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Drivers of export improvisation: empirical evidence from UK export manufacturers

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Abstract

Purpose – We develop and empirically test a model of antecedents to export improvisation, underpinned by a Systematic Literature Review (SLR) and an exploratory study. Export-specific drivers include export commitment, market orientation, experiential skills, learning orientation, and inter-functional coordination, modelled as antecedents of three dimensions of export improvisation, namely export action-orientation, spontaneity, and creativity.

Design/methodology/approach – The SLR was performed to identify the state of the art in our knowledge and understanding of improvisation, its antecedents, and its manifestation in export contexts. An exploratory qualitative study of 10 UK export manufacturers was then conducted, aiming to generate specific insights into drivers of export improvisation. Data was analysed via within- and cross-case displays. Insights contextualised the SLR findings and aided in the development of a survey instrument administered to 197 export manufacturers in the UK. The quantitative data resulting from the survey was analysed via structured equation modelling in LISREL.

Findings – Export commitment and inter-functional coordination boost spontaneity and creativity, while generation of export information hinders these. Meanwhile, export learning orientation and dissemination of export information enable action-orientation.

Originality/value – Theoretical and empirical examinations of the antecedents to export improvisation have largely been overlooked in export literature, despite export improvisation likely being more widespread, and paradoxically trickier, than domestic improvisation. Given the growing importance of improvisation to export performance, an understanding of how to foster greater export improvisation is timely. Therefore, we address this research gap using multiple methods of enquiry.

Keywords Export marketing, Improvisation, Action-orientation, Spontaneity, Creativity, Antecedents

Paper type - Research Paper

1. Introduction

Export trade around the world rose to nearly US$25 trillion in 2023, up from US$6 trillion in 2000, reflecting developments in globalisation and technology (Sabanoglu, 2023). Exporting remains the most common mode of international market entry (Iurkov *et al*., 2023) and is widely pursued as a primary driver of revenue growth (Baum *et al*., 2023). Unsurprisingly, a substantial

body of research has examined the determinants of export success (Bıçakcıoğlu *et al.*, 2020; Eibe Sørensen and Madsen, 2012; Ishii, 2021; Ogasavara *et al.*, 2016; Oliveira *et al.*, 2024). Within this literature, export improvisation has been identified as a key predictor of export performance, both directly (Hilmersson *et al.*, 2022) and indirectly (Nemkova *et al.*, 2015). Export improvisation is salient in global markets that demand spontaneous and creative responses (cf., Abrantes *et al*., 2018) and require firms to deviate from established plans and strategies (Dibrell *et al*., 2014; Lin *et al*., 2021). Conceptually, it encompasses actioned (intentional), spontaneous (extemporaneous), and creative (novel) export decision-making (Chetty *et al.*, 2024; Mamédio *et al.*, 2022; Nemkova *et al.*, 2012), and has been described as inevitable (Cunha *et al.*, 2022), given the persistent elusiveness of foreign market information (Baum *et al.*, 2023).

On the one hand, research on antecedents to *export* improvisation is lacking, while on the other, literature mentioning antecedents to generic (non-export) improvisation is both anaemic and disjointed insofar as it pertains to many different marketing fields, such as sales, strategy, team learning, and planning. Fragmented literature on antecedents to improvisation showcases the construct's wide-ranging applications, with disparate contexts in which these drivers are studied, including individual-level drivers in sales (Banin *et al.*, 2016), team-level drivers in new product development (Moorman and Miner, 1998), and organisational-level drivers in strategy (Yeniaras *et al*., 2021). This makes it challenging to identify patterns of improvisation drivers relevant to the idiosyncrasies of the export function. Consequently, the foundation for examining what drives export improvisation is weak. From a theoretical standpoint, this impedes the advancement of knowledge regarding how export improvisation can be driven by controllable export constructs, such as export market orientation (Cadogan *et al.*, 1999, 2002). According to Macpherson *et al.* (2022, p. 862), it is important for organisations "to develop a context where improvisation can flourish". Managerially, the knowledge void is also unfortunate, as export improvisation is likely trickier (Chaudhry *et al.*, 2024) and paradoxically more widespread (Nemkova *et al.*, 2012) than improvisation in domestic settings. To illustrate this challenge, export improvisation requires experiential knowledge of the specific market (Hilmersson *et al.*, 2022), which may be lacking among export firms targeting new foreign markets (Assadinia *et al.*, 2019; Hilmersson *et al.*, 2021). At the same time, and as testament to its prevalence, the elusiveness of export information may render improvisation inevitable (Cunha *et al.*, 2022).

These competing features characterise the environment within which export improvisation occurs, differentiating it from generic (non-export) improvisation, which tends to be more focused on reacting to external market changes (Whalen and Boush, 2014). They

also render the study of export improvisation drivers pressing in the context of an increased need for export flexibility in turbulent foreign markets (Ahamed *et al.*, 2023), Thus, we argue that exporters would benefit from being armed with guidelines to create environments conducive to improvised decision-making, since improvisation is challenging and inevitable in exporting organisations.

Therefore, our research asks: *how can exporters become more proficient at improvising their decisions?* Our study addresses knowledge deficiency in this area by drawing on a Systematic Literature Review (SLR) of improvisation literature and an exploratory study of export decision-makers to develop a conceptual model of antecedents to export improvisation. This is then tested through survey data from 197 UK export manufacturers and analysed via structural equation modelling.

This paper makes two key contributions to theory development. First, it contributes to knowledge advancement in the export marketing field since it explains the factors that drive a critical predictor of export performance, namely export improvisation. Until now, export improvisation work has tended to examine the performance outcomes of this construct and/or its facets (Nemkova *et al.*, 2015; Souchon *et al.*, 2016). Thus, while the benefits of export improvisation are understood increasingly well, research on how to foster/promote export improvisation is lagging.

Second, it advances organisational improvisation literature in general, since extant research on generic (non-export) improvisation has: (a) largely neglected investigations of its antecedents, with only a handful of studies focusing on the latter (Banin *et al*., 2016; Hughes *et al*., 2020; Yeniaras *et al*., 2021) and a few more just tangentially examining drivers as part of larger studies; (b) been quite disjointed in the approaches used to study the phenomenon, from the perspectives of contexts studied, theories used, and levels of analysis applied; and (c) mostly examined its consequences (Akgün *et al.*, 2007; Fultz and Hmieleski, 2021; Vera and Crossan, 2005). Thus, the findings of what drives improvisation in the context of exporting may serve to unify fragmented work and offer a platform for future research to further investigate improvisation drivers.

This study also contributes to export decision-making practice by developing a set of guidelines exporters can apply to foster export improvisation. In the context of the paradox surrounding the trickiness and prevalence of export improvisation expanded on above, these guidelines may offer a competitive edge to exporters as they navigate the fact that global "customer expectations are moving faster than the fastest businesses [and the competitive landscape is now] a totally different game" (Interbrand, 2024, pp. 15-16).

In the next section, the SLR is presented, followed by the method and findings of the exploratory study. The conceptual framework and hypotheses are then developed. The methodology used to test the framework follows, with the results discussed thereafter. The paper concludes with theoretical and managerial implications, as well as limitations and an agenda for further knowledge generation pertaining to the export improvisation phenomenon.

2. Systematic literature review

We begin our exploration of export improvisation and its antecedents with an SLR to determine current knowledge in the area and aid in the construction of a conceptual framework. We followed a multi-stage SLR search strategy, which we summarise below and explain in detail in Supplementary File A, in the interest of transparency and replicability.

2.1. Systematic literature review search strategy

EBSCO's Business Source Ultimate was used to search and identify relevant literature up to and including May 2025. General search criteria imposed the following parameters on the search strategy: peer-reviewed, academic journal articles written in English. We conducted seven iterative literature searches, resulting in 200 relevant publications mentioning improvisation in peer-reviewed marketing publications between 1984 and 2024 (no publications mentioning improvisation were discovered between January and May 2025).

2.2. Systematic literature review findings

The SLR highlighted that there are very few articles specifically on export improvisation, and none, to the authors' best knowledge, on its drivers. However, generic (non-export) improvisation is a construct that appeared in various marketing fields (e.g., sales, strategy, team learning, planning), showcasing its wide-ranging applications (see Supplementary File A).

We also found distinct definitions and dimensions of improvisation, emphasising its multifaceted nature and convergence of literature onto the same key dimensions. For example, conceptual definitions of improvisation include "the spontaneous and creative process of attempting to achieve an objective in a new way" (Vera and Crossan, 2004, p. 733), "spontaneous and creative decision making" (Nemkova *et al.*, 2015, p. 43), "when the composition and execution of an action converge in time so that, in the limit, they occur simultaneously" (Moorman and Miner, 1998, p. 1), "behavior that is not 'pre-scripted' but rather conceived and implemented extemporaneously" (Carlson and Ross, 2022, p. 323), "when the design and execution of novel activities converge" (Baker *et al.*, 2003, p. 255), and the "organization's capacity to respond spontaneously to problems and opportunities in a novel

way" (Yeniaras *et al.*, 2021, p. 55). Consequently, improvisation is characterised by its real-time, extemporaneous nature (Moorman and Miner, 1998), where novel decisions are made and actioned in the moment (Mourey, 2020).

In this context, a large body of work conceptualises improvisation as a three-dimensional construct entailing action-orientation, spontaneity, and creativity (Cunha *et al.*, 2009; Essuman *et al.*, 2023; Gojny-Zbierowska and Zbierowski, 2021; Hultman *et al.*, 2022; Nemkova *et al.*, 2012, 2015; Song *et al.*, 2022; Vera *et al.*, 2024). Action-orientation refers to "managers' ability to maintain an activity and focus their attention on imminent problems" (Nemkova *et al.*, 2015, p. 44). Spontaneity concerns the "ability to make decisions in the moment" (Souchon *et al.*, 2016, p. 672) and is a manifestation of extemporaneousness (Tabesh and Vera, 2020). Creativity refers to "an organisation's capacity to empower its human resources towards creative action, leading to novel solutions and thereby to a sustainable competitive advantage" (Nisula and Kianto, 2018, p. 484).

The three improvisation dimensions are clearly distinct in their conceptual meanings and cannot be assumed to be automatically highly correlated. For example, a firm may be very creative in its new product development processes and design radical inventions that resemble nothing currently on the market, yet these inventions may seldom translate into action (i.e., marketed commercialisation) (Chandy *et al.*, 2006). In this instance, creativity is present, but action-orientation is not. This example demonstrates why it is inappropriate to treat improvisation as a latent reflective construct and why relationships between antecedents to, and an aggregated version of, improvisation cannot be studied. Instead, the improvisation construct should be examined at its sub-dimensional level when considering its antecedents, for a more fine-grained and appropriate understanding (Lee and Cadogan, 2013), since different dimensions may be driven by varying antecedents in different ways (Cadogan *et al.*, 2008).

The SLR also revealed that outcomes of improvisation have been more extensively studied than its drivers (antecedents). In organisational decision-making contexts, improvisation is often tied to innovation outcomes (Dennis and Macaulay, 2003) and performance (Carlson and Ross, 2022). It enables business units, teams, and individuals to leverage their expertise and creativity to devise novel solutions "on the fly" (Nemkova *et al.*, 2012). This dynamic problem-solving approach is particularly valuable in rapidly changing scenarios, where conventional strategies may fall short (Slotegraaf and Dickson, 2004).

Overall, we learnt that improvisation plays a pivotal role in creative, strategic, and adaptive processes within organisations (Akgün *et al.*, 2003; Banin *et al.*, 2016; Sashittal and Jassawalla, 2001), and that the immediate and creative action of improvisation is especially crucial in fluctuating environments, where unforeseen challenges and opportunities arise, and

flexibility and/or agility are required (Yeniaras *et al.*, 2021). In an export context, Hilmersson *et al*. (2022) observed positive effects of export improvisation on market entry performance; Spyropoulou *et al*. (2018) advised alternative decision-making modes to planning, such as improvisation, in dynamic export environments; and Nemkova *et al.* (2015) reported on the strong positive effect of export action-orientation directly on export customer performance, and on the positive relationships between all three dimensions of export improvisation (action-orientation, spontaneity, and creativity) and responsiveness, itself strongly related to export customer performance.

Concerning antecedents to generic (non-export) improvisation, just three studies focused on these (Banin *et al*., 2016; Hughes *et al*., 2020; Yeniaras *et al*., 2021) and only nine touched upon drivers as part of larger improvisation studies (Akgün *et al*., 2006; Carlson and Ross, 2022; Dennis and Macaulay, 2007; Hill *et al*., 2017; Moorman and Miner, 1998; Oakes, 2009; Slotegraaf and Dickson, 2004; Wen et *al.*, 2022; Whalen and Boush, 2014) (see Table 1). This small body of work draws from decision theory, information processing theory, the jazz metaphor, organisational learning theory, the resource-based view of the firm, dynamic capabilities theory, and relational governance theory. Antecedents include leadership, resource availability (including information), learning (including memory), communication, planning, strategic posture/orientation, resilience, innovation, flexibility, relational ties, and environmental turbulence. Decision-makers with greater experience of marketing planning were paradoxically better at improvisation than those with lower levels of experience (Whalen and Boush, 2014). This echoes the field of music whereby jazz musicians can only improvise after years of dedicated training and experience (Barrett, 1998). Akgün *et al.* (2006) showed that team intelligence fosters team information processing, including improvisation. The findings of the SLR, including the context of each paper, theories applied, drivers, levels of analysis, and key findings (for empirical papers only) are summarised in Table 1.

