The Proactive Personality Scale and Objective Job Performance Among Real Estate Agents

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A sample of 131 real estate agents was used to examine the criterion validity of the Proactive Personality Scale (T. S. Bateman & J. M. Crant, 1993). A job performance index was computed for each agent from archival records of the number of houses sold, number of listings obtained, and commission income over a 9-month period. Experience, social desirability, general mental ability, and 2 of the Big Five factors—Conscientiousness and Extraversion—were controlled for, and the Proactive Personality Scale explained an additional 8% of the variance in the objective measure of agents' job performance. These results provide additional evidence for the criterion validity of the Proactive Personality Scale and suggest that specific personality measures can have incremental validity over the Big Five factors.

Attempting to predict job performance with personality measures has a long tradition in organizational research. This body of work has led some researchers to conclude that personality—relative to other predictors—is a rather weak predictor of performance (e.g., Hunter & Hunter, 1984; Schmitt, Gooding, Noe, & Kirsch, 1984). Recently, however, researchers have begun to reconsider the structure of personality (e.g., Digman, 1990) and the extent to which personality may validly predict on-the-job performance (e.g., Barrick & Mount, 1991, 1993; Barrick, Mount, & Strauss, 1993).

The purpose of this study was to examine the criterion validity of a recently introduced measure, the Proactive Personality Scale, by using objective job performance as the criterion measure. After discussing the theoretical underpinnings of the proactive personality construct, I review research pertaining to four domains that must be controlled in a rigorous test of the criterion validity of the Proactive Personality Scale: the Big Five factors, general mental ability (GMA), work experience, and social desirability.

Theory Development and Hypotheses

Proactive Dimension of Personality

Bateman and Crant (1993) discussed the proactive component of organizational behavior and introduced a measure of the proactive personality. This measure of a personal disposition toward proactive behavior is intended to identify differences among people in the extent to which they take action to influence their environments. Bateman and Crant defined the prototypic proactive personality as one who is relatively unconstrained by situational forces and who effects environmental change. Proactive personalities identify opportunities and act on them; they show initiative, take action, and persevere until they bring about meaningful change. In contrast, people who are not proactive exhibit the opposite patterns; they fail to identify, let alone seize, opportunities to change things. Proactivity is expected to be related to job performance because it represents personal behaviors that are important elements for accomplishing work-related tasks.

Rooted in the interactionist perspective (Bandura, 1977; Schneider, 1983), the proactive approach considers the possibility that individuals create their environments. In the psychology and organizational behavior literatures, the theme of interactionism holds that behavior is both internally and externally controlled and that situations are as much a function of persons as vice versa (Schneider, 1983). Accordingly, individuals can intentionally and directly influence their situations, thereby making successful job performance more likely. More proactive people can be expected to create situations and
environments conducive to effective performance. Moreover, for some jobs, the creation of these environments is itself an element of effective job performance.

How might real estate agents—the sample for the present study—exhibit higher job performance through proactive behaviors? One possibility is that proactive agents select environments conducive to effective job performance. For example, proactive agents might focus on the high-end market, thereby increasing one element of job performance: commissions generated. People can also initiate and maintain actions that directly alter the surrounding environment; proactivity is presumed to capture individual differences in this proclivity (Bateman & Crant, 1993). Thus, proactive agents might scour the classified advertisements of local papers for houses being offered for sale by owners and then solicit the owners to list their houses with the agent. They might carefully screen buyers to ensure that the agent works only with those ready and able to purchase a property. Proactive agents may advertise their services (often at their own expense) in an effort to generate new listings and clients. These proactive behaviors alter the environment by changing markets, clients, and marketplace perceptions of the agent. These are discretionary behaviors that are a function of individual differences in proactivity. Thus, indicators of agent performance such as commissions, listings, and sales logically would be higher for more proactive agents.

**Control Variables**

**The Big Five model of personality.** Over several decades, independent streams of systematic research into personality traits have converged on the same general conclusion: The domain of personality can be represented by five superordinate constructs (Digman, 1990). These general, robust factors of personality are known as the Big Five (cf. Digman, 1990; McCrae & Costa, 1989) and are at a higher level of abstraction than more specific personality variables. Thus, these factors are not intended to replace other personality systems; rather, they can be considered as a framework for interpreting other personality constructs (McCrae & Costa, 1989; Wiggins & Pincus, 1992).

Although researchers do not agree on the labels assigned to the Big Five factors (Barrick & Mount, 1991), representative labels are (a) Neuroticism, or emotional instability; (b) Extraversion, described by being sociable, gregarious, and ambitious; (c) Openness to Experience, represented by flexibility of thought and tolerance of new ideas; (d) Agreeableness, represented by a compassionate interpersonal orientation; and (e) Conscientiousness, or the degree of organization, persistence, and motivation in goal-directed behavior.

