ATTRACTION EFFECT AND ITS EMPIRICAL EVIDENCE IN HUMAN RESOURCE MANAGEMENT REVIEW

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ABSTRACT

The attraction effect or sometimes called decoy effect, which is one of the most mysterious context effects, has attracted significant interest from scholars in different fields. Numerous studies have tried to replicate the effect in different circumstances including the human resource management context, however, the findings are sometimes inconsistent. Considerable mechanisms and factors have been proposed to explain its occurrence and variance in the research findings. Despite such lucrative empirical evidence, its relevance and practicality to the real business world is still questioned. By systematically reviewing the current literature, this study aims to synthesize mechanisms underlying the attraction effect and factors moderating its magnitude. The review suggests a careful choice setting and comprehensive consideration of individual and organizational differences are required when replicating or explaining the attraction effect. By focusing on empirical research in human resource management context, the study reveals potential applications of the attraction effect in achieving some important goals of human resource management such as improving gender equality or accuracy of performance evaluation system as well as ethical issues associated with these applications for practitioners. The review also suggests that the attraction effect might present another form of optimal decisions under uncertainty and limited resources.

Keywords: Attraction Effect, Decoy Effect, Human Resource Practices, Human Resource Management

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Introduction

Decision making means evaluating and selecting a choice from a set of alternatives (Robbins & Coulter, 2018). It can be perceptual (quick decisions with low cognitive level) such as guessing traffic lights, or preferential (goal-oriented decisions with higher cognitive level and deliberate consideration) such as stock investment or job selection (Dutilh & Rieskamp, 2015). It is considered to be an essential part of individual and organizational activities and success. Therefore, understanding what influences decision making, how people process information and make a trade-off between alternatives has attracted numerous studies. Normative theories assume that people select a choice that maximizes their utility – happiness, welfare or satisfaction - within their limited resources (Corr & Plagnol, 2019). This choice remains unchanged over time regardless of decision making environment such as choice context under consideration (Angner, 2011). In contrast, descriptive theories indicate that people's choices are unstable and influenced by choice context (Angner, 2011) and individual factors at the time of making decision (Corr & Plagnol, 2019).

Choice context means the composition of a choice set (Dhar, Nowlis & Sherman, 2000). Descriptive theories suggest that the addition of a new alternative to a choice set can decrease or increase the selection probability of an original alternative in the set (Angner, 2011). In decision making literature, this choice or context effect on people's decision is often categorized into three main types: attraction, similarity and compromise, of which the attraction effect is considered to be most mysterious (Tsetsos, Usher & Chater, 2010). Although the attraction effect has been found in many circumstances, in both perceptual and preferential decisions (Trueblood, Brown, Heathcote, & Busemeyer, 2013), the failure to replicate the effect in recent research such as Frederick, Lee and Baskin (2014), Padamwar, Dawra and Kalakbandi (2021), Izakson, Zeevi and Levy (2020), Rafai et al. (2022), Kubalová and Klepek (2022) indicates that the attraction effect does not occur unconditionally. Numerous studies (i.e Abe & Kaneo, 2022; Marini, Sapienza & Paglieri, 2022; He & Sternthal, 2023, Banerjee, Chatterjee, Mishra & Mishra, 2020) have not only investigated how but also when it happens. Although the study about the attraction effect and its implications has gradually transcended the marketing field (Huber et al., 2014), its number is still quite limited in non-marketing domain. Highhouse (1996) is considered to be one of the initial studies reporting the attraction effect in the human resource management context.

Considering this background, the study aims to synthesize existing literature on mechanisms underlying the attraction effect, factors influencing the occurrence and the magnitude of the effect, and research status on the effect in human resource management context. The literature synthesis is organized into 3 parts: definition of the attraction effect, mechanism and moderating factors of the attraction effect, and empirical evidence of the attraction effect in human resource related context. The study concludes with a general discussion about practical and theoretical implications of the attraction effect, and areas for future research in human resource management context.