[Insert Table 1 about here]

3. Conceptual framework

A growing body of academic research recognises the importance of improvisation to organisational success (Crossan, 1998; Hmieleski *et al.*, 2013; Hughes *et al.*, 2018; Mannucci *et al.*, 2021) or venture performance (Fultz and Hmieleski, 2021). Contrary to popular opinion, improvisation does not simply occur as a tactical response to a chaotic environment, but also constitutes a strategic direction (Cunha *et al.*, 2022; Eisenhardt and Tabrizi, 1995; Hodgkinson *et al.*, 2016; Moorman and Miner, 1998). There is increasingly widespread acceptance of

improvisation as a legitimate decision-making type, as it is particularly suitable to today's volatile, uncertain, and often complex environmental conditions (Hughes *et al.*, 2020).

Adjacent marketing literature on crisis management, innovation under uncertainty, and adaptive decision-making provides further insights into the relevance and prevalence of improvisation in marketing decision-making. First, the ways in which crisis management is applied in turbulent times includes adaptive marketing strategies (Rayburn *et al*., 2021), which resemble improvisation. Crisis management literature underscores the need for innovative solutions (creativity), emergency measures (spontaneity), and decisive action (action-orientation) (Spais and Paul, 2021; Toufaily *et al*., 2023). Second, marketing literature focusing on innovation under uncertainty suggests that innovative organisations seek to leverage uncertainty via creative (Ndubisi *et al*., 2020) and rapid action (Song *et al*., 2023). Third, literature on adaptive decision-making reveals the role of simplifying rules that allow for speedy and intuition-based decision-making (Bauer *et al*., 2013; Locander *et al*., 2014).

There is also mounting evidence of the relevance of improvisation among exporters (Nemkova *et al.*, 2012) and of its associations with desired outcomes, such as speed of foreign market entry (Hilmersson *et al.*, 2022) and export performance through responsiveness (Nemkova *et al.*, 2015). Thus, we devised a set of hypotheses aimed at developing an understanding of how to drive improvisation in exporting firms. These were developed based on the findings of the SLR presented above (including the conceptual definition of export improvisation as a three-dimensional construct and the identification of improvisation drivers from the generic, non-export, literature), relevant adjacent literature (used to supplement conceptual development), and a preliminary study. The aim of the preliminary study was to connect literature to the specific exporting context and focus our conceptual development on export-specific drivers to improvisation.

3.1. Preliminary study

An exploratory qualitative study was conducted, involving in-depth interviews with senior managers in 10 exporting organisations in the UK. The key objectives of this empirical phase were: (a) to develop theory by generating insights into what drives exporters to improvise, since there is scant (if any) knowledge available on export improvisation drivers, while extant literature tends to be non-export-specific; and (b) to assist in the adaption of measures to the export context, where required.

The preliminary work was undertaken following the Miles and Huberman (1994) methodology for qualitative data collection and analysis. Respondents were purposely chosen for their knowledgeability and involvement in export decision-making in their respective

organisations, and data was collected to the point of saturation. Interviews were recorded and transcribed, themes were coded using literature codes, useful quotes were curated, and a portfolio of within-case displays was designed to depict the content of each interview. A cross-case display was also produced, incorporating illustrative quotes that pertain to the key constructs of interest (see Supplementary File B). The combination of codes, quotes, and displays then helped support conceptual construction and measurement adaptation. Respondents noted that export decision-making often involved flexibility and informality (improvisation), operational efficiency through an action-orientated approach to decision-making (action-orientation), informal and instantaneous reactions to market requirements (spontaneity), and differentiation through uniqueness (creativity). In turn, maximising these aspects of their decision-making required the company's strategic emphasis on exporting as a vital and profitable aspect of its business operations (export commitment), experience in making informed export decisions (export experiential skills), market research and responsiveness to export market demands (export market orientation), learning from experience and documenting best practices (export learning), and close-knit teamwork (inter-functional coordination).

3.2. Hypothesis development

Our conceptual development draws on extant literature on generic improvisation and improvisation-adjacent literature on crisis management, innovation under uncertainty, and adaptive decision-making, and is contextualised to export operations using insights generated from the exploratory study. Among the theories previously used to study improvisation, our study adopted an information-processing lens to examine drivers of export improvisation. Extant literature focusing on antecedents to improvisation, or including antecedents as part of larger studies, suggests a focus on information processing constructs may be warranted as they are key in fostering improvisation (Akgün *et al.*, 2003, 2006; Chelariu *et al.*, 2002; Dennis and Macaulay, 2007; Moorman and Miner, 1998; Whalen and Boush, 2014). For example, experiential knowledge (Bauer *et al.*, 2013) plays a critical role in the need for, and implementation of, creative and rapid action (Ndubisi *et al*., 2020; Song *et al*., 2023), which are the foundations of improvisation. In turn, the exploratory study aligns with organisational information processing theory (Galbraith, 1974, 1975). This theory was developed in the context of organisations facing dynamic change in their business environments (Haußmann *et al*., 2012), as is the case with exporting firms. It is predicated on the need to reduce the uncertainty arising from "the difference between the amount of information required to perform the task and the amount of information already possessed by the organization" (Galbraith, 1973,

p. 5), and partly aims to "increase [organisations'] flexibility to adapt to their inability to preplan" (Galbraith, 1973, p. 4) – or, in other words, to their ability to improvise (Ciuchta *et al.*, 2021).

Tied to information processing theory are typical information-based constructs, such as information flow (Ciuchta *et al*., 2021), organisational learning and experience (YahiaMarzouk and Jin, 2023), and coordinating mechanisms (Haußmann *et al.*, 2012). These become imperative in the context of exporting, since internationalisation entails increased information processing and coordination demands (Contractor, 2007). Theodosiou and Katsikea (2013) explained that information processing underpins fundamental marketing theories, including market orientation and organisational learning. In turn, these are not only pertinent to internationalisation in general (Assadinia *et al*., 2019) and exporting in particular (Freixanet *et al*., 2018) but, according to literature on generic improvisation and the exploratory study, they are also likely drivers of export improvisation.

Consistent with this reasoning and underpinned by the SLR and exploratory study, we selected information processing variables, including export learning, export experiential skills, export market orientation, and inter-functional coordination, as key drivers to export improvisation. The exploratory study also highlighted the importance of export commitment, and with this construct being central to the export function (Navarro *et al*., 2010), it was included alongside information processing variables. In addition, due to the SLR revealing their potential existence, we also controlled for market dynamism, competitive intensity, technological turbulence, export resources, and experience through years exporting and firm age (discussed further in section 4).

3.2.1. Export commitment. The preliminary study confirmed the importance of senior management commitment to exporting when making export decisions, for example, in terms of financing export projects (Respondent 1) or driving growth via targeting new export markets (Respondent 2). This should increase improvisation (i.e., action-orientation, spontaneity, and creativity) for three reasons.

First, greater commitment boosts the action-orientation facet of export improvisation in part by ensuring that resources are available to implement decisions, as export commitment is defined as "the willingness of a firm's management to devote adequate financial, managerial, and human resources to exporting activities (Navarro *et al.*, 2010, p. 42) and flexible options can be exercised (Hughes *et al.*, 2020). When commitment is low, resources (i.e., managerial time and attention) available to the export function will be low (Respondent 7 stated that "it's quite expensive to export") and decision-makers will be less able to display flexibility and focus

their attention on imminent export-related problems (i.e., display high levels of export action-orientation) (Hmieleski *et al.*, 2013; Nemkova *et al.*, 2015). As export commitment rises, the value of available resources can be optimised through their redeployment for different actions (Hughes *et al.*, 2020). Thus, greater commitment to the export function will enable decision-makers to handle export problems as they emerge and action accordingly. With increased recognition of the importance of export operations for company revenue generation (Respondent 7) also comes a commitment to act: "If it needs to be implemented straight away then it is implemented straight away" (Respondent 4). Consequently, we hypothesise:

H1a. Export commitment is positively related to export action-orientation.

Second, since greater export commitment means exporters have greater resources at their disposal for export activities, it creates an environment for managers to have freedom to make decisions more spontaneously (i.e., to deal with unanticipated events as they happen through thinking on their feet) (Souchon *et al.,* 2016). Conversely, lower levels of commitment to exporting (and therefore lower levels of resources directed towards exporting) can mean entrenchment into previously made decisions that cannot be deviated from due to export resource deficiencies. Hence, we propose:

H1b. Export commitment is positively related to export spontaneity.

Third, when export commitment is low, resource constraints will inevitably stifle any search for novelty and creativity when making decisions (Hmieleski and Corbett, 2006; Nemkova *et al.*, 2015). Such an environment can result in a capability trap where organisational and strategic routines and practices do not allow for creative adaptation to changing demands (Hughes *et al.*, 2020). However, as export commitment rises in tandem with the deployment of resources (human and financial) towards export operations, so do the opportunities for managers to cultivate creativity (e.g., design original new processes for foreign markets). Respondent 3 explained that when senior management accepts short-term losses from investment into long-term export opportunities, it raises opportunities for the export function to build long-term growth through differentiation in products and processes. Therefore, we propose:

H1c. Export commitment is positively related to export creativity.

3.2.2. Export experiential skills. Under conditions of uncertainty, stakeholders require reassurance from leaders, which is often explicit in leaders "exercising judgment … continuously and dynamically" (Hughes *et al.*, 2020, p. 489) – an exercise rooted in experience (Lowe *et al.*, 1993). In an export context, this will be reflected in a greater level of export

experiential skills, which allow greater confidence in making decisions "in the moment" (a manifestation of export improvisation; see Moorman and Miner, 1998). Miner *et al.* (2001) explained that stored knowledge and experiential skills shape overall improvisation. In this context, Weick (1993) observed that experience plays a role in successful and unsuccessful improvisation by firefighters. Contrastingly, Hatch (1998) found that experienced improvisers often reconfigure their knowledge to create novel action, much as experienced jazz musicians can effortlessly, but spontaneously reassemble known bundles of notes into a new melody. Core to this position is the idea that experience can shape action-orientation, spontaneity, and creativity. In exporting, experience helps "make better export decisions" (Respondent 1), a notion supported by most respondents. Qualifying what they meant by "better" decisions, we find that "instant implementation" or *action-orientation* (Respondent 4), speed or *spontaneity* (Respondent 7), innovation, differentiation, uniqueness or *creativity* (Respondents 1, 2, 6), and informality, flexibility, or *improvisation* (Respondents 3, 6, 8) are common denominators derived from experience.

Strategic cognition plays a core role in terms of the confidence with which managers determine their responses and exercise judgement under uncertainty (Hughes *et al.*, 2020). Export experiential skills are closely tied to Type I cognitive processing (Hodgkinson *et al.*, 2023), where action is heuristic-based, seemingly correct, and relies on judgements that emanate quickly and effortlessly (Hodgkinson and Sadler-Smith, 2018). Descriptive decision theory, and thus improvisation, align to this cognitive processing type, rather than that of Type II and the normative decision theory school. Therefore, experiential skills of decision-makers are enablers of an action-orientation that can be characterised as "acting as a priority and with urgency" (Hughes *et al.*, 2020, p. 489). These heuristics are shortcuts that allow decision-makers to take the best course of action in the moment and for any given circumstance. Thus:

H2a. Export experiential skills are positively related to export action-orientation.

In postulating the link between experiential skills and spontaneity, we again draw from heuristics literature. Over time, organisations develop heuristics (rules of thumb) designed to alleviate cognitive effort (Bingham and Eisenhardt, 2011; Niittymies, 2020). While useful in cutting time and effort in making decisions, heuristics are often criticised for introducing bias to decision-making (Bhatia, 2017). However, the experiential learning that goes into the development of heuristics can also support decision-making in complex environments (Maitland and Sammartino, 2015) by allowing better-quality spontaneous judgements (Spence and Townsend, 2008) and faster decision-making (i.e., better thinking on the spot). This is exemplified by Respondent 9 from the preliminary study, who explained that "experience is a

very useful thing to have … a person with experience is likely to make better decisions in a somewhat shorter time than one without". Thus, if heuristics are determined by experience, we predict that experiential skills will enhance the ability to be spontaneous within exporting contexts. Accordingly, we hypothesise:

H2b. Export experiential skills are positively related to export spontaneity.

Furthermore, existing evidence suggests experience is related to creativity (Fateh *et al.*, 2021). For example, Gino *et al.* (2010) found that direct task experience enhances team creativity. According to Dayan and Di Benedetto (2011, p. 277), "literature suggests that intuition may unconsciously integrate experience and knowledge of employees into responsive and productive decision-making and, ultimately, into innovative solutions, particularly under rapidly changing, turbulent environmental decisions". The aforementioned heightened levels of responsiveness in decision-making regarding innovative solutions are symptomatic of higher levels of creativity. Therefore, we propose:

H2c. Export experiential skills are positively related to export creativity.

3.2.3. Export market orientation. Market orientation, an information processing construct (Jaworski and Kohli, 1993), is akin to a "relentless focus on customer centricity" (Hughes *et al.*, 2020, p. 489). It is a willingness to see customers as individuals and centralising customers and the marketplace in strategising; it is a "sense-and-respond" approach such that international marketing actions taken should have greater immediacy and impact in the market as per outside-in strategic thinking (Asseraf and Shoham, 2019). In an export context, the concept of export market orientation resonates with an organisation's predisposition to place external export market forces (e.g., customers' needs and wants, as well as other stakeholder information that plays a role in influencing those needs and wants) at the heart of export marketing decision-making (Cadogan *et al.*, 1999; İpek and Bıçakcıoğlu-Peynirci, 2000; Murray *et al.*, 2007; Navarro-García *et al.*, 2014). All preliminary study respondents engaged in systemic improvisation, but many underpinned their decisions with export market research. For example, Respondent 6 stated that "the market tends to tell us what is needed … so we tend to listen to what they want". In addition, there was recognition that poor decisions were often the result of too little information processing. According to Respondent 3, "if something fails, it's perhaps because we haven't done preparatory work, perhaps been a little bit casual". In turn, we expect export market orientation to positively drive all three improvisation facets.

