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Measurement in Marketing Research: Misspecification in Multidimensional Marketing Constructs and What to Do to Overcome These

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Abstract

Measurement efforts of marketing researchers during the last three decades have resulted in the accumulation of theoretical and practical knowledge of marketing through the conceptualization of latent constructs. This approach has required transitioning from concrete measurements to measuring latent constructs; that is, researchers needed to specify their theoretical models in terms of measurement language. We conclude that marketing researchers may be risking the psychometric qualities in their findings due to mistakenly operationalizing their latent constructs through reflective measurement, when in fact these should be operationalized through formative measurement. In this paper, we discuss the pitfalls associated with misspecification of multidimensional (second-order) latent constructs to draw attention to this problem that potentially can cast doubt on marketing research conclusions. We also offer guidelines on how to deal with second-order formative latent constructs in the covariance-based SEM through adopting the MIMIC model.

Keywords: Latent constructs, measurement, measurement in marketing research, misspecification, marketing research, structural equation modeling.

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Pazarlama Araştırmasında Ölçüm: Çok Boyutlu Gizil Yapıların Hatalı Operasyonelleştirilmesi ve Çözüm Yolu

Öz

Pazarlama araştırmalarında ölçüme dair yapılan çalışmalar hem teorik hem pratik açıdan gizil yapıların operasyonelleştirilmesine dair bilgi birikimi oluşturmuştur. Bu yaklaşım kapsamında somut ölçümlerin soyut gizil yapılara dönüşümü araştırmacıların ölçüm dillerini teorik modelleri ile senkronize etmesi söz konusudur. Ancak ilgili operasyonelleştirme sürecinde aslında oluşturucu ölçüm modeli ile teorize edilmesi gereken gizil yapıların yansıtıcı ölçüm modeli ile teorize edildiği gözlemlenmektedir. Bu çalışmada çok boyutlu gizil yapıların yanlış operasyonelleştirilmesi konusu tartışılmakta ve ilgili yanlış uygulamaya dikkat çekilmektedir. Ayrıca çok boyutlu gizil yapıların oluşturucu ölçüm modeli kapsamında kovaryans-temelli yapısal eşitlik modelinde MIMIC model ile nasıl operasyonelleştirilmesi gerektiğine dair bir yol haritası ortaya konmuştur.

Anahtar Kelimeler: Gizil yapılar, ölçüm, pazarlama araştırmasında ölçüm, hatalı operasyonelleştirme, pazarlama araştırması, yapısal eşitlik modeli.

Introduction

Measurement is the sine qua non of science (Peter 1979) and as such, it has played a central role in the development of marketing discipline as a field of study over the past three decades. For example, marketing researchers have developed a number of sales-relevant scales and have used these in their research projects to measure sales-related phenomena (Bearden et al. 2011). Collecting data with psychometrically sound sales-relevant scales has led marketing researchers to make theoretical and practical generalizations regarding the latent constructs in their research. These latent constructs, which are abstract and unobservable concepts operationalized through concrete scale items, have helped researchers generate marketing knowledge along with theoretical discus-

sion about concrete measure and their roles in expressing latent constructs (Edwards and Bagozzi 2000).

Since latent constructs are representations of theoretical concepts that are expressed as concrete measurements (Bagozzi and Yi 2012), our marketplace observations become valuable only when these observations lead to theoretical discussion about the nature of marketing phenomena. When latent marketing constructs are operationalized through concrete observations or measurement, we develop a deeper and psychometrically sounder understanding of marketing phenomena.

The transition from concrete measures to the latent constructs can be achieved with the specification of our measurement models. Model specification includes which parameters will be fixed or freed, which scale items will represent which latent constructs, and whether the scale items will cause the latent constructs or be caused by them (Kline 2015); thus, model specification depicts the way we operationalize our latent constructs. Depending on our theory-based thinking about whether the focal scale items will cause our focal latent constructs or vice versa, our measurement model regarding the operationalization of latent constructs will be either formative (where the latent construct is caused by scale items or lower-order constructs) or reflective (where the scale items and/or lower-order constructs are caused by latent constructs (Cadogan et al. 2013; Diamantopoulos and Siguaw 2006; Jarvis et al. 2003; Lee et al. 2014). Although the difference between these two measurement models might seem to be limited to technical detail at first glance, there is in fact considerable philosophical debate on this among marketing researchers (Bagozzi 2007). Even though this debate has yielded an impressive set of knowledge, including identifying the problems and offering solution alternatives (Diamantopoulos et al. 2008; Howell et al. 2007; MacKenzie et al. 2011), surprisingly, we are unaware of papers that have focused on the practices of marketing researchers from the point of how they operationalize multidimensional sales constructs. We aim to help contribute to filling this gap with this paper. We first review and synthesize the debate on the operationalization of latent marketing constructs. We then give