Methodology

Search strategy

In the study, the ESBCO Discovery Service (EDS) was used to search articles because it is connected to various online journal providers such as JSTOR, ScienceDirect, Wiley, Springer, Business Source Premier. In addition, this database is also linked to the full Web of Science dataset. Hanneke and O'Brien (2016) found that it slightly outperforms Primo and Summon in returning the number of relevant articles.

The article search process followed systematic literature review steps suggested by Tranfield, Denyer and Smart (2003). The study started with finding articles related to definition and mechanisms underlying the attraction effect by using keywords: decoy effect, attraction effect to search in titles and abstracts. These two terms are used because they are sometimes interchangeable in the literature. After that, empirical evidence about the attraction effect related to human resource management practices was sought by using keywords: human resource practice and attraction/decoy effect, employee performance evaluation and decoy effect/attraction effect, personnel selection and decoy effect/attraction effect, personnel recruitment and decoy effect/attraction effect, employee promotion and decoy effect/attraction effect to search in text. These specific areas of human resource management were chosen because they involve making decisions from a choice set. During the article search, quotation mark was used with key words related to decoy effect to increase matching rate.

The list of articles appearing after using the keywords was then filtered further by limiting to only those written in English language, with full text and peer reviewed. Since the proposed keywords may be unable to cover relevant articles, while reviewing some selected articles, the study adopted a new term - asymmetric decoy and referred to citations in other articles to seek out additional information.

Article selection

In order to ensure the transparency and reproduction of article selection process (Kraus, Breier & Dasí-Rodríguez, 2020), the filtered articles were then screened further for their relevance to the study's objectives by the following selection criteria.

(1) Title needs to contain at least one key word "attraction effect" or equivalent for the first search, and one keyword related to human resource management areas for the second search.

(2) Abstract needs to contain at least one keyword "attraction effect" or equivalent.

(3) Articles whose full texts can be downloaded.

(4) The study has at least one empirical finding illustrating context effect of decoys that are asymmetrically dominated, not other types of decoys.

(5) The study has empirical data directly related to human resource management practices.

Table 1 shows the steps of the search process and the number of articles selected for final analysis.

Table 1 Literature search and selection process

Step	Database
Terms used: “attraction effect”, “decoy effect”, “asymmetric decoy”	1189
Terms used: human resource practice and “decoy effect”, human resource practice and “attraction effect”, personnel selection and “attraction effect”, personnel selection and “decoy effects”, personnel recruitment and “attraction effect” personnel recruitment and “decoy effect”, employee performance evaluation and “attraction effect”, employee performance evaluation and “decoy effect”, employee promotion and “decoy effect”, employee promotion and “attraction effect”.	1628
Articles selected for title after removing duplicated articles	125
Articles selected for abstract	77
Articles selected from cross-referencing	7
Articles selected for final analysis	84

Apart from searching for the primary topic, articles about general concepts in human resource management activities: gender bias, relative performance evaluation, and forced ranking distribution, and factors influencing preference reversal and context effect in general were sought to provide more insights about empirical evidence of the attraction effect.

Definition of the attraction effect

The attraction effect occurs when adding an asymmetrically dominated option (decoy) to the choice set increases the selection probability of the dominating option (target option) (Reb, Li & Bagger, 2018). An asymmetrically dominated option is the option that is inferior to at least one option, but not to others in the choice set (Huber, Payne & Puto, 1982). A dominating option is the option that performs better than another on at least one attribute, and at least the same on all other attributes (Wedell & Pettibone, 1996). For example, Highhouse (1996) requested participants to select one from three final job candidates (A, B and C1 or A, B and C2) based on scores of two measures presented in Table 1 below; and he found that when decoy C1 was added, 80% of participants preferred candidate A and when decoy C2 was added, only 35% of participants selected candidate A.

Table 2 Information about job candidates

	Interview rating	Promotion ability rating
Candidate A	5	80
Candidate B	7	66
Candidate C1	4	80
Candidate C2	7	54

Source: Adopted from Highhouse (1996)

Asymmetrically dominated (AD) decoys are normally categorized into three types: range extension (R); frequency increment (F); and combination of both range and frequency (RF). See figure 1 for an illustration of these three decoys for option A (Wedell & Pettibone, 1996). Huber, Payne and Puto (1982), who is the first identified the attraction effect, examined three types of AD decoys and found that the attraction effect was only statistically significant for the range extension and range-frequency decoy, and the effect of the range extension decoy was much stronger than the effect of the range-frequency decoy. The authors attributed the weak influence of the range-frequency decoy to the lack of clear dominance in the choice set; and missing influence of the frequency decoy to other factors than the dominance or similarity level.

