Motivational Traits and Work Motivation: Mediating Role of Self-Efficacy

N. Arshadi*

Abstract
The relations between approach and avoidance motivational traits and work motivation, with considering the mediating role of self-efficacy, were investigated. Approach motivation was divided into 2 traits: personal mastery (i.e., desire to achieve) and competitive excellence (i.e., desire to perform better than others). Avoidance motivation, which reflects one's sensitivity to negative stimuli and the desire to escape such stimuli, was conceptualized as motivation anxiety. Data were collected from 562 employees in an industrial company in Ahvaz, Iran. The Structural Equation Modeling (SEM) through AMOS-16 and SPSS-16 software packages was used for data analysis. The results showed that personal mastery and competitive excellence have positive and indirect effects (through self-efficacy) on work motivation. The mediating effect of self-efficacy in motivation anxiety-work motivation relation was not supported. Discussion and implications of the results are presented in the study.

Keywords: motivational traits, work motivation, self-efficacy

Introduction
In the new economy, replete with its dot-coms, e-commerce, and increased globalization (as well as the more traditional manufacturing and service firms), a motivated workforce is frequently cited as a hallmark of competitive advantage. Indeed, successful companies (and countries) will compete in the future based principally on the quality of both their technology and their human resources. A motivated workforce becomes a

* Corresponding author: Assistant Professor of Shahid Chamran University, Department of Education and Psychology, E-mail: nasrinarshadi@yahoo.com.
critical strategic asset in such competition (Steers, Mowday, & Shapiro, 2004).

The term "motivation", drives from the Latin word for movement (moveré). Its importance in the workplace is captured in the equation promulgated by Maier (1955): \( \text{Job Performance} = \text{Ability} \times \text{Motivation} \). In order for an organization to attain its purposes, individual employees must perform their jobs at some reasonable level of proficiency. This is as true for government organizations, in which poor performance means a failure to provide mandated public services, as it is for private companies, in which poor performance can mean bankruptcy. According to Spector (2006), people can perform their jobs well only if they have both the necessary ability and the necessary motivation.

The topic of work motivation plays a central role in the field of management, both practically and theoretically. Managers see motivation as an integral part of performance equation, while organizational researchers see it as a fundamental building block in the development of useful theories of effective management practice (Steers et al., 2004). While worker performance is dependent on, or limited by, resource availability and worker competencies, the presence of these factors is not sufficient in themselves to ensure desired worker performance. Worker performance is also contingent on workers’ willingness to come to work regularly, work diligently, be flexible, and carry out the necessary tasks (Hornby & Sidney, 1988). Motivation in a work context can be defined as an individual’s degree of willingness to exert and maintain an effort towards organizational goals. It is a set of psychological processes that influence workers’ allocation of personal resources towards those goals, which in turn affect workplace effectiveness and productivity (Kanfer, 1999). Work motivation is not an attribute of the individual or the organization; rather, it results from the transaction between individuals and their work environment (Kanfer, 1990).

Pinder (1998) provided a definition that nicely accommodates the different theoretical perspectives that have been brought to bear in the explanation of work motivation. “Work motivation is a set of energetic forces that originates both within as well as beyond an individual being,
to initiate work-related behavior, and to determine its form, direction, intensity, and duration.” (p. 11)

Many organizations faced with little information about work motivation determinants, have implemented financial incentive programs designed to stimulate worker behavior without an empirical base to guide their choice of interventions. Even when financial incentives are not explicitly used to promote higher productivity, the underlying philosophy of intervention programs in many organizations often implies that money is a key motivator in the work context. While financial incentives may be important determinants of work motivation, it seems equally evident that they alone cannot and have not resolved all worker motivation problems.

