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The role of organismic integration theory in marketing science: A systematic review and research agenda

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ABSTRACT

Researchers have repeatedly applied the same models/theories to predict consumer behaviour, whereas theories that have been extensively used to promote motivation are disregarded in marketing science. For instance, organismic integration theory (OIT) is a prominent theory of human motivation that provides a framework for categorizing customers' regulatory styles into different forms of motivational regulations, which could be used in marketing as customers can be motivated to engage in behaviour for a diverse array of reasons. Therefore, we aim to enrich the field of marketing by reviewing extant knowledge on OIT, noting tensions and inconsistencies, and identifying important gaps with reference to how the constructs underpinned by OIT have been applied and what research themes, contexts, and methodologies have been carried out. With this aim in mind, we reviewed three decades of research between 1991 and 2020, outlined underdeveloped and emerging marketing issues, and set comprehensive research agendas (presented as testable propositions).

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1. Introduction

The concept of motivation may be traced to an early study by [Cofer and Appley \(1964\)](#) in which they cited the work of [Maslow \(1943\)](#). From that point, motivation was viewed in terms of a paradigm shift in the management and organizational behaviour literature of both academicians and market practitioners. Today, it holds a key position not only in the fields of organizational behaviour and management but also in the areas of marketing and consumer psychology. Marketing scientists have adopted many behavioural theories and models to understand customers' motivation. For instance, the Pavlovian model ([Pavlov, 1927](#)), the input–process–output model ([Waldorf, 1962](#)), the family decision-making model ([Pollay, 1968](#)), the consumer decision model ([Engel et al., 1968](#)), and the theory of buyer behaviour ([Howard & Sheth, 1969](#)) are considered pioneering theories in marketing research, followed by the theory of reasoned action ([Fishbein & Ajzen, 1975](#)), the service quality model ([Parasuraman et al., 1985](#)), the

hierarchical model of attitude ([Peffley & Hurwitz, 1985](#)), the theory of planned behaviour ([Ajzen, 1985](#)), and the theory of trying ([Bagozzi & Warshaw, 1990](#)). Later, in the early 2000s, the model of goal-directed behaviour ([Perugini & Bagozzi, 2001](#)) and the technology acceptance model ([Davis, 1989](#)) have captured the attention of marketing scholars globally.

Thousands of studies have been published to date, many of which attempt to predict consumer behaviour by using the same traditional theories and models ([Alzahrani et al., 2019](#); [Judge et al., 2019](#)). However, the usefulness of these behavioural theories is limited by the conclusions and criticisms that come from many fronts and on many grounds ([Cheung et al., 2017](#); [Webb et al., 2013](#)). It is quite surprising to learn that the aforementioned theories do not address the valence to behaviours – for example, behaviour in response to controlling events and behaviour in response to informational events ([Deci & Ryan, 2008](#); [Leavell, 2017](#)). [Deci & Ryan \(1985a\)](#) described controlling events as activities in which consumers engage, not for the sake of the activity itself, but rather to fulfil external demands. For example, a husband who works solely to support his family in a job he dislikes would be a response to a controlling event. Although he is choosing to go to work every day, he is bound to do so and has no other option. Informational events, on the other hand, are events or activities that support the

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interest, aims, desires, and goals of the individual. For instance, imagine that the same husband mentioned above receives another offer for a job he really loves and enjoys doing. His decision to change jobs would be in response to informational events because the new job supports his aims and aspirations. In the former scenario, he is bound to work; in the latter, he feels fulfilment in his work. Such a phenomenon cannot be captured and addressed through traditional theories and models of behaviour (Gilal et al., 2019).

Moreover, it is further noted that the theories mentioned above mainly have a general extrinsic focus, but they do not provide a framework for the classification of different types of extrinsic motivation (Hagger & Chatzisarantis, 2009). Research suggests that different types of extrinsic motivation can not only be distinguished but also applied in different life domains to account for a diverse array of reasons why people engage in certain behaviours (Ryan & Deci, 1985). For instance, a woman may be motivated to buy a Porsche Boxster car because of her inherent passion for luxury sports cars –i.e. she enjoys automobiles and loves to try new luxury sports cars as part of her hobby (intrinsic/integrated motivation); or because she is convinced that it will offer her unmatched comfort, unique experiences, and top-level performance (identified motivation); or because she wants to boost her self-esteem, uplift her social life to the next level, or gain approval or appreciation from others by showing off, to let her friends and relatives know that she is extremely rich and has reached a personal milestone (introjected motivation); or due to pressure from a friend or a spouse to actively maintain a high level of social prestige in the privileged society in which she lives, e.g. as most of her friends are super elites and have fantastic high-end luxury cars (external motivation). These different motivation types are applicable in marketing research as consumer behaviours are influenced to a great extent by these motivational factors. Such marketing issues cannot be addressed by the above-mentioned traditional theories and models of behaviour.

Despite these limitations, prominent theories that are actually capable of explaining customers' motivations have been disregarded in marketing science (Gilal et al., 2019). Therefore, now is the right time to borrow some theories from a discipline such as psychology, which not only helps marketing researchers to better understand customers' motivations but also serves as a foundation for future research in marketing science. In line with these rationales, we introduce OIT as an alternative way of looking at customers' motivations in the marketing domain. OIT is a motivational paradigm that categorizes customers' regulatory styles into different forms of motivation (i.e. intrinsic/integrated, identified, introjected, and external) that provide a framework to understand why customers engage in certain behaviours (Ryan & Deci, 2000). We firmly believe that OIT is a well-developed theory that deals with the motivation behind the choices customers make to satisfy needs and wants. Understanding customers' motivations to fulfil needs, wants, and desires is the core of the marketing concept (Leavell, 2017). Therefore, we believe that many, if not most, products and services are purchased because of customers' motivations (Gilal et al., 2020). OIT categorizes extrinsic motivations into types that differ in their degree of autonomy; this is the comparative advantage of the OIT theory over other relevant alternatives, which we believe helps researchers address a wide array of marketing issues. Such a paradigm offers a theoretical framework for understanding consumer behaviour.

A significant body of knowledge has been published on OIT, which addresses motivation in the fields of management (Gagné et al., 2019), physical sports and exercise (Hurst et al., 2017), medical education (Guay et al., 2010), mental health (Ryan et al., 2000), romantic relationships (Tóth-Király et al., 2019), religion (Mazidi & Ostovar, 2006), and public service administration and

politics (Losier et al., 2001). Despite a promising beginning and the strong empirical foundations of OIT, relatively little is known about OIT in marketing science. Therefore, we aim to introduce OIT in marketing science as an alternative way of looking at customers' motivations. We also intend to inspire OIT research by identifying key research gaps based on how the constructs underpinned by OIT have been utilized, what research themes and contexts have been looked at, and what methodologies have been applied. To achieve this purpose, we review research on OIT spanning the three decades between 1991 and 2020, look at different marketing domains where OIT seems particularly promising in addressing issues that are currently underdeveloped or emerging, and present testable propositions that set fruitful agendas for future research in different areas of marketing with reference to new research methodologies, sampling designs, and analysis methods.

The remainder of this review is organized as follows. A detailed description of the boundaries set for our theory-based review (i.e. the inclusion and exclusion criteria of the articles) is provided in the methodology section. In section 3, we present the six research questions, and then we provide a brief overview of the basic concept and assumptions of OIT. Likewise, an in-depth review of the OIT studies (i.e. targeted publication outlets, publication trends, countries studied, research context studied, research design, sampling technique, sample size, and data analysis technique) is provided in section 4. In sections 5 and 6, we have outlined underdeveloped and emerging research areas in marketing science and presented future research agendas in terms of testable propositions that may serve as a foundation for future research. Finally, we conclude by discussing the limitations of the present review in Section 7.

2. Theory, purpose and research questions

To guide our classic theory-based review, we first explain the basic concept and assumptions of OIT, then shift to an in-depth review of the OIT studies by considering the six major questions:

2.1. A brief overview of OIT

OIT is a theory of motivation in social contexts that offers a framework for distinguishing different types of extrinsic motivation, namely, integrated motivation, identified motivation, introjected motivation, and external motivation (Gilal et al., 2019). As exhibited in Fig. 1, these diverse multifaceted constructs (types of extrinsic motivation) within OIT are aligned on a continuum of relative autonomy or self-determination (Deci & Ryan, 1985b). On the self-determined end of this continuum is intrinsic motivation, while at the other end of the continuum is amotivation, reflecting a state in which individuals lack the motivation to engage in behaviour. Extrinsic motivation is aligned between intrinsic motivation and amotivation on a continuum of self-determination. The more internalized the extrinsic motivation, the more self-determined the person is going to be when enacting the behaviours (Wasserkampf & Kleinert, 2016). Identified motivation and integrated motivation are highly self-determined regulatory styles, while external motivation and introjected motivation are the most controlled regulatory styles (Osei-Frimpong, 2019). Integrated motivation is often correlated with intrinsic motivation, and in many marketing studies, it has been combined into composites to form the single variable of intrinsic motivation (Teng et al., 2020). Therefore, we refer to integrated motivation as intrinsic/integrated motivation throughout this manuscript.

