RESEARCH PAPER NO. 1805

Corporate Social Responsibility
Reputation Effects on MBA Job Choice

David B. Montgomery
Catherine A. Ramus

May 2003
CORPORATE SOCIAL RESPONSIBILITY
REPUTATION EFFECTS ON MBA JOB CHOICE

David B. Montgomery
Sebastian S. Kresge Professor of Marketing Strategy -Emeritus
Graduate School of Business
Stanford University
Stanford, CA
Tel: (650) 723 3029
Email: Montgomery_david@gsb.stanford.edu

&
Dean, School of Business
Singapore Management University

Catherine A. Ramus *
Assistant Professor
Donald Bren School of Environmental
Science and Management
University of California
Santa Barbara, CA 93106- 5131
Email: Ramus@bren.ucsb.edu
Tel: (805) 893 5057 Fax: (805) 893 7612

*Corresponding Author

---

1 The authors’ names are merely alphabetical.
CORPORATE SOCIAL RESPONSIBILITY
REPUTATION EFFECTS ON MBA JOB CHOICE

ABSTRACT

In a preliminary study with 279 MBA’s from two European and three North American business schools we find that reputation-related attributes of caring about employees, environmental sustainability, community/stakeholder relations, and ethical products and services are important in job choice decisions. We use an adaptive conjoint analysis survey tool to discover the relative weighting of a new set of social responsibility job search criteria, including these attributes with traditional job search criteria like financial package, geographical location, etc. In addition, our results show that more than ninety percent of the MBAs in the sample were willing to forgo financial benefits in order to work for an organization with a better reputation for corporate social responsibility and ethics.
Masters in Business Administration students (MBA’s) select employment in organizations based upon the relative utility they place on different attributes of the offer, and based upon the attributes of the organization giving the offer. We call these attributes (both of the job offer and of the organization) job factors. Researchers studied this issue of MBA job choice in the 1970’s and 80’s using conjoint analysis looking at the importance of financial package, geographical location of the work, business travel, opportunity for advancement, company growth, functional activity of job offer, advancement opportunity, and people in the company (Montgomery & Wittink, 1980; Krishnamurthi, 1983; Srinivasan, 1988). Missing from this list are attributes related to reputation and values congruence between the applicant and the organization, which recent research by Judge and Bretz (1992) and Scott (2000) showed to impact job choice.

Reputation of an organization is a multidimensional construct, meaning that no single factor is responsible for influencing a person’s perception of an organization’s reputation. Indeed, Fombrun and Shanley (1990) show that factors such as accounting signals of profitability, market valuation, media visibility, dividend yield, size, advertising intensity, and social welfare contributions affect Fortune 500 firm reputations. They raise the question of whether firms have one reputation or many, noting that reputation can vary significantly based upon domain and audience. Our research is based upon the separation of reputation effects into different categories of attributes including economic performance, communication with societal stakeholders, environmental sustainability, caring about employees, and ethics of products and services. We study the relative importance of MBA perceptions of reputation along these different dimensions, juxtaposing these reputation effects with traditional job attributes studied in earlier research (i.e., financial package, geographical location of the work, business travel, opportunity for advancement, company growth, functional activity of job offer, advancement opportunity, and people in the company).

Why are we interested in reputations related to corporate social responsibility and their effects on MBA’s job choices? Zenisek (1979) argued that societal expectations of private enterprises change over time, placing increasing responsibility for social welfare on firms. He defined corporate social responsibility as “that set of demands and expectations, regarding the production of goods and services of both a physical and social nature, which society places on private enterprise” (Zenisek, 1979: p. 362). Just as expectations of the public with regards to corporate social responsibility are changing over time, so too might we expect MBAs’ expectations to evolve.