Individual differences in motivation have long been held to influence learning and performance (e.g., Atkinson, 1957; McClelland, 1951; McClelland, Atkinson, Clark, & Lowell, 1953; Murray, 1938). During the 1970s and early 1980s, however, interest in person-centered approaches waned as researchers grappled with the influences of situational factors on motivation. A few decades ago some major developments have spurred resurgent interest in theory and research directed toward understanding personality-related influences on motivational processes (e.g., Dweck & Legget, 1988; Higgins, 1998; Kanfer & Kanfer, 1991; Nicholls, 1984; VandeWalle, 1997; Winne, 1995).

Most motivational trait frameworks have a common foundation in the distinction between approach and avoidance motivation (Elliot & Thrash, 2002). These two broad motivational traits appear to map onto two separate, biologically based motivation systems (Gray, 1982). As such, these traits are at the core of a wide variety of human activities and experiences and can provide a depth of explanation not found in personality frameworks such as the Big Five. Kanfer and Heggestad (1997) defined motivational traits as stable, trans-situational individual differences in preferences related to approach and avoidance of goal-directed effort expenditures. Much organizational research on motivational traits also is grounded in the distinction between approach and avoidance motivation but is more contextualized to the concerns associated with work settings. For instance, Heggestad and Kanfer (2000; Kanfer & Ackerman, 2000) described three main motivational traits
relevant to the workplace: personal mastery (tendency to approach learning, goal attainment, and high performance), competitive excellence (desire to compete with and perform better than others), and motivation related to anxiety (tendency to experience negative states when faced with aversive stimuli and the desire to avoid such stimuli). Personal mastery and competitive excellence are considered approach traits, whereas motivation related to anxiety is an avoidance trait. Kanfer and Ackerman’s (2000) framework emphasizes the motivation to approach rewarding outcomes that are potentially also of value to organizations (e.g., mastery, achievement, outperforming others). Personal mastery is an approach motivation trait emphasizing the desire to achieve, learn, and perform at a high level. Individuals high in this are ambitious, are hard working, and seek challenging goals, whereas individuals low in personal mastery tend to care less about accomplishment, are unenthusiastic, and do not put forth high effort (Heggestad & Kanfer, 2000). Personal mastery is a self-referent form of achievement striving. An individual with high standing on this trait defines standards of excellence in terms of personal improvement and persists in striving to achieve those standards despite frustrations and difficulties. In addition, individuals with a high level of personal mastery generally show a preference for tasks that challenge their skills and abilities. These individuals are competitive with themselves, always seeking to “be the best they can be”. In direct contrast to personal mastery, competitive excellence is another-referent form of achievement striving. Competitive excellence pertains to the desire to compete with and perform better than others. Organizations often encourage interpersonal competition to reach higher levels of firm performance (Murphy & Cleveland, 1995). An individual with high standing on this trait adopts normative standards of excellence. The absolute quality of performance is not of paramount importance for these individuals because they define success relative to others; what matters is that their performance exceeds that of others. These individuals are very competitive, often attempting to create competition in otherwise non-competitive situations. Furthermore, these individuals have a strong desire to be respected by others for their accomplishments (Heggestad & Kanfer, 2000). Individuals high in avoidance motivation are chronically
over-aroused and prefer to keep their level of stimulation low (Carver & White, 1994).

This study is investigating the effects of motivational traits on work motivation through self-efficacy. The effect of personal characteristics on motivational processes is a subject of interest for many researchers in recent years (Kanfer & Kanfer, 1991; Higgins, 1998; VandeWalle, 1997). Kanfer (1990) defines motivational traits as distal determinants of behavior and work motivation that through proximal precursors, such as self-efficacy, could affect behavior and work motivation. In the current study, avoidance motivation is conceptualized as one construct (motivation anxiety), and approach motivation as two distinct constructs (personal mastery and competitive excellence). The relations of these three traits with work motivation and the mediating role of self-efficacy in these relations were examined in a proposed model (see Figure 1).