Intrinsic/integrated motivation, the highest level of autonomous motivation, is not only characterized by integrating one's core values and sense of self (Truong et al., 2010) but it also reflects

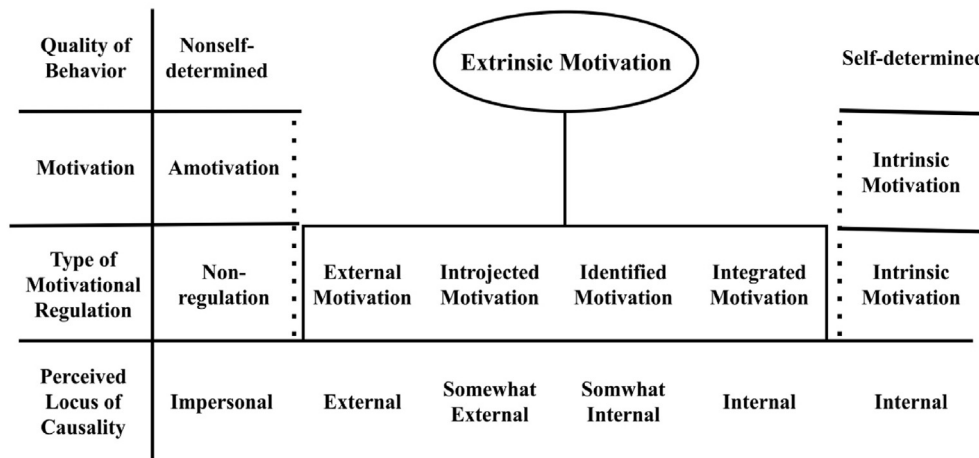


Fig. 1. Organismic integration theory's continuum of motivation.

behavioural engagement that is inherently undertaken for the pleasure, enjoyment, vitality, and interest derived from the behaviour itself (Osei-Frimpong, 2017; Zhao & Zhu, 2014). For instance, a woman may be inspired to buy a Porsche Boxster because of her inherent passion for luxury sports cars, i.e. she enjoys automobiles and loves to buy new luxury sports cars as part of her hobby. Likewise, identified motivation occurs when one acknowledges the importance of the activity and believes that the activity or behaviour is congruent with one's personal goals (Back, Lee, & Stinchfield, 2011). For instance, continuing with the previous example, a woman may be inclined to buy a Porsche Boxster because she is convinced that it is going to provide her with unmatched comfort, unique experiences, and top-level performance. In a similar vein, introjected motivation is exhibited when one engages in behaviour to avoid feelings of anxiety, shame, or guilt, or to support ego-enhancement and gain approval or praise from others (Deci & Ryan, 1985b). For instance, the woman mentioned above may be inspired to buy a Porsche Boxster because she wants to boost her self-esteem and uplift her social life to the next level, or to gain approval or appreciation from others by showing off to let her friends and relatives know that she is rich and has reached a personal milestone. Finally, external motivation is the most controlled form of extrinsic motivation, in which one may engage in behaviour to avoid punishment (Deci & Ryan, 1985b), satisfy external demand (Teng et al., 2020), obtain external rewards, or comply with social pressures (Murphy & Taylor, 2019). For instance, the woman may be motivated to buy a Porsche Boxster because of her friends and relatives' influence, or she may be enthused to buy a Porsche Boxster to maintain a high level of social prestige in the privileged society in which she lives, for example, if most of her friends are elites and have high-end luxury cars.

2.2. Research questions

Likewise, to guide our review of studies, we considered six major questions which helped us synthesize the research in marketing under OIT, thereby enabling us to identify the past, present, and future of OIT research in marketing science.

- RQ1: What journals publish OIT research in the marketing domain? (publication outlets)
- RQ2: How many peer-reviewed studies have been published on OIT and/or are being published each year? (publication trends of OIT research)

- RQ3: What countries are using OIT in the marketing domain? (countries studied)
- RQ4: What research areas have been studied? (i.e. a description of the research areas/themes)
- RQ5: What research methodologies, such as research designs, sampling technique, sample size, and statistical data analysis techniques, have been applied?
- RQ6: How have the constructs underpinned by OIT (e.g. intrinsic/integrated, identified, introjected, extrinsic motivational regulations) been used in marketing research, and what marketing issues have been addressed? (description of the dependent, independent, mediating, and moderating variables).

3. Review methodology

Systematic literature review articles come in several forms (Paul & Criado, 2020; Williams et al., 2020) and can be classified as structured reviews (Dhaliwal et al., 2021; Paul & Feliciano-Cestero, 2020; Paul & Singh, 2017; Rebouças & Soares, 2020; (Gilal et al., 2021); Mishra, Singh & Koles, 2020; Åberg et al., 2019), framework-based reviews (Paul, 2020; Paul & Benito, 2018), bibliometric reviews (Donthiy et al., 2020; Pattnaik et al., 2020), hybrid reviews (Dabić et al., 2020), reviews aimed at theory development (Paul, 2018), method-based reviews (Ali et al., 2018), meta-analytical reviews (Rana & Paul, 2020), and theory-based reviews (Gilal et al., 2019). We adopt a theory-based approach in this paper to demonstrate the importance of OIT and how it plays an important role in marketing science.

3.1. Article search strategy

Based on the guidelines for developing insightful and credible reviews (de Araújo Lima et al., 2020; Hulland & Houston, 2020), we used two criteria to select peer-reviewed journal articles. First, we restricted the search to peer-reviewed publications from journals indexed in the Social Sciences Citation Index (SSCI), containing keywords/search terms such as 'organismic integration theory' OR 'intrinsic motivation and consumer behaviour' OR 'identified motivation' OR 'introjected motivation' OR 'extrinsic motivation' AND 'external motivation' OR 'self-determination theory' in the title, abstract, or keywords. Second, we restricted the search to journals within the Australian Business Deans Council (ABDC) classification (ABDC, 2019) and initially downloaded all the publications ranked 'B' and above in ABDC, as recommended by Hao et al. (2019).

3.2. Article screening and eligibility criteria

The whole computerized search strategy produced 297 articles in both marketing and non-marketing journals. Based on the guidelines for developing insightful theory-based review, the obtained publications were screened or refined based on six criteria. First, based on the initial screening, we removed duplicated articles: out of 297 downloaded articles, 47 duplicated documents were removed. Second, we filtered out irrelevant non-marketing articles (i.e. not directly focused on the usage of OIT in marketing science) based on an in-depth reading of the title, abstracts, and keywords. Third, we filtered out non-empirical articles based on an in-depth reading of the full-text articles. Fourth, we retained peer-reviewed articles conducted through the lens of OIT in different marketing domains, including articles from sports marketing, education marketing, health marketing, brand management, consumer behaviour, and so on. Fifth, we retained peer-reviewed publications from journals ranked 'B' and above in ABDC and SSCI with an impact factor above 1.00 (2019 Clarivate Analytics Journal Citation Report) to ensure the inclusion of all quality publications carried out by researchers under the theoretical lens of OIT (Hulland, 2020). Finally, we excluded conference proceedings, commentaries, editorial viewpoints, book chapters, and papers written in languages other than English. The final list comprised 39 peer-reviewed articles, published in 32 well-recognized premier journals between 1991 and 2020, which were considered eligible for inclusion in the present theory-based review. See Fig. 2 for more details on the article screening and eligibility criteria.

4. Findings and reflections

Based on the research questions highlighted above, we first provide an in-depth review of OIT studies with reference to the publication outlets targeted, historical trends in publication, the countries studied, the research context examined, research design methodologies, sampling techniques, sample size, and data analysis techniques. Accordingly, we identify gaps with reference to the above-mentioned areas, outline underdeveloped and novel research questions, and present propositions that may serve as a foundation for future research in marketing science.

4.1. Publication outlets/journals

We further evaluated the distribution of articles by the journal. The 39 peer-reviewed publications on OIT in marketing reflect the three decades of research that were covered in 32 renowned journals. Table 1 further shows that the *Journal of Environmental Psychology* (n = 4), *Computers in Human behavior* (n = 3), and *Psychology of Sport and Exercise* (n = 3) published the most research output. The remaining twenty-nine journals took up equal shares of the research output and each published a single research article on the constructs underpinned by OIT. The distribution of articles throughout a wide range of journals indicates the diverse interests of marketing scholars. Our analysis of journals further indicates that out of 32 journals included in our review, 18 articles were published in 'A*' or 'A'-ranked journals. Seven articles were published in journals ranked either 'B' or 'C' with ABDC, and the remaining articles appeared in non-ABDC-ranked SSCI journals with an impact factor of 1+.