Two recent meta-analyses (Barrick & Mount, 1991; Hough, Eaton, Dunnette, Kamp, & McCloy, 1990) indicated that one of the five factors, Conscientiousness, is consistently related to job performance across all occupational groups. Extraversion appears to predict performance for jobs involving social interaction, like management and sales. The validities for the remaining three personality variables were somewhat smaller and differed by occupation or criterion categories. Thus, for many jobs, Conscientiousness and Extraversion appear to be the most relevant dimensions of the Big Five model.

**GMA.** This measure has long been believed to be a key component of job performance (e.g., Hunter & Hunter, 1984; Schmidt & Hunter, 1981). In a meta-analysis on various predictors of job performance, Hunter and Hunter concluded that GMA is the single most valid predictor of performance for entry-level jobs. More recently, Schmidt and Hunter (1992) asserted that models seeking to explain job performance should incorporate both cognitive ability and conscientiousness.

**Work experience and social desirability.** A thorough test of the criterion validity of the Proactive Personality Scale must also control for work experience. In their meta-analysis of various predictors of job performance for entry-level jobs, Hunter and Hunter (1984) found a mean validity coefficient of .18 for experience. After reviewing the work experience—job performance literature, Rowe (1988) concluded that work experience does enhance job performance.

Finally, social desirability should routinely be controlled for in studies using self-report data. Social desirability may be considered as a style of responding that contaminates or distorts measures of personality. According to this viewpoint, a correlation between a social desirability measure and a personality scale compromises the integrity of the personality scale. Therefore, social desirability can be viewed as a nuisance variable that must be controlled for in studies using personality-based predictor variables (Nicholson & Hogan, 1990).

**Hypothesis**

On the basis of the discussion in the previous paragraph, it is reasonable to expect that experience, GMA, Conscientiousness, and Extraversion will be associated with job performance (social desirability is included as a statistical control). However, the Proactive Personality Scale is conceptually distinct from these other variables and has the potential to capture factors associated with job performance that are not accounted for by these other constructs. Thus, an effect for proactivity over and above the effects of these other variables is expected. In particular, after controlling for Conscientiousness, Extra-
version, GMA, experience, and social desirability, I hypothesized that the Proactive Personality Scale would explain a significant amount of variance in objective job performance.

Method

Participants and Procedure

The participants for this study were taken from 146 real estate agents in a medium-sized midwestern city. The average age of the sample was 47 years, and the average amount of real estate experience was 8 years. Fifty-six percent of the agents were women. The participants were drawn from four separate firms; the number of agents participating at each firm ranged from 10 to 79.

I attended staff meetings at the four firms and administered a personality inventory, ability measure, and demographic questionnaire. Participants were asked to complete the materials as part of a study examining individual differences among real estate agents. The personality inventory and ability measure are described below. The demographic questionnaire asked about the participants’ age, sex, and number of years of experience as a real estate agent. The participants were assured of the confidentiality of their responses, and they returned the materials directly to me. I stressed that individual responses would not be seen by the agencies and would not be used to make any personnel decisions. To match the predictor and criterion measures, I asked participants to write the last four digits of their social security numbers on the questionnaires.

Criterion measures were archivaly obtained 10 months after the personality, ability, and demographic data were collected. The owners of the real estate agencies provided objective performance data covering a 9-month period for each agent who completed the earlier surveys. Among the 146 agents participating in the initial data collection effort, 8 agents terminated their employment during the job performance period and 7 failed to complete all of the items on the personality inventory. Thus, analyses were based on the 131 agents for whom all measures were available.

Measures

Proactive personality. Proactivity was measured by using Bateman and Crant’s (1993) 17-item measure. These items were summed to arrive at a proactive personality score. Responses are indicated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Sample items are “I excel at identifying opportunities” and “No matter what the odds, if I believe in something I will make it happen.”

Bateman and Crant (1993) presented the results of three studies assessing the scale’s psychometric properties. Factor analysis and reliability estimates (ranging from .87 to .89) of the scale across three samples supported its unidimensionality. Convergent validity was demonstrated by means of moderate correlations with need for achievement and need for dominance. Proactive personality was not significantly associated with locus of control, providing some evidence of discriminant validity. To establish criterion validity, Bateman and Crant demonstrated that the Proactive Personality Scale was associated with involvement in proactive community service activities, the degree of constructive environmental change revealed in essays of participants’ most significant personal achievements, and with peer ratings of transformational leadership.

Conscientiousness and Extraversion. These elements of the Big Five personality dimensions were each measured with a 12-item scale from the NEO Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992). The NEO-FFI is the short version of the NEO Personality Inventory (NEO-PI), which has been called the best measure of the five-factor model developed to date (Briggs, 1992). Costa and McCrae reported correlations between NEO-FFI and NEO-PI scales of .90 and .87 for Extraversion and Conscientiousness, respectively. The test manual provides evidence for the reliability (on the order of .90 and .78 for Conscientiousness and Extraversion, respectively) and construct validity of these measures.