examples from the sales literature to underscore marketing researchers' practices on the specification of their latent constructs. Finally, we identify the common specification of multidimensional marketing constructs problem in marketing research and offer a solution to it.

We hope to make two contributions to the literature with our work. First, we provide an up-to-date discussion regarding the operationalization of the multidimensional marketing constructs. This discussion highlights the specification of latent constructs problem, including formative and reflective measurement. Second, we offer a solution to this problem, the multiple indicators multiple causes (MIMIC) model (Bagozzi et al. 1981; Bagozzi 2011). We hope that these contributions will help us to untangle operationalization practices of multidimensional (second-order) marketing constructs employed in marketing research.

The measurement of latent constructs

Marketing researchers regularly create research models to capture the reality of marketplace behaviors. These models have a two-layer nature in which the measurement model and structural model are intertwined. Marketing researchers are expected to check their measurement model to make sure that the expected scale items adequately represent the underlying latent construct (Anderson and Gerbing 1988). That is, a measurement model is the first step of the process in which researchers test their expectations regarding the factorial structure of their latent constructs. As abstract entities that have reflections on our daily lives, latent constructs are measured through concrete scale items in which respondents report their levels of agreement with designated statements (Byrne 2016). Following the test of their measurement model, marketing researchers are expected to test their hypotheses by analyzing their structural model. The structural model is much more abstract than the measurement model. Although the measurement model focuses on a hypothesized point, to which concrete observations correspond with latent constructs, the structural model focuses only on the relationships among the latent constructs (Bagozzi and Phillips 1982). It is reasonable to con-

clude then that latent constructs are the common elements of both the measurement and the structural models.

Marketing researchers might question the rationale behind the creation of their research models with latent constructs rather than only focusing on concrete measurement based on scale items. The answer to this question has a philosophical root. As social scientists, marketing researchers are interested in explaining and understanding the reality of the marketing phenomenon under study. They use theoretical models to represent reality thanks to their abstraction abilities because concrete observation or measurement falls short on providing conceptual discussion. Further, this philosophical position of the researchers will encourage them to perform research in which latent constructs have pivotal roles.

The recent debate on whether marketing is science has drawn the attention of the marketing research community to the issues on latent constructs and the philosophy of social science (Hunt 2010). These discussions reveal the dominant marketing research paradigm that marketing researchers need to adopt scientific realism rather than positivism because the marketing discipline is heavily interested in abstract phenomena, such as service-dominant logic or salespersons' motivation. That is, the marketing discipline is required to conduct research projects in which marketplace reality is explained through abstract or latent constructs. Thus, marketing researchers should admit the idea that unobservable constructs can be evaluated within the scope of science, which is one of the central premises of scientific realism (Psillos 2005).

Yet, this statement is refuted by the scientific realists (Pigliucci and Boudry 2013). Scientific realism defends that the discovery of a phenomenon, which is currently unknown, can be achieved with the advent of measurement tools (Boyd 1983). For example, while salesperson motivation has always been there in reality, marketing researchers have discovered and measured it so far thanks to conceptual development and psychometrically developed scales. Thus, the existence of this phenomenon is independent of measurement possibilities (Suppe 1989). Moreover, scientific realism argues that researchers will never be able

to capture and measure phenomena perfectly (Bagozzi 2011). Measurement precision of phenomena progresses incrementally; classical measurement theory assumes that measurement includes the real score and error. Measurement is not error-free; perfect measurement is utopia (Nunnally and Bernstein 1994). Most statistical techniques, including structural equation modeling (SEM), are developed with this assumption (Darlington and Hayes 2016). The most important feature of SEM is that it takes measurement error into account when hypotheses are tested (Chin 1998). If we only focus on concrete measurement without accepting the existence of latent constructs, speaking about measurement error would be meaningless.