4.2. Publication trends

We evaluated the number of articles that have borrowed insights from and/or used OIT as a theoretical lens in the marketing domain since inception (i.e. over the last 25 years). As reflected in

Table 2 the trend for using OIT in marketing research is very thin (only 39 studies), suggesting that there has been very little research utilizing intrinsic/integrated, identified, introjected, and external motivation regulations underpinned by OIT, specifically, over the 25 years. The average number of articles published per year is 1, indicating that little effort has been made by marketing researchers to understand consumer behaviour through the lens of OIT. Our analysis, presented in Fig. 3 further suggests that the number of articles that borrowed insights from OIT to address marketing issues increased year by year after 2009. Publication trends show that OIT is a newly emerged theory that has gained traction in the marketing domain in the last decade. In light of the above, we believe that OIT is increasingly attracting the interest of marketing scholars and that more research will be released in upcoming years on the roles and goals of OIT in marketing science.

4.3. Countries studied

In the last three decades, a majority of the marketing research under the theoretical lens of OIT was conducted in Canada (n = 8), followed by China (n = 4), the USA (n = 4), Pakistan (n = 4), Taiwan (n = 3), Australia (n = 2), the UK (n = 2), Ghana (n = 2), and India (n = 2), while the remaining eight countries examined were the Netherlands (n = 1), Denmark (n = 1), Belgium (n = 1), France (n = 1), Poland (n = 1), South Korea (n = 1), Israel (n = 1), and Mozambique (n = 1). Table 2 further suggests that out of thirty-nine (39) articles included in our review, thirty-eight articles drew the sample from a single country, while only one study recruited participants from multiple countries (Viinai-Yavetz & Levina, 2018). In line with the findings within the countries studied, it is clear that OIT research in marketing science has evolved considerably in the last three decades with reference to the areas covered. Considering the importance of OIT in marketing science, more cross-cultural as well as country-specific research needs to be undertaken to provide an in-depth understanding regarding the role OIT can play in marketing science.

4.4. Research areas

Further review of the existing studies reveals the seven different sub-fields of marketing in which OIT appeared robust in addressing marketing issues. Table 3 shows that OIT was intensively borrowed by branding and consumer scholars (Chang et al., 2016; De Groot & Steg, 2010; Grønhoj & Thøgersen, 2017; Osbaldiston & Sheldon, 2003; Razmus et al., 2017; Tandon et al., 2020; Truong et al., 2010). Specifically, the majority of studies were conducted in the domain of brand management and consumer behaviour (n = 14, 35.90% of total articles), which covered a wide range of topics such as customers' preference for luxury brands, online shopping behaviour, green consumption behaviour, airline brand adoption, brand passion for luxury clothing, brand engagement in self-concept, consumers' pro-environmental behaviour, and buying behaviour for organic food. Likewise, Table 3 further suggests that OIT plays an important role in addressing a wide range of issues in social media marketing (n = 6, 15.38% of total articles), sports marketing (n = 6, 15.38% of total articles), service marketing (n = 5, 12.82% of total articles), education marketing (n = 3, 7.69% of total articles), tourism & hospitality management (n = 3, 7.69% of total articles), and political marketing (n = 2, 5.13% of total articles). In light of the above, it is clear that OIT is a well-developed marketing theory that appears highly promising and provides a framework for addressing a wide range of marketing issues. Thus, considering the importance of OIT in marketing science, more research is needed in different marketing domains such as tourism & hospitality management, consumer behaviour, service marketing, education marketing, and so on.

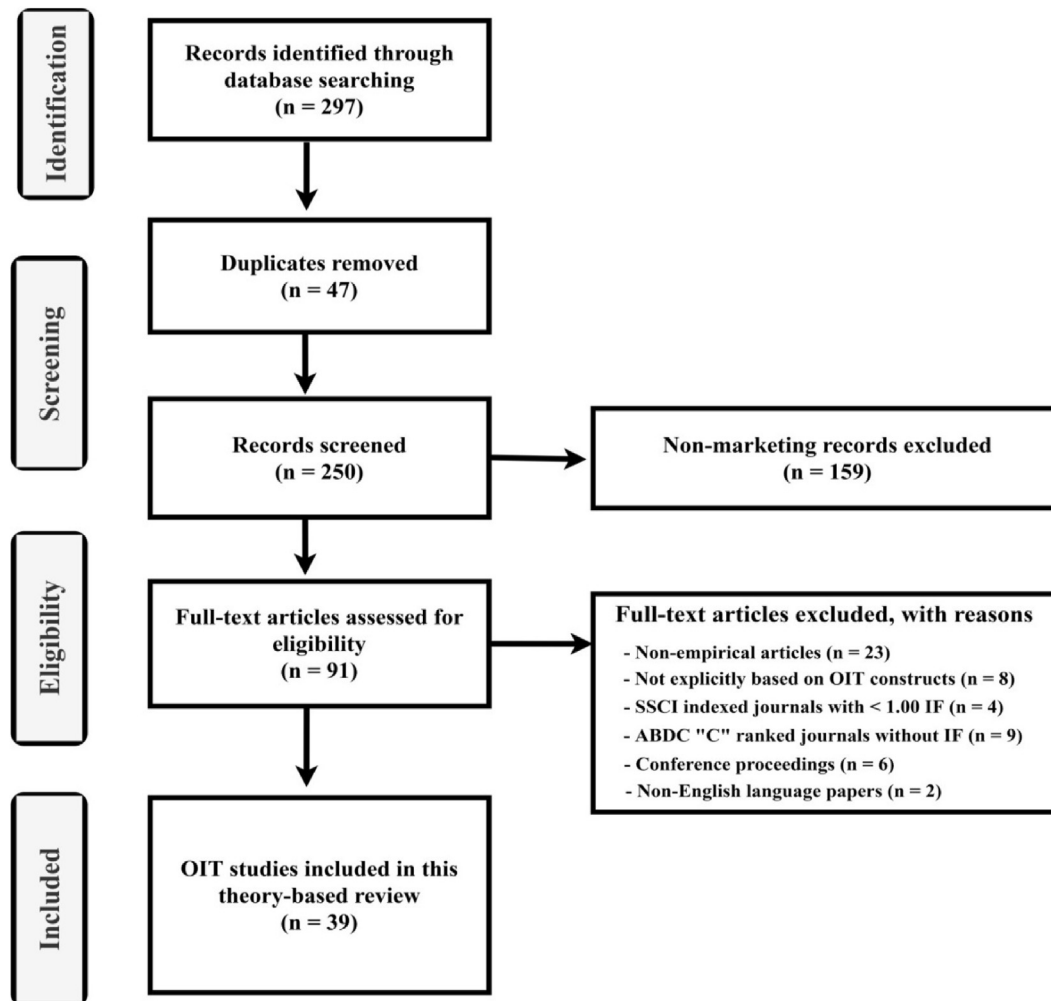


Fig. 2. Overview of the article screening and eligibility criteria.

4.5. Research design

In line with guidelines for developing insightful theory-based review papers (Hulland, 2020; Paul & Criado, 2020), we further evaluate the main research design methodologies used in the studies analysed, including main research designs, data analysis methods, sampling methods, and sample size.

4.5.1. Research design methodologies

As presented in Table 4, by far the most widely used research design methodology in OIT research is the field survey ($n = 35$), which accounts for 89.74% of the total number of published OIT studies in marketing. This analysis shows that field surveys dominate OIT research in marketing science. Likewise, our analysis further reveals experimental design ($n = 3$) to be the second most widely used design methodology in the OIT literature, followed by mixed-method design ($n = 1$); these account for 7.69% and 2.56% respectively. To our surprise, naturalistic observation, case study, and correctional design each show a frequency of zero, indicating that OIT is a newly emerged marketing theory that has trivially captured the attention of marketing scholars. In light of the above gaps, we have explained in detail, in the 'going forward' section, why and how the aforementioned research design methodologies could be used in different subfields of marketing (e.g. social media marketing, tourism & hospitality management, service marketing,

education marketing, and so on) to address a wide range of marketing issues.