The proposed model states that personal mastery and competitive excellence have direct positive effects on self-efficacy (hypotheses 1 and 2), and motivation anxiety has direct negative effect on self-efficacy (hypothesis 3). According to hypothesis 4, self-efficacy has direct positive effect on work motivation. Further, self-efficacy mediates the relations between motivational traits and work motivation (hypotheses 5, 6 and 7).

Figure 1
Proposed Model
Method

Participants
Respondents for this study were selected by stratified random sampling method from an industrial company in Ahvaz, Iran. Anonymous questionnaires were distributed to 650 full-time employees (working in various company units). The mean age was 31 years, and 93% of the employees were male. Altogether, 562 questionnaires were returned and analyzed.

Measures
The participants were asked to complete three questionnaires that measured motivational traits, work motivation, and self-efficacy.

Motivational traits. Motivational traits were assessed with the short form of Heggestad (1997), Heggestad and Kanfer (2000) Motivational Traits Questionnaire (MTQ). The MTQ has 48 items and three major dimensions, each with two scales. The Personal Mastery dimension is composed of Desire to Learn subscale (8 items) and Mastery Goals subscale (8 items), the Competitive Excellence dimension consists of the Other Referenced Goals (7 items) and Competitiveness subscale (6 items), and Motivation Related to Anxiety is composed of the Worry (10 items) and Emotionality subscale (9 items). Participants responded to each item on a 6-point Likert scale (1 = very untrue to 6 = very true). Kanfer and Ackerman (2000) reported Cronbach’s alpha internal consistency reliability estimates ranged from .79 to .89 for these subscales.

Work motivation. Work motivation was measured by the Motivational Orientation Inventory (Barrick, Stewart, & Piotrowski, 2002). This inventory is broken into three subscales: Accomplishment Striving (11 items), Status Striving (11 items) and Communion Striving (9 items). Items were scored on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Barrick et al. (2002) reported Cronbach’s alpha reliability estimates for these three subscales as .88, .89, and .76, respectively.
Self-efficacy. For assessing general self-efficacy, participants completed the General Self-Efficacy (GSE) Scale by Schawarzer and Jerusalem (1995). Responses to 10 items range from strongly disagree (1) to strongly agree (4). In samples from 23 nations, Cronbach’s alphas ranged from 0.76 to 0.90.

Data Analysis

The model presented in Figure 1 was evaluated with a two-step approach outlined by Anderson and Gerbing (1988) in structural equation modeling (SEM). The first step of Anderson and Gerbing’s approach involves determining the fit of a confirmatory factor analytic (CFA) model to the observed data. Step 2 is to estimate the structural section of the model using the results from step 1. The model was tested using AMOS 16, with maximum likelihood estimation. The focal point when analyzing structural equation models is the extent to which the hypothesized model fits the sample data. In accordance with the classification of recommended fit indices, a mixture of fit indices was used: (a) Chi-square ($\chi^2$), (b) normed chi-square measure (ratio of $\chi^2$ to degrees of freedom), (c) goodness-of-fit (GFI), (d) adjusted goodness-of-fit (AGFI), (e) normed fit index (NFI), (f) comparative fit index (CFI), (g) incremental fit index (IFI), (h) Tucker-Lewis index (TLI), and (i) root-mean-square error of approximation (RMSEA).

Results

Descriptive statistics include minimum, maximum, means and standard deviations for the study variables are presented in Table 1.

Prior to assessment of the structural model, the relationships of the indicator variables with their respective latent variables in the model were examined. The proposed model in this study consists of three latent variables, i.e. personal mastery, competitive excellence and motivation anxiety, where each latent variable has been measured by several indicators. Eventually in final analysis only those indicators which had significant factor loadings were used. Confirmatory factor analysis model is depicted in Figure 2.
Table 1