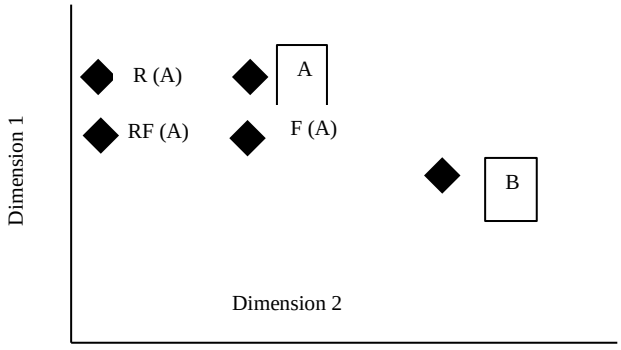

Figure 1 Illustration of three decoys (adopted from Wedell & Pettibone, 1996)

Moreover, the attraction effect is not always replicable. For example, Frederick et al. (2014) did not find the attraction effect when they represented choice stimuli in verbal description. Rafai et al. (2022) found that the introduction of decoy effect did not increase the probability of selecting targeted flight options. Although this failure can be explained by the difference in experiment conditions among studies, it still requires researchers to identify conditions when the effect occurs and what factors impact the size of the effect (Huber et al., 2014).

Mechanisms for the attraction effect

When facing a choice set, people make decisions by evaluating and comparing the objective value and psychological value of alternatives in the choice set on different dimensions. Objective value is the functional value of things quantified through metric such as price, cost, or speed (Corr & Plagnol, 2019), and influenced by people's cognitive capability. Psychological value is the perceived value of things revealed through people's belief or assumption, and influenced by people's psychological and biological factors (Kusev et al., 2017) such as mood, personality, feeling, experience (Corr & Plagnol, 2019), hormonal and other environmental factors (Kusev et al., 2017). Therefore, the study incorporates both cognitive and psychological mechanisms from the literature to establish a holistic explanation for why and how attraction effect occurs and varies in choice contexts. The study classifies the mechanisms into two broad categories: relational evaluation and attention (Tsetsos et al., 2010), and cognitive effort-accuracy trade-off (Dhar et al., 2000).

Relational evaluation and attention

According to prospect theory, the value of an option is often determined by its relation (either gain or loss) to a reference point (Kahneman & Tversky, 1979; Sivakumar, 2016), which can be either other available alternatives in the choice set (Dhar et al., 2000; Simonson & Tversky, 1992) or a neutral reference point (Simonson & Tversky, 1992). When one option in the choice set is superior to the other options on, at least, one dimension, direct comparison between them becomes difficult. Adding an asymmetrically dominated decoy to such a choice set can facilitate decision making process because the decoy can act as a neutral reference point from which relative value of original options is more easily determined (Tsetsos & Usher, 2010). For example, there is a choice set of two options that are compared only in terms of two attributes and an asymmetrically dominated decoy is added. Compared to the added decoy, the dominating option (target) offers overall net gain while the remaining option (competitor) provides some loss on one dimension (Highhouse, 1996). Consequently, the target is more likely to be selected than the competitor because people tend to be loss averse or risk averse (Corr & Plagnol, 2019).

However, instead of considering all alternatives equally and calculating the net loss or gain, decision makers may pay more attention to comparing the target to the decoy than to comparing the competitor to the decoy, which increases the likelihood of selecting the target option. This selective attention occurs due to lateral inhibition (Tsetsos et al., 2010), which means human visual attention focuses more on stimuli located near one another (Isaacson & Sxanziani, 2011) than a large surrounding area to reduce visual noise or distractions in natural scenes (Kim & Bertalmio, 2016). In the choice set, the target is located spatially closer to the decoy than the competitor; therefore, decision makers focus more on the target-decoy pair than on the competitor-decoy pair (Mishra, Umesh & Stem, 1993). The relational comparison or attentional process that influences the occurrence and magnitude of attraction effect may vary according to individual differences and decoy's perceived characteristics.