Whereas the work of Judge and Breitz (1992) and Scott (2000) showed a relationship between organizational values and applicant choice, there is no empirical study that shows how important these additional reputation-related factors might be. Building on the conjoint analysis research of the 1970’s and 80’s (Montgomery & Wittink, 1980; Krishnamurthi, 1983; Srinivasan, 1988) our research presents a preliminary study of the relative importance of these reputation attributes for MBAs when deciding between organizations for which to work. The conjoint tool allows us to determine the relative weighting of values-driven search criteria with traditional search criteria like financial package, for example. In addition, we show that there is an economic dimension related to corporate social responsibility reputation effects on MBA job preferences. The results of our research demonstrate that a significant percentage of the MBAs in the sample were willing to forgo financial benefits in order to work for an organization with a better reputation for corporate social responsibility and ethics.
METHODOLOGY

The purpose of this study was to measure the utilities of MBA graduates for the full range of job factors that could affect their choices of employment. To develop a complete set of job attributes and measures, we reviewed the literature on job choice (Arnold, 1981; Feldman & Arnold, 1978; Montgomery & Wittink, 1980; Judge & Bretz, 1992; Krishnamurthi, 1983; Rynes & Lawler, 1983; Rynes, Schwab, & Heneman, 1983; Srinivasan, 1988; Zedeck, 1977) and interviewed career services professionals. We developed an exhaustive list of attributes, which we tested in a survey of sixty-six MBA’s to refine the list. Then we ran two focus groups with graduate students to further refine the attributes and to develop levels for each attribute. The seventeen job choice attributes used in this job preference study are defined in the Appendix, seven of which were not part of previous conjoint analysis studies:

• **Work Environment** - non-financial benefits like childcare, office environment, restaurant/food and other services, health club, etc.
• **People in the Organization** - work attitude of boss, colleagues, and other members of the organization
• **Learning on the Job** - opportunity for personal development/training/learning
• **Ethical Products, Services or Marketing** - the ethical reputation of the organization's products, services, or marketing practices
• **Caring about Employees** - organization's reputation for managing layoffs, ensuring worker’s health and safety, and providing HR benefits, especially insurance package
• **Relationship with Local Communities and Outside Stakeholders** - organization's reputation for interacting with local communities and external stakeholders, such as governments, public interest groups, etc.
• **Environmental Sustainability and Socially Conscious Behavior** - organization's reputation for commitment to environmentally and socially sustainable development

Using the list of seventeen job choice attributes and levels as the starting point, we developed an Adaptive Conjoint Analysis (ACA) survey in Sawtooth Software. We asked respondents to choose between computer-generated sets of choices of job attributes (paired and triple comparisons). The software took the respondents previous answers into consideration when generating new choice sets. In addition to questions on job attribute weights, the survey also asked four questions regarding whether the respondent was willing to forgo financial benefits to work for an organization with a reputation for caring about employees, environmental sustainability, community/stakeholder relations, and all three. The survey was conducted online using a server at the school of one of the authors. Results were confidential. We did not ask for respondent name or email information. Our sample included 279 MBA students graduating in 2002 from two business schools in Europe and three in North America.

Note that since this study utilized Sawtooth Software’s Adaptive Conjoint Analysis, every respondent did not see the same combination of attributes and levels. Rather, the program selects those attribute levels and combinations for a given respondent that will enable it to construct the part worth utilities for that respondent without exhausting either his/her patience or stamina. It will be useful to refer to the definitions and levels in the Appendix while examining the results discussed in the next section.

RESULTS

Attribute Importances in MBA Job Choice

The raw importance weight for a given attribute (e.g., Length of Commute) for a given respondent is measured by the total difference in utility between the level with the highest utility (e.g., commute takes less than five minutes) and the level with the lowest utility (e.g., commute
takes more than 30 minutes). These raw importance weights are then summed for all seventeen attributes for that respondent and the raw importance weight for each attribute is then divided by this sum to yield the Importance Score or weight for each attribute for that respondent. That is, the Importance Scores normalize across all seventeen attributes for a given respondent. Thus they reflect the relative importance of each attribute to a given respondent.

The average Importance Scores and their associated standard deviations for each of the seventeen attributes across the 279 respondents are reported in the first two columns of Table 1 in descending order of Average Importance Score. Higher scores indicate a more important attribute.

