00000
	Work Experience	18.18142	7.49012	17.99890	8.86675	0.05800	0.95400	0.94400
	Campus Location	6.94098	3.67352	4.80728	2.39668	1.64500	0.11200	0.13300
	Distance to Home	3.04976	2.13147	3.84351	2.49659	-0.88900	0.38200	0.46400
	Salary	35.88353	9.38956	39.00600	8.62184	-0.86700	0.39400	0.33200

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Sampling Method

1. Students – convenience sample
   - Partnered with the Association of University Programs in Health Administration (AUPHA)
   - Sent to all applicants within the Health Administration, Management, and Policy Centralized Application System (HAMPCAS)
   - 512 applicants for Fall 2018 cycle
   - Four emails sent over the course of four weeks

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Market Simulation

- Sensitivity Analysis – Aim 2
  - Share of preference
  - Allows us to plot demand curves for each attribute relative to price
  - Price elasticity of demand
- Market Share Assumptions
  - Marketplace is equal playing field (i.e. marketing is equally effective, awareness is equal across respondents, staff are equally effective, etc.)
  - Responses not haphazard
    - Measured through validity of fixed-items
  - No IIA Problem – Independence from Irrelevant Alternatives (Red Bus-Blue Bus)

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RESULTS

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Applicant Response Rate

- Survey sent to 512 applicants
- 126 opened survey
- 93 provided data
  - 18.2% response rate
  - In line with published data – 17-34% (Guo et al., 2016)

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Applicant Demographics

Gender	N	%
Male	23	24.7%
Female	36	38.7%
Transgendered	1	1.1%
Prefer Not to Respond	1	1.1%
Did not Answer	32	34.4%

Age (u= 26.5, SD = 6.2)	N	%
20-24	32	34.4%
25-29	17	18.3%
30+	12	12.9%
Did not Answer	32	34.4%

Ethnicity	N	%
Hispanic/Latino	5	5.4%
Not Hispanic/Latino	56	60.2%
Did not Answer	32	34.4%

Race	N	%
American Indian/Alaska Native	0	0.0%
Asian	17	18.3%
Black or African American	15	16.1%
Hawaiian/Pacific Islander	2	2.2%
White/Caucasian	28	30.1%
Did not Answer	31	33.3%

First in Family to Attend College?	N	%
Yes	14	15.1%
No	47	50.5%
Did not Answer	32	34.4%

First in Family to Attend Graduate School?	N	%
Yes	29	31.2%
No	32	34.4%
Did not Answer	32	34.4%

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Overall Utilities and Importance Scores

$$P_c(i) = \mathrm{EXP}(V_i) / \sum_{j \in C} \mathrm{EXP}(V_j)$$ (McFadden, 1986)

$$V_i = x_{i1}B_1 + x_{i2}B_2 + \ldots + x_{iK}B_K$$

		Utilities (N=93)	Importances (N=93)
	Intercept	2.00***	
Ranking	R1	0.24***	24.59
	R10	0.06**	
	R25	-0.03	
	Unranked	-0.27	
Tuition Cost	$50,000	0.18***	20.09
	$65,000	0.06**	
	$80,000	-0.23	
Work Experience During the Program	Fieldwork Only	-0.08***	7.98
	Summer	-0.01	
	Summer+Internship	0.09	
Geographic Location	Large Metro	0.01	3.87
	Mid-Sized City	0.04*	
	Small College Town	-0.04	
Distance to Home	Not Local	-0.06***	5.42
	Local	0.06	
Average Starting Salary	$45,000	-0.42***	38.05
	$60,000	0.05**	
	$75,000	0.36	

Overall - F = 134.1, 3,080 DF, p<.001
***p<.001**
p<.01
*p<.05**

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Price Elasticity

- Calculated for all attribute levels relative to price
- **Perfectly elastic** - any very small change in price results in a very large change in the quantity demanded.
- **Relatively elastic** - small changes in price cause large changes in quantity demanded (the result of the formula is greater than 1).
- **Unit elastic** - any change in price is matched by an equal change in quantity (where the number is equal to 1).
- **Relatively inelastic** - large changes in price cause small changes in demand (the number is less than 1).
- **Perfectly inelastic** - quantity demanded does not change when the price changes. Products in this category are things consumers absolutely need and there are no other options from which to obtain them.