Marketing researchers regularly conduct SEM analyses in their research projects (Allison et al. 2016; Hollet-Haudebert et al. 2011; Krishnan et al. 2002; Rodriguez et al. 2012); thus, they widely accept both the existence of latent constructs and the presence of measurement error. In other words, they hold the view that scale items are mediums to measure latent constructs. This view is plausible because it is consistent with the principle of scientific realism, which is a dominant paradigm in the behavioral and social sciences (Hunt 2010; Suppe 1989).

In sum, latent constructs help us better understand abstract-level discussion of marketplace consumer behaviors. Moreover, tests of hypotheses are possible through latent constructs because hypotheses are abstract assumptions based on the relationships or differences among abstract entities that are represented by latent constructs. By adopting the view that scale items are tools to measure and operationalize latent constructs, marketing researchers are likely to contribute to the scientific status of the marketing discipline (Hunt 2010). Marketing cannot be evaluated as a science without scientific realism (Bagozzi 1984; Hunt 1992). Furthermore, accepting the existence of the latent constructs will improve the measurement effectiveness of marketing researchers since taking measurement error into account will lead to better measurement. Last, maintaining theoretical discussion among the marketing researchers is more feasible and possible via better understanding of latent constructs. This

practice makes the distinction between marketing research and market research more discernible (Armstrong 1970; Woodside 2016).

Latent construct measurement practice in marketing research

To illustrate how marketing researchers operationalize their latent constructs, we randomly picked the Journal of Personal Selling and Sales Management. We reviewed past issues of the Journal of Personal Selling and Sales Management to find papers in which psychometric scale of the marketing-related construct was developed. Our search resulted in two salient measurement practices. The first is the excessive usage of unidimensional scales to measure marketing constructs. Thus, this practice poses a threat in that researchers may fail in capturing the multidimensional nature of the marketing constructs they use in their research. Previous discussion on the factor structure of latent constructs and the resulting initial attempts to measure particular latent constructs assumed unidimensional factor structures. Researchers began focusing on the multidimensional nature of latent constructs only as knowledge about latent constructs progressively accumulated (Bagozzi et al. 1991). Marketing researchers seem to have been slow in adopting this approach. For instance, though conceptually, salesperson job satisfaction (Dugan et al. 2018; Pomirleanu and Mariadoss 2015; Rouziou et al. 2018; Valentine et al. 2015), salesperson performance (Krishnan et al. 2002; Mulki et al. 2007; Schwepker 2017), and salesperson job stress (Allison et al. 2016; Lewin and Sager 2008) are multidimensional constructs, they have been measured through unidimensional scales. These unidimensional measurement approaches pose a threat in that researchers may fail to fully capture the scope of these important marketing constructs. Developing multidimensional scales with which to measure these can overcome this weakness.

Our research pointed to a second, and related, problem: the liberal use of the reflective measurement model in measuring multidimensional (second-order) marketing constructs. This indicates that there may be a risk of misspecification in multidimensional (second-order) marketing

constructs without exhaustive thinking upon their nature. When marketing researchers specify their multidimensional (second-order) marketing constructs without sufficient thinking about whether the nature of their constructs requires a formative or a reflective measurement model, the psychometric properties of their findings may be suspect. Though reflective operationalization of latent constructs is commonplace in the behavioral and the social sciences (Coltman et al. 2008), for proper psychometric measurement, marketing researchers should accurately specify their measurement model through reflection over the nature of their constructs. Although there is work in the literature in which researchers discuss the measurement model before operationalizing their second-order latent constructs in either a formative or a reflective way (Dogan, 2018), there is also considerable unresponsiveness to the need to explore the conceptual nature of marketing constructs before operationalizing them in research.