The final column of Table 1 reports the average rank of each attribute across the respondents, where the attributes are ranked by their importance scores for each individual respondent (1 = most important...17 = least important) and are then averaged across the 279 respondents. The ranking of the attribute importance scores implicit in columns 1 and 3 of Table 1, are highly correlated (Spearman rho rank order correlation = 0.991 and Kendall tau b = 0.948, both significant at p < 0.001). Since the ranking implications are so similar for both columns and since column 1 contains more information, further analysis will be reported on the column 1 Average Importance Scores only.

The Average Importance Scores in Table 1 are combined into five groups in which the attribute(s) in each higher group in the table have statistically (p< 0.05) higher average importance scores than all attributes in lower groups. Within a group, the average importance score is not statistically (p<0.05) different between attributes, with a couple minor exceptions noted in the table for attributes below the top ten in average importance score.

The results show that on average, Intellectual Challenge is substantially more important than any other attribute, even the Financial Package. In fact, it is over 20% more important than the second place attribute. But Financial Package is clearly second by a comfortable margin. Interestingly, the social aspect of Caring about Employees is well up in the job preference rankings as a member of group #3 and is the fifth ranked job attribute. Ethical Reputation is ninth out of the seventeen attributes and the social issue of Environmental Sustainability is in the fourth level group in importance. Finally, the group five attributes anchor the list and may be candidates for deletion in future research. It is interesting that Image of Organization is by far the least important attribute in MBA job choice.

While these average results are useful for identifying general phenomena, one should note that the standard deviations of the importance scores across individuals, averaging over 2.5, suggest that there is still a considerable variation across individual MBA’s in their preference for job choice attributes. Future research will consider some of the ways in which these differences may relate to individual characteristics such as country of origin or business school attended.

A fair question to raise at this point is whether conjoint methods will actually predict real MBA job choice. Although this is not a primary concern of the present paper, there is earlier evidence that conjoint methods can make successful ex ante predictions of MBA job choice. Montgomery and Wittink (1980) and Montgomery (1986) report successful results. They obtained MBA responses to conjoint questions in early winter quarter and used the utilities developed from these questions to predict MBA choice among jobs in May. Their results showed that 68% and 63% of the jobs actually chosen were correctly predicted from just eight attributes under circumstances where the chance level was less than 30%. In a later unreported study, Montgomery found that 63% of the jobs chosen by Stanford MBA’s and 81% of the jobs chosen by London Business School MBA’s could be predicted ex ante from similar conjoint questions. Once again, the chance level was less than 30%. So there is some reason to expect that there is a fair bit of job choice predictive power in the methodology that has been used in this study.
Willingness to Forego Financial Benefits (WFFB)

The next question which was addressed, using the time honored dollar metric technique from marketing research, was to ask each MBA respondent how much salary they would be willing to give up in order to work for a company which: 1) cares about employees, 2) cares about stakeholders such as the community, 3) commits to sustainability such as to the environment, and 4) exhibits all three of these aspects. The results are presented in Table 2.

In column 2 one sees that over 90% of the MBA respondents were willing to give up some income in order to work for an organization which cares about employees, while over 94% are willing to sacrifice some income for an organization which exhibits all three characteristics. Even the lowest percentage of 70.8% for caring about stakeholders is quite high. So it appears that MBA’s are indeed willing to forego income in order to work for an organization with a reputation for social conscientiousness.

But how much income will they give up? The first column reports the mean and standard deviation across the 260 respondents to these questions. By far the largest amount of WFFB was for organizations which care about employees, where the mean WFFB as $ 9300. Interestingly, this is totally consistent with the fact that Caring About Employees was the fifth ranked job attribute in Table 1, which was generated using an entirely different methodology (i.e., conjoint analysis). Similar consistency with the conjoint results may be found in the result that environmental sustainability has the second highest WFFB ($ 5500) while caring about stakeholders has the third highest level ($3700). These are ordered and significant in the same way that the conjoint results in Table 1 report. Each of these WFFB are significantly different from the other at \( p < 0.01 \). The WFFB for organizations exhibiting all three characteristics averaged $ 13700, which suggests that there was some diminishing willingness to forego income since the sum of the three average WFFB results is $18000. As with the conjoint analysis results, the magnitude of the standard errors being of the same order of magnitude of the mean suggests substantial variation across MBA in the willingness to forego income.

