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Regulatory Focus and Individual Sales Performance of Field Marketers: 
A Constructive Replication

Melvyn R. W. Hamstra\(^a\), Kira O. McCabe\(^b\), Bruno Klekamp\(^c\), and Eric F. Rietzschel\(^d\)

\(^a\)Maastricht University; \(^b\)Vanderbilt University; \(^c\)University of Amsterdam; \(^d\)University of Groningen

ABSTRACT
We tested whether field marketers’ regulatory focus predicted their performance. Promotion focus spurs eagerness (acting on opportunity, to advance), whereas prevention focus spurs vigilance (not acting, to maintain security). When sales work involves approaching as many new buyers as possible for single transactions (and little else), promotion focus is well suited for sales performance, and prevention focus is counterproductive. Accordingly, prior research found that promotion focus positively, and prevention focus negatively, predicts performance in such a context. We attempt constructive replication of these findings using stronger methodology. Our study \((N = 156)\) showed that promotion focus positively, and prevention focus negatively, predicted performance. The study replicated previous findings and showed similar, though in most cases slightly smaller, effect sizes than the original study.

Introduction
Selling remains one of the most prevalent job tasks in modern economies (Grant, 2013). Although sales jobs come in many forms with distinct requirements (Reinartz, Kraft, & Hoyer, 2004), most of these jobs are rewarded based on the number of successful transactions, that is, the number of products or services sold. There are even jobs in which performance depends on little else than selling as many products as possible, or getting as many new buyers as possible in the shortest amount of time. Moreover, when job success is determined by a single sales transaction (e.g., one purchase or signature) without the need for that particular salesperson to maintain a long-term relationship with a client, the most effective approach is to consider every person a potential new client and to seize every possible opportunity to make a sale, to try as many actions as possible.

More precisely, seizing an opportunity implies a tactical-level decision to take action. The decision to act or not to act depends on a calculation of potential benefits and costs associated with success and failure of the action. Rationally considered, to act is effective in this sales context, whereas to not act is ineffective: Although acting could lead to gaining a sell, not acting will certainly lead to not gaining a sell, and acting will certainly not lead to losing a sell. People do not make such action versus nonaction decisions perfectly rationally, however; nor are the tactical decisions of all people biased in the same direction. Instead, decisions to act or not to act are biased by people’s previous success and failure experiences, their learned strategic proclivities (Crowe & Higgins, 1997; Higgins et al., 2001). Using individual differences in broad “strategic” tendencies for the prediction of salesperson performance in this context, thus, potentially holds predictive validity. Our purpose is, therefore, to study individual differences that reflect this strategic tendency and to determine their predictive validity for sales performance in this context.

Individual differences and sales performance
Although the Big Five personality traits of Conscientiousness and Extraversion are traditionally considered to be important individual predictors of a salesperson’s job performance (Vinchur, Schippmann, Switzer, & Roth, 1998), a recent study (Hamstra, Rietzschel, & Groeneveld, 2015) proposed that an alternative individual difference variable—regulatory...
focus—might be a better predictor of sales performance in these specific contexts (Higgins, 1997). Hamstra et al. (2015) explained this hypothesis: “Broad personality traits may not capture the strategic and tactical behaviors involved in specific aspects of sales task-performance (Ashton, 1998); self-regulation may offer additional explanatory power in predicting this aspect of sales” (p. 109). Hence, these authors tested whether regulatory focus predicted sales performance after controlling for the Big Five traits.

Regulatory focus theory (Higgins, 1997) distinguishes between promotion focus and prevention focus, which are associated with different states and strategies. Promotion-focused eagerness arises from a focus on advancement, whereas prevention-focused vigilance arises from a focus on maintenance (Crowe & Higgins, 1997). Eagerness results in a risky bias to grasp opportunities. Eagerness also means the desire not to miss out, not to omit acting upon an opportunity. In contrast, vigilance results in a conservative behavioral bias not to act upon things that might cause (social) mistakes. Vigilance also means the desire not to make a mistake by committing an action.

Eagerness to grasp and to avoid missing opportunities is beneficial in the sales contexts just described, because eager sellers act as if every instance is a potential success (e.g., every person they encounter or every doorbell they ring). Vigilance to wait for certainty, and to treat every contact as a possible failure, is counterproductive in such situations. The more a person is promotion-focused, the more likely that person is to act upon the potential sell, whereas the more a person is prevention-focused, the more likely that person is to not act upon the potential sell. Therefore, we tested whether promotion focus is positively related to sales performance and whether prevention focus is negatively related to sales performance.