The misspecification of multidimensional marketing constructs

Marketing researchers need to perform the specification of their research models in two steps. First, they need to have prior expectations about the existence and directions of the relationships among their latent constructs. When researchers use multidimensional scales to measure these latent constructs, the models they construct should include two layers of specification, the abstract-level and the concrete-level. In the abstract-level, second (or higher) order latent constructs that compose the structural model are depicted and hypotheses are tested (Byrne 2016). In the concrete level, first-order latent constructs, which are also called dimensions or factors (Jarvis et al. 2003) are specified. The first-order latent constructs (or factors) are placed in the intersection of the structural and the measurement model. In the measurement model, researchers are expected to specify the measurement-related part of their research models (Bollen and Noble 2011); that is, they should define which scale items are going to measure which first-order constructs in the measurement model. Overall, model specification includes the phil-

osophical, theoretical, and statistical thinking in which interrelationships among second-order latent constructs and the factorial structure of the first-order latent constructs are defined. In both the first and the second step, researchers need to decide whether the measurement model will be formative or reflective (Bagozzi 2011). A reflective measurement model holds the assumption that the higher-order constructs cause the lower-order constructs or scale items. In contrast, in the formative measurement model, the lower-order constructs or scale items cause the higher-order constructs (see Figure 1). If the latent construct is operationalized through the reflective (formative) measurement model while it needs to be operationalized through the formative (reflective) measurement model, there will be a misspecification problem. There is no statistical method to diagnose a misspecification problem; thus, it is safe to decide through deliberative justification (Diamantopoulos and Siguaw 2006). That is, researchers should base their decision on how to proceed through philosophical justification on why they operationalized their constructs in a reflective or a formative manner. That is, they need to rationalize, why they believe their second-order latent constructs cause the first-order constructs or vice versa and why they feel that their scale items are the causes of their first-order latent constructs or vice versa.

Fig 1. Reflective (left) and formative (right) measurement model (Bagozzi 2011).

Our search of the past issues of the Journal of Personal Selling and Sales Management showed several examples of this misspecification problem. For instance, Jaramillo et al. (2015) and Marshall et al. (2012) treated salesperson performance as a multidimensional (second-order)

latent construct with three first-order dimensions. Furthermore, they operationalized salesperson performance through a reflective measurement model. As depicted in Figure 2, salesperson performance is the cause of the three first-order constructs (dimensions) including task proficiency, proactivity, and helpfulness. Therefore, it is expected that any changes in salesperson performance will lead to a change in each of these three first-order latent constructs. Consistent with this argument, these three first-order constructs are supposed to be correlated.

Fig 2. The operationalization of salesperson performance (Jaramillo et al. 2015).

When we focus on how Jaramillo et al. (2015) operationalized salesperson performance, we conclude that there might be a misspecification problem in terms of the measurement model; that is, because salesperson performance was operationalized through a reflective measurement model, the relationships among the three dimensions are obligatorily expected. Consistent with this view, the authors found significant relationships among these three first-order latent constructs. Although the data

supported the reflective measurement model of salesperson performance, it is surprising to assume that any changes in salesperson performance will lead to changes in each dimension, i.e., task proficiency, proactivity, and helpfulness. From a theoretical point of view, this assumption is without foundation since we believe that these three dimensions should be evaluated as different facets of salesperson performance. Further examination of the conceptual meanings of these three first-order latent constructs also provides support for our argument. Task proficiency refers to the extent to which salespersons properly execute the sales task, while proactivity represents the degree to which developing and suggesting proactive actions to increase sales performance. The dimension of helpfulness represents the extent to which the salesperson helps his coworkers (Griffin et al. 2007). Although a particular salesperson might have high sales performance solely based on his or her superiority on one of these three dimensions, any changes in salesperson performance does not necessarily lead to changes in all three dimensions. Consistent with this view, these three first-order latent constructs should not be correlated. Thus, first-order latent constructs should not be the consequences of salesperson performance; Jaramillo et al. (2015) should have specified salesperson performance (a second-order latent construct) through formative measurement rather than a reflective measurement model. We assume that this misspecification problem might have arisen from a lack of comprehensive consideration of the nature of salesperson performance.