But how much of a sacrifice does this represent to the MBA’s on average. Across our sample the mean expected financial benefits which MBA’s anticipated was $ 115,000. The third column of Table 2 presents a calibrated picture of this magnitude by dividing the mean WFFB by the mean expected financial benefits. Thus Table 2 shows that the MBA’s on average were willing to forego 8.1% of their expected income in order to work for an organization which cares about its employees. This is a substantial amount. Overall they were willing to forego 11.9% of their mean expected income to work for an organization exhibiting all three characteristics.

Aspects of Social Responsibility

In order to ascertain whether the various aspects of social responsibility which were measured in the conjoint task are distinct aspects or likely to be part of a larger “social responsibility” construct, the correlation of the conjoint importance weights reported in Table 3 provides some insight. Note that although many of the correlations are statistically significant, due to the substantial sample size, all of the correlations are fairly small and do not give indication that they are part of some larger construct. Only the correlation between Environmental Sustainability and both Community/Stakeholder Relations and Ethical Reputation exceeded 0.2, with the former being 0.3. So it would appear plausible that the different aspects are distinct and that future research should probably treat them as separate aspects. Note also that Image of Organization is rather unrelated to all of the Social Responsibility aspects. And recall that Image of Organization was also dead last among the conjoint attributes in importance in job preference. One must wonder, at least for purposes of attracting MBA employees, whether the sort of thing measured by Fortune in it’s annual survey is very relevant. Naturally it may be very important to investors and other publics, but these results at least raise questions in relation to MBA job preference.
CONCLUSIONS

This preliminary study showed that many of the MBA respondents cared about social responsibility reputations of organizations when considering employment. This finding is in keeping with the work of Judge and Breitz (1992) and Scott (2000), who showed that job applicants chose organizations based upon values congruence. If candidates choose organizations based on people-organization values fit, and a significant percentage of graduating MBA’s care about organizational reputations for ethically and socially responsible behavior as our preliminary study indicates, then there is a strong argument for firms to become more ethically and socially responsible in order to attract MBA candidates. Chatman (1991; 459) showed that “recruits whose values most closely match the firm’s feel most satisfied and intend to and actually remain with it longer”. Therefore, there may be important practical implications for both recruitment and retention related to maintaining a reputation for caring about employees, stakeholders, environmental sustainability, and for providing products and services that are considered ethically sound. Further research over time with a larger sample of schools should help us to contribute to this line of inquiry.
NOTES

Psychology research has also studied the issue of which attributes affect job choice decisions. As recently as 1992, Judge and Bretz tested the influence of job characteristics of salary level, advancement potential, geographic location, type of work, and type of organization on graduates’ choices. Also see Feldman and Arnold (1978) who looked at pay and benefits, opportunities to use skills and abilities, autonomy and independence, responsibility, provision of essential services and products, and flexibility of work schedules; Zedeck (1977) who looked at salary, advancement opportunity, flexibility, and assignment duration; and, Rynes, Schwab, and Heneman (1983) who looked at salary, location, promotional opportunities, and type of work. This literature indicates that salary/benefits and advancement opportunities are the two most important attributes affecting job choices.
APPENDIX
Attribute Definitions and Levels

A. **Financial Package in First Year of Employment** - salary, bonus, paid overtime and other monetary benefits such as stock options
   - Expected financial package plus 20%
   - Expected financial package plus 10%
   - Expected financial package
   - Expected financial package minus 10%
   - Expected financial package minus 20%

B. **Geographical Area** - location of office where you work most of the time
   - Job is in (one of) my preferred location(s)
   - Job is not in (one of) my preferred location(s)

C. **Learning on the Job** - organizational support for personal development, training and further education
   - Lots of opportunities for developing new skills/abilities
   - Moderate opportunity for developing new skills/abilities

D. **People in the Organization** - work attitude of boss, colleagues and other members of the organization
   - People are flexible
   - People are competitive and cut-throat