Gallo, 2015

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Probability of Choice and Elasticity Summaries

		Probability of Choice			Price Elasticity		
		$50,000	**$65,000**	**$80,000**	**E($50k-->$65k)**	**E($65k-->$80k)**	**E($50k-->$80k)**
USNWR Ranking	R1	0.61	0.58	0.51	-0.19	-0.64	-0.39
	R10	0.56	0.53	0.46	-0.21	-0.71	-0.44
	R25	0.54	0.51	0.44	-0.22	-0.73	-0.45
	Unranked	0.48	0.45	0.38	-0.25	-0.82	-0.50
Structure of Work Experience	Fieldwork	0.55	0.52	0.45	-0.22	-0.72	-0.45
	Summer	0.56	0.53	0.46	-0.21	-0.71	-0.44
	Summer+Internship	0.59	0.56	0.49	-0.20	-0.68	-0.42
Campus Location	LargeMetro	0.56	0.53	0.45	-0.21	-0.72	-0.44
	MidSized	0.56	0.53	0.46	-0.21	-0.71	-0.44
	SmallCollegeTown	0.54	0.51	0.44	-0.22	-0.73	-0.45
Distance to Home	NotLocal	0.56	0.53	0.46	-0.21	-0.71	-0.44
	Local	0.59	0.56	0.49	-0.19	-0.67	-0.41
Average Starting Salary	S45000	0.45	0.42	0.35	-0.26	-0.87	-0.53
	S60000	0.56	0.53	0.46	-0.21	-0.71	-0.44
	S75000	0.64	0.61	0.54	-0.18	-0.60	-0.37

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Results Between Groups

Age

- Less differentiation between salary and ranking for older students
- More importance on geographic factors for older students

Gender

- Females placed higher importance on tuition cost than ranking
- Males placed higher importance on geographic factors

Ethnicity

- Hispanics placed higher importance on tuition cost than ranking
- Hispanics preferred large metropolitan area, non-Hispanics preferred mid-sized city

Race

- Small sample sizes within groups
- African Americans identified tuition cost as the second-most important attribute

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Results Between Groups

First-Generation College Student

- First-Generation college students placed higher importance on tuition cost than ranking

First-Generation Graduate School Student

- First-Generation graduate students placed higher importance on tuition cost than ranking
- Large difference between ranking and salary importance scores

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Discussion

- First known data on preferences of students for healthcare management programs
- Applicants place most importance on starting salary, ranking, and tuition cost
  - Place less importance on work experience and geographic factors
- All applicant attribute levels were inelastic relative to price
  - The changes in demand, however, could be significant for programs competing to fill a small number of seats

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Potential Limitations

- Populations under study – limits generalizability
  - Other professions
  - Non-HAMPCAS populations
- Small sample size
  - Students – 1,031 choice tasks; 6,186 ranking inputs

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Future Recommendations

- Repeat study with future cohorts
  - Identify differences between cohorts
  - Build sample size to identify other segments
- Expand approach for other professional programs
  - Public Health
  - Allied Health Disciplines
  - Medicine
  - Nursing
- Assess results against actual market performance

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Questions?