**Descriptive Statistics for the Study Variables**

<table>
<thead>
<tr>
<th>Indices</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivational Traits</td>
<td>98</td>
<td>229</td>
<td>179.45</td>
<td>18.3</td>
</tr>
<tr>
<td>Personal Mastery</td>
<td>34</td>
<td>95</td>
<td>71.84</td>
<td>8.40</td>
</tr>
<tr>
<td>Desire to Learn</td>
<td>17</td>
<td>48</td>
<td>37.40</td>
<td>4.57</td>
</tr>
<tr>
<td>Mastery Goals</td>
<td>17</td>
<td>48</td>
<td>34.44</td>
<td>4.69</td>
</tr>
<tr>
<td>Competitive Excellence</td>
<td>19</td>
<td>69</td>
<td>47.44</td>
<td>8.00</td>
</tr>
<tr>
<td>Other Referenced Goals</td>
<td>10</td>
<td>47</td>
<td>28.25</td>
<td>4.74</td>
</tr>
<tr>
<td>Competitiveness</td>
<td>6</td>
<td>34</td>
<td>19.19</td>
<td>4.65</td>
</tr>
<tr>
<td>Motivation Anxiety</td>
<td>27</td>
<td>95</td>
<td>60.16</td>
<td>11.97</td>
</tr>
<tr>
<td>Worry</td>
<td>17</td>
<td>53</td>
<td>34.28</td>
<td>6.63</td>
</tr>
<tr>
<td>Emotionality</td>
<td>9</td>
<td>49</td>
<td>25.88</td>
<td>6.53</td>
</tr>
<tr>
<td>Work Motivation</td>
<td>69</td>
<td>155</td>
<td>115.43</td>
<td>13.26</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>17</td>
<td>40</td>
<td>33.22</td>
<td>4.24</td>
</tr>
</tbody>
</table>

Figure 2

**Confirmatory Factor Analysis Model**

Note. Latent variables are depicted in oval shapes and their indicators are shown in rectangles.
As shown in Figure 2, indicators adequately measure the underlying theoretical constructs, which in turn confirms the construct validity of subscales. The results of the hypothesized confirmatory factor analysis model indicated a reasonable fit, $\chi^2/df = 3.32$, $NFI = 0.95$, $IFI = 0.97$, $CFI = 0.97$, $RMSEA = 0.056$, $TLI = 0.95$. Values of these indices indicate that the fit of the measurement model was reasonable. The correlations among these latent variables are presented in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Personal Mastery</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Competitive Excellence</td>
<td>0.58**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3. Motivation Anxiety</td>
<td>-0.16**</td>
<td>0.26**</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. Table values represent the correlations among the latent variables as estimated in the confirmatory factor analysis (i.e., measurement model).

Having the measurement model for latent variables being evaluated, structural equation modeling was used to assess the proposed model. The hypothesized model fit the data adequately, $\chi^2/df = 2.99$, $GFI = 0.93$, $CFI = 0.93$, $TLI = 0.90$, $NFI = 0.91$, $IFI = 0.94$, $AGFI = 0.90$, and $RMSEA = 0.050$.

As expected, hypotheses 1 and 2 were supported, that is, personal mastery and competitive excellence were related positively to self-efficacy ($\beta = 0.30$, $p < .001$ and $\beta = 0.15$, $p < .001$, respectively). Consistent with the hypothesis 3, motivation anxiety was related negatively to self-efficacy ($\beta = -0.34$, $p < .001$). According to hypothesis 4, self-efficacy was related positively to work motivation ($\beta = 0.21$, $p < .001$).

Mediating relationships in the proposed model was tested following the procedure recommended by Baron and Kenny (1986), in which three regression models are investigated. If the beta of the predictor variable is significant in the first model but non-significant or reduced in the combined model, there is a pattern consistent with mediation.
Furthermore, Sobel (1982) test was used to determine the significance level of indirect paths. Results of this analysis indicated that except for the path of motivation anxiety → self-efficacy → work motivation, for which a mediation test is meaningless (because it fails Baron and Kenny’s first test of a significant predictor-criterion relation), mediation of self-efficacy in the other relations was confirmed, as the beta coefficients of the predictor variables became non-significant when self-efficacy was added to the regression model. Therefore, the mediating role of self-efficacy confirmed in two relations: personal mastery → work motivation, and competitive excellence → work motivation.