Individual differences

The stronger prior preference, knowledge, information or experience people have about the original options in the choice set, the more stable and clearer their decision-making criteria are (Mishra et al., 1993), the less necessary relative evaluation among alternatives is (Hsee, 1998), and the less likely the decoy generates impacts on their decision. For example, Slaughter, Sinar and Highhouse (1999) found that customer strong preference on quality weakened the decoy effect, while Kim, Park and Ryu (2006) reported the moderating role of customer's brand knowledge on the attraction effect.

The nature of relative evaluation and attention to the options in the choice set is also influenced by people's different cognitive styles, thereby impacting the magnitude of the attraction effect. Cognitive styles are generally categorized into two groups: holistic and analytic (Nisbett, Peng, Choi & Norenzayan, 2001). People with holistic thinking perceive meaning, and explain or predict behavior of an event by attending or seeking its relationship with the context. In contrast, people with analytic

thinking perceive an event independent of its context. They tend to establish categories and seek a dominance relationship within the category to explain or make predictions about the event (Nisbett et al., 2001). Banerjee et al. (2020) indicated that the attraction effect was more likely to be found among Western people – who adopt an analytic mode of cognition than Eastern people – who adopt holistic style. Similarly, Abe and Kaneo (2022) and Khan, Zhu and Kalra (2011) found that people with high construal level were more vulnerable to the attraction effect than people with low construal level. People with high construal level focus on decontextualized, abstract and central features of options, whereas people with low construal level focus on contextualized, specific and incidental features of options (Trope & Liberman, 2010). High construal level people seek a dominance relationship rather than comprehensive relative comparisons of options (Khan et al., 2011). According to the proximity principle, the decoy and the target are more likely to form a category than the decoy and the competitor. Within the formed category, the dominance of the target over the decoy is more obvious than that of the competitor. These explain the findings aforementioned.

Decoy's perceived characteristics

For the attraction effect to occur, a certain degree of similarity between target and decoy is necessary (Marini et al., 2022) because similarity facilitates the formulation of a category between the decoy and the target from which the target appears better and is thus more likely to be selected (Izakson et al., 2020). However, if the decoy is too close to the target, the attraction effect may diminish or even disappear (Mishra et al., 1993) because decision makers may not be able to identify the dominance relationship (Fredick et al., 2014). For example, Padamwar et al. (2021) found that the attraction effect was absent when the range extension of the decoy was insufficient.

The influence of the decoy on people's comparison or attention also depends on how favorable or popular decision makers perceive it (Mishra et al., 1993). If the decoy is perceived undesirable, it is more likely to be ignored by decision makers and therefore cannot provide any additional boost for identifying the dominance of the target option. The attraction effect also vanishes when the decoy is perceived better than the original options because they pay attention to the decoy and select it instead of the dominating option (Huber et al., 2014). Ahn and Novoa (2016) and Slaughter (2007) found that participants selected the decoy as the best performing candidates in their experiments. In contrast, if the decoy is perceived popular in the market, it can enhance the selection probability of the target by causing decision makers to ignore their previous preference to conform to a social norm (Asch, 1955) and focus on options close to it as explained above.

Cognitive effort-accuracy trade off

According to rational choice theories, people are rational and choose items with the highest value or benefits (Angner, 2011). However, such choice is not always feasible because of their limited budget (Corr & Plagnol, 2019). Even when given a choice set within their budget, they do not always select the optimal option because they are unable to fully access proper information, to do sophisticated economic functions (Thaler, 2016), or to act like a perfect computer that processes information in an

unbiased way (Corr & Plagnol, 2019) all the time. Therefore, a cognitive effort-accuracy trade-off offers another way to explain the attraction effect.