GMA. This construct was measured with the Wonderlic Personnel Test (E. F. Wonderlic & Associates, 1992), a timed, 12-min test of general g, the primary factor among the various factors that make up adult intelligence. Reliabilities reported in the test manual range from .88 to .94, and the manual also provides evidence for the validity of the measure.

Social desirability. Social desirability response bias was measured with 10 items from the Marlowe–Crowne Social Desirability Scale (Crowne & Marlowe, 1960). Short versions of this scale have extensively been used in self-report data collection, with sound reliability and construct validity (Ballard, 1992).

Job performance. The criterion measure for this study, job performance, was collected from objective archival data. After talking with the owners of the participating firms and reviewing previous research using real estate agents (e.g., Katerberg & Blau, 1983), I decided to collect information on three critical dimensions of each agent’s job performance for which objective archival data would be available: the number of houses sold, the number of listings generated for the firm, and commission income. All measures were collected for a 9-month performance period.

Results

Because the three performance dimensions were highly intercorrelated (the correlation coefficients were as follows: sales–listings, .79; sales–commissions, .77; and listings–commissions, .70), z scores for each of the three performance dimensions were computed and then summed to create an overall performance rating. Because two of the performance dimensions were stated in terms of the number of houses sold or listed and the third was in dollar terms, I used z scores to account for the measurement differences among the dimensions. In subsequent analyses I used the overall performance rating.

Means, standard deviations, reliabilities, and correlations for job performance, proactive personality, Conscientiousness, Extraversion, GMA, experience, and social desirabil-
Table 1
Descriptive Statistics and Correlations for All Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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</thead>
<tbody>
<tr>
<td>1. Performance (z scores)</td>
<td>0.00</td>
<td>3.00</td>
<td>.90</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>2. Proactive personality</td>
<td>90.79</td>
<td>14.04</td>
<td>.23**</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3. Conscientiousness</td>
<td>46.69</td>
<td>6.78</td>
<td>-.05</td>
<td>.26**</td>
<td>.80</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>4. Extraversion</td>
<td>45.81</td>
<td>6.37</td>
<td>.01</td>
<td>.35**</td>
<td>.29**</td>
<td>.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Neuroticism</td>
<td>27.89</td>
<td>8.22</td>
<td>-.10</td>
<td>-.12</td>
<td>-.33**</td>
<td>-.57**</td>
<td>.82</td>
<td></td>
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<tr>
<td>6. Openness to Experience</td>
<td>38.62</td>
<td>6.67</td>
<td>-.11</td>
<td>.18</td>
<td>-.11</td>
<td>.15</td>
<td>-.17</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>7. Agreeableness</td>
<td>47.01</td>
<td>6.13</td>
<td>-.11</td>
<td>-.09</td>
<td>.40**</td>
<td>.25**</td>
<td>-.44**</td>
<td>-.02</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>8. GMA</td>
<td>24.91</td>
<td>5.73</td>
<td>.21</td>
<td>-.07</td>
<td>-.14</td>
<td>.04</td>
<td>-.15</td>
<td>.15</td>
<td>-.02</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>9. Experience</td>
<td>8.37</td>
<td>8.97</td>
<td>-.28**</td>
<td>-.14</td>
<td>-.06</td>
<td>-.29**</td>
<td>.16</td>
<td>-.22**</td>
<td>-.19**</td>
<td>-.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Social desirability</td>
<td>6.08</td>
<td>2.03</td>
<td>-.06</td>
<td>.09</td>
<td>.29**</td>
<td>.05</td>
<td>-.32**</td>
<td>.09</td>
<td>.36**</td>
<td>-.09</td>
<td>-.10</td>
<td>.72</td>
</tr>
</tbody>
</table>

Note.  N = 131. Values in parentheses represent coefficient alphas. GMA = general mental ability.
* p < .05.  ** p < .01.

Although no effects were hypothesized for the other Big Five factors (Neuroticism, Openness to Experience, and Agreeableness), for completeness, Table 1 includes these variables.

As shown in Table 1, experience had the highest validity coefficient among the predictor variables (r = .28, p < .01). The Proactive Personality Scale had the next highest validity coefficient (r = .23, p < .01), followed by GMA (r = .21, p < .05). The correlation coefficients between job performance and the other variables were insignificant. Social desirability was significantly associated with Conscientiousness (r = .29, p < .01) but not with proactive personality or Extraversion.