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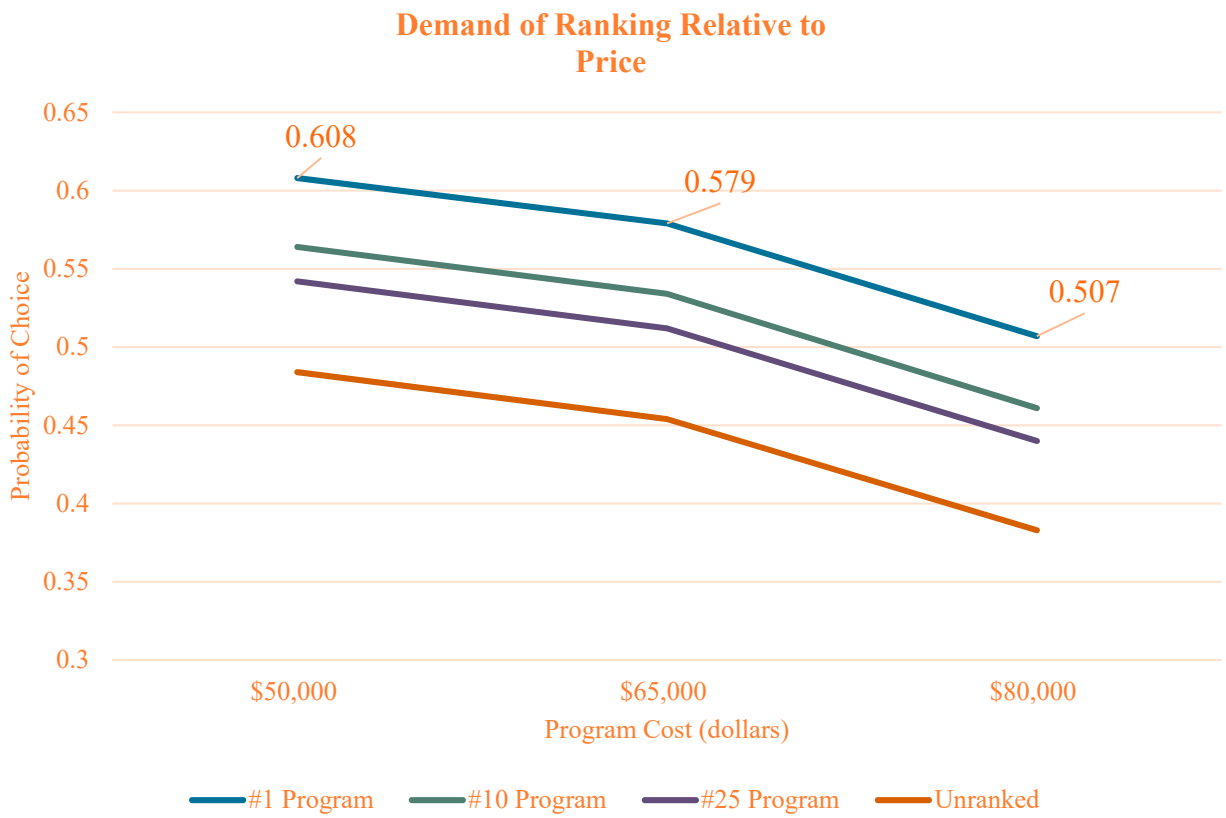
Sensitivity Analysis