The introduction of the decoy to the original choice set increases the choice complexity (Dhar et al., 2000). Decision makers need to consider more alternatives and perform more comparisons on different attributes (Huber et al., 1982), thereby exerting more cognitive effort. To avoid this mental pressure, they tend to simplify the evaluation process by focusing and selecting the dominating option (Mishra et al., 1993). However, their willingness to invest effort or avoidance of mental pressure in decision making and then resort to simplified cognitive process can be moderated by their decision-making conditions and individual differences.

Decision making conditions

Since time pressure can influence people's effort and thereby their decision making behaviors, it is expected to play a role in the occurrence or intensity of the attraction effect. Pettibone (2012) found that time pressure mitigated the attraction effect because under time limitation, participants were more likely to make a random choice than perform a careful consideration or seek a dominant option. However, Lin, Sun, Chuang and Su (2008) found the opposite and explained that under time pressure, respondents tend to use heuristic and focus on identifying the clearly dominating option. The inconsistency of these two research findings could be due to the different study settings. While Pettibone (2012) required participants to respond within predetermined time limits (2s,4s,6s,8s), Lin et al. (2008) did not set a time limit for participants, but asked them to record and report their time spent on making decisions. Another explanation could be the difference in participant's perception of the difficulty of the tasks and the availability of cognitive ability. Wedell, Hayes and Verma (2022) found that greater perceived difficulty led to longer response time and greater decoy effects. In contrast, Lee, Chuang, Chiu and Lan (2016) indicated that perceived difficulty reduced response time and led to more random choice, thereby weakening the attraction effect when participants perceive their cognitive resources of participants less than cognitive requirement of the tasks.

People's cognitive effort in decision making is also affected by the requirement to justify their decision. When the justification requirement comes from others such as managers, colleagues or spouses and decision makers do not know the preference or criteria of their evaluators, the attraction effect may be stronger because the explicit and objective superiority of the dominating option make it a more justifiable and convincing solution for others (Simonson, 1989). However, this is not necessarily the case when decision makers have meaningful information about the options in the choice set. For example, Malaviya and Sivakumar (2002) found that the requirement to justify their choice enhanced the attraction effect when participants received little information about products, but reduced the attraction effect when they received meaningful information. When the justification is their own requirement, the attraction effect can reduce or even disappear because they are more likely to suspect the dominance of the target and examine options in the choice set more thoroughly to avoid the feeling of regret later (Connlly, Reb & Kausel, 2013). Mourali, Bockenholt and Laroche (2007) found that

justification requirement weakened the preference for dominant options when people activated their mode of prevention focus (mistake and loss avoidance). However, when the regret is interpreted as the result of choosing a worse option rather than as the result of deploying an low-quality decision making process (Reb, 2008), the feeling of regret actually enhances the attraction effect (Reb et al., 2018) because the attractiveness of the dominating choice is fairly obvious in terms of outcome justification.

Incentives or rewards for decision making outcomes is another factor that can influence people's willingness and cognitive effort investment in decision making. Incentives or rewards can make people think carefully or take necessary actions to get things right (Thaler, 2016); yet they also generate more stress for decision makers. Decision makers have to make a trade-off between confidence in their knowledge of the choice and their desire for accuracy in order to secure incentives or rewards (Siegel-Jacobs & Yates, 1996). Although Grether and Plott (1979) and more recently Berg, Dickhault and Rieyz (2010) found that incentives increase the intensity of preference reversal, Slaughter et al. (2006) reported an insignificant impact of rewards on the attraction effect in candidate selection decision making by individuals and groups. The failure of rewards in influencing people's making behaviors in the attraction effect can be attributed to the difference in their attitude towards rewards.

Individual differences

Kivetz (2003) found that although rewards intensified preference shifting among participants, their influence was different among extrinsic and intrinsic motivation people. This finding suggests that if people have high expectations for rewards, they are more likely to invest effort and trade off certainty for the magnitude of rewards by selecting the dominating option. Therefore, the absence of the reward's influence on the attraction effect in the findings of Slaughter et al. (2006) could be explained by the participants' low expectations for rewards.