Another misspecification example in marketing research is the recently published paper on the effect of salespeople's political skill on relationship performance (Kalra et al. 2017). The authors operationalize political skill as a multidimensional (second-order) latent construct in which social astuteness, interpersonal influence, networking ability, and apparent sincerity are treated as first-order latent constructs or factors. Kalra et al. (2017) define political skill as how talented a salesperson is at sensing the political stance of the influential persons at work. Social astuteness represents the extent to which the salesperson has a good intuition about how to present herself to her coworkers, whereas interpersonal influence stands for communication effectiveness of the

salesperson. Networking ability indicates how skilled the salesperson is at building relationships with coworkers, while apparent sincerity refers to the degree to which the salesperson shows genuine interest in other people at work. Kalra et al. (2017) operationalize salespeople's political skill through a reflective measurement model. That is, they hold the view that salespeople's political skill is a multidimensional (second-order) latent construct that causes the first-order latent constructs or factors, including social astuteness, interpersonal influence, networking ability, and apparent sincerity. They find significant relationships among these four dimensions.

It is possible, however, that the authors have erroneously specified the salespeople's political skill construct. It is probably safe to argue that any changes in salespersons' political skill will not necessarily change all four first-order latent constructs. Salespeoples' political skill should be treated similar to an index because the four dimensions represent the different facets of it. Furthermore, significant relationships among the four dimensions do not necessarily verify the proper usage of the reflective measurement model. These significant relationships may, in fact, be stemming from such causes as survey response styles, rather than the reflective nature of the latent construct.

As these examples show, marketing researchers should not blindly operationalize their multidimensional (second-order) marketing constructs through reflective measurement models. They should instead provide a conceptual justification for the operationalization of their marketing constructs in their measurement model or rationalize their formative measurement model. They should also remember that the significant relationships among the first-order latent constructs or dimensions are not necessarily sufficient to justify the adoption of the reflective model. The significant relationships might be engendered by extreme response styles (Bachman and O'Malley 1984) or simply careless responding (Dogan 2018). Thus, the specification of the multidimensional (second-order) latent constructs should be based on philosophical rationalization of the nature of the construct.

One way to overcome this frequently encountered problem in marketing research is through the adoption of the MIMIC model (Bagozzi et al. 1981). In the next section, we discuss how this solution alternative may be applied in marketing research in the structural equation modeling (SEM) platform.

Dealing with the misspecification problem of multidimensional marketing constructs

Multiple Indicators Multiple Causes (MIMIC) Model

Structural equation modeling is the statistical approach that makes testing theoretical models and the hypotheses embedded in them through the examination of the fitness between the data and the focal model (Kline 2015). When researchers build their research models, they specify which of their variables in those models will be dependent and independent, and which of the links between those variables will be estimated (Bagozzi and Yi 2012).

In the covariance-based SEM, the fitness between the data and the model is tested based on the covariance-matrices (Reinartz et al. 2009) and these variable matrices and the specification of the research model determine the SEM results. The covariance-based SEM approach is ubiquitous among the behavioral and social scientists because of the user-friendly nature of the AMOS and LISREL software packages. In addition, the main principle on which the covariance-based SEM approach is based is that measurement is error-loaded; therefore, measurement error should be taken fully into account while the latent constructs are being operationalized and hypotheses are tested (Bagozzi 2011). This argument is also consistent with the classical test theory, which posits that the observed score is the sum of the real score and measurement error (Nunnally and Bernstein 1994). Although covariance-based SEM provides numerous advantages when we test our models, it is not a feasible platform to operationalize our multidimensional (second-order) latent constructs through the formative measurement model. It is safe to say that there are two main problems with the operationalization of the

multidimensional (second-order) formative latent constructs in the covariance-based SEM. The first problem is the philosophical one in which the central assumption of scientific realism is violated. As discussed earlier, scientific realism accepts the presence of the latent constructs even though they are not visible (Bagozzi 2007; Psillos 2005); scientific reasoning holds the assumption that latent constructs exist even when we are not able to measure them (Borsboom et al. 2003). Thus, when we specify higher-order latent constructs, they should not be caused by lower-order latent constructs or scale items.

This assumption is violated, however, when multidimensional (second-order) latent constructs are operationalized as caused by first-order latent constructs. It is inappropriate to operationalize multidimensional (second-order) formative latent constructs in the covariance-based SEM approach when violating the assumption of the a priori nature of the model's latent constructs. A second problem, statistical inaccuracy, may also arise when multidimensional (second-order) formative latent constructs in the covariance-based SEM are operationalized. Specifically, although it is possible to specify multidimensional (second-order) formative latent constructs in the covariance-based SEM, this specification might lead to statistical conclusions that were not expected (Bagozzi 2011; Howell et al. 2007). To illustrate these two problems, we are going to give a fictitious example depicted in Figure 3.