4.5.2. Data analysis methods

In terms of statistical methods, our analysis suggests that structural equation modelling ($n = 23$) is the most popular method used in OIT research, accounting for 58.97% of total published studies. Likewise, as shown in Table 5, hierarchical multiple regression ($n = 5$) appeared to be the second most popular data analysis method, followed by exploratory/confirmatory factor analysis ($n = 4$), path analysis ($n = 1$), ANCOVA/MANCOVA ($n = 1$), ANOVA ($n = 1$), multi-group modelling ($n = 1$), polynomial regression ($n = 1$), cluster analysis ($n = 1$), and parallel mediation analysis ($n = 1$). From a review of the existing literature, we observe that many contemporary statistical data analysis methods have been ignored by researchers. Therefore, considering the importance of OIT in marketing science, we propose new statistical analysis methods (multi-group modelling, cluster analysis, multi-level modelling, latent profile analysis, moderated moderated-mediation analysis, and serial mediation analysis) in the 'going forward' section to implement in OIT research. We have also elaborated on why and how those analysis methods could be used under the lens of OIT to address a wide range of marketing issues.

Table 1
Articles included in this review.

Journal Name	Number of articles	Clarivate Analytics IF	ABDC References
Journal of Environmental Psychology	4	3.301	N/A Osbaldiston& Sheldon (2003).; De Groot and Steg (2010). Grønhoj and Thøgersen (2017); Baxter and Pelletier (2020).
Psychology of Sport and Exercise	3	2.827	N/A Wilson and Rodgers (2004); Pelletier et al. (1998); Murphy & Taylor (2019)
Computers in Human Behavior	3	5.003	A Feng et al. (2016); Kim and Drumwright (2016); Vilnai-Yavetz and Levina (2018)
Educational and Psychological Measurement	1	1.941	A Vallerand et al. (1992)
Journal of Personality and Social Psychology	1	6.335	A* Koestner, Losier, Vallerand, & Carducci (1996)
Journal of Applied Social Psychology	1	1.537	B Pelletier et al. (1998)
Journal of Research in Personality	1	2.767	A Losier et al. (2001)
British Journal of Educational Psychology	1	2.506	N/A Standage et al. (2005)
Journal of Business and Psychology	1	3.289	A Lin et al. (2009).
Journal of Product & Brand Management	1	2.018	A Truong et al. (2010)
Journal of Gambling Studies	1	2.836	A Back et al., (2011)
Journal of Sport and Exercise Psychology	1	2.434	N/A Brunet et al. (2012)
Online Information Review	1	1.805	B Zhao and Zhu (2014)
Psychology & Marketing	1	2.37	A Sweeney et al. (2014)
International Journal of Culture, Tourism and Hospitality Research	1	N/A	B Chang et al. (2014)
European Journal of Marketing.	1	1.716	A* White, C. (2015)
Journal of Service Theory and Practice	1	3.512	A Osei-Frimpong, K. (2017)
Information Technology & People	1	2.495	A Chang et al. (2016)
Internet Research	1	4.708	A Tang et al. (2016)
Personality and Individual Differences	1	2.311	A Razmus et al. (2017)
Sustainability	1	2.576	N/A Sass et al. (2018)
International Journal of Contemporary Hospitality Management	1	5.667	A Zhang, Gao, Cole, & Ricci (2019)
Sustainable Development.	1	4.082	C Gilal et al. (2019)
International Journal of Information Management,	1	8.210	A* Wang et al. (2019).
International Journal of Retail & Distribution Management	1	2.321	A Osei-Frimpong (2019)
European Journal of International Management	1	2.145	C Gilal et al. (2019)
Transforming Government: People, Process and Policy	1	N/A	B Chaurasia et al. (2019)
Journal of Consumer Behaviour	1	1.708	A Gilal et al. (2019)
Review of Managerial Science	1	3.000	N/A Gilal et al. (2020)
International Journal of Psychology	1	1.255	N/A van Egmond et al. (2020)
Service Business	1	2.169	B Teng et al. (2020)
Journal of Retailing and Consumer Services	1	4.219	A Tandon, Dhir, Kaur, Kushwah, & Salo (2020)
Total Number of Journal Articles	39		

Note: N/A = not applicable, ABDC = Australian Business Deans Council.

Table 2
Distribution of OIT studies across countries.

S.no	Country of publication	Number of articles	Percentage of the total (%)	Source of Data (Single vs. multiple country data)
1	Canada	8	21.05%	Single country data
2	China	4	10.26%	Single country data
3	United States of America	4	10.26%	Single country data
4	Pakistan	4	10.26%	Single country data
5	Taiwan	3	7.69%	Single country data
6	Australia	2	5.13%	Single country data
7	United Kingdom	2	5.13%	Single country data
8	Ghana	2	5.13%	Single country data
9	India	2	5.13%	Single country data
10	Netherlands	1	2.56%	Single country data
11	Denmark	1	2.56%	Single country data
12	Belgium	1	2.56%	Single country data
13	France	1	2.56%	Single country data
14	Poland	1	2.56%	Single country data
15	South Korea	1	2.56%	Single country data
16	Israel	1	2.56%	Multiple country data
17	Mozambique	1	2.56%	Single country data
	Total	39	100%	

4.5.3. Sampling method and sample size

From a review of the existing literature on OIT, we observe that the majority of OIT studies (35 articles in total, which account for 89.74%) have used non-probability sampling methods, which include student sampling (n = 20), purposive sampling (n = 8),

convenience sampling (n = 6), and quota sampling (n = 1). As presented in Table 6, the remaining 4 (10.26%) studies utilize probability sampling methods including stratified random sampling (n = 2) and simple random sampling (n = 2). Overall, the existing studies on OIT are heavily reliant on student sampling and

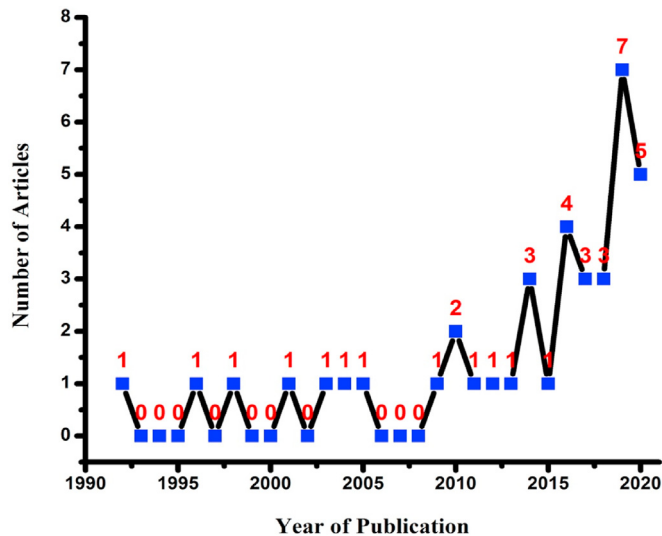


Fig. 3. Historical trends of OIT publication in marketing science (1991–2020).

convenience sampling (26 studies in total, which account for 66.67%), which significantly reduces the power of the study. Concerning the sample size, Table 7 shows that 23.08% of studies (9 publications) use a sample size smaller than $n = 250$, 41.03% of studies (16 publications) have a sample size between $n = 250$ and $n = 500$, 17.95% of articles (7 publications) have sample sizes between $n = 500$ and $n = 750$, 12.82% of studies (5 publications) have a sample size between $n = 750$ and $n = 1000$, and 5.13% (2 articles) have sample sizes above $n = 1000$. The heavily reliance on non-probability sampling methods (e.g., student and convenience sample) and small sample size pose the issue of generalizability. Therefore, in the 'going forward' section, we propose some guidelines for OIT scholars with respect to sample size and sampling methods.

4.6. OIT and its constructs used in marketing literature

Next, we evaluated each article in detail to identify how the constructs underpinned by OIT have been used to address marketing issues. Our analysis of dependent, independent, mediation, and moderation of intrinsic/integrated, identified, introjected, and external motivational regulations suggest that the majority of the OIT researchers have used the aforementioned constructs as independent variables ($n = 22$) to predict consumer behaviour in different marketing domains such as voting behaviour (Koestner et al., 1996), luxury brand preference (Truong et al., 2010), gambling intention/passion (Back et al., 2011), customer participation in a crowd-sourcing contest (Zhao & Zhu, 2014), customer satisfaction in higher education (White, 2015), customer brand engagement (Kim & Drumwright, 2016; Razmus et al., 2017),

Table 3
Research areas studied in OIT research.

s.no	Sub-fields of marketing	Number of articles	Percentage of the total (%)
1	Brand Management and Consumer Behavior	14	35.90%
2	Social Media Marketing	6	15.38%
3	Sports Marketing	6	15.38%
4	Service Marketing	5	12.82%
5	Educational Marketing	3	7.69%
6	Tourism and Hospitality Management	3	7.69%
7	Political Marketing	2	5.13%
	Total	39	100%

Table 4
Research design methods.