Discussion

The purpose of this study was to investigate the effects of motivational traits on work motivation with considering the mediating role of self-efficacy. Present study supports mediation effects of self-efficacy in personal mastery-work motivation and competitive excellence-work motivation relations. These results are consistent with the findings of other researchers (e.g. Heggestad & Kanfer, 2000; Kanfer & Heggestad, 1997). Mediation effect of self-efficacy in the relation between motivation anxiety and work motivation was not supported (because it fails Baron and Kenny’s first test of a significant predictor-criterion relation). Effect of personal characteristics on motivational processes is a subject of interest for many researchers in recent years (Kanfer & Kanfer, 1991; Higgins, 1998; VandeWalle, 1997). The mediating role of self-efficacy, consistent with the findings of many previous works, in general, and specifically in the field of goal setting, supports the concept of self-efficacy. Personal efficacy expectations determine adaptive behavior with situation, exerting effort in task accomplishment and persistence in the face of obstacles (Earley & Lituchy, 1991). Individuals who feel very efficacious are motivated in exerting effort and if their effort is managed properly, it could yield desired outcomes. Employees with high self-efficacy believe that they will succeed in accomplishing most or even all of their assigned tasks and responsibilities (Bandura, 1997).

Individual differences in motivational traits represent central and related source of the employees’ contribution to motivational processes.
In this way, persons and environment simultaneously contribute to work-related motivation and behavior. Organizations actively attempt to optimize the “motivational fit” between an individual and a job in multiple ways. Selection practices focus on matching the individual to the job. In selection, organizations may seek individuals whose traits tendencies and motivational skills are concordant with job demands. Furthermore, organizations may improve employee fit by providing motivational skills training. For instance, self-confidence building interventions may be offered to employees who experience disruptive self-doubts about their performance in difficult interactions with others. Inspirational seminars, typically replete with concrete ideas about how to “get motivated” in the face of uncertainty, may also improve incumbent’s motivation control skills. In contrast, other management practices seek to improve "motivational fit" among job incumbents by changing and modifying the work environment. For instance, employee recognition programs, and other incentive programs, typically prescribe employee behaviors for success and impose clear, direct, and immediate external rewards for work effort and persistence. Such programs reduce the influence of motivationally related individual differences on work behavior, and so may be used in part to overcome poor selection practices and/or negligence in employee training in motivational domain.

Considering the results of the present study regarding the mediating role of self-efficacy, organizations should select individuals who have a strong sense of generalized self-efficacy and/or global self-esteem. Managers should create opportunities for employees so that they can experience success and then help them make personal attributions for this success. Providing adequate resources and direction, removing obstacles to performance, and allowing subordinates to achieve success without unnecessary meddling, are ways in which managers can improve self-efficacy in their employees. Managers need to provide employees with verbal support and encouraging messages. Korman (1971) reminds us that the verbal cues that people receive from significant others play a powerful role in shaping self-perception of one’s importance and organizational value. Finally, managers should arrange organizational structures such
that sending signals of inherent trust to employees, as competent, valuable, contributing individuals.

It is important to highlight some limitations of the present study which can guide future research. First, neither the design of this study nor the use of SEM proves causation. Longitudinal studies should be employed to test the hypotheses. This approach is recommended for future research. Second, the use of self-report measures may have inherent limitations (e.g. inability to recall, social desirability). A combination of self-report questionnaires and objective assessments would be ideal. Finally, the results obtained in this research are neither limited to the studied organization nor necessarily applicable to all organizations with different characteristics. Anderson and Gerbing (1988) stated, although a given model has acceptable goodness of fit, other models may equally exists that provide the same fitness.

References