Recent research suggests that the magnitude of the attraction effect can be moderated by age because age is considered to be correlated with cognitive ability. For example, Zhen and Yu (2016) only found the decoy effect among children aged 5 and older, not among younger children because the latter group has limited cognitive ability to make judgements. Koscielniak, Rydzewska and Sedek (2018) found that older adults were more resistant to the attraction effect than young adults in the grocery shopping task. The authors explained that declining cognitive ability and unwillingness to invest effort in decision making may prevent older people from recognizing the dominance relationship in the choice set and they simply make a random choice. Pocheptsova, Amir, Dhar and Baumeister (2009) found that depletion of cognitive resources enhances reliance on intuitive thinking, and increases the attraction effect.

Empirical evidence of the attraction effect in human resource practices

The attraction effect has been studied in a few non-marketing fields (Huber et al., 2014), yet the number of research on its relationship or applications in the human resource management field is still limited. The review is able to find only six articles related to four areas of human resource practices:

job benefit, selection, gender discrimination and performance evaluation. Before describing the influence of the attraction effect in detail, some insights about each area are given.

Job benefit package design

Employees are increasingly seeking work-life benefits. According to a Forbes survey (2022), 90% of 620 surveyed employees considered work-life balance to be an important aspect of their jobs. This is due partly to the increasing number of dual-career couples. According to Chen, Huang, Obeid and Zucker (2022), as of 2021, 81 percent of women and 63 percent of men reported being dual-career couples. As a result, many organizations have provided various family friendly programs to ensure organizational attractiveness and employee retention. When having limited resources and facing competitive offerings from other organizations, the question is to what extent organizations can communicate and influence employees' decisions without having to offer more benefits.

Reb et al. (2018) studied the attraction effect on the choice set of two job benefits: dependent care support and flexible working arrangement. They found that participants' preference changed toward the targeted choice after an asymmetrically dominated decoy was added. Interestingly, the decoy effect was found stronger than the influence of the role centrality (work versus non-work life) that normally defines employee's preference for family friendly benefits: higher work centrality is associated with lower preference for family friendly benefits (Reb et al., 2018). This finding provides some important implications for organizations to answer the above question.

Gender discrimination in selection

Highhouse (1996) and Slaughter et al. (2006) found that the attraction effect influences people's personnel selection decisions. Slaughter (2007) went further and examined the attraction effect in the first and last phase of the selection process. The author found that the attraction effect occurs in both phases and indicated that the attraction effect in final selection round is influenced by how candidates are evaluated and ranked in the previous round. It tends to be stronger when previous evaluations favor the target candidate, and weaker when previous evaluations favor the non-targeted candidate.

Gender discrimination remains a challenging issue in employment selection around the globe, although it is considered to be illegitimate and unlawful in some countries such as the United States, the United Kingdom or Hungary. According to the European Institute for Gender Equality (2022), as of 2020 the employment rate for single men aged 15 and older is 54%, compared to only 31% for women. Occupations are also highly segregated and segmented by gender. According to the International Labour Organization (2008), at least 80% of workers in the same occupations are of the same gender. Women have little opportunity to work in traditionally considered male jobs such as leadership positions, or engineering jobs (Keck & Tang, 2019). More than 80% of home workers are women (International Labor Organization, 2008). Therefore, addressing gender bias in selection is still an on-going task for organizations, which requires an understanding of multidisciplinary science such

as psychology or behavioral economics. Recent research have examined the attraction effect in the context of gender equality context, and found both negative and positive results.

Attraction effect reduces gender bias

Physical attractiveness can provide job applicants an advantage because attractiveness is associated with positive qualities (Langlois et al., 2000) that are desirable for jobs such as confidence, intelligence, trustworthiness, or competence (Murphy, Murphy, Kelly & Roche 2021). However, unlike men, it can become a hindrance for women when they apply for traditionally masculine jobs because their attractiveness is more likely to be associated with less qualification (Johnson & Chan, 2019). Johnson and Chan (2019) found that adding an asymmetrically dominated decoy (equally attractive but less qualified) to the choice set of unattractive and attractive female candidates with the same qualification reduced the decision makers' bias against the attractive candidates and increased the selection probability of the original attractive candidate. In other words, the presence of the attractive decoy diverted decision makers' attention to attractive candidates and looked for a dominance relationship among them.