Research Design	Number of articles	Percentage of the total (%)
Field survey design	35	89.74%
Experiment design	3	7.69%
Mixed-methods design	1	2.56%
Total	39	100%

consumer green behaviour (Gilal et al., 2019), exercise behaviour (Murphy & Taylor, 2019), online shopping/purchase intention (Chang et al., 2016; Feng et al., 2016), brand passion (Gilal et al., 2020), customer willingness to share e-business content on SNS (Vilnai-Yavetz & Levina, 2018), customer intention to contribute social commerce information (Wang et al., 2019), customers' pro-environmental behaviour (Grønhøj and Thøgersen (2017), the patient-perceived value realized (Osei-Frimpong, 2017), school attendance (van Egmond et al., 2020), and buying behaviour for organic food (Tandon et al., 2020).

As presented in Table 8, the motivation types underpinned by OIT have been used as mediating variables ($n = 12$) to capture customer loyalty (Lin et al., 2009), airline brand adoption, intention to use m-payment (Chaurasia et al., 2019), participation in brand engagement in social media (Osei-Frimpong, 2019), energy-saving behaviour (Sweeney et al., 2014), and e-waste disposal behaviour in the domains of service marketing, brand management, and consumer behaviour. Similarly, intrinsic/integrated, identified, introjected, and external motivational regulations have been used as a mediating mechanism to capture individuals' intentions to continue physical education, their exercise behaviour, and physical activity in the sports marketing domain (Brunet, Sabiston, Castonguay, Ferguson, & Bessette, 2012; Standage, Duda, & Ntoumanis, 2005; Wilson & Rodgers, 2004). Moreover, four studies ($n = 4$) have borrowed insights from OIT to develop and validate a scale (i.e. a measuring instrument) for measuring motivation types in the domains of education, environment, politics, and sports marketing (Losier et al., 2001; Pelletier et al., 1998; Pelletier, Rocchi, Vallerand, Deci, & Ryan, 2013; Vallerand et al., 1992;). Finally, as presented in Table 8, no study has used intrinsic/integrated, identified, introjected, or external motivational regulations as moderating variables to identify the boundary conditions.

Collectively, the review of the above empirical studies has provided valuable insights into how intrinsic/integrated, identified, introjected, and external motivational regulations underpinned by OIT have been applied in different marketing domains and what relationships and problems have been explored. The review of three decades of research on OIT has provided valuable insights with reference to the variables that should be tested. Meanwhile, new contexts, research methodologies, sampling designs, and data analysis methods should be tested and included in future research.

Table 5
Data analysis methods covered in OIT research.

Main Statistical Methods	Number of articles	Percentage of the total (%)
Structural equation modelling	23	58.97%
Hierarchical multiple regressions	5	12.82%
EFA/CFA	4	10.26%
Path Analysis	1	2.56%
ANCOVA/MANCOVA	1	2.56%
ANOVA	1	2.56%
Multi-group modelling	1	2.56%
Polynomial regression approach	1	2.56%
Cluster analysis	1	2.56%
Parallel mediation analysis	1	2.56%
Total	39	100%

Table 6
Sampling methods.

Sampling Method	Sample Type	Number of articles	Percentage of the total (%)
Non-probability Sampling	Student sample	20	51.28%
	Purposive sampling	8	20.51%
	Convenience sampling	6	15.38%
	Quota sampling	1	2.56%
Probability Sampling	Stratified random sample	2	5.13%
	Simple random sample	2	5.13%
	Total	39	100%

Table 7
Sampling size.

Sample Type	Number of articles	Percentage of the total (%)
Less than 250 Sample Size	9	23.08%
250-500 Sample Size	16	41.03%
500-750 Sample Size	7	17.95%
750-1000 Sample Size	5	12.82%
Above 1000 Sample Size	2	5.13%
Total	39	100%

5. Going forward: prioritization of potential research topics

Although, as already noted, many management and organization behaviour researchers utilize OIT to understand employees' motivation (i.e. intrinsic/integrated, identified, introjected, and external) within organizational settings (Zhang et al., 2016), little attention has been paid to the use of OIT in the marketing domain to understand the different effects of intrinsic/integrated, identified, introjected, and external motivational regulations on consumer behaviour. Thus, based on the guidelines for producing a useful and credible review (Hulland, 2020; Richter & Brühl, 2017), we outline some underdeveloped and emerging novel research problems in the marketing domain, and we present propositions that need to be tested in marketing science through the lens of OIT (see Fig. 4).

Dozens of field and lab experiments in the domain of organizational behaviour have explored the different effects of employees' external, introjected, identified, and intrinsic/integrated motivations on positive work outcomes (Gagné et al., 2019; Zhang et al., 2016). Nonetheless, by comparison, few studies have investigated the effects of motivational regulations in the marketing domain; among these, seven studies have used intrinsic/integrated, identified, introjected, and external motivations as independent variables in the domains of branding and consumer behaviour. As such, Truong et al. (2010) suggested that customers tend to prefer luxury brands because of their extrinsic motivation. This point of view is supported by Razmus et al. (2017), whose study indicated that extrinsically motivated customers exhibit a higher tendency to

include important brands as part of their self-concept. Likewise, in the consumer behaviour domain, research showed that intrinsic, identified, and external motivations have considerable influence on green consumer behaviour, while introjected motivation has a trivial effect. This finding is further supported by a subsequent study (Gilal et al., 2020) which suggested that luxury clothing brand passion is likely to be captured by three motivational regulations, namely intrinsic, identified, and external motivations.

Although these studies have provided initial support to the importance of capturing customers' motivations, considerably more academic research is still needed in the areas of branding and consumer research to explore the different effects of customers' motivations on brand-related outcomes. Therefore, one issue that should be addressed in the brand management domain is to investigate the effect of intrinsic/integrated, identified, introjected, and external motivation on customers' participation in brand resurrection movements –that is, what motivates customers to see and bring their favourite brands back to life. For instance, Gilal et al. (2020) reported that customers' passion for clothing brands is significantly influenced by intrinsic and external motivation. Likewise, it is also important to examine whether intrinsic/integrated, identified, introjected, or external motivation is essential in bringing dead brands back to life (Gilal et al., 2020). Likewise, Kumar et al. (2020) suggested that mass prestige value for brands differ significantly across developed as well as developing countries. Therefore, one application of OIT is to explore cross-cultural consumer behaviour differences by investigating what motivates customers to buy masstige brands (i.e. low-cost luxury brands) and/or what motivational regulations are important in developing customers' passion for masstige brands in both emerging and developed markets (Kumar et al., 2020). Academic researches may also benefit from examining how and whether intrinsic/integrated, identified, introjected, and external motivations help enhance customers' willingness to engage in luxury consumption behavior (Kastanakis & Balabanis, 2012) and to pay a premium for non-deceptive luxury counterfeit fashion brands (Singh et al., 2021).

Another important application of OIT in the hospitality and tourism settings is to examine what motivates customers to choose

Table 8
OIT and consumer behavior constructs in the literature.

Integrated/intrinsic, identified, introjected, external motivation	Number of articles on OIT	Outcomes variables studied in OIT literature	References
Independent variable	22	<ol style="list-style-type: none"> 1. Voting behavior 2. Environmental performance of the preferred car 3. Luxury brand preference 4. Gambling passion 5. Participation in a crowdsourcing contest 6. Tourists revisit intentions 7. Customer satisfaction in higher education 8. Intention to share m-coupons in SNSs 9. Online shopping intention 10. Pro-environmental behavior 11. Consumer engagement 12. Patient perceived value realized 13. Brand engagement in self-concept 14. Willingness to share e-business content on SNS 15. Attitude towards mobile advertising 16. Intention to contribute social commerce information 17. Exercise behavior 18. Green consumer behavior 19. Brand purchase intention 20. Brand passion 21. School attendance 22. Buying behavior for organic food 	<p>Koestner et al. (1996) De Groot and Steg (2010) Truong et al. (2010) Back et al., (2011) Zhao and Zhu (2014) Chang et al. (2014) White (2015) Tang et al. (2016) Kim and Drumwright (2016) Grønhøj and Thøgersen (2017) Rasmus et al. (2017) Osei-Frimpong (2017) Chang et al. (2016) Feng et al. (2016) Vilnai-Yavetz and Levina (2018) Gilal et al. (2019) Murphy & Taylor (2019) Wang et al. (2019) Osei-Frimpong (2019) Gilal et al. (2020) van Egmond et al. (2020) Tandon et al. (2020)</p>
Mediating variable	12	<ol style="list-style-type: none"> 1. Future intentions 2. Behavioral intentions to exercise 3. Intentions to physical education 4. Customer loyalty 5. Physical activity behavior 6. Energy-saving behavior 7. Resort travel pursuits 8. Airline brand adoption 9. Intention to use M-payment 10. E-waste disposal behavior 11. Customer Compliance 12. Sustainable behavior 	<p>Osbaldiston and Sheldon (2003) Wilson and Rodgers (2004) Standage et al. (2005) Lin et al. (2009) Brunet et al. (2012) Sweeney et al. (2014) Zhang et al. (2019) Gilal et al. (2019a) Chaurasia et al. (2019) Gilal et al. (2019b) Teng et al. (2020) Baxter and Pelletier (2020)</p>
Moderating variable		N/A	N/A
Dependent variable		N/A	N/A
Scale Development	4	Scale Development	Vallerand et al. (1992); Pelletier et al. (1998); Losier et al. (2001); Pelletier et al. (2013)
Other	1	N/A	Sass et al. (2018)
Total Studies	39		