First, we anticipate export market orientation to be related to the action-orientation dimension of improvisation. Market orientation, as an information processing construct

(Korhonen-Sande, 2010) entailing generating and disseminating intelligence, and responding to this intelligence (Cadogan *et al.*, 2003), involves implementing actions dictated by the information to hand – it is principally an action-orientation (Dobni and Luffman, 2000). For instance, in their study of market-orientated senior leaders (chief executive officers/presidents), Martin *et al.* (2009) linked market orientation cognition to action and found that highly market-orientated leaders are more actioning than those with lower market-orientations. Undoubtedly, export market orientation translates as action. Respondent 3, a market-orientated exporter, explained that "if there is a problem, if [customers] are not happy with a product, it's not the end of the world, we will replace it straight away. We won't quibble". Thus, if an exporter is more market-orientated, it is likely to also be more action-orientated. Consequently, we hypothesise:

H3a. Export market orientation is positively related to export action-orientation.

Second, we predict export market orientation will create an environment where spontaneity will flourish. Firms that display higher levels of export market orientation have superior knowledge regarding export markets relative to their less export market-orientated counterparts (Cadogan *et al.*, 1999). Such knowledge gives firms the confidence to deal with unanticipated events in their export markets as they occur, and to think on their feet (Souchon *et al.*, 2016). This is a major reason why the spontaneity dimension of improvisation is often observed in jobs with direct external customer contact. Since customer needs often evolve in unpredictable ways, the need to respond "in the moment" is critical within a customer-centric approach (Hughes *et al.*, 2020). Respondent 2 explained that being responsive to customers entails the need for "instantaneous" decision-making. Hence, we propose:

H3b. Export market orientation is positively related to export spontaneity.

Third, a similar logic applies to export decision-making creativity. Firms that display greater levels of export market orientation have superior knowledge of their export customers' needs and of their export markets in general (Cadogan *et al.*, 1999). This strategic mindset leads managers to identify and challenge standardised assumptions underpinning exporting actions (e.g., value proposition), which help drive improvisation creativity (Hughes *et al.*, 2020). Put differently, the knowledge stock export market-orientated firms are endowed with (Jaworski and Kohli, 1993) creates an environment in which creative decision-making concerning export markets can flourish, as firms are driven by inputs to innovation (i.e., sensing and responding to superior export market knowledge emanating from the systematic generation of, dissemination of, and responsiveness to export market intelligence). Respondent 1 credited their

organisation's creativity with listening to customer requests for "new" solutions to problems. Accordingly, we expect the following:

H3c. Export market orientation is positively related to export creativity.

3.2.4. Export learning orientation. Socio-cognitive abilities linked to the organisational learning process have also been found to be essential to developing improvised decision-making (Akgün *et al.*, 2003), in that improvisation skills can (and must) be learnt (Chelariu *et al.*, 2002). Learning is a systematic change in behaviour or knowledge informed by experience (Argote and Miron-Spektor, 2011; Glynn *et al.*, 1994; Huber, 1991; Miner *et al.*, 2001). In turn, resilient organisations tend to welcome learning from trial and error (Do *et al*., 2022), a mindset that offers fertile ground for improvisation to occur. The idea of learning by trial and error or making mistakes (Weinzimmer and Esken, 2017) echoes exploration (Sousa *et al.*, 2020) and experimentation. In turn, experimentation-based learning enhances organisations' improvisation (Pereira Christopoulos *et al*., 2016; Yalcinkaya *et al.*, 2007). Decision-makers' learnt competencies enable organisations to respond in a resilient manner (Hughes *et al.*, 2020), which is at the heart of the learning orientation concept (An *et al.*, 2018). As per Respondent 10: "We have identified a recipe of what we believe is a successful way to do business." Respondent 2 also explained that learning along the way allows decision-making to be quicker and easier, arguing that documenting mistakes is essential to make better and faster export decisions as well as to embed learning with the export function so others can benefit.

Export learning orientation is expected to be a driver of improvisation in three ways. First, we argue that export learning orientation is tied to an action orientation, as firms that display high levels of export learning orientation typically focus on action as a means to achieve improvement (Souchon *et al.*, 2012). Learning shapes behaviour (Huber, 1991) such that "a good learning orientation will increase the company's response to market and customer conditions" (Wahyono and Hutahayan, 2021, p. 40). The impact on firm-level response is articulated under descriptive decision theory logics, whereby the learning school places "emphasis on adaptation, rapid initiation of actions, and eschewing adherence to predefined or formalized strategic plans or actions" (Hughes *et al.*, 2020, p. 486). Therefore, it is inherently action-orientated driven by the learning climate. As per Thompson (1997), an organisation can only adapt if it is first able to learn. Learning as a values-driven, investment-based, and cultural priority (Hult *et al.*, 2000) will drive the action-orientation facet of improvisation. As Respondent 8 explained, decisions are "normally based on what we sold there in the past. So, we will get an idea what works in that country and then go forward". From the above, we hypothesise:

H4a. Export learning orientation is positively related to export action-orientation.

Second, concerning spontaneity, firms that exhibit high levels of export learning orientation are typically open to new ideas and willing to try new experiences (Souchon *et al.*, 2012). While it is often assumed, and believed by managers, that strategic decision-making and the process of making decisions is deeply rigorous and scientific, the reality is often far different (as outlined by descriptive decision theory) (Hughes *et al.*, 2020). Strategies may be a pattern of decisions that emerge outside of the rational-actor model through a process of learning (Mintzberg, 1994). We argue that such features typify spontaneous behaviours where the contextual characteristics of exporting require managers to think on their own feet when dealing with unexpected circumstances (internally and/or in export markets; namely circumstances that may be surprising, uncertain, or adverse, and cannot usually be anticipated through strategic planning). Hence, we suggest:

H4b. Export learning orientation is positively related to export spontaneity.

Third, we predict export learning orientation will boost the creativity facet of export improvisation. Firms that display higher levels of export learning orientation will be willing to challenge assumptions and try new ways of doing things to improve their actions (Souchon *et al.*, 2012). As Garvin (1993) observed, an organisation skilled at creating, acquiring, and transferring knowledge will transform behaviour based on the new knowledge and insights gained. Consequently, a learning orientation provides an appropriate organisational climate to be cultivated for the creativity of employees to flourish (Hughes *et al.*, 2020). Based on the above, we anticipate that:

H4c. Export learning orientation is positively related to export creativity.

3.2.5. Inter-functional coordination. Inter-functional coordination entails a collaborative environment in which the export function and other functional areas all pull in the same direction (Cadogan *et al.*, 2005). High inter-functional coordination (i.e., a strong collaborative working relationship between the export function and other functional areas of the firm) is likely to reduce challenges (e.g., conflict) between functional areas (Cadogan *et al.*, 2005), with the latter being consuming in terms of resources (e.g., time, focus). Conversely, when inter-functional coordination is low, export decision-makers may be more "mentally occupied" with solving problems that arise from poor coordination, compromising their ability to act to support and drive export operations (Hmieleski *et al.*, 2013; Nemkova *et al.*, 2015). In addition, coordination ensures knowledge of export operations is spread throughout an organisation, so

implementation is more secure. Respondent 4 agreed: "I suppose because we all know how to work the system, how to work every part of the system, if somebody goes off sick, someone else can handle this." Accordingly, we hypothesise:

H5a. Inter-functional coordination is positively related to export action-orientation.

Higher inter-functional coordination also facilitates greater levels of spontaneity through a consistent, clear, and shared strategic intent across functions (Hughes *et al.*, 2020). Coordinated exporters are more likely to adopt mechanisms that facilitate dialogue and harmonise action across different functional areas, such as establishing cooperative norms and ongoing internal communications to foster alignment of strategic goals across departments and/or functions (Zhang *et al.*, 2008). In this context, coordination blurs knowledge boundaries (Marjanovic and Roztocki, 2013), such that export information becomes available beyond the export function, rendering spontaneous export action more acceptable and feasible. In other words, export operations will gain sufficient exposure and traction for export decisions to be resourced and actioned. As experienced by Respondent 3, "everybody knows each other and directors have open doors, so you can get more or less instant decisions". Conversely, when inter-functional coordination is low, export decision-makers may not benefit from the freedom afforded by pertinent resourcing functions (e.g., finance) endorsing export action, since export and resourcing functions may not share common strategic intent. Well-developed inter-functional coordination helps to establish a clear focus to strategic effort across functions, and such principles are at the heart of agile methodologies (Hughes *et al.*, 2020), which are the contexts in which spontaneity flourishes (Suscheck and Ford, 2008). Thus, we propose:

H5b. Inter-functional coordination is positively related to export spontaneity.

Third, we argue that inter-functional coordination is an enabler of export creativity. Coordination fosters involvement and engagement, which are sources of agency (empowerment) conducive to greater creativity (Sacchetti, 2023). When inter-functional coordination is low, export decision-makers may lack the support of resourcing functions to allow for the greater investment that creative (novel) export decisions require. However, when inter-functional coordination is high, export decision-makers may better count on the support of resourcing functions to endorse the feasibility of creative decisions and leverage these decisions with solutions stemming from the expertise of members of other functional areas. Moreover, inter-functional coordination encourages collaboration between key internal stakeholders, such as individuals, teams, and groups from other functions, which provides the required conditions for experimentation and novel ideas to emerge (i.e., creativity) (Hughes *et*

al., 2020). This may also occur in the context of differences of opinion, as expressed by Respondent 6 who described tight coordination between production, development, and quality functions, which "can be quite dynamic with our decision-making, and we are rather open with each other. We can give each other a hard time". In turn, creativity is often sourced in functional conflict (Hundschell *et al.*, 2022). Therefore, we posit that:

H5c. Inter-functional coordination is positively related to export creativity.

Figure 1 summarises the hypothesised relationships.

[Insert Figure 1 about here]

4. Methodology

4.1. Research setting

The empirical study focuses on the activities of manufacturing exporters for several reasons. First, it has been argued that exporting entails a propensity to operate in unchartered export market environments (Ibeh and Young, 2001) and a proclivity to create novel solutions (Faroque *et al*., 2020), which are characteristic of improvisational behaviour. Second, as the exporting sector is characterised by dynamic, flexible, and adaptive decision-making processes (Nemkova *et al.*, 2015), it presents an ideal context to study improvisational decision-making and its determinants. Third, because exporting manufacturers may struggle to quickly adapt their market offerings to meet export market customer expectations that are now "moving faster than the fastest businesses" (Interbrand, 2024, p. 15), it is timely to explain how manufacturers can develop improvisational competencies to succeed in a fast-moving export business environment.

4.2. Data collection

A structured survey instrument was administered to senior export decision-makers in export manufacturing firms in the UK. Export-specific insights generated from the exploratory interviews were also integrated with improvisation and export literature to adapt measures for the study's key constructs (see Appendix for measurement items). Attention was paid to measuring export improvisation using the Rossiter (2002) C-OAR-SE instructions while being cognisant of cautions by Diamantopoulos (2005) on their limitations. We followed several processes to align the conceptual definitions with the operational definitions (Slife *et al.*, 2016). First, we used preliminary interviews with 10 senior export decision-makers to generate insights into export decision-makers' understanding of the notion of export improvisation, allowing us

to classify export improvisation as a formed abstract collective with constituent parts. Second, we determined the relevance and incidence of improvisation as it pertained to export-specific decisions and what it meant to the decision-makers. Third, following a cognitive interviewing process, we developed export improvisation scale by employing established pretesting methods (Reynolds *et al.*, 1993). Fourth, in establishing an enumeration of 3, 3, and 4 scores for action-orientation, spontaneity, and creativity respectively, we operationalised export improvisation with three distinct latent constructs with reflective items.

We followed Zhang and Merchant (2020) in conceptualising improvisation as a proficiency, as it is argued to be derived from spontaneous and creative capabilities. However, the action-orientation element is critical, given the inherent actionability of improvisation (Moorman and Miner, 1998). In this context, we followed Harmancioglu *et al.* (2009) in acknowledging execution proficiency as an action-orientation capability. Thus, we used "proficiency" as the umbrella term to cover the three dimensions of export improvisation (i.e., action-orientation, spontaneity, and creativity). Action-orientation proficiency emphasises the capability to maintain focus and effort towards achieving export goals without getting distracted, which is reflected in our adapted items. Spontaneity proficiency reflects the skill required to effectively respond in the spur of the moment to unexpected challenges and events during the exporting process. Finally, creativity proficiency highlights the ability to be inventive and original in generating innovative export market ideas and solutions.

Following item purification, three items were drawn from Diefendorff *et al.* (2000) to measure action-orientation. To measure the spontaneity dimension of improvisation, three items from Vera and Crossan (2005) were adapted to the export context. Four items from Hmieleski and Corbett (2006) were also adapted to capture creativity. Export commitment was captured using four items drawn from Gencturk *et al.* (1995). Export experiential skills were measured with three items from Cadogan *et al.* (2005). To measure each of the three export market orientation dimensions (generation, dissemination, responsiveness), three items per scale were sourced from Cadogan *et al.* (1999). To measure export learning orientation, three items were used from Hult *et al.* (2000). Inter-functional coordination was measured with three items from Cadogan *et al.* (2005).