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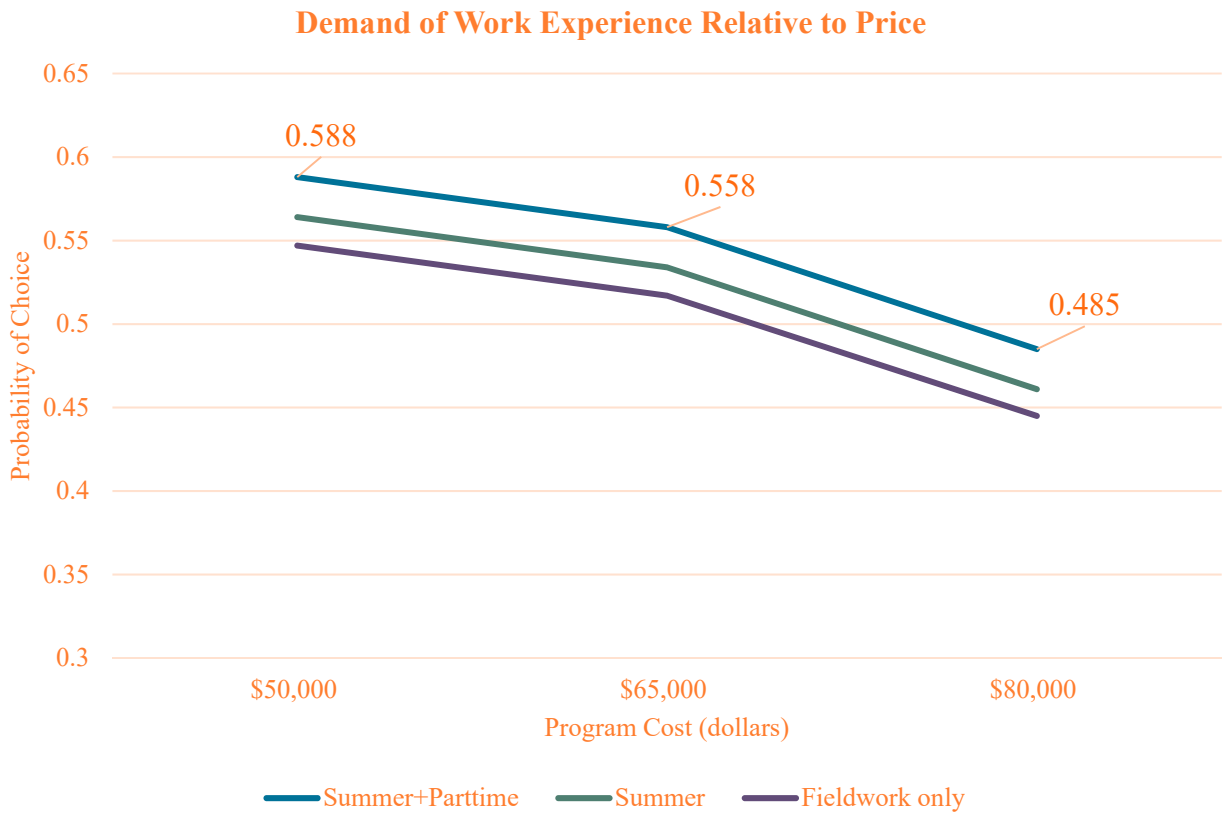
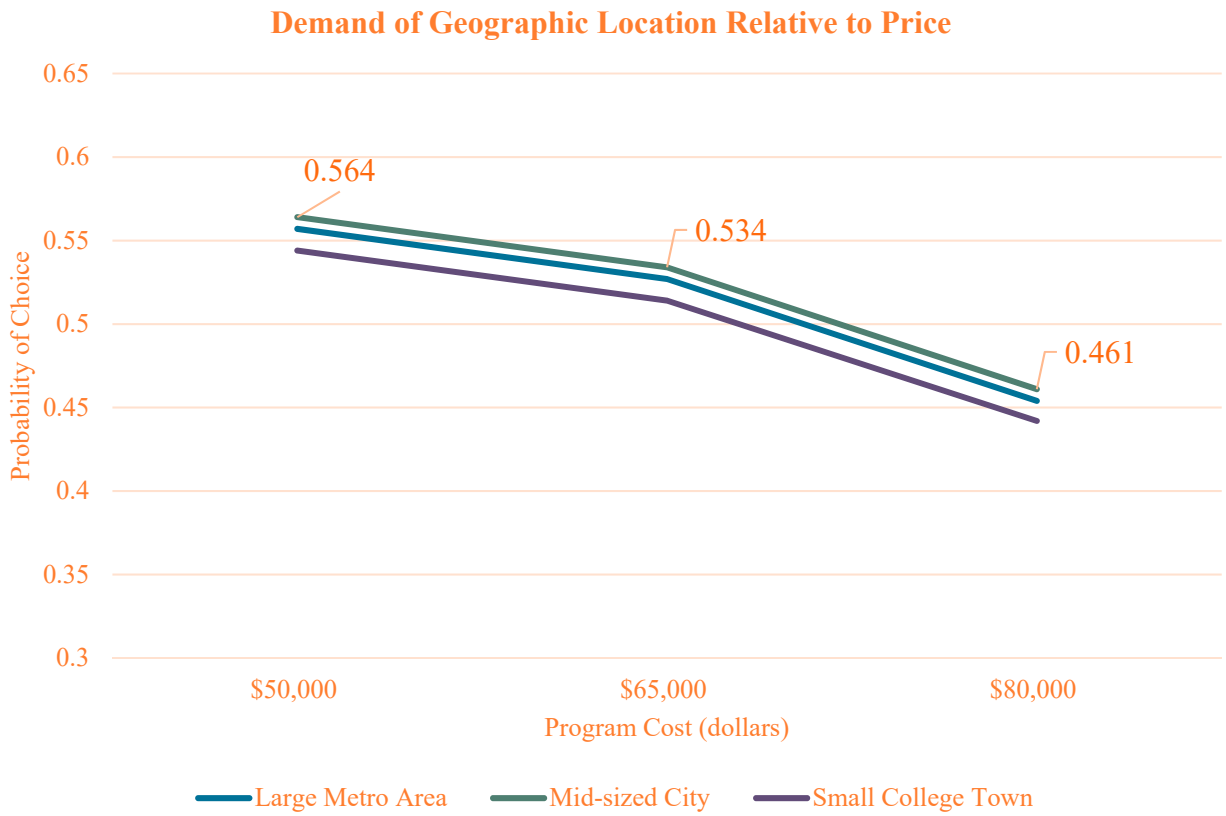
Sensitivity Analysis