E. **Opportunity for Advancement** - expected time until promotion
   - Rapid opportunity for advancement (expect promotion within 1-2 years)
   - Moderate opportunity for advancement (expect promotion within 2 years or more)

F. **Work Environment** - non-financial benefits, including office environment as well as surrounding amenities, such as day care, health club, restaurant/food services, laundry etc.
   - Pleasant work/office environment and a wide range of on-site facilities
   - Pleasant office/work environment but few on-site facilities
   - Not particularly pleasant office/work environment and few on-site facilities

G. **Dynamics and Culture** - incorporates aspects of the size, age and culture of the organization
   - Flat Start-up with entrepreneurial culture
   - Medium sized, maturing organization
   - Larger, well-established national/multinational organization

H. **Environmental Sustainability and Socially Conscious Behavior** - organization’s reputation for commitment to environmentally and socially sustainable development
   - The organization has a good reputation concerning environmentally and socially sustainable development
   - The organization has no particular reputation concerning environmentally and socially sustainable development
   - The organization has a poor reputation concerning environmentally and socially sustainable development
I. Caring about Employees - organization’s reputation for managing layoffs, ensuring worker’s health and safety and providing HR benefits, especially insurance package
   - The organization has a good reputation for caring about employees
   - The organization has no particular reputation for caring about employees
   - The organization has a poor reputation for caring about employees

J. Relationship with Local Communities and Outside Stakeholders - organization's reputation for interacting with local communities and external stakeholders, such as governments, public interest groups, etc.
   - The organization has a positive reputation for community and stakeholder relations
   - The organization has no particular reputation for community or stakeholder relations
   - The organization has a poor reputation for community and stakeholder relations

K. Length of Commute - time needed to commute from home to major place of work
   - The commute takes less than 5 minutes
   - The commute takes 5 to 30 minutes
   - The commute takes more than 30 minutes

L. Ethical Products, Services or Marketing - the ethical reputation of the organization's products, services or marketing practices
   - Products, services or marketing are ethically controversial
   - Products, services and marketing are ethically non-controversial

M. Economic Sustainability of Organizational Unit - economic potential of the particular organizational unit where you will work
   - Excellent economic potential of organizational unit
   - Average economic potential of organizational unit

N. Business Travel - average number of nights per month away from home as a result of business-related commitments
   - 2 nights or less per month away from home
   - 3-7 nights per month away from home
   - 8 nights or more per month away from home

O. Brand Image of Organization - organization’s image as assessed by corporate leaders, investors, consumers, other members of the industry and/or other stakeholders
   - The organization has an excellent brand image
   - The organization has no particular brand image

P. Type of Position Offered - management or non-management position
   - Management position
   - Non-management position

Q. Intellectual Challenge - intellectual challenge and amount of routine work involved in your work
   - Very stimulating, challenging job/work
   - Moderately stimulating job; some routine work
   - Primarily routine work
REFERENCES