We also included several control variables, following the decision-making tree of Curado *et al*. (2024), which was a revised model from Bernerth and Aguinis (2016). More specifically, we established sequentially that (a) control variables (market dynamism, competitive intensity, technological turbulence, export resources, number of years the firm has been exporting, age of the firm) are supported by theory; (b) that they are likely to affect the improvisation variables in the model (dependent variables); because (c) their effect on

improvisation (Hilmersson *et al*., 2022; Nemkova *et al*., 2012, 2015) and improvisation-adjacent constructs, such as crisis management (e.g., Spais and Paul, 2021), has been empirically established; and (d) the control variables can be measured reliably. Consequently, market dynamism, competitive intensity, and technological turbulence were each captured with two items from scales by Jaworski and Kohli (1993). Export resources were measured by capturing the number of full-time employees directly involved in export activities (Thirkell and Dau, 1998). We also controlled for the number of years the firm had been exporting (Thirkell and Dau, 1998). Firm age was measured by the number of years the firms had been in business. Except for export resources, number of years exporting, and firm age, all variables were measured using seven-point response formats.

Guidance offered by Podsakoff et al. (2003) and Spector and Brannick (1995) for limiting potential bias from Common Method Variance (CMV) was followed. Specifically, guarantees of respondent confidentiality and anonymity were provided to respondents at the outset to induce confidence in participating confidently and without apprehension; guidance around there being no right or wrong answers were given at the start of the survey instrument and detailed instructions for its completion were provided; measurement scales were placed in random order; different response formats were used across questions in the survey instrument; non-idealised responses and wording neutrality were adopted; and overall questionnaire length was reduced. The questionnaire was pretested using protocols and debriefing methods with academic experts and export decision-makers, as well as a pilot study of 100 exporters. Upon revision, the final questionnaire was sent to a random sample of 1,207 eligible manufacturing exporters drawn from a Dun and Bradstreet database. The Dillman (2011) method was used for survey administration. A total of 197 responses were received (16.32% response rate), commensurate with the response rates of other export studies (Lukas *et al.*, 2007)).

We followed prior export research (Bello *et al.*, 2010; Hultman and Oghazi, 2024) to obtain information on the study constructs from a single export decision-maker in each firm. While this approach is less susceptible to bias (Rindfleisch *et al.*, 2008), it is sometimes perceived as a limitation. We identified and addressed the potential limitations in two ways. First, specific attention was paid to the selection of respondents who were contacted by name, as people directly in charge of, and thus most knowledgeable about, export decisions. Second, several statistical tests were performed to assess response bias. Objectively available data was gathered from the Dun and Bradstreet database to triangulate primary (self-reported) data concerning three indicators: number of employees, total sales turnover, and firm age. Significant correlations were uncovered between the two methods of assessing the three indicators (0.50, 0.65, and 0.59, $p < 0.001$). Additionally, the study sample was compared to

the entire population of eligible respondents from Dun and Bradstreet based on the number of employees (mean difference = 306.818, *t*-value = -0.327, $p = 0.743$) and company sales (mean difference = 27,433,462.04, *t*-value = -0.602, $p = 0.547$). Finally, the sampled firms were compared to non-respondents in terms of geographic location. As respondents were drawn from the whole of the UK, the proportion of respondents from England, Northern Ireland, Scotland, and Wales was visually examined. In each constituent country, the proportion of firms represented by the sample was comparable to the total number of potential respondents located within each nation within the UK. Based on these tests, a conclusion was reached that response bias was unlikely.

5. Analyses and results

5.1. Measurement model estimation

Reliability and validity of measures were evaluated using Confirmatory Factor Analysis (CFA), with all measures simultaneously entered into the CFA. We performed an iterative process of scale purification based on modification indices (Diamantopoulos and Siguaw, 2000) to attain good model fit. Measurement model fit was gauged through the standard χ^2 statistic and other typical fit indicators (Diamantopoulos and Siguaw, 2000).

[Insert Table 2 about here]

Table 2 shows that, for the final measurement model, all critical indicators were within recommended thresholds, implying acceptable fit of the study's measurement model and empirical data. Furthermore, all Average Variances Extracted (AVE) values exceeded the squares of the corresponding inter-construct correlations, suggesting discriminant validity between the measures was achieved. All composite reliabilities were large (> 0.60), as were the AVE values (> 0.50), and Cronbach's alpha (α) were all above 0.70. Therefore, all scales displayed sufficient reliability, convergent, and discriminant validity for the purpose of testing our structural model.

Attention was then given to potential CMV issues. A Harman's one factor test was performed in CFA. The model displayed poor fit statistics ($\chi^2 = 4{,}531.83$, $p = 0.000$, df = 740, Root Mean Square Error of Approximation [RMSEA] = 0.16, Non-Normed Fit Index [NNFI] = 0.63, Comparative Fit Index [CFI] = 0.65), suggesting no one single factor to which most of the variance in the measures used could be attributed and thereby indicating that common method concerns were not prevalent. The Lindell and Whitney (2001) method marker test was also performed, using the marker "I sometimes try to get even rather than forgive and

forget" (with "very strongly disagree" and "very strongly agree" as anchors), which is theoretically independent from any of the model's constructs. No significant correlation ($-0.10 \leq r \leq 0.11$) was found. By partialling out the correlations of the marker variable from the study variables, any significant changes in results would indicate that the presence of CMV problems is likely. Comparison of the original results to the results obtained after this procedure revealed no notable differences between the two sets of results: there were no meaningful changes to statistical significance or changes in the direction of results. Although the limitations of the tests conducted were acknowledged (Conway and Lance, 2010; Podsakoff et al., 2003), the results provided confidence that CMV does not explain the outcomes found in hypothesis testing.

5.2. Structural model estimation

The second stage of analysis involved estimating a structural model to test the study's hypotheses. An item parcelling approach was adopted (Bandalos, 2002; Ping, 1995). Accordingly, while the three dependent variables were entered in the model as multi-item scales, all antecedents and control variables were entered as single indicants. The single indicants were computed by averaging the corresponding observed items of the multi-item constructs (Bandalos, 2002). We then set the error variances of the single indicants at $[(1 - \alpha) \times \sigma^2]$ (Jöreskog and Sörbom, 1993), where α was the construct reliability and σ corresponded to the standard deviation of the single indicant. We assumed a construct reliability score of 0.70 for each single indicant when calculating the error variances, in line with a substantial body of export research (Cadogan *et al.*, 2005; Gnizy *et al.*, 2017).

As shown in Table 2, the results of the structural model indicate good fit with the data. Additionally, the model yielded good explanatory power, accounting for 34.4%, 23.8%, and 30.3% of the variance of action-orientation, spontaneity, and creativity respectively. Therefore, the structural model estimates were deemed suitable for hypothesis testing. The correlations between the dependent variables were 0.23 ($p < 0.01$) between action-orientation and spontaneity, 0.16 ($p > 0.05$) between action orientation and creativity, and 0.66 ($p < 0.01$) between spontaneity and creativity.

5.3. Results of hypothesis testing

Export commitment was found to be statistically significantly and positively related to export spontaneity (H1b, *t-value* = 2.94; $p \leq 0.01$) and creativity (H1c, *t-value* = 2.40; $p \leq 0.01$), but not to action-orientation (H1a). The relationship between inter-functional coordination and export improvisation followed a similar pattern, with coordination significantly and positively

related to both spontaneity (H5b, *t-value* = 1.93; $p \leq 0.05$) and creativity (H5c, *t-value* = 2.82; $p \leq 0.01$), but not to action-orientation (H5a). Meanwhile, intelligence generation was found to be significantly, but negatively related to export spontaneity ($H3b_{IG}$, *t-value* = -2.53; $p \leq 0.01$) and export creativity ($H3c_{IG}$, *t-value* = -2.13; $p \leq 0.05$) but not significantly related to action-orientation ($H3a_{IG}$). Conversely, intelligence dissemination was only found to be significantly related to action-orientation ($H3a_{ID}$: *t-value* = 4.30; $p \leq 0.01$), which followed a similar pattern to export learning orientation's relationship with action-orientation (H4a, *t-value* = 2.53; $p \leq 0.01$). Finally, export experiential skills (H2) were not found to be statistically related to any dimension of export improvisation. The results are summarised in Table 3.

[Insert Table 3 about here]

5.4. Post-hoc analysis

5.4.1. Nonlinear effects. We conducted additional post-hoc tests to further investigate the direct effects found in the main analysis. We examined for squared (quadratic) effects and conducted moderation analysis to determine if there were interactions between the study's variables. Variables were mean-centred prior to analysis to avoid risks of multicollinearity, and interaction terms were computed using the Ping (1996) estimation technique. Such analysis may explain some of the original findings (see Supplementary File C for the relevant data tables).

We first examined quadratic effects from all the hypothesised variables in our initial model by running three separate structural equation models to respect parameter-to-observation constraints. The model fit statistics are presented in Table C1 and the results in Table C2. Examining for quadratic effects did not further explain findings relating to the market orientation variables other than for intelligence dissemination where the squared term was positive and significant (*t-value* = 1.83; $p \leq 0.05$) onto spontaneity, which was indicative of an upwards sloping and shaped U-curve when the initial positive direct path was also considered. The same finding was true for inter-functional coordination onto spontaneity (*t-value* = 2.83; $p \leq 0.01$) and creativity (*t-value* = 2.35; $p \leq 0.01$). Beyond this, the results for export commitment onto action-orientation resolved to an inverted U-shape curve (*t-value* = -2.88; $p \leq 0.01$). This initial post-hoc analysis added additional nuance into the nature of the effects of dissemination, inter-functional coordination, and export commitment on aspects of export improvisation.

5.4.2. Moderating effects. Additional post-hoc analysis into potential moderation effects may further explain and illuminate the original results. The model fit statistics are presented in Table C3 and the subsequent moderation test results are presented in Table C4. For action-orientation, pure moderation and quasi-moderation effects (Sharma et al., 1981) were found for intelligence generation and intelligence responsiveness respectively. The negative but statistically non-significant effect of intelligence generation was positively moderated by export experiential skills (*t-value* = 2.43; $p \leq 0.01$) and inter-functional coordination (*t-value* = 1.73; $p \leq 0.05$). Therefore, generation interacts with these variables to lead to positive outcomes. Contrastingly, responsiveness was negatively moderated by export learning orientation (*t-value* = -1.95; $p \leq 0.05$), but positively by inter-functional coordination (*t-value* = 1.84; $p \leq 0.05$). The former magnifies the negative effect of intelligence responsiveness onto action-orientation, while the latter attenuates it.

Quasi-moderation effects were found for spontaneity. The negative effect of intelligence generation was reduced by inter-functional coordination where a positive moderation effect was found (*t-value* = 2.48; $p \leq 0.05$). Regarding intelligence dissemination, the initial positive direct effect was strengthened by export learning orientation (*t-value* = 3.00; $p \leq 0.01$), but reduced by negative moderation effects from experiential skills (*t-value* = -3.10; $p \leq 0.01$) and inter-functional coordination (*t-value* = -2.34; $p \leq 0.01$).

Multiple moderation effects were also found for the creativity outcome. The negative direct effect of intelligence generation was reduced when the positive interaction with inter-functional coordination was considered (*t-value* = 1.96; $p \leq 0.05$). Meanwhile, although export learning orientation (*t-value* = 2.17; $p \leq 0.05$) strengthened the direct positive effect of dissemination onto creativity, both export experiential skills (*t-value* = -2.24; $p \leq 0.05$) and inter-functional coordination (*t-value* = -2.08; $p \leq 0.05$) negatively moderated the effects of dissemination. To complicate the picture for export managers, the interaction effects of these same three variables but with intelligence responsiveness presented an opposing picture. In this situation, export learning orientation was a pure negative moderator of the relationship between responsiveness and creativity (*t-value* = -1.99; $p \leq 0.05$), while both export experiential skills (*t-value* = 1.94; $p \leq 0.05$) and inter-functional coordination (*t-value* = 1.91; $p \leq 0.05$) positively moderated the relationship.

The moderation results added nuance to understanding the main findings (particularly for some of the negative results) and presented clarity on interaction effects between variables – for example, inter-functional coordination had consistently positive interaction effects with intelligence dissemination on all outcome variables, while export learning orientation had consistently negative interaction effects with intelligence responsiveness. However, a more

complex picture was also presented, whereby some moderating variables could have both positive and negative interactions. For instance, inter-functional coordination had both positive and negative moderation effects onto spontaneity and creativity depending on what aspect of market orientation it interacted with (positive effects when interacting with intelligence generation and responsiveness, but negative when interacting with dissemination).

6. Discussion

6.1. Theoretical contributions

This study makes several important theoretical contributions to export marketing knowledge. First, the study sheds light on the key drivers of export improvisation, a major determinant of export market success. Research on export improvisation to date has tended to examine the performance outcomes of this construct and/or its facets (Nemkova *et al.*, 2015; Souchon *et al.*, 2016), rather than its drivers. Thus, while the benefits of export improvisation are well understood, research on the antecedents of export improvisation is lagging. Findings from this study show that export market commitment increases degrees of spontaneity and creativity in exporting firms. The more resources flow towards exporting activities and export decision-making processes (Navarro *et al.*, 2010), the more spontaneous and creative export manufacturers become. Similarly, export inter-functional coordination was found to be a major driver of spontaneity and creativity in exporting organisations. Contrastingly, the study finds that export learning orientation and export market intelligence dissemination affect export action-orientation, echoing the contention that intelligence dissemination (Chung, 2012) and learning orientation (Calantone *et al.*, 2002) act through actionable export market strategic responses to affect export performance.