**Constructive replication**

As mentioned previously, these hypotheses have been tested before (Hamstra et al., 2015), and the current study can be considered a constructive replication (Lykken, 1968) or conceptual replication (Makel, Plucker, & Hegarty, 2012; Schmidt, 2009) that maintains a similar structure to the original study design but changes the methodology. These changes to the method include using a different sample and different measures for both the Big Five and regulatory focus to test the relationship between regulatory focus and sales performance. By using this different methodology (rather than just doing a direct replication), we are able to test the rigor of the underlying hypothesis and the strength of the previous findings beyond the scope of the original publication (also see Kepes & McDaniel, 2013).

The current study significantly improves upon this prior work in a variety of ways. First, the nature of our sample makes this a constructive replication. That is, the sample size is considerably larger, which increases the accuracy of the estimates by decreasing the relative amount of variability around the estimates. The prior study sampled 80 sales professionals, and the current study sampled 156 sales professionals. Also in line with this constructive replication, the current sample is different, and it offers a more conservative test of the hypothesis. Specifically, the original study tested Dutch sales employees working summer jobs in Greece, selling event tickets. The current study tests a similar context with a different product and setting: Dutch sales employees working in the Netherlands who elicit subscriptions to charities (e.g., ask clients to sign up to do regular charitable donations). The event ticket context in particular could “suit” a promotion focus more because it implies selling something that clients already want to some extent: Potential buyers are on vacation with the goal of enjoying themselves. In contrast, people usually do not make charitable donations for hedonic reasons. Hence, although the “strategic” behavioral requirements to make sales across the two studies are similar, the products are different. Replication of the previously observed effect is important because it would show that the effect is not restricted to one particular product and setting. Yet these sampling differences mean that our study is a constructive replication and not a direct replication (Lykken, 1968; Schmidt, 2009).

For the management literature and for the regulatory focus literature (cf. Pollack, Forster, Johnson, Coy, & Molden, 2015), it is of value also to examine the role of varying contexts in the effects of regulatory focus on outcome variables.

Second, this constructive replication uses different measures from the original study. A major purpose of the original study was to determine whether regulatory focus predicted sales performance beyond the Big Five personality traits. The original authors argued, “A significant relation between regulatory focus and sales would be interesting in its own right. Yet, from an applied perspective, this becomes important particularly if it has incremental value over broader traits known to predict sales” (p. 110). As we noted earlier, the most often studied correlates of sales performance
in the literature have been Extraversion and Conscientiousness. The original study and this study both examined whether promotion focus and prevention focus predict sales performance beyond the Big Five, particularly Extraversion and Conscientiousness. However, the original study sought to do so by using a short-form Big Five measure (Shafer, 1999). This practice has been criticized, because a short measure does not fully measure the Big Five traits well compared to longer measures. As such, it may underestimate importance of Big Five traits and overestimate the importance of “new” constructs (Credé, Harms, Niehorster, & Gaye-Valentine, 2012). Given that the purpose of the original study was to show that regulatory focus predicts sales performance above and beyond the Big Five traits, this issue is particularly pressing. Thus, in line with the goals of this constructive replication, we are measuring the Big Five with a different and improved measure: the validated Big Five Inventory (John & Srivastava, 1999; Dutch translation validated by Denissen, Geenen, Van Aken, Gosling, & Potter, 2008).

Similarly, we use a different measure for our main predictor construct, regulatory focus. The regulatory focus measure used in the original study (Semin, Higgins, de Montes, Estourget, & Valencia, 2005) was a nonvalidated adaptation of the traditional measure by Higgins et al. (2001), which may cast some doubt on its construct and discriminant validity. For example, promotion focus and conscientiousness strongly correlated in the original study, and they predicted a shared part of the variance in performance. In line with the goal of this constructive replication, to provide a stronger test of the main hypothesis, we used the more reliable and validated—original—version of Higgins et al. (2001) regulatory focus questionnaire.

**Method**

**Sample**

Participants (156 Dutch sales agents; 50.6% female; M<sub>age</sub> = 20.76, SD<sub>age</sub> = 2.27) worked at an international field marketing company as fund-raisers, selling charity subscriptions. In these subscriptions, buyers agreed to donate a monthly amount to a charity for a specified period. The participants’ job was to sell as many subscriptions as possible. The participants engaged in this marketing and selling work through door-to-door sales (n = 94; 60.3%) or selling on the streets (n = 62; 39.7%). Participants varied in their positions within the company: 52 participants (33.3%) were “captains” (having some supervisory responsibilities, based on prior sales success), 80 (51.3%) were “promoters” (regular sales agents), and 24 (15.4%) were “talents” (employees still in their trial period). At Time 1 of data collection, participants worked for the company from 1 to 72 months (M = 14.74, SD = 15.97). The company has branches throughout the Netherlands, and employees from 13 locations participated in the study. Participation was voluntary and commenced with an online questionnaire, administered before the days for which we recorded performance (see the following). This study was approved by the ethics committee of the psychology department at the university where the third author conducted the research.