UT Health San Antonio

Sensitivity Analysis



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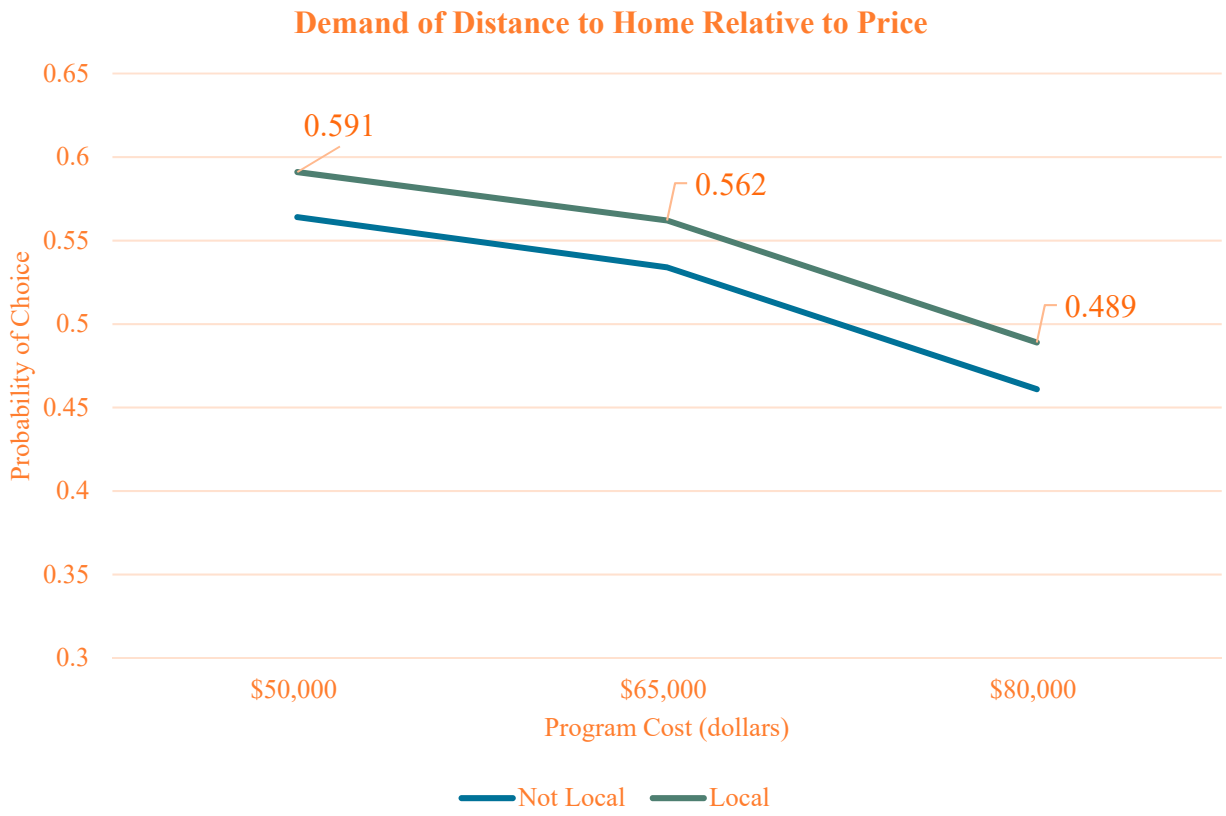
Sensitivity Analysis