However, contrary to our expectations, export market intelligence generation was found to be negatively related to spontaneity and creativity. First, this suggests that an excessive focus on export information searches may undermine the ability of exporters to make timely decisions and to act in the spur of the moment. This finding aligns with literature that uncovers negative patterns (or non-significant relationships) between information generation and strategic outcomes, particularly under certain conditions (Conduit *et al.*, 2014; Murray *et al*., 2007; Özturan *et al.*, 2014). Arguments in supply chain literature also suggest that prolonged information processing can contribute to decision-making delays (Wang et al., 2017). Moreover, this finding echoes marketing literature on innovation under uncertainty, where lack of information is considered crucial in the need for, and implementation of, creative and rapid action (Liu and Hart, 2011; Ndubisi *et al*., 2020; Song *et al*., 2023). Literature on adaptive

decision-making also uncovers the use of intuition when tasks are complex and information is unavailable (Bauer *et al*., 2013; Locander *et al*., 2014).

Second, greater access to export information could stifle creativity in several ways. For example, information overload can cause decision-making paralysis and a reliance on the "wisdom of the crowds" (Özturan *et al.*, 2014, p. 141), instead of one's own creativity. Moreover, excessive information search may be indicative of confirmation bias in decision-makers (Vedejová and Čavojová, 2022), which is likely to limit decision-makers' ability to think outside the box and be creative.

Equally surprising, export experiential skills were not found to be related to any of the export improvisation components, suggesting that improvisation may occur at both low (e.g., to "test things out" by trial and error) and high (e.g., because experiential knowledge has rendered spontaneous and creative action easier to perform) levels of export market experience. While intuitively, theoretically (Miner *et al.*, 2001; Moorman and Miner, 1998; Weick, 1993), and from the perspective of export decision-makers (see preliminary study) we expect greater export experience to be associated with improvisation, a body of work suggests that senior managers with job-specific experience in the same or related industry can be outperformed by those without prior experience (Hamori and Koyuncu, 2015). Thus, the reverse may also be true. Furthermore, lack of experience may entail fewer contacts and networks that are often sources of export information, without which, improvisation may prove inevitable.

Third, the post-hoc quadratic and moderation analyses further extend the study's theoretical contributions by revealing that the effects of certain export capabilities on improvisation are nonlinear and contingent, rather than uniformly positive. Export commitment exhibits an inverted U-shaped relationship with action-orientation, suggesting that moderate commitment facilitates decisive action under uncertainty, whereas excessive commitment may constrain action by reinforcing formalisation, sunk-cost considerations, or strategic rigidity. This finding adds nuance to organisational information processing theory in export contexts by indicating that resource dedication can become counterproductive for flexible action once a threshold is exceeded (Hitt *et al.*, 1998). In contrast, inter-functional coordination displays potential accelerating effects on spontaneity and creativity, implying that improvisational capacity may only emerge once coordination reaches sufficient intensity to support rapid sensemaking and cross-functional integration, consistent with threshold-based views of integration and information-processing capacity (Kogut and Zander, 1992; Pavlou and El Sawy, 2011). The moderation results further point towards a sort of configurational view of export improvisation. Intelligence generation, which is negatively associated with spontaneity and creativity in isolation, becomes positively related to action-orientation when combined with

export experiential skills and inter-functional coordination. This indicates that information acquisition contributes to improvisation, especially when firms can interpret and mobilise intelligence effectively, aligning with research on absorptive capacity and capability conversion mechanisms (Zahra and George, 2002).

Finally, our study advances organisational improvisation proficiency literature in the sense that extant research (Akgün *et al.*, 2007; Fultz and Hmieleski, 2021; Vera and Crossan, 2005) has largely neglected investigation of antecedents to improvisation – with the notable exception of Hughes *et al*. (2020) in the context of improvisation readiness. The tendency has been to explain variations in organisational outcomes of improvisation. Thus, the findings on the key determinants of export improvisation proficiency may serve as a new platform to further examine the interplays between the drivers of export improvisation proficiency, helping advance knowledge on how export improvisation can be developed in export organisations.

6.2. Managerial implications

The study's findings have generated several implications for practising export managers on how to develop improvisation in their export operations. Our findings suggest that export improvisation (creativity, spontaneity, and action-orientation) is not merely a reaction to unforeseen events but can be cultivated as a proficiency. First, export decision-makers have a portfolio of controllable factors that can be used to enhance different aspects of export improvisation. In this context, to boost spontaneous and creative decision-making (that allows for customer requirements to be met in the spur of the moment), findings from this study suggest that exporters should foster greater commitment to export operations and greater inter-functional coordination. Taking each driver in turn, if an organisation's leadership considers export operations to be central to organisational success and allocates appropriate resources to developing export trade (manifestations of export commitment; see Gencturk *et al*., 1995), capital is likely to be available for any immediate market responses required and for novel approaches to serving that market. Spontaneity and creativity can only truly be deployed when appropriately resourced (Barrett, 1998).

Concerning inter-functional coordination, in a recent paper, Sacchetti (2023) posited that coordination gives rise to involvement and engagement, providing an empowerment to foster greater creativity. Coordination also blurs knowledge boundaries (Marjanovic and Roztocki, 2013) such that international market knowledge becomes more widely accessible beyond the export function, rendering spontaneous action more feasible. When combined with smoother and more reliable processes for circulating export information across an organisation, export decisions can be sanctioned and implemented more readily. Unsurprisingly, export

commitment and inter-functional coordination are related to spontaneity and creativity, since the two may be organically aligned, facilitating exporting activities. For example, coordinated organisations adopt mechanisms that promote dialogue and harmonise action across different functional areas (e.g., IT systems that aid coordination of activities, or periodical meetings involving members of different functions), allowing export operations to gain the exposure and traction necessary for export ventures to be resourced (encouraging leadership's export commitment). In turn, greater inter-functional coordination can foster group problem-solving when different functions are aligned through cooperative, rather than competing goals (Tjosvold *et al.*, 2004). Furthermore, the findings suggest that coordination should not be treated merely as a control mechanism, but as an enabling infrastructure for improvisation. In practice, managers may need to move beyond ad hoc coordination and institutionalise cross-functional interaction through standing export teams, clearly defined response roles, or short-cycle coordination routines, particularly during periods of market volatility (Pavlou and El Sawy, 2011).

In addition, export action-orientation can be amplified by an organisation's dissemination of export information and the export function's openness to and prioritisation of learning. The ability to act will be predicated on information having flowed to the actor (Marusich *et al.*, 2016). Thus, in today's information-loaded environment, investing in information systems that ensure up-to-date information makes its way speedily to export decision-makers is essential. Moreover, promoting a culture where making mistakes is tolerated and learning from them is rewarded may take a long time to achieve in organisations that have little to no learning culture, but the rewards are likely to be substantial in a world where global trade (and therefore exporting) is confronted with new parameters for success (Interbrand, 2024). However, the nonlinear relationship identified in the analysis indicates that very high levels of export commitment may also constrain action-orientated improvisation. Therefore, managers should periodically review approval routines, escalation rules, and reporting requirements in highly committed export operations to ensure that frontline decision-makers retain sufficient discretion to act quickly under uncertainty (Hitt *et al.*, 1998).

A focus on export information generation also looks to hinder spontaneity and creativity. This finding suggests that the managerial challenge is not the absence of information, but its conversion into timely action. Managers can address this by linking intelligence generation more explicitly to predefined decision triggers (e.g., distributor signals, competitor actions, regulatory changes) that clarify when information should prompt immediate action (Eisenhardt and Martin, 2017). Contrastingly, if exporters can shelve their need to secure information before making decisions, freedom from informational constraints may allow them

to generate greater originality (e.g., in new product development) and be able to think on their feet when encountering problems to solve.

At the same time, the negative moderating role of learning orientation on responsiveness suggests that managers should explicitly differentiate between learning-focused and action-focused phases. One practical approach is to define short response windows that prioritise rapid action, followed by structured reflection once immediate uncertainty has been addressed (Sinkula *et al*., 1997). Overall, the findings suggest that export improvisation is fostered less by uniformly increasing capabilities and more by calibrating their intensity and deployment to the type of improvisational response required.

6.3. Limitations and directions for future research

This research is not free from limitations, which are now discussed in connection with future research directions. First, this study adopts a cross-sectional design. Thus, causal assertions ought to be treated with caution, and the ability to demystify the mechanisms for driving export improvisation is limited. Therefore, future research may wish to unpack the nature of the causal mechanisms related to the hypotheses of this study by constructing data sets of a longitudinal nature, with a first wave of data collection pertaining to drivers effected prior to the collection of export improvisation data. The use of Fuzzy-set Qualitative Comparative Analysis (FsQCA) may also allow for causal complexities to be ascertained.

Second, the structural equation model returned eight significant paths, one of which running counter to expectations. Having tested 15 hypotheses and 21 paths (owing to market orientation entailing three dimensions), a larger number of significant paths and supported hypotheses may have been expected. Future studies could consider larger samples to ensure greater statistical power is harnessed to reveal currently obscured relationships – for example, export experiential skills may become significantly related to creativity, since the *t*-value for this path is already at 1.43, significant at the 10% level. The findings derived from the additional analysis unlock some potential future research directions worthy of further investigation.

Third, the nonlinear relationships identified in the post-hoc analysis suggest that export improvisation may evolve through distinct phases over time, with capabilities shifting from enabling to constraining as they intensify. Future research could adopt time-lagged designs to examine how export commitment, coordination, and information-processing interact dynamically as firms accumulate experience in export markets. Such studies could investigate whether threshold effects observed cross-sectionally correspond to temporal tipping points, at which increasing commitment or coordination transitions from facilitating improvisational action to generating rigidity. Tracking the sequencing and timing of capability development

would allow scholars to move beyond static relationships and better capture how improvisation unfolds as export environments change.

Fourth, future research could extend the potential configurational logic unveiled by the post-hoc moderation results by examining capability bundles using approaches, such as set-theoretic methods or multilevel designs that combine firm-level capabilities with team-level or manager-level decision processes. Such multi-source data could explore how individual managers' experiential skills and cognitive frames interact with organisational coordination structures to shape different forms of improvisation. This would deepen understanding of how improvisation emerges from the alignment (or misalignment) of capabilities across organisational levels in export contexts.

Fifth, this study used a sample of companies based in one country, namely the UK, which is a developed economy. Future studies should assess whether the findings hold in different institutional settings (e.g., emerging markets). In this context, a potentially fruitful area for future research could be a multilevel investigation of how nation-level institutions of firms' domestic and/or export markets shape the link between improvisation and its antecedents.

Sixth, the study emphasised export manufacturers. Future studies may examine the extent to which export service firms and export manufacturers' servitisation strategies foster improvisation (it is plausible the nature of services allows for greater customisation through easier improvised decision-making).

Finally, the theoretical model used is not exhaustive. Future studies could expand the present conceptual framework and examine additional factors that stem from complementary theoretical perspectives (e.g., dynamic capabilities theory, upper echelons theory, contingency theory) and seek to identify inhibitors to improvisation both internal (e.g., structural inhibitors) and external (e.g., competitor aggressiveness) to the firm, as well as potential moderators in the antecedents-improvisation relationships (e.g., environmental turbulence). For example, the non-significant relationship between export experiential skills and export improvisation may be explained by the existence of a moderator, such as export complexity (Cadogan *et al*., 2005) or decision-making autonomy (Özsomer *et al.*, 2023). It is also possible that the relationships tested may operate through intervening mechanisms (e.g., export processes and structures). Future research can extend our findings by theorising and empirically validating the contention that antecedents to export improvisation and its components may operate through mediating variables.