**Measures**

**Regulatory focus**

Participants completed the 11-item Regulatory Focus Questionnaire (Higgins et al., 2001). Five items (e.g., “Not being careful enough has gotten me into trouble at times”) measured prevention focus (M = 2.96, SD = 0.86; α = .81) and six items (e.g., “How often have you accomplished things that got you ‘psyched’ to work even harder?”) measured promotion focus (M = 3.82, SD = 0.56; α = .72). Participants responded on a scale ranging from 1 (never or seldom) to 5 (very frequently).

**Big Five personality traits**

Participants completed the 44-item Big Five Inventory (John & Srivastava, 1999) translated and validated by Denissen et al. (2008); response scales ranged from 1 (strongly disagree) to 5 (strongly agree). Participants responded to eight items for Extraversion (M = 4.02, SD = 0.63; α = .86). An example item is, “I see myself as someone who is talkative.” Eight items such as “I see myself as someone who worries a lot” measured Neuroticism (M = 2.31, SD = 0.65; α = .84), nine items such as “I see myself as someone who makes plans and follows through with them” measured Conscientiousness (M = 3.43, SD = 0.59; α = .82), nine items such as “I see myself as someone who is considerate and kind to almost everyone” measured Agreeableness (M = 3.91, SD = 0.50; α = .72), and 10 items such as “I see myself as someone who is curious about many different things” measured Openness to Experience (M = 3.81, SD = 0.57; α = .79).

**Sales performance**

We obtained company records of individuals’ sales performances (number of sales). We attained sales...
performance data for the 5 days that each sales person worked after completing the questionnaire. However, we encountered some partial (i.e., incomplete) data; namely, there were four individuals for whom we did not acquire 5 days of sales data because they did not work 5 days within the measurement period (one person had 4 days; one person had 3 days, two people had 2 days). Average per-day sales numbers ranged between 0.40 and 12.20 ($M = 2.72, SD = 1.78$) and 42.1% (intraclass correlation) of variance in performance was attributable to the individual.

Results

Analytic strategy and preliminary findings

Table 1 reports the zero-order correlations and gives an overview of the descriptive statistics of all the study variables. Promotion focus was positively ($r = 0.18$) correlated with sales performance, whereas prevention focus was negatively ($r = -0.09$) correlated with sales performance. The signs of these correlations are consistent with the original study and the hypothesis but considerably smaller than in the original study (i.e., respectively, 0.58 and $-0.30$).

For a more accurate test of the main hypotheses, we conducted a set of linear multiple regression analyses. For these analyses, we reported unstandardized effect sizes, that is, regression coefficients that reflect the effect in direct relation to the actual scale on which the variables were measured. These regression coefficients serve to interpret what the effects practically mean. We also report the standard errors of these effects, and we report the standardized regression coefficients. Standardized coefficients can be interpreted similarly to $d$ values (also known as Cohen’s $d$), because these coefficients are the unstandardized effects divided by their standard error. However, that is not to say that their size should be evaluated on the same scale as the size of Cohen’s $d$. Standardized regression coefficients, under most circumstances, do not vary below $-1$ or above $1$ (Deegan, 1978), whereas Cohen’s $d$ does.

Our data analytic procedure was as follows. We first determined whether any control variables (other than the Big Five traits) needed to be included in our analysis. Then we conducted our main hypothesis test concerning the link between regulatory foci and sales performance. Finally, we repeated these analyses while controlling for the Big Five personality traits. Throughout this section, we compared our results to the original study findings.

Control variables

As explained earlier, our data were collected in a sample of sales personnel working in two slightly different sales contexts (door-to-door vs. selling on the streets in shopping areas), 13 cities, and in one of three possible positions in the company (talents, promotors, captains). These factors could add inaccuracy to the estimation of our effects because, for example, they lead to variation in the availability of potential clients. Hence, we sought to determine whether we ought to control for these variables to obtain more accurate assessments of the size of the hypothesized effects. Following Becker (2005), who argues that controlling for variables that are related to the dependent variable can increase estimation accuracy, we first entered these variables as predictors of sales performance in an analysis of variance: As these variables were categorical, doing so enabled us to report an effect size that combines the different levels of each factor (e.g., an overall effect of all the differences between cities instead of dummy variables making single comparisons to a reference group).