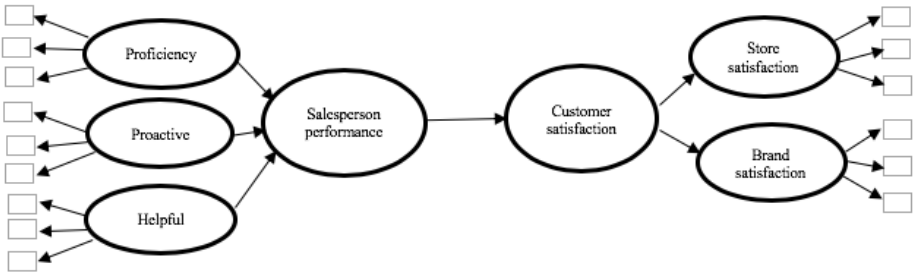

Fig 3. Fictitious research model.

In Figure 3, salesperson performance and customer satisfaction are multidimensional (second-order) latent constructs. Furthermore, salesperson performance is operationalized by formative measurement reasoning, i.e., that it is caused by three first-order latent constructs,, proficiency, proactivity, and helpfulness. On the other hand, customer satisfaction is operationalized by a reflective measurement model in which store satisfaction and brand satisfaction are the first-order constructs or factors. The main purpose of this research model is to test whether salesperson performance influences customer satisfaction. In case we analyze this exact model in the covariance-based SEM, our results will be under the threat of statistical inaccuracy. As previously discussed by Bagozzi (2011), this model, in essence, would be statistically equivalent to the model depicted in Figure 4.

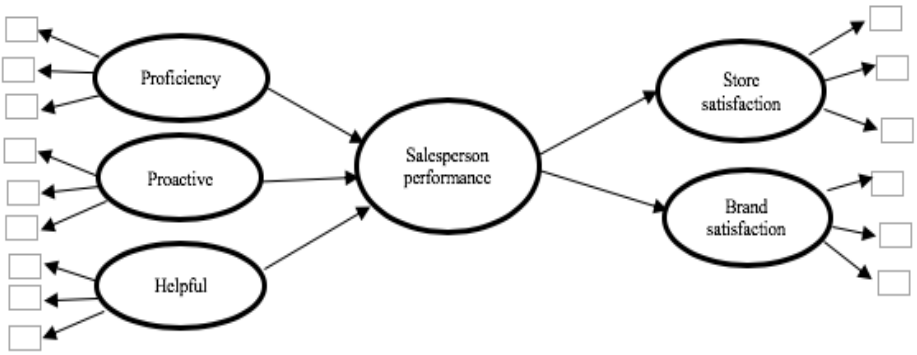

Fig 4. Statistically equivalent research model.

Because the models depicted in Figures 3 and Figure 4 are statistically equivalent, the researchers would be testing two models, i.e., the intended model and an equivalent model. This duality prevents the researcher from conducting convergent and discriminant validity tests of salesperson performance because that construct is operationalized through formative measurement reasoning. If the SEM perceives store satisfaction and brand satisfaction as dimensions of salesperson performance, the latent presence of customer satisfaction will be ignored by the statistical algorithm. In this case, it is impossible to conduct convergent and dis-

criminant validity tests between salesperson performance and customer satisfaction because the presence of the latter construct is ignored; that is, convergent and discriminant validity tests will be invalid. In sum, when we operationalize our multidimensional (second-order) formative latent constructs in the covariance-based SEM, we should not follow the specification process we use when we operationalize our multidimensional (second-order) reflective latent constructs. To help solve this problem, Bagozzi et al. (1981) developed the Multiple Indicators Multiple Causes (MIMIC) Model, which we suggest is a solution to the misspecification problem of multidimensional (second-order) sales constructs.