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Table 1. SLR findings: context, theories applied, drivers, levels of analysis, and key findings

Publication	Context	Theory applied	Drivers	Level of analysis	Key findings
Akgün *et al.* (2006)	Team learning process	Information processing	Team intelligence	Team	Improvisation and unlearning enhance new product success in turbulent environments
Banin *et al.* (2016)	Salesperson improvisation	Decision theory	Resource availability Customer demandingness	Individual	Salesperson improvisation improves performance, especially with resource availability and low customer demandingness
Carlson and Ross (2022)	Polychronicity, role ambiguity and improvisation, and self-assessments of sales performance	Person-job fit	Polychronicity	Individual	Improvisation mediates the effect of polychronicity on performance; job complexity moderates this relationship
Dennis and Macaulay (2007)	Market orientation	Jazz metaphor	Learning Flexible leadership Quasi-autonomous leadership Open communication Self-reflexivity	Team	Jazz metaphor illustrates how improvisation enhances market orientation through flexibility and creativity
Hill *et al.* (2017)	How improvisation manifests in the context of the sales team presentation	Team dynamics Unplanned behaviour	Emotional intelligence	Team	Improvisation in team selling boosts customer acquisition under pressure; team dynamics are critical
Hughes *et al.* (2020)	Strategic imperative framework for improvisation readiness	Decision theory	Resource fluidity Strategic leadership Strategic posture Organisational resilience Innovation proclivity	Organisational	Strategic improvisation readiness index score helps firms adapt and thrive during crises
Moorman and Miner (1998)	Marketing strategy	Innovation and learning	Memory levels Environmental turbulence	Organisational	Improvisation occurs when planning and execution converge; memory and turbulence influence effectiveness
Oakes (2009)	Cultural diversity of improvisation	Jazz metaphor	Freedom (empowerment) versus constraint	Individual	Improvisation supports market orientation in SMEs; enables responsiveness in dynamic environments
Slotegraaf and Dickson (2004)	Marketing planning capability	Resource-based view	Marketing plan comprehensiveness Marketing planning capability	Organisational	Strong planning capability may reduce improvisation but also create rigidity, highlighting a performance paradox
Wen *et al.* (2022)	Improvisation of tourism products	Stimulus-organism-response Situated cognition	Co-development of products	Product	Improvisational capability and digital readiness jointly enhance innovation performance in SMEs

Publication	Context	Theory applied	Drivers	Level of analysis	Key findings
Whalen and Boush (2014)	Deviations from intended marketing plans	N/A	Market changes	Organisational	Improvisation in consumer behaviour can lead to ethical dilemmas and trust issues in marketing
Yeniaras *et al.* (2021)	Business and political ties, organisational flexibility, organisational improvisation and performance	Relational governance dynamic capabilities	Business ties Political ties Flexibility	Organisational	Improvisation and bricolage positively affect new venture performance; defensive improvisation is more impactful

Table 2. Fit statistics, correlation matrix, and measure descriptives

Model	χ^2(d.f.)	*p*-value	RMSEA	CFI	NFI	NNFI	Standardised RMR
Measurement model	749.99(623)	0.00	0.03	0.98	0.91	0.97	0.04
Structural model	184.84(126)	0.00	0.05	0.98	0.94	0.96	0.07

Inter-construct correlations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Action-orientation	-															
2. Spontaneity	0.23**	-														
3. Creativity	0.16	0.66**	-													
4. Export commitment	0.23**	0.29**	0.30**	-												
5. Experiential skills	0.20*	0.23**	0.33**	0.52**	-											
6. EMO: Generation	0.16	0.08	0.19*	0.50**	0.68**	-										
7. EMO: Dissemination	0.45**	0.07	0.15	0.23**	0.33**	0.25**	-									
8. EMO: Responsiveness	0.16	.023**	0.30**	0.40**	0.45**	0.44**	0.30**	-								
9. Learning orientation	0.38**	0.23**	0.36**	0.52**	0.59**	0.53**	0.29**	0.48**	-							
10. Coordination	0.23**	0.20**	0.33**	0.10	0.31**	0.24**	0.24**	0.33**	0.38**	-						
11. Market dynamism	-0.12	0.11	0.09	0.07	0.24**	0.13	-0.12	-0.04	0.08	-0.02	-					
12. Competitive intensity	-0.03	0.14	0.11	0.19*	0.21**	0.27**	-0.29**	0.11	0.18	-0.07	0.46**	-				
13. Technological turbulence	-0.04	0.12	0.16*	0.29**	0.35**	0.30**	-0.09	0.19*	0.21*	0.24**	0.46**	0.24**	-			
14. Export resources	0.00	-0.07	-0.06	0.18*	0.19*	0.33**	0.06	0.04	0.18*	-0.01	0.09	0.17*	0.14	-		
15. Years exporting	0.01	-0.02	.006	0.14	0.19*	0.28**	-0.10	0.11	0.20*	0.07	0.16	0.17*	0.19*	0.08	-	
16. Firm age	-0.01	-0.13	-.011	0.02	0.00	0.12	-0.04	0.03	0.15	-0.09	0.17*	0.09	0.05	0.09	0.64*	-
Mean	4.97	5.66	4.91	6.71	4.19	4.15	4.8	4.89	4.98	4.95	4.01	3.12	4.26	13.75	34.16	53.81
Standard deviation	1.22	0.81	1.01	1.77	1.34	1.57	1.32	1.25	1.21	1.17	1.45	1.40	1.44	28.20	30.69	45.35
Composite reliability	0.86	0.90	0.90	0.90	0.87	0.84	0.86	0.85	0.79	0.88	0.78	0.80	0.89	N.A.	N.A.	N.A.
AVE	0.68	0.75	0.68	0.76	0.68	0.64	0.67	0.66	0.56	0.71	0.64	0.66	0.81	N.A.	N.A.	N.A.
Square root of AVE	0.82	0.87	0.82	0.87	0.82	0.80	0.82	0.81	0.75	0.84	0.80	.81	.90	N.A.	N.A.	N.A.

Notes: * Correlation is significant at the 0.05 level; ** Correlation is significant at the 0.01 level; N.A. = scale properties not available (single item scale)

Table 3. Structural model results

		Outcome variables and parameter estimates					
		Action-orientation (a)		Spontaneity (b)		Creativity (c)	
Hypothesis	Antecedent	Gamma	*t*-value	Gamma	*t*-value	Gamma	*t*-value
H1	Export commitment	0.06	0.60	0.31	2.94**	0.25	2.40**
H2	Export experiential skills	-0.03	-.024	0.17	1.27	0.18	1.43
$H3_{IG}$	Export market orientation (intelligence generation)	-0.12	-0.93	-0.32	-2.53**	-0.26	-2.13*
$H3_{ID}$	Export market orientation (intelligence dissemination)	0.44	4.30**	0.01	0.09	0.02	0.23
$H3_{RI}$	Export market orientation (responsiveness to intelligence)	-0.13	-1.36	0.05	0.55	0.09	0.96
H4	Export learning orientation	0.34	2.53**	0.06	0.46	0.08	0.61
H5	Inter-functional coordination	0.06	0.62	0.19	1.93*	0.28	2.82**
Control	Export market dynamism	-0.20	-1.65*	0.07	0.61	0.11	0.92
Control	Export competitive intensity	0.18	1.57	0.16	1.43	0.10	0.93
Control	Export technological turbulence	0.02	0.23	-0.08	-0.72	-0.08	-0.80
Control	Export resources	-0.06	-0.74	-0.08	-1.10	-0.08	-1.08
Control	Years exporting	0.04	0.43	0.02	0.23	0.11	1.18
Control	Firm age	-0.03	-0.34	-11	-1.16	-0.15	-1.62

Notes: The Gamma coefficients presented are standardised. One-tailed tests are used due to directional hypotheses.
* significant at 5% level (critical t-value: 1.65); ** significant at 1% level (critical t-value: 2.33)

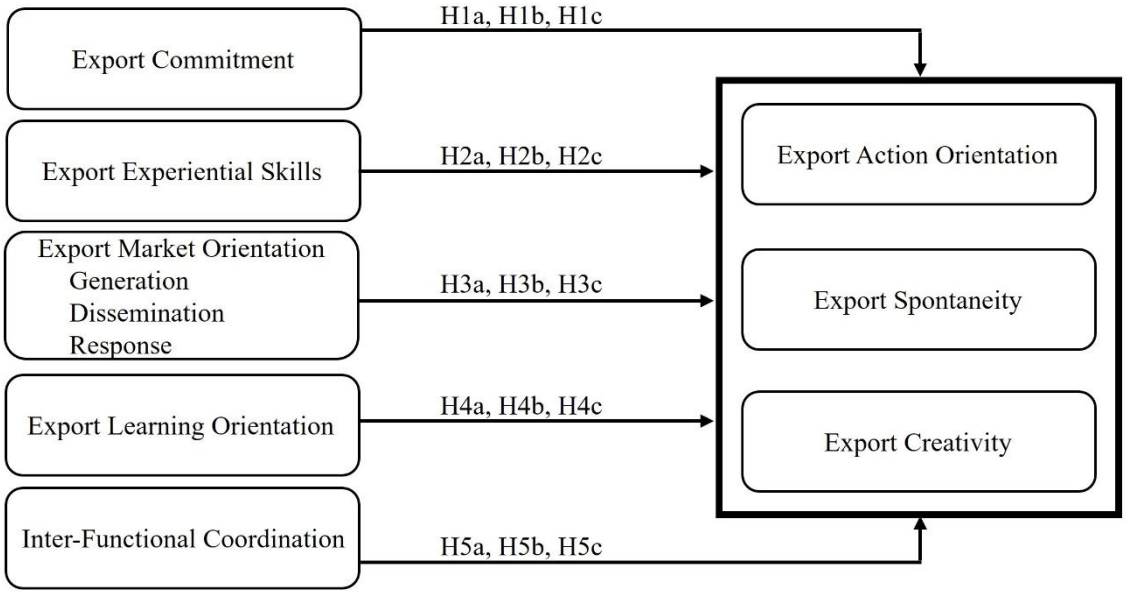

Figure 1. Conceptual model

Appendix: Measurement scales

Items, examples of item sources, and Cronbach's alpha

Export improvisation: action-orientation[a] (Diefendorff *et al*., 2000) *(Cronbach's α = 0.86)*
Members of the export function…
…get easily distracted from pursuing set export objectives. (R)
…often engage in actions that are irrelevant for achieving export goals. (R)
…are sometimes unable to maintain effort to see export decisions through. (R)
Export improvisation: spontaneity[a] (Vera and Crossan, 2005) *(Cronbach's α = 0.90)*
Members of the export function…
…are good at thinking on their feet when carrying out actions.
…are able to deal with unanticipated events on the spot.
…have an ability to respond "in the moment" to unexpected problems.
Export improvisation: creativity[a] (Hmieleski and Corbett, 2006) *(Cronbach's α = 0.89)*
Members of the export function…
…are very inventive.
…serve as good role models for creativity.
…often try new approaches to problems.
…often demonstrate originality in their work.
Export commitment[b] **(**Gencturk *et al*., 1995) *(Cronbach's α = 0.90)*
Senior management in our company…
…consider our exporting activities to be important.
…intend to increase the company's exporting activities.
…actively explore international market opportunities.
…consider exporting to be a valuable investment of resources.[c]
Export experiential skills[b] (Cadogan *et al*., 2005) *(Cronbach's α = 0.87)*
In this company, we have developed…
…a base of information on export sales opportunities.
…an ability to interpret the degree of quality of export market information.
…an understanding of how best to conduct market research in foreign markets.
Export market orientation – generation[a] **(**Cadogan *et al*., 1999)
(Cronbach's α = 0.84)
In this company, we generate a lot of information concerning trends (e.g., regulations, technological developments, political, economic) in our export markets.
We periodically review the likely effects of changes in our export environment (e.g., regulation, technology).
We generate a lot of information in order to understand the forces which influence our overseas customers' needs and preferences.
Export market orientation – dissemination[a] **(**Cadogan *et al*., 1999) *(Cronbach's α = 0.85)*
Information which can influence the way we serve export customers takes forever to reach export personnel. (R)
Information about export competitors' activities often reaches relevant personnel too late to be of any use. (R)
Important information concerning export market trends (regulations, technology) is often discarded at it makes its way along the communication chain. (R)
Export market orientation – responsiveness[a] **(**Cadogan *et al*., 1999) *(Cronbach's α = 0.85)*
If a major competitor were to launch an intensive campaign targeted at our foreign customers, we would implement a response immediately.
We are quick to respond to significant changes in our competitors' price structures in foreign markets.
We rapidly respond to competitive actions that threaten us in our export markets.
Export learning orientation[a] (Hult *et al*., 2000) *(Cronbach's α = 0.78)*
The basic values of the export team/person include learning as key to improvement.
The sense around here is that export employee learning is an investment, not an expense.
Our culture is one that does not make export employee learning a top priority. (R)

Export inter-functional coordination[a] (Cadogan *et al*., 2005)
(Cronbach's α = 0.87)
There is a strong collaborative working relationship between the export function and "operations".
Functional areas in this company pull together in the same direction.
We resolve issues and conflicts through communication and group problem-solving.
Market dynamism[a] (Jaworski and Kohli, 1993) *(Cronbach's α = 0.76)*
Our export customers' product preferences change quite a bit over time.
Our export customers tend to look for new products all the time.
New export customers tend to have product-related needs that are different from those of our existing customers.[c]
Competitive intensity[a] (Jaworski and Kohli, 1993) *(Cronbach's α = 0.80)*
In our export markets there are many "promotion wars".
One hears of a new competitive move in our export markets almost every day.
In our foreign markets, aggressive selling is the norm.[c]
Technological turbulence[a] (Jaworski and Kohli, 1993) *(Cronbach's α = 0.89)*
Technological changes provide big opportunities for our export operations.
A large number of new export ideas have been made possible through technological breakthroughs.
The technology that is relevant to our export markets is changing rapidly.[c]
Export resources (Thirkell and Dau, 1998) *(Cronbach's α: N.A.)*
Number of full-time staff directly involved in exporting matters
Years exporting (Thirkell and Dau, 1998) *(Cronbach's α: N.A.)*
Number of years the firm has been exporting
Firm age (Cronbach's α: N.A.)
Number of years the firm has been in business

Notes: (R) Item reverse coded prior to any analysis.
[a] Seven-point scale with anchors "strongly disagree"/"strongly agree"
[b] Seven-point scale with anchors "skill poorly developed"/"skill very well developed"
[c] Item deleted during scale purification
N.A. Cronbach's α not meaningful as this is a single item scale

SUPPLEMENTARY FILE A
Systematic literature review (SLR)

1. SLR search strategy

We used EBSCO's Business Source Ultimate as the database for searching and identifying relevant literature up to and including May 2025. We selected peer reviewed, academic journal articles, in the English language, as search criteria.