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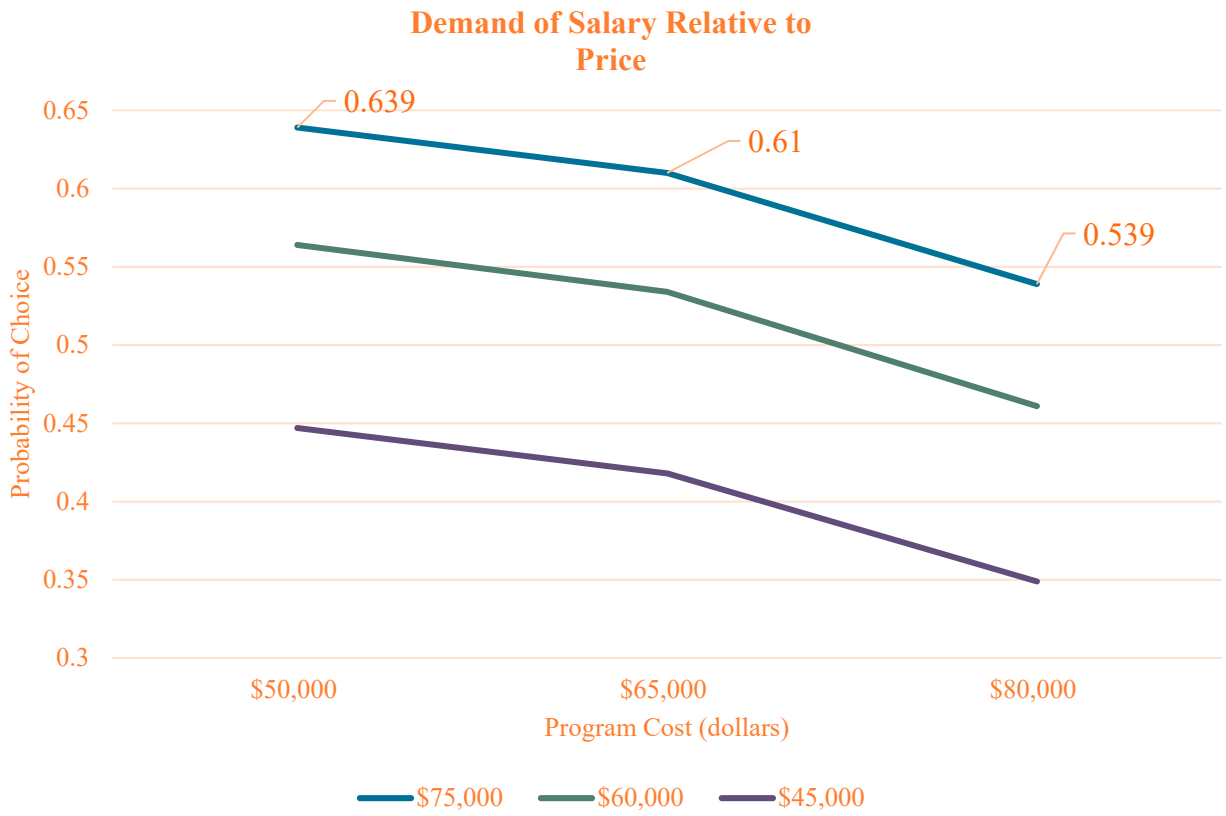
Sensitivity Analysis



UT Health San Antonio

Utilities and Importance Scores by Age

			Utilities			Importances		
		Total (N=93)	20-24 (N=32)	25-29 (N=17)	30+ (N=12)	20-24 (N=32)	25-29 (N=17)	30+ (N=12)
	Intercept	2.00***	2.01***	2.00***	2.00***			
Ranking	R1	0.24***	0.21***	0.22***	0.27***	22.81	24.42	26.83
	R10	0.06**	0.07*	0.02	0.11			
	R25	-0.03	-0.02	0.01	-0.13*			
	Unranked	-0.27	-0.27	-0.25	-0.25			
Tuition Cost	$50,000	0.18***	0.21***	0.19***	0.11*	22.02	22.05	16.97
	$65,000	0.06**	0.06*	0.04	0.10*			
	$80,000	-0.23	-0.26	-0.23	-0.22			
Work Experience During the Program	Fieldwork Only	-0.08***	-0.12***	-0.04	-0.05	11.52	3.07	6.67
	Summer	-0.01	0.00	0.01	-0.02			
	Summer+Internship	0.09	0.12	0.02	0.08			
Geographic Location	Large Metro	0.01	0.00	0.00	-0.00	1.18	5.19	8.33
	Mid-Sized City	0.04*	0.01	0.05	0.08*			
	Small College Town	-0.04	-0.01	-0.05	-0.08			
Distance to Home	Not Local	-0.06***	-0.03	-0.04	-0.11***	2.50	4.10	11.86
	Local	0.06	0.03	0.04	0.11			
Average Starting Salary	$45,000	-0.42***	-0.44***	-0.41***	-0.34***	39.97	41.16	29.35
	$60,000	0.05**	0.03	0.04	0.11*			
	$75,000	0.36	0.41	0.37	0.23			

*****p<.001**
****p<.01**
***p<.05**

- Less differentiation between salary and ranking for older students
- More importance on geographic factors for older students