According to the MIMIC model (Bagozzi et al. 1981), multidimensional (second-order) formative latent constructs should be simultaneously operationalized through formative and reflective measurement reasoning in the covariance-based SEM. As shown in Figure 5, multidimensional (second-order) formative latent constructs should not only be caused by formative measures, but they should also be caused by two or more reflective measures. This helps solve two problems we mentioned earlier. First, the MIMIC model will remove the philosophical discrepancy which stems from the operationalization of multidimensional (second-order) formative latent constructs by assuming the a priori existence of the multidimensional (second-order) latent variable. In particular, this is achieved thanks to adding reflective measures to the latent variable. Secondly, the MIMIC model will rule out the statistically equivalent model, therefore, validity tests will be conducted safely (Bagozzi 2011).

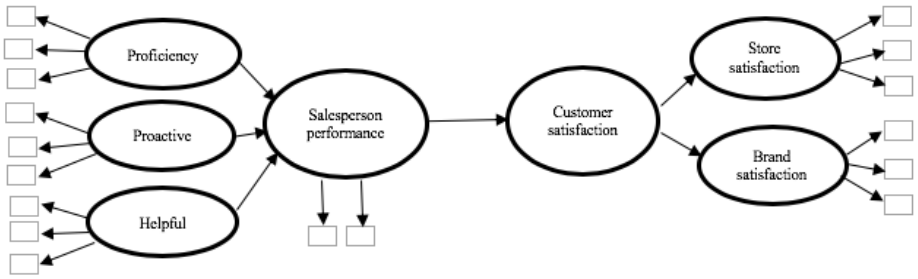

Fig 5. The MIMIC model.

To convert our multidimensional (second-order) formative latent model into the MIMIC model, we only need to add two or more reflective measures to our latent construct (Bagozzi et al. 1981; Lee et al. 2013). These reflective measures should help capture the multidimensional (second-order) nature of our latent construct as much as possible. For instance, 'I am satisfied with the performance of this salesperson' and 'This salesperson's performance is good' are two universal, reflective items that should help capture the essence of salesperson performance. The MIMIC model should also inspire marketing researchers to think more thoroughly about the nature of their second-order latent constructs prior to data collection. This should assure proper design of their reserch, the research instruments they construct, the data they will collect, and their research findings.

Discussion

In this paper, we call attention to a critical problem in social science research: misspecification of research constructs, the measurement of their relationships, and the resulting potentially erroneous research findings. In this broader context, we focus specifically on the operationalization of multidimensional (second-order) latent constructs in the sales literature. By discussing two examples from that literature, we show that marketing researchers sometimes mistakenly operationalize their multidimensional (second-order) latent constructs through reflective measurement reasoning when in fact operationalization of their measures through a formative measurement model would be more appropriate. We also suggest that, to help in gaining greater statistical rigor, researchers would be wise to pay greater attention to the conceptual nature of their multidimensional (second-order) latent constructs before they begin their research.

After deciding on the latent or reflective nature of their constructs, researchers should also plan on how they will be operationalizing these in the covariance-based SEM. In this paper, we suggest that the MIMIC approach (Bagozzi et al. 1981; Bagozzi 2011) may be an appropriate way to operationalize multidimensional (second-order) formative latent constructs in the covariance-based SEM.

Our paper makes at least two contributions to the marketing literature. First, though the misspecification of multidinensional latent constructs has been studied in the psychology and the social pyschology literatures recently (Borsboom et al. 2003; MacKenzie et al. 2005; Howell et al. 2007; Bagozzi 2007), our paper brings this discussion to the marketing literature by underscoring its significance in marketing research. It should extend the more recent marketing studies that have had to specify their constructs as formative or reflective and have used covariance based SEM (Aguirre-Urreta et al. 2016; Allison et al. 2016; Hollett-Haudebert et al. 2011; Rodriguez et al. 2012). Second, we underscore the significance of construct specification reasoning before research design. Since research models reflect the particular thinking of the researchers in conceptualizing their constructs and the relationships that define their worldview of the nature of their phenomena, the particular ways in which they specify their constructs, whether formative and reflective, will help open up new ways of looking at these fueling future research. Thus, our paper should inspire future research that will lead to methodologically sounder research findings by shedding light on a critical problem in marketing research (misspecification of formative latent constructs) and by suggesting a methodological panacea (the MIMIC approach) to help cope with it.