We first began by selecting "export improvisation" as the primary search term (PST) in the title of papers (Search 1) which returned zero entries. We then searched for "export improvisation" in abstracts (Search 2), returning one paper (Nemkova *et al*., 2012). Expanding the search for "export improvisation" as the PST in All Text (Search 3) returned three papers: Nemkova *et al*. (2012) (a duplicate from the previous search), Nemkova *et al*. (2015) and Tripathi *et al*. (2023). This was followed by searching for "export" and "improvisation" as two separate PSTs in All Text (Search 4), which returned 8 papers, including the three from Search 3 plus Chetty *et al.* (2018), Elbanna *et al*. (2020), Freixanet *et al*. (2018), Hilmersson *et al*. (2022), and Siddiqui and Arora (2022). Given the paucity of literature, we broadened our search to "improvisation" (i.e., we removed the word, "export") as the PST in the title of papers, together with "marketing" in the publication name (Search 5), which returned 12 papers. Of these, one paper was deemed irrelevant as improvisation was applied to consumers rather than organisations. We then searched for "improvisation" as the PST in abstracts together with "marketing" in the publication name (Search 6), which returned 29 papers. Of these, 11 were duplicates from previous searches, and one was deemed irrelevant due to focussing on improvisation in education. The next expansion to search criteria involved searching for the "improvisation" PST in All Text together with "marketing" in the publication name (Search 7), which returned 229 articles. Of these 36 were irrelevant due to applying to consumers (with one of these overlapping with the previous search), 20 were irrelevant due to focussing on improvisation for educational purposes, three focussed on improvisation in academic research rather than business practice, one was a methodological paper, one was a keyword index, and 26 were further duplicated from previous searches. A summary table of the SLR is provided below. Where there is duplication of papers, the duplicate is marked in grey font.

2. SLR supplementary findings

Search 6 of the SLR (where 'improvisation' was sought in marketing journal articles' abstracts and was more focussed on the improvisation construct than Search 7 where the PST 'improvisation' was searched in ALL TEXT) highlights that improvisation is a construct that appears in a variety of different marketing fields (e.g., sales, strategy, team learning, planning), showcasing its wide-ranging applications. Moreover, given the diversity of fields, distinct definitions and dimensions of improvisation are also revealed (e.g., creativity, spontaneity, action-orientation, see Nemkova *et al.* (2015)), emphasising both the construct's multifaceted nature and convergence of the literature onto the same key dimensions. While improvisation has an extemporaneous (i.e., ad-libbed) quality, it is deceiving to narrow it down solely to this characteristic alone. A large body of work conceptualises improvisation as a three-dimensional construct entailing action-orientation, spontaneity and creativity (Cunha *et al.*, 2009; Essuman *et al.*, 2023; Gojny-Zbierowska *et al.*, 2021; Hultman *et al.*, 2022; Nemkova *et al.*, 2012, 2015; Song *et al.*, 2022; Vera *et al.*, 2024).

The SLR continued to Search 7, where the term 'improvisation' was searched in ALL TEXT in marketing publications. From this review, we do not identify additional antecedents to improvisation, since improvisation was not the core construct under study. However, we do uncover the contexts within which improvisation is studied. These include relationship marketing (Bendapudi and Leone, 2002; Voss and Voss, 2008), marketing strategy (e.g.,

Assadinia *et al.*, 2019; Chimhanzi, 2004; Chowdhury *et al.*, 2014; Houston *et al.*, 2001; Maciel and Fischer, 2020; Morgan *et al.*, 2019), new product development (Alam, 2003; Lambe *et al.*, 2009), communication (Daly and Moloney, 2005), innovation (Dobni, 2006), branding (Chailan, 2010; Oakes *et al.*, 2013; Scholz and Smith, 2019), market orientation (Sheth, 2011), exporting (Chabowski *et al.*, 2018; Morgan *et al.*, 2012), internationalisation (Ahi *et al.*, 2017), crisis management (Ozanne *et al.*, 2020), digital marketing (e.g., Busca and Bertrandias, 2020; Wielgos *et al.*, 2021), and services marketing (e.g., Ozanne and Ozanne, 2021; Sharma *et al.*, 2023). This body of work reveals that improvisation is pertinent to a variety of marketing contexts, in which the diverse and multi-faceted nature of improvisation research is reflected.

3. SLR output

Table A1
Systematic literature review output summary

Search sequence	Search criteria	Papers	Context
Search 1 – 0 relevant papers	"export improvisation" as keywords in titles	n/a	n/a
Search 2 – 1 relevant paper	"export improvisation" as keywords in abstracts	Nemkova *et al.* (2012)	Export decision-making orientations
Search 3 – 3 relevant papers – 1 duplication	"export improvisation" as keywords in all text	Nemkova *et al.* (2012)	Export decision-making orientations
		Nemkova *et al.* (2015)	Interaction of export planning and improvisation
		Tripathy *et al.* (2023)	Productivity, export, and outward foreign direct investment
Search 4 – 8 relevant papers – 3 duplications	"export" and "improvisation" as keywords in all text	Nemkova *et al.* (2012)	Export decision-making orientations
		Nemkova *et al.* (2015)	Interaction of export planning and improvisation
		Chetty *et al.* (2018)	Discovery and creation of opportunities during the internationalization of small firms
		Freixanet *et al*. (2018)	Managers' global orientation
		Elbanna *et al*. (2020)	Internationalisation decision-making
		Hilmersson *et al*. (2022)	Market entry performance
		Siddiqui and Arora (2022)	Expansion-oriented and escape-oriented export strategies
		Tripathy *et al.* (2023)	Productivity, export, and outward foreign direct investment
Search 5* – 11 relevant papers – 1 duplication * articles in bold focus on antecedents to improvisation or examine improvisation antecedents as part of larger studies	"improvisation" as keyword in titles + "marketing" in publication name	Sparks (1994)	Machiavellianism
		Moorman and Miner (1998)	**Marketing strategy**
		Dennis and Macaulay (2007)	**Market orientation**
		Whalen and Boush (2014)	**Deviations from intended marketing plans**
		Nemkova *et al.* (2015)	Interaction of export planning and improvisation
		Banin *et al.* (2016)	**Salesperson improvisation**
		Hill *et al.* (2017)	**How improvisation manifests itself in the context of the sales team presentation**
		Hughes *et al.* (2020)	**Strategic Imperative Framework for improvisation readiness**
		Yeniaras *et al.* (2021)	**Business and political ties, organizational flexibility, organizational improvisation and performance**
		Carlson and Ross Jr (2022)	**Polychronicity, role ambiguity and improvisation, and self-assessments of sales performance**
		Shaner *et al.* (2024)	Improvisation as an instrumental process for change

Search 6* – 28 relevant papers – 11 duplications * articles in bold focus on antecedents to improvisation or examine improvisation antecedents as part of larger studies	"improvisation" as keyword in abstracts + "marketing" in publication name	Holbrook & Day (1994)	Jazz musicianship and teaching as product delivery
		Sparks (1994)	Machiavellianism
		Moorman and Miner (1998)	Marketing strategy
		Sashittal and Jassawalla (2001)	Marketing planning in smaller industrial organizations
		Dennis and Macaulay (2003)	Jazz improvisation to strategic marketing planning
		Slotegraaf and Dickson (2004)	**Marketing planning capability**
		Akgün *et al.* (2006)	**Team learning process**
		Dennis and Macaulay (2007)	Market orientation
		Holbrook (2008)	Classification of management and marketing styles based on parallels with the jazz metaphor
		Oakes (2009)	**Cultural diversity of improvisation**
		Nemkova *et al.* (2012)	Export decision-making orientations
		Singh and Sonnenburg (2012)	Brand storytelling
		Whalen and Boush (2014)	Deviations from intended marketing plans
		Nemkova *et al.* (2015)	Interaction of export planning and improvisation
		Banin *et al.* (2016)	Salesperson improvisation
		Hill *et al.* (2017)	How improvisation manifests itself in the context of the sales team presentation
		Kim and Lee (2017)	Motivation of independent resellers
		Lowe and Rod (2018)	Sensemaking within business networks
		Hultman *et al.* (2019)	Tone of the salesperson–customer relationship and salesperson improvisation
		Hughes *et al.* (2020)	Strategic Imperative Framework for improvisation readiness
		Mourey (2020)	Improvisational training and group collaboration, self-efficacy, and divergent thinking
		Yeniaras *et al.* (2021)	Business and political ties, organizational flexibility, organizational improvisation and performance
		Carlson and Ross Jr (2022)	Polychronicity, role ambiguity and improvisation, and self-assessments of sales performance
		Wen *et al.* (2022)	**Improvisation of tourism products**
		Ahmad and Laroche (2023)	User-generated content, market surveillance, digital innovation, and brand improvisation
		Chaudhry *et al.* (2024)	Entrepreneurs' international target market strategies
		Malerba *et al.* (2024)	Family-friendly wine tourism
		Shaner *et al.* (2024)	Improvisation as an instrumental process for change
Search 7	"improvisation" as keyword in all text + "marketing" in publication name	Hunt and Chonko (1984)	Machiavellianism
		Sparks (1994)	Machiavellianism

– 193 relevant papers – 27 duplications		Moorman (1995)	Organizational market information processes
		Moorman and Miner (1997)	Organizational memory and new product development
		Sashittal and Tankersley (1997)	Marketing planning and implementation processes
		Sparks *et al.* (1997)	Consumer responses to empowerment strategies
		Moorman and Miner (1998)	Marketing strategy
		Moorman and Slotegraaf (1999)	Organizational capabilities
		Menon *et al.* (1999)	Marketing strategy
		Morgan *et al.* (2000)	Contribution of marketing to business strategy formation
		Sashittal and Jassawalla (2001)	Marketing planning in smaller industrial organizations
		Grewal and Tansuhaj (2001)	Market orientation, strategic flexibility and firm performance after crisis
		Houston *et al.* (2001)	Structural, social, and cognitive factors to manage in search for the best strategy–structure fit in emerging markets
		Raymond *et al.* (2001)	Pricing practices of export firms
		Atuahene-Gima and Li (2002)	Supervisee trust–sales performance relationship
		Bendapudi and Leone (2002)	Trust
		Forlani *et al.* (2002)	Risk and choice
		Thomas (2002)	Barriers to marketing implementation
		Dennis and Macaulay (2003)	Jazz improvisation to strategic marketing planning
		Alam (2003)	NPD in banking services
		Johnson *et al.* (2003)	Market-focused strategic flexibility
		Wu *et al.* (2003)	Antecedents of e-business adoption, adoption intensity, and performance outcomes
		Chimhanzi (2004)	Cross-unit working relationships and marketing strategy execution
		Joshi and Sharma (2004)	Fit between new product features and customer preferences
		Lee and Grewal (2004)	Relationships between strategic responses to new technologies, organizational resources, and firm performance
		Slotegraaf and Dickson (2004)	Marketing planning capability
		Veloutsou and Panigyrakis (2004)	Effect of brand managers' role stress, perceived performance and satisfaction on intention to leave
		Baker and Sinkula (2005)	Enviropreneurial marketing
		Daly and Moloney (2005)	Corporate rebranding
		Ganesan *et al.* (2005)	Geographic proximity and new product development
		Menguc and Auh (2005)	Strategic orientation formation and implementation

		Pal *et al.* (2005)	Using a simulation to develop student skills and knowledge required to plan
		Saini and Johnson (2005)	E-commerce
		Salavou (2005)	Firm-specific factors that influence the innovativeness level of new products
		Wernerfelt (2005)	Strength in product development and optimal scope
		Yoon and Lee (2005)	Market-oriented culture and the marketing strategy making process
		Akgün *et al.* (2006)	Team learning process
		Dobni (2006)	Innovation, market positioning strategy and performance
		Chang (2006)	Service recovery programs
		Hauser *et al.* (2006)	Innovation
		Lee *et al.* (2006)	Market-orientation and marketing strategy
		Macaulay and Dennis (2006)	Marketing of jazz music
		Voss *et al.* (2006)	Innovation, product exploration experience, promotion, and market sophistication
		Alam (2007)	Cross-national comparison of innovation practices
		Berger *et al.* (2007)	Branding
		Coskun Samli (2007)	Radical product innovations
		Dennis and Macaulay (2007)	Market orientation
		O'Donohoe and Turley (2007)	Emotional dimensions of service failure experiences
		Patterson and Brown (2007)	Anglosphere
		Yalcinkaya *et al.* (2007)	Exploitation and exploration capabilities
		Fang (2008)	Customer participation
		Holbrook (2008)	Classification of management and marketing styles based on parallels with the jazz metaphor
		Sethi and Iqbal (2008)	Stage-Gate controls on new product development
		Voss and Voss (2008)	Customer retention and acquisition strategies
		Kilgour and Koslow (2009)	Divergent and convergent creative thinking techniques
		Lambe *et al.* (2009)	New product development alliances
		Malshe and Sohi (2009)	Marketing strategy making
		Oakes (2009)	Cultural diversity of improvisation
		Pearce and Jackson (2009)	Product life cycle (PLC) stages
		Canning and Szmigin (2010)	Disposal of the dead
		Chailan (2010)	Brand-portfolio management
		Hewer and Brownlie (2010)	Social dynamics
		Logan and McEwan (2010)	Open source business