To test the criterion validity of the Proactive Personality Scale over and above that of the other measures, I used a hierarchical regression procedure. Following the recommendations of Cohen and Cohen (1983), I entered the control variables into the regression equation before the proactive personality score. Experience was entered into the regression equation in the first step, followed in turn by social desirability, GMA, Conscientiousness, and Extraversion. Finally, the proactive personality score was entered into the regression equation.

The results of the hierarchical regression are displayed in Table 2. The results indicate that the Proactive Personality Scale does account for a significant amount of variance in the criterion measure, even when controlling for the effects of experience, social desirability, GMA, Conscientiousness, and Extraversion. Entering the Proactive Personality Scale into the regression equation explained an additional 8% (p < .01) of the variance in job performance. The effect was in the expected direction; agents with higher scores on the Proactive Personality Scale had higher job performance than their less proactive counterparts. Among the control variables, experience explained 8% of the variance in job performance (p < .01), and GMA explained an additional 5% of the variance (p < .01).

To assess whether these findings held for each of the three dimensions of the overall performance rating, I computed separate hierarchical regression analyses for each of the three dimensions of job performance (sales, listings, and commissions) that made up the overall performance measure. After I entered the control variables, the Proactive Personality Scale explained a significant amount of the variance in each dimension of job performance. The effect was strongest for the number of houses sold (proactive personality accounted for an additional 9% of the variance in sales, p < .01), followed by commission income (7% of the variance, p < .01) and the number of listings obtained (6% of the variance, p < .01).

Discussion

The results of this study indicate that scores on the Proactive Personality Scale are associated with objective job performance, even when I controlled for the effects of experience, social desirability, GMA, Conscientiousness,

Table 2
Results of Hierarchical Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>$\Delta R^2$</th>
<th>p of $\Delta$</th>
<th>$R^2$</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experience</td>
<td>.076</td>
<td>.01</td>
<td>.076</td>
<td>.329</td>
</tr>
<tr>
<td>Social desirability</td>
<td>.001</td>
<td>ns</td>
<td>.077</td>
<td>-.011</td>
</tr>
<tr>
<td>GMA</td>
<td>.052</td>
<td>.01</td>
<td>.129</td>
<td>.239</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>.001</td>
<td>ns</td>
<td>.130</td>
<td>-.081</td>
</tr>
<tr>
<td>Extraversion</td>
<td>.008</td>
<td>ns</td>
<td>.138</td>
<td>.007</td>
</tr>
<tr>
<td>Proactive personality</td>
<td>.083</td>
<td>.01</td>
<td>.221</td>
<td>.314</td>
</tr>
</tbody>
</table>

Note.  GMA = general mental ability.
and Extraversion. These results provide evidence that specific personality measures can have incremental validity over the Big Five factors.

These findings are consistent with the interactional psychology perspective (Bandura, 1977; Schneider, 1983), which postulates that people influence their environments as well as vice versa. Individuals select, interpret, and alter situations. Evidence suggests that personality may be more useful in predicting behavior when autonomy is high compared with when it is low (Barrick & Mount, 1993), and the job of real estate agent offers considerable job autonomy. Thus, one explanation for these findings is that more proactive people tend to create situations consistent with effective job performance.

When considering the generalizability of the findings, potential limitations should be noted. First, because the sample shared a single occupation, the results of this research probably should not be generalized beyond the real estate sales profession. Although it is possible and perhaps likely that similar results would be found for other sales professions (e.g., stockbrokers, automobile and insurance sales, and manufacturing sales representatives), future research is needed to establish the generalizability of these findings. Second, in this study I used a sample of current employees. Future research might measure individual differences among job applicants to rule out the possibility that experience with the job itself affected the results. In the present study, I statistically controlled for experience.

Regarding opportunities for future research, potential criterion measures appear unlimited (Bateman & Crant, 1993) and would vary as a function of the specific jobs studied. To more broadly assess criterion validity, researchers should study both subjective and objective measures (Muckler & Seven, 1992) of various dimensions of performance. The domain of dependent measures could be expanded beyond task-specific job performance. Other potential criterion measures include idea championing, innovation and intrapreneurship, whistleblowing, and certain types of organizational citizenship behaviors. Concerning control variables, because there is not uniform agreement on how to best operationalize and measure the Big Five factors, other measures (e.g., the Personal Characteristics Inventory [Barrick & Mount, 1993] and Goldberg's [1992] adjective set) should be included in future studies.

In conclusion, this study provides some additional evidence for the criterion validity of the Proactive Personality Scale. The results suggest that the Proactive Personality Scale may be a valuable addition to the array of individual difference measures predictive of job performance. Although the research design did not permit statements of causality, the Proactive Personality Scale did account for variance in job performance over and above that accounted for by a number of other variables, including two of the Big Five factors. Thus, the Proactive Personality Scale is potentially useful as a selection or development tool. Future research is needed to establish its generalizability and boundary conditions.

References