This analysis yielded partial eta-square values (which are comparable to $R^2$). For the branch factor (different cities), partial $\eta^2 = 0.11$; for the positions factor, partial $\eta^2 = 0.18$; and for the sales context factor, partial $\eta^2 = 0.02$. Other potential control variables such as age, job tenure, and gender all yielded partial $\eta^2$ values smaller than 0.002. The effect of job tenure on performance was better captured by the positions, which are based on previous sales success and therefore confounded with job tenure. In sum, the three variables of branch, job position, and sales context were retained as control variables for our main analysis. It may be noted that the mean values of promotion and prevention focus showed only very small differences depending on the job position: for promotion focus, sales people in captain positions ($M = 3.89, SD = 0.59$), in promoter positions ($M = 3.75, SD = 0.57$), and in talent positions ($M = 3.90,
SD = 0.45) and for prevention focus, sales people in captain positions (M = 3.05, SD = 0.81), in promotor positions (M = 2.92, SD = 0.89), and in talent positions (M = 2.90, SD = 0.86).

Hypothesis tests

Next, the multiple regression analysis for our main hypothesis test included only the specified control variables, promotion focus, and prevention focus as predictors. Results showed that, as hypothesized, promotion focus was positively related to sales performance (B = 0.47, SE_B = 0.23, β = 0.15), whereas prevention focus was negatively related to sales performance (B = −0.38, SE_B = 0.16, β = −0.18). The unstandardized regression coefficients implied that a one-unit increase in promotion focus was associated with a 0.47 increase in sales by a participant per day. Moreover, a one-unit increase in prevention focus was associated with a 0.38 decrease in sales by a participant per day. To put these results into perspective, the average number of sales per day was 2.74 (SD = 1.78). Also, the R^2 adjusted for the model including only the control variables was .193, whereas for the model wherein promotion and prevention were added to the control variables, R^2 adjusted was 0.235.

Finally, we ran these regressions analyses again with the Big Five traits added to the model. When controlling for the Big Five traits, the effects of promotion (B = 0.54, SE_B = 0.31, β = 0.17) and prevention (B = −0.40, SE_B = 0.18, β = −0.19) remained similar. The standardized effect size for prevention was identical to the standardized effect size in the original study (β = −0.18), but the standardized effect size for promotion focus was considerably smaller than in the original study (β = 0.32). These results showed that, as in the original study, even after controlling for the Big Five traits, regulatory focus was a significant predictor of sales performance. The relations between all the Big Five traits and sales performance were somewhat smaller than those for promotion focus and prevention focus, evidenced by the zero-order correlations in Table 1. This pattern is also visible in the regression analyses. An analysis that included the aforementioned control variables and the Big Five traits showed the following links to sales performance: Extraversion (B = 0.11, SE_B = 0.11, β = 0.04), Neuroticism (B = −0.13, SE_B = 0.23, β = −0.05), Conscientiousness (B = 0.35, SE_B = 0.26, β = 0.12), Agreeableness (B = −0.44, SE_B = 0.30, β = −0.12), and Openness to Experience (B = −0.32, SE_B = 0.25, β = −0.10). These results are similar to the pattern found in the original study, though the coefficients are considerably smaller.

In terms of total variance explained, the model that included both the control variables and the Big Five factors had R^2 adjusted = 0.197, and the model that included only the control variables had R^2 adjusted = 0.193. In contrast, the final model with the control variables, the Big Five, and the regulatory foci had R^2 adjusted = 0.236, showing the unique variance of regulatory foci beyond the Big Five and control variables in predicting sales performance.

Discussion

The purpose of this study was to conduct a constructive replication concerning the hypothesis that regulatory focus predicts performance in a specific sales context of face-to-face field marketing. As expected, promotion focus positively predicted sales performance, whereas prevention focus negatively predicted performance. Important to note, these results replicated earlier findings by Hamstra et al. (2015) using different and stronger methodology.