Attraction effect enhances gender bias

In contrast, Keck and Tang (2019) found that the attraction effect reinforced gender bias in hiring decisions. For male positions, after the introduction of a male decoy, male target with female competitor was more likely to be selected than female target with male competitor. The same pattern was found significant for female positions. The authors also pointed out that the attraction effect was stronger when the candidate pool consisted of different genders than the same gender; and female target benefited much less from the addition of decoy than male target. Gender stereotypes can provide a reasonable explanation for this finding. In the gender-diverse group, gender unconsciously becomes a criterion that helps decision makers shorten their choice list or form a category before seeking a dominance relationship to make decisions. However, this role disappears when the pool consists of candidates of the same gender.

Performance evaluation

Performance appraisal systems can be described as either "absolute" or "relative" (Duffy and Webber, 1974). In an absolute system such as a behaviorally anchored rating scales, behavioral observation scales or graphic rating scales, employee performance is compared against predetermined criteria. In contrast, a relative system such as alternative ranking, paired comparison or forced distribution evaluate their performance relative to one another (Roch, Sternburgh & Caputo, 2007). Although each system has its own advantages and disadvantages, research have focused more on demonstrating the superiority of the relative system over the absolute system (Chattopadhayay & Ghosh, 2012) than on examining employee's perceived fairness of the system - an important component of the evaluation system (Roch et al., 2007).

The nature of each evaluation system indicates that the relative system can be more susceptible to the attraction effect than the absolute system. However, despite the call for more research,

the number of studies on the attraction effect and performance evaluation is still limited (Ahn & Novoa, 2016). Jiang, Fehrenbacher & Schulz (2016) are among a few researchers who have investigated how an asymmetrically dominated decoy influences evaluators' decisions. The authors found that the addition of a decoy increased the likelihood that the targeted subordinate was rated as the best performer. However, as the number of subordinates under consideration increased, the decoy lost its role as a reference point; raters had to make broader comparisons among candidates to select the best qualified, which weakened the decoy effect.

Discussion and conclusion

The expansion of a choice set by adding an asymmetrically dominated decoy can increase the likelihood that the dominating option (target) is selected. This phenomenon is called the attraction effect or sometimes the decoy effect - one of the most mysterious context effects (Tsetsos et al., 2010). By incorporating both cognitive and psychological mechanisms, the study categorizes the mechanisms for the attraction effect in the current literature into two broad groups: relational evaluation and attention, and cognitive effort-accuracy trade off. The first mechanism indicates that the attraction effect occurs because the decoy facilitates evaluation process by serving as a reference point against which the value of available options is compared and determined. The presence of the decoy also causes decision makers to develop selective attention to the options. They pay more attention to the option that is spatially close to the decoy to minimize visual noise or to form a category from which they can infer dominance relationship and derive their decision. In either case, the decoy and the target are more likely to attract their attention than the remaining option (competitor) and the decoy, thereby increasing the selection probability of the dominating option. The higher attention paid to the comparison of the target and decoy than other options can also be explained by the trade-off between decision makers' cognitive constraints and requirements for justifying decision. The clearer and objective dominance relationship found with the target and decoy pair provides a safer and more justifiable choice while avoiding unnecessary mental pressure for decision makers.

The findings of mechanisms also suggest that the attraction effect is unstable and sensitive to characteristics of choice composition, individual differences, and decision making conditions. This explains the failure to replicate the attraction effect in some research. For the attraction effect to occur, there must be a certain level of similarity between the decoy and the target that allows decision makers to form a category. At the same time, similarity levels need to be adequately controlled so that decision makers can still recognize the dominance relationship. However, even if the degree of similarity is sufficient, the attraction effect may not occur because decision makers simply prefer the decoy to the original options. Therefore, the study and explanation of the attraction effect should take into account individuals' prior preference, knowledge, experience, age or cognitive styles because these factors influence decision makers' perception of the options in the choice set and their decision making criteria. People who have strong prior preference, knowledge or experience about the options are more likely to

know what to choose and therefore, less likely to be influenced by the attraction effect (Mishra et al., 1993). People who adopt an analytic thinking approach are less likely to rely on the dominance relationship to make decisions, and are therefore more likely to be resistant to the attraction effect (Banerjee et al., 2020).