UT Health San Antonio

Utilities and Importance Scores by Gender

			Utilities		Importances	
		Total (N=93)	Male (N=23)	Female (N=36)	Male (N=23)	Female (N=36)
	Intercept	2.00***	1.99***	2.00***		
Ranking	R1	0.24***	0.24***	0.19***	23.52	21.60
	R10	0.06**	0.05	0.07*		
	R25	-0.03	-0.03	-0.01		
	Unranked	-0.27	-0.26	-0.25		
Tuition Cost	$50,000	0.18***	0.17***	0.20***	20.04	21.97
	$65,000	0.06**	0.08**	0.05*		
	$80,000	-0.23	-0.25	-0.25		
Work Experience During the Program	Fieldwork Only	-0.08***	-0.09**	-0.10***	7.41	9.89
	Summer	-0.01	0.02	-0.01		
	Summer+Internship	0.09	0.07	0.10		
Geographic Location	Large Metro	0.01	0.00	-0.01	7.73	1.80
	Mid-Sized City	0.04*	0.08**	0.02		
	Small College Town	-0.04	-0.08	-0.01		
Distance to Home	Not Local	-0.06***	-0.05**	-0.05**	5.18	4.70
	Local	0.06	0.05	0.05		
Average Starting Salary	$45,000	-0.42***	-0.43***	-0.41***	36.13	40.05
	$60,000	0.05**	0.10***	0.01		
	$75,000	0.36	0.33	0.40		

*****p<.001**
****p<.01**
***p<.05**

- Ranking and tuition cost reversed for males and females
- Males placed higher importance on geographic factors

UT Health San Antonio

Utilities and Importance Scores by Ethnicity

			Utilities		Importances	
		Total (N=93)	Hispanic/Latino (N=5)	Not Hispanic/Latino (N=56)	Hispanic/ Latino (N=5)	Not Hispanic/Latino (N=56)
	Intercept	2.00***	2.01***	2.00***		
Ranking	R1	0.24***	0.16*	0.21***	16.08	22.03
	R10	0.06**	0.01	0.05*		
	R25	-0.03	0.00	-0.03		
	Unranked	-0.27	-0.17	-0.24		
Tuition Cost	$50,000	0.18***	0.13*	0.19***	16.78	21.84
	$65,000	0.06**	0.07	0.07***		
	$80,000	-0.23	-0.20	-0.25		
Work Experience During the Program	Fieldwork Only	-0.08***	-0.10	-0.10***	9.93	9.68
	Summer	-0.01	0.00	-0.00		
	Summer+Internship	0.09	0.10	0.10		
Geographic Location	Large Metro	0.01	0.11	-0.00	9.26	4.65
	Mid-Sized City	0.04*	-0.07	0.05**		
	Small College Town	-0.04	-0.04	-0.05		
Distance to Home	Not Local	-0.06***	0.02	-0.05***	2.08	5.04
	Local	0.06	-0.02	0.05***		
Average Starting Salary	$45,000	-0.42***	-0.52***	-0.39***	45.87	36.76
	$60,000	0.05**	0.12	0.04*		
	$75,000	0.36	0.40	0.35		

*****p<.001**
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***p<.05**

- Hispanics placed higher importance on tuition cost than ranking
- Hispanics preferred large metropolitan area, non-Hispanics preferred mid-sized city

UT Health San Antonio

Utilities and Importance Scores by Race

		Utilities					Importances			
		Total (N=93)	Asian (N=17)	Black or African American (N=15)	Hawaiian /Pacific Islander (N=2)	White (N=28)	Asian (N=17)	Black or African American (N=15)	Hawaiian /Pacific Islander (N=2)	White (N=28)
	Intercept	2.00***	2.00***	1.99***	2.00***	2.00***				
Ranking	R1	0.24***	0.17***	0.14**	0.11	0.29***	19.67	17.29	22.52	26.85
	R10	0.06**	0.04	0.02	-0.25	0.08**				
	R25	-0.03	0.01	0.02	-0.01	-0.06				
	Unranked	-0.27	-0.22	-0.18	0.14	-0.30				
Tuition Cost	$50,000	0.18***	0.13***	0.19***	0.03	0.22***	14.54	26.98	7.14	22.32
	$65,000	0.06**	0.02	0.11**	0.05	0.06*				
	$80,000	-0.23	-0.15	-0.30	-0.08	-0.27				
Work Experience During the Program	Fieldwork Only	-0.08***	-0.16***	0.09*	-0.18	-0.56*	15.99	8.57	20.35	5.77
	Summer	-0.01	0.01	0.02	0.17	-0.01				
	Summer+Internship	0.09	0.15	0.07	0.01	0.07				
Geographic Location	Large Metro	0.01	0.01	0.02	0.08	-0.01	4.24	4.68	10.59	2.32
	Mid-Sized City	0.04*	0.04	0.03	-0.10	0.03				
	Small College Town	-0.04	-0.05	-0.05	0.02	-0.02				
Distance to Home	Not Local	-0.06***	-0.03	-0.01	0.04	-0.08***	2.68	0.82	5.04	7.20
	Local	0.06	0.03	0.01	-0.04	0.08				
Average Starting Salary	$45,000	-0.42***	-0.41***	-0.42***	-0.38**	-0.43***	42.90	41.66	34.37	35.54
	$60,000	0.05**	-0.03	0.07	0.17	0.08**				
	$75,000	0.36	0.43	0.34	0.21	0.35				