Of interest, although the results are highly consistent, the smaller effect sizes in the current study suggest that the effect sizes in the initial study may have been over-estimations due to the study's methodological shortcomings. Finding more modest effect sizes in a replication is no exception when we look at recent large-scale replication attempts (e.g., Open Science Collaboration, 2015). Yet commentators may hold that some such attempts are biased toward non-replication or smaller effects, in explicitly seeking to test whether an effect replicates. Moreover, some might suggest that, if original authors were involved in the replication, then the effect would be more similar to the original study (e.g., because of idiosyncratic decisions made regarding sample, measures, or analytic strategy). In light of this, and recent discussions of replication in psychology (Makel et al., 2012), it should be noted that our study involved several of the same authors as the original study that we were attempting to replicate. It is also important to acknowledge that we should expect effect sizes to become smaller in replication attempts because of regression to the mean and sampling variability, and possibly also because published effect sizes tend to be upwardly biased (Maxwell, Lau, & Howard, 2015). Our study suggests that even when original authors are involved in the study, effect sizes may become considerably lower due to a variety of factors. Some of these factors could be methodological, but it could also simply be sampling variability. In other words, replications can be constructively conducted by involving some of the same authors who also conducted the original study.
Looking across the original study and this constructive replication, examining across sales contexts, regulatory focus seems to be a stronger predictor of sales performance than the Big Five traits. These findings also have clear, practical benefits. In specific contexts, regulatory focus is useful in predicting performance. Companies could use regulatory focus to recruit salespeople who are likely to perform well. Moreover and of interest, research also shows that, within their established professional network, promotion-focused entrepreneurs initiate business-related contact more frequently, whereas prevention-focused entrepreneurs initiate contact less frequently (Pollack et al., 2015). Initiating contacts with existing clients is important in sales jobs requiring the effective management of longer term relationships (Reinartz et al., 2004). Thus, the practical implications of these results may be broad. However, our arguments and findings do not necessarily generalize to every sales context. Many sales jobs are more complex than merely ensuring as many potential buyers as possible (Reinartz et al., 2004). Thus, it is not likely that promotion focus is beneficial (and prevention focus detrimental) for sales performance in every context, and more research is needed to uncover the possible differences between contexts and task requirements.

Relatedly, another important consideration is whether the sales context is for-profit or non-profit, which was an additional difference between the original study and the replication. The original study’s participants sold event tickets (i.e., for-profit), whereas the replication study’s participants sold for charity (i.e., non-profit). Although personal monetary concerns were consistent across both studies (participants in both studies were paid according to the number of sales they made), this difference might be a reason for the decreased effect size of promotion focus on sales performance. Nonetheless, promotion focus was still a critical and unique predictor of sales performance in both contexts. Still, it is important to consider the myriad of differences that may exist between sales contexts in relation to regulatory focus.

Despite the fact that our measurement of regulatory focus preceded the objective performance variable in time, and that we controlled for major third variables (the Big Five), causality claims should be nuanced. For example, response bias may have influenced the results, as there is a possibility that participants understood that their organizational membership implied being promotion focused rather than prevention focused: Being a good member implies being both a good performer and a promotion-focused, not prevention-focused, individual. We feel this is not likely, as one would, in that case, also expect a spurious correlation between performance and the desirable (for salespeople) trait of Extraversion. Furthermore, it is possible that the size of the effects is influenced by (self) selection bias, in the sense that people with a strong promotion focus (relative to prevention focus) may be more attracted to the prospect of sales work in the first place, and be more likely to join such an organization. However, because such a bias would limit the variability in regulatory focus per se, it would only yield underestimation of the effects.

Future replication attempts also should consider the measure used for regulatory focus. As our study suggests, the measure used in the Hamstra et al. (2015) study might have led to overestimation of the effect. Moreover, other measures of regulatory focus are also available in the literature. However, these measures may not tap into the strategic eagerness and vigilance component that is the core of the regulatory focus concept, and that is covered by Higgins et al. (2001) Regulatory Focus Questionnaire. Future replication attempts should be careful to use a measure that clearly taps into these strategic orientations appropriately.

In future research, the regulatory focus perspective could also provide insight into more complex sales (management) behavior. For example, in sales involving long-term relationships with clients, salespeople also need to cope with losing clients and need to attempt to un-lose those clients (or, of course, prevent losing them in the first place). Research indicates that prevention-focused individuals might be better at these tasks. After incurring a loss, prevention-focused individuals are motivated to do whatever is necessary to restore the situation to a nonloss, even by means of risky behaviors (Scholer, Zou, Fujita, Stroessner, & Higgins, 2010). Moreover, having successfully “landed” a long-term client might render promotion-focused individuals more vigilant to maintain the progress they have made (Zou, Scholer, & Higgins, 2014). Thus, this research has the potential to inspire further research on the role of regulatory focus in sales occupations and organizations.

ORCID
Melvyn R. W. Hamstra http://orcid.org/0000-0002-0552-2006
Kira O. McCabe http://orcid.org/0000-0001-7716-6808

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