Araştırma ve Yayın Etiği Beyanı

Bu araştırma, bilimsel araştırma ve yayın etiği kurallarına uygun gerçekleştirilmiştir.

Yazarların Makaleye Katkı Oranları

Bu çalışma tek yazarlıdır.

Destek Beyanı

Bu araştırma herhangi bir kurum veya kuruluş tarafından desteklenmemiştir.

Çıkar Beyanı

Bu araştırma herhangi çıkar çatışmasına konu değildir.

Kaynakça

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Genişletilmiş Özet

Pazarlama araştırmasında ölçüm: Çok boyutlu gizil yapıların hatalı operasyonelleştirilmesi ve çözüm yolu

Bu yazıda, sosyal bilim araştırmalarındaki kritik bir soruna dikkat çekilmektedir. Araştırmalarda yer alan gizil yapıların yanlış tanımlanması, ilişkilerinin yanlış operasyonelleştirilmesi ve bunun sonucunda ortaya çıkan potansiyel olarak hatalı araştırma bulguları bu çalışmanın ana tartışma noktalarını oluşturmaktadır. Örnek olması açısından, satış literatüründeki çok boyutlu (ikinci dereceden) gizli yapıların operasyonelleştirilmesine odaklanılmaktadır. Bu literatürden iki örnek tartışılarak, pazarlama araştırmacılarının bazen yanlışlıkla çok boyutlu (ikinci dereceden) gizli yapılarını yansıtıcı ölçüm mantığı yoluyla operasyonel hale getirdikleri, oysa gerçekte ölçümlerinin oluşturucu bir ölçüm modeli aracılığıyla operasyonelleştirilmesinin daha uygun olacağı gösterilmektedir. Ayrıca, daha fazla istatistiksel netlik kazanmaya yardımcı olmak için araştırmacıların, araştırmalarına başlamadan önce çok boyutlu (ikinci dereceden) gizli yapılarının kavramsal doğasına daha fazla dikkat etmelerinin akıllıca olacağı da önerilmektedir.

Araştırmacılar, gizil yapılarının/değişkenlerinin oluşturucu veya yansıtıcı doğasına karar verdikten sonra bunları kovaryansa dayalı SEM'de nasıl işlevsel hale getireceklerini de planlamalıdırlar. Bu yazıda, MIMIC yaklaşımının, kovaryansa dayalı SEM'de çok boyutlu (ikinci dereceden) oluşturucu gizli yapıları operasyonelleştirmenin uygun bir yolu olabileceği önerilmektedir.

Bu metodolojik yazı, pazarlama literatürüne iki temel katkı sağlamaktadır. Birincisi, çok boyutlu gizil yapıların yanlış tanımlanması son zamanlarda psikoloji ve sosyal psikoloji literatüründe çalışılmış olsa da, makalemiz bu tartışmayı pazarlama araştırmasındaki önemini vurgulayarak tekrar metodolojik açıdan gündeme getirmektedir. Gizil yapılarını/değişkenlerini oluşturucu veya yansıtıcı olarak belirlemek zorunda olan ve kovaryans temelli SEM'i kullanan pazarlama çalışmalarının ilerlemesinin önü bu çalışma ile açılmaktadır. İkinci olarak, araştırma tasarımından önce gizil yapı/değişken operasyonelleştirilmesi mantığının öneminin altı bu metodolojik yazı ile çizilmektedir. Araştırma modelleri, araştırmacıların kendi yapılarının ve olgularının doğasına ilişkin dünya görüşlerini tanımlayan ilişkileri kavramsallaştırmadaki özel düşüncelerini yansıttığından, ister oluşturucu ister yansıtıcı olsun, yapılarını operasyonelleştirmedeki pratikleri yeni metodolojik açıdan gelişimin önünü açacaktır. Bu nedenle, bu metodolojik yazı, pazarlama araştırmasındaki kritik bir soruna

(aslında oluşturucu doğaya sahip olan gizil yapıların yansıtıcı şekilde operasyonelleştirilmesi) ışık tutarak ve bu sorunla başa çıkmaya yardımcı olacak metodolojik çözümü (MIMIC yaklaşımı) önererek, metodolojik olarak daha sağlam araştırma bulgularına yol açacak gelecekteki araştırmalara ilham vermektedir.