Note: N/A = Not Applicable.

one travel location over another or what motivational regulations are important in customers' decisions to choose Airbnb over hotels (Yang & Mao, 2020). Likewise, further research is needed to examine how intrinsic/integrated, identified, introjected, and external motivations influence travel behaviour, destination attachment, willingness to revisit, and travel on environmentally responsible electric airplanes. In a similar vein, our review of OIT research suggests that only four studies have used intrinsic/integrated, identified, introjected, and external motivations as independent variables in service marketing domains such as higher education (van Egmond et al., 2020; White, 2015), health care services (Osei-Frimpong, 2017), and crowdsourcing (Zhao & Zhu, 2014). Thus, we highlight several potential directions for future research that need to be carried out in the service marketing domain under the theoretical lens of OIT. First, in higher education settings, studies have noted that the student choice of university is significantly influenced by different factors. For instance, Hemsley-Brown and Oplatka (2015) reported parents, teachers, advisors, friends, and university websites as important determinants of student choice of university. Le et al. (2020) studied the choice factors and the usage of information sources to predict student

choice of university. In line with these studies, it would be invaluable to examine how different motivations underpinned by OIT influence students to choose a university. In other words, research should examine whether the following motivations play important roles in university choice (Ivy, 2010): intrinsic/integrated (i.e. own interest), identified (i.e. realizing the importance of university ranking), introjected (i.e., because students feel shame and guilt about not attending a big university), and external motivation (i.e. students choose a university because their family and friends wanted them to go in that university). Second, academic research needs to be conducted to investigate why customers opt for Islamic banking over conventional methods, i.e. how motivation types influence customer loyalty towards Islamic banking (Suhartanto et al., 2019). The third possible application of OIT in the service marketing domain is to assess the direct effect of motivation types on customers' intention to use ride-sharing services in a tourism destination.

Our review of existing research further indicates that seven studies used constructs underpinned by OIT (e.g., intrinsic/integrated, identified, introjected, and external motivations) as independent variables in the social media marketing domain (Chang

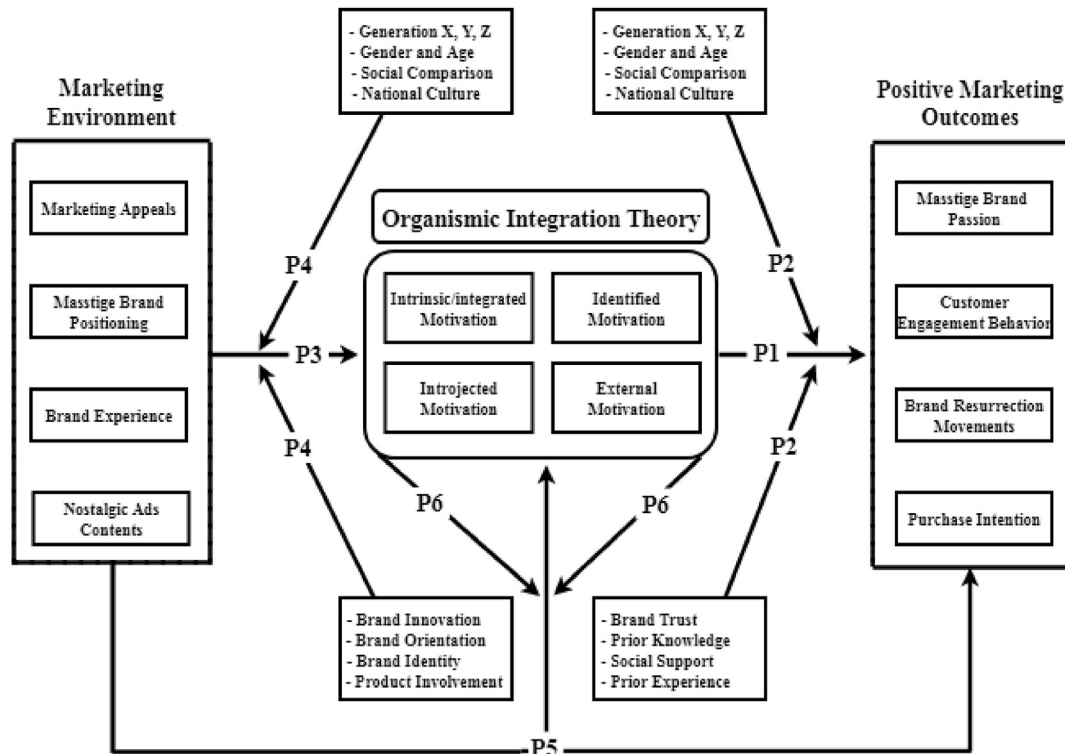


Fig. 4. Prioritization of potential research topics.

et al., 2016; Feng et al., 2016; Kim & Drumwright, 2016; Osei-Frimpong, 2019; Tang et al., 2016; Vilnai-Yavetz & Levina, 2018; Wang et al., 2019). Still, there are many important avenues for further research on OIT. One possible application of OIT in the digital marketing domain is to examine whether and how different motivational regulations underpinned by OIT influence customers' intentions to use mobile fintech payment services (Lim et al., 2019). It is of great significance to investigate what motivates customers to use mobile payment apps in emerging markets (Liao & Yang, 2019). Another interesting application of OIT in the social media marketing domain is to examine how different motivations affect customers' intentions to use e-money (Aji et al., 2020). Specifically, it is very useful to understand what motivates customers to use digital services offered by the government, such as e-taxes, booking train/aeroplane tickets and accommodation online, and/or applying for a passport or national identity card. The third direction for further research under the theoretical lens of OIT is to examine what motivates individuals to post and view selfies (Wang et al., 2017). The fourth area for study is to assess how different motivation types underpinned by OIT influence customers' participation in brand pages on social networking sites (Tsai & Men, 2013) and/or what motivates customers to join brand pages and to ensure the social presence on Facebook brand pages. In light of the above applications of OIT, we posit the following:

Proposition 1. *Intrinsic/integrated, identified, introjected, and external motivations will have a significant positive effect on positive marketing outcomes.*

Our review of marketing literature suggests that generation cohorts such as generation X, Y, and Z customers (Zuo & Lai, 2020), customers' gender (Shao et al., 2019), customers' age (Mora & Vila, 2020), national culture (Nam, 2018), customers' social comparison orientation (Tariq et al., 2019), brand trust (Khalid et al., 2016), prior knowledge (Johnson et al., 2015), and prior experience (Shao et al.,

2020) have a significant moderating effect on positive marketing outcomes. Identifying such boundary conditions is particularly relevant when prior literature has produced inconsistent findings. For instance, Gilal et al. (2020) reported that the effect of intrinsic motivations on brand passion is more important for female customers than for their male counterparts. Similarly, Gilal et al. (2020) further revealed that historical and personal nostalgic ads are more capable of increasing consumers' engagement in brand resurrection movements for older customers. Likewise, another recent study by Gilal et al. (2020) reported that satisfaction with customer autonomy is more promising at explaining attachment to brands for Korean customers than for Chinese and Pakistani customers. In line with these studies, it is expected that the strength of different motivation types and marketing outcome associations may also vary under the influence of potential moderators. Therefore, one possible application of OIT in the hospitality and tourism settings is to examine whether customer age and gender and national culture moderate the link between motivational regulations and the intention to revisit luxury restaurants.