The unsuccessful replication of the attraction effect is also due to the fact that people have no motivation to make right decisions (Huber et al., 2014). However, even when they are interested in making decision, the magnitude of the attraction effect also varies according to their decision making conditions and objectives. The attraction effect increases when they are required to justify their decisions to other people whose preference is unknown to them (Simonson, 1989) or when they aim to lower their anticipated regret for the selected option (Reb et al., 2018), because they are more likely to choose the dominating option for its clearer and objective justification compared to other options. Similarly, the attraction effect is intensified when highly extrinsic motivated people are provided with rewards for their decision. However, the attraction effect may disappear when people aim to minimize their post decisional regret by making sure that their decision process is careful and well-justified, not simply relying on the superficial dominance of the targeted option (Connlly et al., 2013). It may also be impossible to find the attraction effect in the decision making circumstances with time pressure or task difficulty where decision makers cannot manage to identify the dominance relationship in the choice set.

Research implications and limitations

The synthesis of mechanisms and moderating factors of the attraction effect suggests another way to interpret decision making behavior under the influence of choice context. The decision can be considered optimal under the condition of cognitive and psychological constraint rather than a simple deviation from normative rules (Farmer, Warren, El-Deredy & Howes, 2016). This interpretation is closely related to the term “bounded rationality” proposed by Simon but previously ignored by other economists and researchers (Thaler, 2016). Moreover, attentive consideration of individual differences and careful manipulation of the composition of the choice set and environment is needed if researchers expect to produce or replicate the attraction effect.

The review also shows potential applications of the attraction effect in helping organizations to achieve their human resource management goal such as gender equality (Keck & Tang, 2019; Johnson & Chan, 2019) or job benefit package attractiveness (Reb et al., 2008) by influencing employee’s preference. For gender segregated occupations, a careful introduction of an asymmetrically dominated candidate to the candidate pool can increase the chance that the candidate of opposite gender are selected. The attractiveness of a job benefit package can be assured if organizations spend time learning about employees’ experience and expectation before designing, and then communicate it in a way that allows relative comparison and emphasizes the superiority of their package to other organizations. However, the application of the attraction effect in human resource practices should be

proceeded with high consciousness because it poses some ethical issues. Practitioners may implicitly use the decoy to rectify their biased choice in personnel selection (Reb et al., 2008) or relative performance evaluation (Slaughter, Kausel & Quinones, 2011). To mitigate negative impacts of the attraction effect in these cases, organizations should ensure the number of candidates under consideration (Jiang et al., 2016) be large enough and unbiased and meaningful information about candidates be provided to evaluators so that evaluators do not experience cognitive constraints and resort to selective attention or comparison. It is also helpful to provide evaluators with some awareness trainings about the attraction effect along with selection and evaluation technical courses.

Despite the attention paid to methodological requirements, the study's findings may not be exhaustive. First, although the EDS database has a large research coverage, it is still impossible to have access to all possible studies. Second, literature from articles written in non-English language and inaccessible to full text may contain additional information that is not covered in the study. Third, keywords and subjective selection criteria may have defined relevant articles in ways that other researchers may not. Therefore, other researchers may expand the number of relevant articles by using additional databases, selection criteria, and keywords, and including articles written in another language.

Future research needs

The practicality of a huge number of publications about the attraction effect in the marketing field is questionable (Gomez, Martínez-Molés, Urbano & Vila, 2016) because most of them utilized laboratory environment that differs or excludes important factors in the decision making process in the real world. The review found the same problem with studies in the human resource management field. Moreover, majority of studies focus on individual decisions rather than group decisions. The review found only one study by Slaughter et al. (2006) considering the attraction effect in group decisions. They found that under the condition of process accountability, the attraction effect was stronger in selection decision made by groups than by individuals. Additional accountability for justifying the group decision together with the minimal disagreement between the selected group members could explain this result. Therefore, future research on the attraction effect in human resource practices context should involve more real decision makers and explore more group-based decisions in real business situations to enhance its relevance and practical implications for the organizations and practitioners.

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