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# **A Meta-Analysis of the Moderation Effect of Regulatory Focus**

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Track Indications:

1. Motivation (content area)
2. Meta-analysis (methodology)

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## **Abstract**

We conduct a meta-analysis on the existing literature integrating a large number of empirical findings of regulatory focus studies. Our study is aimed at making two important contributions to the RF literature. First, we give an overview of the impact of regulatory focus fit in terms of the magnitude of the interaction effect. Second, we identify and show the influence of potential moderators that may contribute to the magnitude of effect size: (1) feeling-right operationalization, (2) type of regulatory focus, (3) research domain, (4) use of incentives, (5) type of student sample and (6) participants' cultural background. We employ meta-regression analysis (MRA) to assess the association between these factors and effect size heterogeneity. Findings and limitations of the study are addressed.

## Overview of the Research

One of the most popular and fascinating topics in consumer research is the impact of consumer's regulatory focus (Higgins 1997) on emotions, judgments, and behaviors. This theory proposes that consumers differ in how they present and experience basic needs (i.e. advancement or security), how they act in the course of goal pursuits, and how they react toward either positive or negative outcomes. Regulatory focus theory discerns consumer focus into two distinct foci: promotion and prevention focus. Promotion focus is related to nurturance needs, concerned with advancement and progress, and focused on gain-nongains outcomes. In contrast, prevention focus is related to security needs, concerned with duty, obligations, and responsibility, and focused on loss-nonloss outcomes.

Recently, regulatory focus has been branched out to regulatory fit theory (Avnet & Higgins 2006, Kruglanski 2006). This theory aims to explain the relationship between the way the goals are pursued and customer's regulatory orientation of promotion or prevention. According to regulatory fit theory, the means of goal pursuit can sustain or disrupt the orientation (Avnet & Higgins 2006). Prior research has documented the consequences of the fit between these two factors. When the manner of goal pursuits fit customer's regulatory focus, they (1) put a higher value on their chosen objects, (2) are more motivated and enjoy more goals pursuit, (3) feel right about their goal pursuits.

## Significance and Implication of the Research

Despite the aforementioned findings, regulatory fit theory is still "in the stage of discovering new ideas and discoveries" (Kruglanski 2006, Avnet & Higgins 2006). Thus, if the research is to progress research is needed that summarize the theory and quantify the impact of regulatory focus. Thus, the current study attempts to examine this issue. In addition, we assess the impact of a number of moderators that influence the effect of the interaction between regulatory focus and other variables on consumer's judgment and behaviours.

We conduct a meta-analysis on the existing literature integrating a large number of findings of experimental studies. We use partial eta-squared that can be transformed to  $r$  contrast and Fisher-Z transformation as effect sizes. Partial eta squared is defined as the proportion variance in the dependent variable accounted for by the independent variable divided by the amount of variance in the dependent variable that is unexplained by any other systematic factors in the design (or after these other systematic factors have been partialled out (Cohen 1973). The rationale for the partialling is that because these systematic factors (i.e. any experimental variables) may induce additional variance in the dependent measures that make comparison of an intended effect size across studies became unreasonable. Pertaining to our meta-analysis context, this effect size of variance proportion explained is consistent with the conceptualization of RF as a moderating factor (i.e. cell means approach see Jaccard 1998).

In total, we obtained 83 effect sizes collected from 20 studies. Our meta-analysis study reveals that the effect size of the interaction effect varies between moderate and

large: the estimate of  $r$  contrast is 0.321, which is equivalent to partial eta-squared of 0.103. We use a meta-regression procedure with REML estimator (Borenstein & Rothstein 2001) to test for the homogeneity of the effect sizes across studies. Following Card and Krueger (2005), we also estimate the model with OLS, adding standard error in the regressor in order to check for publication bias (i.e., the bias stemming from the fact that research with statistically significant results is has a greater chance of being submitted and published than research that reports no significant results). The results show no potential publication bias. In addition, the majority of moderator variables were insignificant. We cross-checked this result by calculating the fail-safe  $N$  of Rosenthal (1979) i.e. the numbers of ‘missing’ studies needed to nullify the result. The fail-safe  $N$  seems very unlikely to exist ( $N > 1000$ ). Hence, we conclude that there is no threat for the publication bias in our meta study.

We find that homogeneity test is significant, which means that there is systematic variability in the effect sizes. We identify five moderators: type of feeling-right operationalization (process-based vs. outcome based); type of regulatory focus (trait vs. ideal-ought priming vs. identical task priming vs. approach-avoidance strategic priming vs. attribute priming), research domain (laboratory task vs. health vs. education vs. other), type of incentive for participation (voluntarily vs. money vs. personal gift vs. course credits), type of student sample (high school vs. college), and cultural background (independent vs. interdependent). It appears that types of RF priming, research domain, type of incentives, and type of student sample were found to be significant predictors of the magnitude of effect sizes.

Our findings should be interpreted in the light of their limitations. First, we were only able to use a relatively small number of articles as only these met the imposed criteria for inclusion in the sample. Many articles did not contain enough information for calculation of the interaction effect size. Second, treating multiple effect sizes of the same studies as statistically independent may also create a certain degree of bias in the findings. As more effect sizes become available, future meta-analyses can be conducted by taking into account dependency among effect sizes. Third, in addition to the major study variables included in our analysis, other potential moderators may help to explain variation in effect sizes. For instance, we were unable to record the amount time participant spent in experiments; as such information is frequently not reported by researchers. The availability of such information may, for instance, help to better interpret the level of participants’ involvement in the study. Overall, our review of the literature demonstrates the relevance of the regulatory fit effect in consumer decision-making.

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\* Note that a complete list of full reference used is available from lead author