Moreover, studies have shown that the strength of the antecedents and outcome associations may vary with the generation cohort (e.g., generation X, Y, and Z customers). For instance, Herrando et al. (2019) reported that the effect of user-generated content and company-generated contents on trust in social commerce websites differs significantly for generation X, Y, and Z customers. This view is further supported by Gilal et al. (2020) who suggested that the effect of motivational antecedents on fans' intention to watch the T20 world cup differs significantly under the moderating influence of the generation cohort. Based on these rationales, one possible application of OIT is to assess the moderating effect of generation cohort (e.g., generation X, Y, and Z customers) on the relationship between motivational regulations and customer participation in brand resurrection movements, discussing whether the effect of different motivational regulations on

customer participation in brand resurrection movements varies with generation X, Y, and Z customers. The third direction for further research is to investigate whether brand trust, prior knowledge, social support, user experience, and user brand familiarity interact significantly with customer motivational regulations to capture better positive marketing outcomes such as a passion for airline brands (Gilal et al., 2020), masstige brands (Paul, 2018), or robot hotel services (Zhong et al., 2020). Based on the above-discussed possible applications of OIT, we posit the following:

Proposition 2. *Intrinsic/integrated, identified, introjected, and external motivations will interact significantly with theoretically derived moderators to capture positive marketing outcomes.*

Dozens of researchers in the domains of human resources and organizational behaviour have examined the effects of social environmental factors such as work design and work climate on employees' external, introjected, identified, and intrinsic/integrated motivations (Gagné et al., 2019). Surprisingly, no study has used customers' intrinsic/integrated, identified, introjected, and external motivations as dependent variables in the marketing domain to understand whether and how marketing activities contribute to the enhancing and/or undermining of customers' motivational regulations. This analysis also suggests that no effort has been made to study characteristics that tend to enhance customers' motivations. In light of this knowledge gap, much more research is needed in the marketing realm to understand how customer motivation is influenced by marketing activities. Therefore, one call for further research in sports marketing is to investigate what motivational regulations are influenced by celebrity sport endorsers' attractiveness, trustworthiness, and expertise (Gilal et al., 2020). Likewise, in the social media marketing setting, it would be very significant to explore what kinds of customers' motivational regulations are influenced by a fear of missing out on marketing appeals (Hodkinson, 2019) and buy-one-get-one-free appeals (Ofosu-Boateng, 2020). Finally, future research may benefit from examining how different motivation types are influenced by hotel brand personality (Tran et al., 2013) hotel brand experience (Ali et al., 2016), and user-generated content (Herrando et al., 2019). Based on the aforesaid possible applications of OIT in various marketing domains, we posit the following:

Proposition 3. *Marketing environment (i.e. marketing appeal, masstige brand positioning, and brand experience) will have a significant positive effect on customers' intrinsic/integrated, identified, introjected, and external motivation.*

A closer look at the intervening variables or moderators of the reviewed studies indicates that brand innovation, brand orientation, brand identity, product involvement, generation cohorts, social comparison, national culture, customer age, and gender have been frequently used as moderating variables in marketing studies (Fu & Elliott, 2013; Heinberg et al., 2019; Mora & Vila, 2020; Nam, 2018; Park & Keil, 2019; Shao et al., 2019; Tajeddini & Ratten, 2020; Tariq et al., 2019; Wheeler et al., 2006). Consequently, it is believed that these theoretically derived moderators can play an important role in capturing customers' intrinsic/integrated, identified, introjected, and external motivations. Several potential directions for future OIT research are therefore worth mentioning. For instance, one possible application of OIT in the advertisement domain is to examine how rational and emotional appeals influence the intrinsic/integrated, identified, introjected, and external motivations of customers belonging to generations X, Y, and Z (Zuo & Lai, 2020). Second, OIT can be applied in luxury marketing studies grounded in Kastianakis & Balabanis (2012, 2014) to explore whether luxury brand experience shared by family vs. that shared by colleagues influences the intrinsic/integrated, identified, introjected, and external motivations of males and females (Shao et al.,

2019) and young vs. older customers (Mora & Vila, 2020; (Gilal, Channa, Gilal, & Gilal, 2021) Gilal et al., 2021).

The third direction for future research is to assess how and whether brand innovation, brand orientation, brand identity, and product involvement interact with the marketing environment to enhance and/or undermine customers' intrinsically/integrated, identified, introjected, and external motivations. We encourage marketing scholars to develop models to test the aforementioned gaps in various marketing domains including brand management, social media marketing, sports marketing, service marketing, education marketing, political marketing, and tourism & hospitality marketing. In line with the abovementioned possible applications of OIT in various marketing domains, we posit the following:

Proposition 4. *The marketing environment will interact significantly with theoretically derived moderators to capture customers' intrinsic/integrated, identified, introjected, and external motivations.*

Our review on OIT further reveals that only three publications used different motivation types as mediating variables in the sports marketing realm. For instance, Wilson and Rodgers (2004) studied the impact of autonomy support from friends on women's behavioural intentions to exercise via the mediation of motivational regulations. Standage et al. (2005) showed that receiving supportive feedback from supervisors positively influences students' intrinsic motivational regulation, which in turn leads to improved positive outcomes. Brunet et al. (2012) linked self-concept to women's physical activity behaviours via motivational regulation and suggested that women's actual-self positively increases their intrinsic and introjected motivations, which in turn enhances their physical activity behaviour. These existing studies on sports marketing have provided initial support for the propositions regarding OIT. Thus, further research is needed under the lens of OIT to explore how individuals associated with sports (e.g. sports fans) are motivated by the marketing activities of sports marketers. For instance, one promising avenue for future research in the sports marketing domain is to examine how marketing appeals (nostalgic appeals vs. non-nostalgic appeals) influences sports fans' intentions to watch the Cricket World Cup via motivational regulations. For instance, Gilal et al. (2020) reported the importance of nostalgic ads in bringing defunct brands back to life. Because motivational regulations are considered more promising in influencing consumer behaviour and nostalgic appeals have a stronger impact in bringing defunct brands back to life, it is therefore believed that nostalgic appeals will be considered more prominent in enhancing customers' motivation types (e.g., intrinsic/integrated, identified, introjected, and external motivational regulations). This in turn can influence positive marketing outcomes. In light of these rationales, it is essential to explore whether, and which, motivational regulations of sports lovers/fans are influenced by nostalgic ads.

Likewise, another avenue for further research in the sports marketing realm is to explore whether intrinsic/integrated, identified, introjected, and external motivations mediate the effect of stadium atmosphere/environment (Cho & Lee, 2019) and sports event experience (Ladhari & Souiden, 2020) on fans' intention to watch the sporting event. This is an interesting question that may help marketers to understand which motivational regulations of customers are influenced by the stadium atmosphere/environment and sports event experience. In light of this rationale, we invite scholars to address the aforementioned gaps under the lens of OIT.

In a similar vein, our review of OIT studies indicates that eight studies have used motivational regulations as a mediating variable to understand how different motivation types underpinned by OIT are influenced by the marketing environment in the domains of branding, service marketing, and consumer behaviour (Baxter & Pelletier, 2020; Chaurasia et al., 2019; Lin et al., 2009; Osbaldiston

& Sheldon, 2003; Sweeney et al., 2014; Zhang et al., 2019). Lin et al. (2009) suggest that customer satisfaction with skincare and beauty salon services positively influences four motivational regulations, which in turn positively capture customer loyalty. Similarly, the research found that airline travellers' intrinsic motivation is influenced by soft-sell appeal, which in turn strongly influences airline brand adoption. Likewise, Chaurasia et al. (2019) suggested that demonetization policy has the strongest effect on customer's m-payment usage via extrinsic motivation. Although these three investigations have provided initial insight into the antecedents and consequences of different motivation types, considerably more research needs to be undertaken to explore the mediating role of motivational regulations in different domains of marketing. For instance, in hospitality and tourism marketing, it would be of great value to find out what motivational regulations are influenced by the hotel's smart service experience (Ali et al., 2016) and what motivational regulations are more promising in capturing positive outcomes. Likewise, it is interesting to address how robot hotel service, hotel website quality, hotel lobby design, and hotel service quality influence customers' motivational regulations (Zhong et al., 2020), and what motivational regulations, in turn, are capable of capturing hotel customers' satisfaction, loyalty, hotel brand love, and revisit intention (Ali et al., 2016).