*****p<.001**
****p<.01**
***p<.05**

- Small sample sizes within groups
- African Americans identified tuition cost as the second-most important attribute

UT Health San Antonio

Utilities and Importance Scores by First Generation College Students

			Utilities		Importances	
		Total (N=93)	First Generation College (N=14)	Not First Generation College (N=47)	First Generation College (N=14)	Not First Generation College (N=47)
	Intercept	2.00***	2.00***	2.00***		
Ranking	R1	0.24***	0.12*	0.26***	18.81	25.30
	R10	0.06**	0.05	0.07**		
	R25	-0.03	0.04	-0.05		
	Unranked	-0.27	-0.21	-0.28		
Tuition Cost	$50,000	0.18***	0.18***	0.18***	25.51	19.74
	$65,000	0.06**	0.08*	0.06**		
	$80,000	-0.23	-0.26	-0.24		
Work Experience During the Program	Fieldwork Only	-0.08***	-0.07	-0.09***	6.70	8.77
	Summer	-0.01	0.02	-0.00		
	Summer+Internship	0.09	0.05	0.09		
Geographic Location	Large Metro	0.01	0.02	-0.01	4.52	3.41
	Mid-Sized City	0.04*	0.03	0.04*		
	Small College Town	-0.04	-0.05	-0.03		
Distance to Home	Not Local	-0.06***	-0.02	-0.05***	2.86	5.18
	Local	0.06	0.02	0.05		
Average Starting Salary	$45,000	-0.42***	-0.41***	-0.41***	41.60	37.60
	$60,000	0.05**	0.09*	0.03		
	$75,000	0.36	0.32	0.38		

*****p<.001**
****p<.01**
***p<.05**

- First-Generation college students placed higher importance on tuition cost than ranking

UT Health San Antonio

Utilities and Importance Scores by First Generation Graduate School Student

			Utilities		Importances	
		Total (N=93)	First Generation Grad School (N=29)	Not First Generation Grad School (N=32)	First Generation Grad School (N=29)	Not First Generation Grad School (N=32)
	Intercept	2.00***	2.00***	2.00***		
Ranking	R1	0.24***	0.15***	0.30***	16.79	30.99
	R10	0.06**	0.07*	0.05		
	R25	-0.03	-0.01	-0.04		
	Unranked	-0.27	-0.21	-0.31		
Tuition Cost	$50,000	0.18***	0.22***	0.14***	25.04	16.64
	$65,000	0.06**	0.08**	0.05*		
	$80,000	-0.23	-0.30	-0.19		
Work Experience During the Program	Fieldwork Only	-0.08***	-0.06*	-0.11***	7.27	9.35
	Summer	-0.01	-0.03	0.03		
	Summer+Internship	0.09	0.09	0.08		
Geographic Location	Large Metro	0.01	0.00	-0.01	6.05	1.29
	Mid-Sized City	0.04*	0.06*	0.02		
	Small College Town	-0.04	-0.06	-0.01		
Distance to Home	Not Local	-0.06***	-0.05*	-0.05**	4.32	5.26
	Local	0.06	0.05	0.05		
Average Starting Salary	$45,000	-0.42***	-0.43***	-0.39***	40.53	36.47
	$60,000	0.05**	0.02	0.07**		
	$75,000	0.36	0.41	0.32		

*****p<.001**
****p<.01**
***p<.05**

- First-Generation graduate students placed higher importance on tuition cost than ranking
- Large difference between ranking and salary importance scores

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