### TABLE 1
Overall Attribute Importance Results
N = 279

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Average Importance Score</th>
<th>Standard Deviation of Importance Score</th>
<th>Average Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Group # 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intellectual Challenge</td>
<td>9.38</td>
<td>2.80</td>
<td>3.76</td>
</tr>
<tr>
<td><strong>Group # 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial Package</td>
<td>7.36</td>
<td>2.31</td>
<td>6.42</td>
</tr>
<tr>
<td><strong>Group # 3</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Geographic Area</td>
<td>6.70</td>
<td>3.10</td>
<td>7.75</td>
</tr>
<tr>
<td>People in Organization</td>
<td>6.46</td>
<td>2.97</td>
<td>7.86</td>
</tr>
<tr>
<td>Caring about Employees</td>
<td>6.40</td>
<td>2.33</td>
<td>7.76</td>
</tr>
<tr>
<td>Learning on Job</td>
<td>6.33</td>
<td>2.66</td>
<td>8.32</td>
</tr>
<tr>
<td>Type of Position</td>
<td>6.31</td>
<td>3.37</td>
<td>8.29</td>
</tr>
<tr>
<td><strong>Group # 4</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advancement</td>
<td>5.71</td>
<td>2.28</td>
<td>9.21</td>
</tr>
<tr>
<td>Ethical Reputation</td>
<td>5.60</td>
<td>3.21</td>
<td>9.32</td>
</tr>
<tr>
<td>Dynamics &amp; Culture</td>
<td>5.42</td>
<td>2.57</td>
<td>9.79</td>
</tr>
<tr>
<td>Environmental Sustainability</td>
<td>5.40</td>
<td>2.65</td>
<td>9.72</td>
</tr>
<tr>
<td>Business Travel</td>
<td>5.38</td>
<td>2.70</td>
<td>9.82</td>
</tr>
<tr>
<td><strong>Group # 5</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work Environment</td>
<td>4.97</td>
<td>2.23</td>
<td>10.54</td>
</tr>
<tr>
<td>Community Relationships</td>
<td>4.88</td>
<td>2.29</td>
<td>10.54</td>
</tr>
<tr>
<td>Economic Sustainability</td>
<td>4.66</td>
<td>2.29</td>
<td>11.04</td>
</tr>
<tr>
<td>Length of Commute</td>
<td>4.66</td>
<td>2.40</td>
<td>10.97</td>
</tr>
<tr>
<td>Image of Organization</td>
<td>4.38</td>
<td>2.54</td>
<td>11.55</td>
</tr>
</tbody>
</table>

Attributes are ordered in descending order of mean attribute importance weights.

Groups represent attributes whose mean importance weights are insignificantly different from other attributes within the group, but are significantly different from attributes in other groups (p at least 0.05), with minor exceptions as noted below.

Exception 1. The mean of Environmental Sustainability just misses being significantly different from Work Environment with a t = 1.97, which is marginally below the p = 0.05 criterion.

Exception 2. Image of Organization, which is the least important of the seventeen attributes, is actually significantly less important than it’s other group members, except for Length of Commute.

It is important to note that these minor exceptions occur among the least important attributes.
TABLE 2
Willingness to Forego Financial Benefits (WFFB)

<table>
<thead>
<tr>
<th>Job Search Parameters</th>
<th>Mean &amp; Std. Deviation of WFFB</th>
<th>% Willing to Forego Income ($ &gt; 0)</th>
<th>Mean WFFB as % of Mean Expected Financial Benefits ($ 115,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WFFB for companies which care about employees</td>
<td>$ 9300 ( 7200)</td>
<td>90.3 %</td>
<td>8.1 %</td>
</tr>
<tr>
<td>WFFB for companies which care about stakeholders</td>
<td>$ 3700 ( 4100)</td>
<td>70.8 %</td>
<td>3.2 %</td>
</tr>
<tr>
<td>WFFB for companies which commit to sustainability</td>
<td>$ 5500 ( 6000)</td>
<td>76.9 %</td>
<td>4.8 %</td>
</tr>
<tr>
<td>WFFB for companies exhibiting all three above characteristics</td>
<td>$ 13700 ( 9600)</td>
<td>94.2 %</td>
<td>11.9 %</td>
</tr>
</tbody>
</table>

Sample sizes vary slightly by row due to limited non-response. The sample sizes by row are 259, 257, 257, and 260, respectively.
TABLE 3
Aspects of Social Responsibility
Correlation of Importance Weights

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Environmental Sustainability</th>
<th>Caring About Employees</th>
<th>Community/ Stakeholder Relations</th>
<th>Ethical Reputation</th>
<th>Economic Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Sustainability</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caring About Employees</td>
<td>0.07</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community/ Stakeholder Relations</td>
<td>0.30</td>
<td>0.17</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethical Reputation</td>
<td>0.28</td>
<td>0.00</td>
<td>0.14</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Economic Sustainability</td>
<td>-0.15</td>
<td>-0.07</td>
<td>-0.13</td>
<td>-0.12</td>
<td>1.00</td>
</tr>
<tr>
<td>Image of Organization</td>
<td>0.09</td>
<td>0.03</td>
<td>-0.05</td>
<td>-0.01</td>
<td>0.02</td>
</tr>
</tbody>
</table>

N = 279  \( r (0.05) = .118 \)  \( r (0.01) = .155 \)