Moreover, another underdeveloped and emerging research area that should be explored is whether and how masstige brand positioning influences customers' motivational regulations. In particular, researchers interested in this area are encouraged to develop models to examine different brands such as Emirates Airlines, Standard Chartered Bank, Victoria's Secret, Lenovo, and Armani to determine the effects of masstige brand positioning on customers' intrinsic/integrated, identified, introjected, and external motivational regulations and what motivational regulations, in turn, are capable of capturing passion for these brands. In line with these OIT applications, we postulate the following:

Proposition 5. *Intrinsic/integrated, identified, introjected, and external motivations will have a significant mediating effect on positive marketing outcomes.*

Our review of OIT studies suggests that no study has hypothesized customers' intrinsic/integrated, identified, introjected, and external motivation to be key boundary conditions (i.e. moderating variables) for the indirect positive effect of the marketing environment (masstige brand positioning, brand experience, nostalgic ads, and so on) on positive marketing outcomes (passion for masstige brand, customer engagement, customer participation in brand resurrection movements, and so on). Therefore, several potential directions for future research on the moderating effect of motivation types deserve mention. One agenda for research is to investigate the effect of luxury fashion brand advertising on customers' purchase intentions when the customers are high vs. low on identified and external motivational regulations. Likewise, a second direction for further research in the political marketing domain is to assess how a candidate's political ads on social media (e.g. Facebook) influence voting behaviour when individuals' intrinsic/integrated and identified motivation is high vs. low (Endres, 2020) –that is, whether individuals' intrinsic/integrated and identified motivation can differentiate the effect of the candidate's political ads on voting behaviour. The third direction for future research in the advertisement domain is to assess the effects of guilt appeal, fear appeal, buy-one-get-one-free, and fear of missing out on actual purchase behaviour when customers are high vs. low on different motivation types. In other words, do intrinsic/integrated, identified, introjected, and external motivations enhance and/or undermine the effects of different types of appeals on positive consumer behaviour outcomes? The fourth direction for future research in the

service marketing domain is to examine the effect of e-banking service quality on customer adoption of mobile self-service retail banking technologies when customers are high vs. low on identified motivation (Giovanis et al., 2019). Based on the above-mentioned possible applications of OIT, we propose the following:

Proposition 6. *Intrinsic/integrated, identified, introjected, and external motivations will interact significantly with the marketing environment to capture positive marketing outcomes.*

6. Future research agenda with respect to methods

Our review of OIT studies finds that 89.74% (n = 35) of the total published papers have utilized field surveys, 7.69% (n = 3) of studies have used an experimental design, and only one study has used mixed-method design. Surprisingly, none of the studies used eye-tracking design, naturalistic observation, case study, or correctional design. Therefore, several potential directions for future research emerge, using eye-tracking design, experimental design, observational design, case study, and correctional design. For instance, one direction for future research using eye-tracking design under the theoretical lens of OIT is to assess how much time customers spend viewing intrinsic/integrated, identified, introjected, and externally motivated pictures and messages using the Tobii Pro eye-tracker (Mou & Shin, 2018). Likewise, another direction for future research using the observational design is to examine how customers respond to emotional ads (intrinsic/integrated) vs. informative ads (identified) during their shopping (Toubia & Stephen, 2013). The third direction for future research, using experimental design, is to examine the effect of low vs. high intrinsic/integrated, identified, introjected, and external motivational conditions on the consumption of hedonic versus utilitarian brand-related behaviour intentions in developed and emerging markets. The fourth direction for future research, using the correctional design method, is to assess the associations between intrinsic/integrated, identified, introjected, external customer religiosity, and luxury brand consumption (Alhazmi, 2019). Likewise, it is of great deal of importance to examine the associations between customer religiosity, willingness-to-pay a premium, and willingness to recommend the luxury restaurant dining experience. Hence, we propose the following:

Proposition 7. *OIT scholarship will derive increased benefit from employing advanced methodologies (e.g. eye-tracking, mouse-tracking, naturalistic observation, experimental design, and so on) to address motivational issues in marketing research.*

Upon further review of existing studies, we observe that many contemporary statistical data analysis methods have been ignored by researchers. Therefore, there are several marketing issues and/or research agendas that might be carried out using advanced statistical analysis methods such as multi-group modelling, cluster analysis, multilevel modelling, latent profile analysis, moderated moderated-mediation analysis, serial mediation analysis, and sequential mediation analysis. For instance, one direction for future research is to categorize customers (grouped by age, gender, and so on) based on their motivations using cluster and latent profile analysis (Fullerton, 2019). Likewise, another direction for future research is to examine the effect of nostalgic appeal on customer brand resurrection movements via motivational regulations of generation X, Y, and Z customers using multi-group modelling. Specifically, it would be of great interest to explore the effect of skin-whitening cosmetics advertisements on the identified motivation of generation X, Y, and Z women using multi-group modelling (Chauhan & Tiwari, 2019). The third direction for further research in the social media marketing domain is to investigate the effect of destination travel experience on travelling

behaviour via the mediation of the introjected motivation of young males vs. young females and older males vs. older females using the moderated moderated-mediation data analysis method. A fourth potential direction for future research is to study the association between a parents' identified motivation for masstige brand attachment and that of a child, using a multilevel modelling data analysis technique. This examines whether a parent's motivation for masstige brand attachment can be transferred to their child. Based on these rationales, we posit the following:

Proposition 8. *OIT scholarship will derive increased benefit from employing advanced data analysis techniques (e.g. multi-group modelling, cluster analysis, multilevel modelling, moderated moderated-mediation analysis, and so on) to address motivational issues in the marketing domain.*

From a further review of the literature, we found that a majority of the OIT researchers have employed non-probability sampling methods (35 articles out of 38 publications) and of these, twenty articles used student sampling, with a further six using the convenience sampling method. The heavily reliance on student and convenience sampling (66.67% of total studies) raises significant issues regarding generalizability. Therefore, we encourage OIT researchers to focus more on the probability sampling method to overcome the generalizability issue. Moreover, our review reveals that over three decades, four studies have been conducted to develop and validate a scale (i.e. a measuring instrument) for measuring motivation types in the domains of education, politics, sports, and environmental management. We encourage scholars to develop and validate the customer motivational regulation scale in the domains of service, branding, hospitality, and consumer behaviour. Upon further review, our analysis of existing studies reveals that the majority of OIT publications have used sample sizes smaller than $n = 500$ to address the research objectives of their studies. Therefore, considering the importance of OIT in marketing science, we encourage OIT researchers to use greater sample sizes to achieve generalizable results. Based on these rationales, we posit the following:

Proposition 9. *OIT scholarship will derive greater benefit from employing a probabilistic sampling method and improving sample sizes to generalize motivational issues in the marketing domain.*

Moreover, our review of the existing literature suggests that marketing research on OIT has been carried out within the context of only seventeen countries (see Table 2). We observe that many European, African, and Western countries have been ignored. Our review further indicates that out of 39 published studies, 38 publications drew the sample from a single country, while only one study recruited participants from multiple countries. Therefore, several cross-cultural marketing issues need to be addressed to provide an in-depth understanding of OIT in the settings of European, African, and Western countries. One possible direction for future research under the lens of OIT is to examine the effect of different motivation types on customers' green behaviour in the settings of European and African countries (Paul and Mas, 2019). This could determine whether intrinsic/integrated, identified, introjected, and external motivations are more promising in terms of capturing green consumer behaviour for customers located in European countries or in African countries. Likewise, another agenda for research is to explore how different customers' motivation types are influenced by celebrity vs. expert endorsers across countries located in Asia, Africa, and Europe (Gilal et al., 2020; Kumar et al., 2020). In particular, it is extremely important to design a cross-cultural investigation into the effect of endorser type (i.e. a celebrity, CEO, expert, or non-celebrity) on the adoption of Islamic banking services in Asian and European countries through the mediation of intrinsic/integrated, identified, introjected, and

external motivations. The third agenda for research is to study the association between identified motivation for a luxury brand, family religiosity, and purchase intention in individualistic and collectivist cultural settings (Jacob et al., 2020). Based on the abovementioned examples of future agendas, we propose the following:

Proposition 10. *OIT scholarship will benefit from designing cross-cultural investigations across several countries to address and generalize motivational issues in the marketing domain.*

7. Conclusion

To the best of the authors' knowledge, the present theory-based review is the first of its kind to provide an in-depth review of all empirical studies exploring the role of OIT in the marketing domain. Specifically, we have formally introduced OIT in marketing science as an alternative way of looking at customers' motivations and paved the way for their reconciliation in directing the avenues (presented as testable propositions) for more constructive research in marketing science. We also believe this classic review will act as a guide for marketing scholars in understanding OIT and inspiring future scholarship. Although this review has mapped out the major streams of research and set agendas for inspiring marketing research through the lens of OIT, it does have some limitations. First, we retained all peer-reviewed articles published in journals with 1+ impact factor that were ranked as either 'B' or 'A' in ABDC, whereas articles published in journals with an impact factor of less than 1.00 were excluded from the review. Second, we excluded conference proceedings, commentaries, editorial viewpoints, book chapters, and papers written in languages other than English. Nevertheless, based on the insights from this review, we encourage marketing researchers to avoid replicated research based on the repetitive use of the same traditional models/theories and to focus on the current state-of-the-art aspects of OIT by testing one, two, or more of our propositions in their future studies using multi-group modelling, cluster analysis, multilevel modelling, latent profile analysis, moderated moderated-mediation analysis, or serial and sequential mediation analysis.

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