		Samli (2010)	Chaos theory
		Sarkees *et al.* (2010)	Ambidextrous approach to exploiting existing markets while exploring new opportunities
		Schäfer and Berg (2010)	Business theatre
		Akroush (2011)	Marketing strategy implementation
		Kaleka (2011)	Service advantage in overseas markets
		Kumar *et al.* (2011)	Manufacturer's governance of external supplier relationship
		Park *et al.* (2011)	Outsourcing customer relationship management
		Ratnatunga (2011)	Supply chain management
		Sheth (2011)	Emerging markets as radically different to traditional industrialized societies
		Wood *et al.* (2011)	Organizational creativity
		Berne *et al.* (2012)	Trade show organizer services
		Bindroo *et al.* (2012)	Effect of customer clusters on a firm's innovation
		Coviello and Joseph (2012)	Creation of major innovation
		Duverger and Steffes (2012)	Creativity
		Henderson (2012)	Different models used in collecting qualitative data
		Hodgkinson *et al.* (2012)	Market orientation in the public leisure sector
		Hoyos-Ruperto *et al.* (2012)	Entrepreneurial environment in Puerto Rico
		Kaufmann and Roesch (2012)	Marketing capabilities
		Morgan (2012)	Strategic marketing
		Morgan *et al.* (2012)	Export market performance
		Nemkova *et al.* (2012)	Export decision-making orientations
		Singh and Sonnenburg (2012)	Brand storytelling
		Ye *et al.* (2012)	Frontline learning process
		Gensler *et al.* (2013)	Social media and brand management
		Larson (2013)	Innovation and creativity in festival organizations
		Oakes *et al.* (2013)	Metaphysical branding
		Punjaisri *et al.* (2013)	Brand-specific leadership and employees' brand-aligned service recovery performance
		Ramaseshan *et al.* (2013)	Marketing strategy
		Roberts (2013)	Mega Mall phenomenon and retail marketing managers in Russia
		Ryu *et al.* (2013)	Embedded network
		Zafeiropoulou and Koufopoulos (2013)	Social franchising
		Besharat *et al.* (2014)	Utility maximizers
		Boerman *et al.* (2014)	Timing of sponsorship disclosure

		Chowdhury *et al.* (2014)	Strategy-making
		Epp *et al.* (2014)	Geographic dispersion of family networks
		Gnizy and Shoham (2014)	Reverse internationalization
		Kozlenkova *et al.* (2014)	Review of RBT
		Tang *et al.* (2014)	Performance implications of neutral user-generated content (UGC) on product sales
		Tracey *et al.* (2014)	New product outcomes in the context of regional clusters
		Whalen and Boush (2014)	Deviations from intended marketing plans
		Azmat *et al.* (2015)	Social entrepreneurship
		Dickson (2015)	Customer service improvement practices
		Giannakis *et al.* (2015)	Re-casting of marketing from a focus on products and transactions to a focus on services and relationships
		Mena and Chabowski (2015)	Organization's internal drivers in delivering value to its stakeholders
		Nemkova *et al.* (2015)	Interaction of export planning and improvisation
		Tokman *et al.* (2015)	Channels theory
		Banin *et al.* (2016)	Salesperson improvisation
		Grant (2016)	Flash mobs as a marketing device
		Whalen *et al.* (2016)	Entrepreneurial marketing
		Ahi *et al.* (2017)	International market entry modes
		Chen *et al.* (2017)	Lone designer smes
		Dadzie *et al.* (2017)	4As marketing mix in emerging markets
		Hill *et al.* (2017)	How improvisation manifests itself in the context of the sales team presentation
		Hilmersson *et al.* (2017)	Speed of internationalization
		Kalaignanam *et al.* (2017)	Impact of NPD "make/buy" choices on product quality in the automobile industry
		Kim and Lee (2017)	Motivation of independent resellers
		Nurhayati and Hendar (2017)	Customer Interaction Management Capabilities, Market Intelligence Quality, Customer-Centric Commitment and New Product Performance
		Park (2017)	Outsourcing of customer relationship management
		Thompson *et al.* (2017)	Celebritisation process in structured reality television
		Chabowski *et al.* (2018)	Exporting research
		Chetty *et al.* (2018)	Discovery and creation of opportunities during the internationalisation of small firms
		Grewal *et al.* (2018)	Mncs' marketing channels

		Hughes (2018)	Organisational ambidexterity
		Lowe and Rod (2018)	Sensemaking within business networks
		Marinova *et al.* (2018)	The impact of frontline employees' problem solving on customer satisfaction
		Miles and Nilsson (2018)	Marketing and the ancient subject of rhetoric
		Rodríguez-Rivero *et al.* (2018)	Cultural risk breakdown structure
		Rudd *et al.* (2018)	The emotion of awe, consumer experiential creation and willingness to learn
		Schellenberg *et al.* (2018)	Market entry modes
		Singh *et al.* (2018)	Dynamic analysis of salesperson effectiveness in handling customer queries
		Spyropoulou *et al.* (2018)	Strategic goals
		Assadinia *et al.* (2019)	Export learning process
		Bakhshi (2019)	Cultural competence
		Hultman *et al.* (2019)	Tone of the salesperson–customer relationship and salesperson improvisation
		Johnson *et al.* (2019)	Crowdsourcing for service innovation
		Lee and Griffith (2019)	MNC strategic approach
		Molner *et al.* (2019)	Market scoping for early-stage technologies
		Morgan *et al.* (2019)	Marketing strategy
		Ramani and Srinivasan (2019)	Liberalization
		Scholz and Smith (2019)	Social media firestorms
		Smith (2019)	Strategic marketing plans
		Tower *et al.* (2019)	International joint ventures
		Zuo *et al.* (2019)	Organizational learning and technological innovation
		Borah *et al.* (2020)	Online virality
		Borders and Lester (2020)	World pandemic of 2020
		Brozovic and Tregua (2020)	Service ecosystems
		Busca and Bertrandias (2020)	Digital marketing
		Hughes *et al.* (2020)	Strategic Imperative Framework for improvisation readiness
		Lee *et al.* (2020)	Innovation
		Maciel and Fischer (2020)	Collective action among peer firms
		Mourey (2020)	Improvisational training and group collaboration, self-efficacy, and divergent thinking
		Ozanne *et al.* (2020)	Crisis communication
		Plouffe *et al.* (2020)	Behavior of the solutions-oriented-firm
		Shaner *et al.* (2020)	NPD speed

		Kalaignanam *et al.* (2021)	Marketing agility
		Ozanne and Ozanne (2021)	Ad hoc marketing system for exchange services before a disaster
		Pels and Sheth (2021)	Poverty
		Shamsollahi *et al.* (2021)	Buyer–supplier relationships
		Wielgos *et al.* (2021)	Digital business capability
		Yeniaras *et al.* (2021)	Business and political ties, organizational flexibility, organizational improvisation and performance
		Agarwal (2022)	Digital marketing
		Carlson and Ross Jr (2022)	Polychronicity, role ambiguity and improvisation, and self-assessments of sales performance
		Li *et al.* (2022)	Industry convergence
		Patsiaouras *et al.* (2022)	Interrelationships between marketing theory/practice and protest groups' promotional tactics
		Scaraboto and Figueiredo (2022)	Sharing economy platforms
		Ahmad and Laroche (2023)	User-generated content, market surveillance, digital innovation, and brand improvisation
		Amendah *et al.* (2023)	Customer lifetime value
		Astvansh *et al.* (2023)	Prevention-focused messaging to promote consumer safety and protection
		de Brito Silva *et al.* (2023)	Nano-influencers
		Crick and Crick (2023)	Decision-making associated with the 'concentration versus spreading debate'
		Gurrieri *et al.* (2023)	Influencer marketing
		Júnior *et al.* (2023)	Storytelling
		Karami *et al.* (2023)	Decision-makers' non-predictive effectual logic, market-oriented behaviour, and firm performance
		Muange *et al.* (2023)	Dynamic capabilities of supermarkets
		Sharma *et al.* (2023)	Transformative services
		Singh *et al.* (2023)	The relationship between e-CRM and consumer loyalty in the Indian private healthcare sector
		Srivastava *et al.* (2023)	Female influence in top management teams
		Tan and Saraniemi (2023)	Blockchain technology
		Addis and Rurale (2024)	Philanthropy practices for well-being
		Agnihotri and Gabler (2024)	Relationships among resources, capabilities, and performance in the interactive digital marketplace
		Bettayeb and Al-Hawari (2024)	Green corporate social responsibility, well-being and creativity

		Bradford and Sherry Jr (2024)	Cocreate of ritual vitality
		Burton *et al.* (2024)	Marketing agility
		Chandak *et al.* (2024)	Decision-making trial and evaluation laboratory
		Chaudhry *et al.* (2024)	Entrepreneurs' international target market strategies
		Hashim *et al.* (2024)	Entrepreneurial bricolage
		Knight *et al.* (2024)	Development of self-leadership and sales-related self-efficacy
		Malerba *et al.* (2024)	Family-friendly wine tourism
		Salomonson and Echeverri (2024)	Disabling marketplaces and consumer vulnerability
		Shaner *et al.* (2024)	Improvisation as an instrumental process for change

References available upon request

SUPPLEMENTARY FILE B

Table B1
Preliminary study - cross-case matrix

Literature-based code	Illustrative in-vivo quotes
Flexibility and informal decision-making (improvisation)	"It's not that we don't have a plan, just the things which we tried to do actively have not paid off […] We actually had a detailed plan, but we were not able actually execute it" (R1) "Essentially, we will just sit down, have a five-ten minutes discussion, and then come up with the way forward what we can do, and then we respond to the customer depending on the outcome of that discussion. There is no actual formal process" (R2) "Sometimes it's informal, because this is a family company, so not everybody has come from the University with the MBA, but as we grow it's become more professional. So, it's a mix, but a healthy mix of ideas […] Generally decisions here are made quickly and informally" (R3) "You cannot afford to delay if the customer wants a product as soon as possible [...] At times one needs to make a quick decision, and maybe there isn't enough time to do a bit of research because otherwise you may lose business [...] Decisions have to be made fairly quickly at times, even if information is limited" (R4) "We don't have a formal document, or anything written down, we just discuss it amongst ourselves, we are a small company" (R4) "Because what's going on around you and in the country you deal with, you can't plan […] I think, in the back of your mind, you've got a long-term strategy, aim, call it what you will. It has to be regularly updated" (R4) "If the manager trusts the distributor and vice versa then you can get a lot of stuff done quicker than if it's got to be a completely formal process" (R6) "Flexibility is one of our selling points, and we have to keep that flexibility otherwise we become a similar product line to our sister companies. So, what we have to do is keep it flexible […] It's to respond quickly and get things out of there" (R6) "If we delay, the customer will go somewhere else" (R7) "In our business you have to move with what the customer wants [...] improvise according to their needs" (R8) "We don't plan (laugh). We have trade meetings every week and then we have some notes and then we work from those notes, we don't actually have a schedule of how we are going to go forward as such" (R8)
Operational efficiency	"We didn't set out thinking how we are going to export, it just started to develop" (R1)

through action-oriented approach to decision-making (action-orientation)	"Once a decision is made, it's implemented instantly, yes, instantly. I asked our managing director if it's going to be a big tender or change of material. I had an email, twenty minutes later bounced it to him, got a reply and replied to that email within ten minutes. So, within half an hour, a decision had been processed, made and answered" (R3) "If there is a problem, if they are not happy with a product, it's not the end of the world, we will replace it straight away. We won't quibble" (R3) "If it needs to be implemented straight away, then it is implemented straight away" (R4) "I mean when we have to get the job out of the door, we have to stop one, finish that one quickly and get the next one on." (R7)
Informal and instantaneous reactions (spontaneity)	"They get to the point where they want to go ahead and it always happens very quickly. They want a decision quickly" (R1) "When they made a decision they want it immediately, so we used to build more of the stock, so that we could deliver fairly quickly" (R1) [anticipated spontaneity] "We can make the decisions quickly and react very very quickly […] It's almost instantaneous once we make a decision […] If it was strict then it would obviously be documented and formalised which means that takes us a lot longer to react quickly to our customers. So, I think it works better having something that is informal, very fluid, where you can just sit round the table, just have a quick discussion, make a decision and then move on […] So I think being flexible and informal means we can be much more responsive and respond much quicker" (R2) "We think very quickly" (R3)
Differentiation through uniqueness (creativity)	"We have very unique products […] We invented a unique process […] We were more than 50 per cent exporting, because the world came to us to buy this technology […] We developed new products. If we had not been doing that probably it would just not be worth continuing, but we developed a very instant product […] We were approached by people who asked: 'can it be done', and we said: 'yes, we think so'" (R1) "So, there is a constant cycle of new products coming out […] Trying to find innovative products" (R2) "Everything has to be new" (R4) "We have to find the way of pitching ourselves differently, we make it slightly differently to the other companies. Anyway it was number one, so we actually showed the benefits of the way we make it, and then we also had to say, you know, what makes us different, and the thing which make us different, that we can respond quicker, so we can have shorter lead times, and we are more flexible within certain parameters. We can do small changes to benefit customers, so instead of having a standard products it gives you a chance to have just a slightly less than standard or a small difference in one or another property of that" (R6)

	"We usually decide on innovations as it pops into our head I think really (laugh)" (R8)
Company's strategic emphasis on exporting as a vital and profitable aspect of its business operations (export commitment)	"The managers suggested a defense approach, they asked if we could do it, we said: 'yes'. And then they said if we can, then they want to do it: 'we would like you to help to develop the equipment'. Basically, they financially supported the first trials, processed the first trials and then every subsequent trial" (R1) "So, we don't want to limit, restrict ourselves to the UK […] 70% of our business is export and it proves to be, you know, profitable […] One thing I've been asked is to look at new areas of business. We have got five traditional markets where we sell our equipment into. And to have a look and say 'are there any other markets which our equipment can fit'" (R2) "We are also very export oriented here. And we do not operate on short-term financial objectives […] we are looking for new markets, and it's where the concentration is by the managing director" (R3) "Why did he export? Because he enjoyed traveling, and yes, business, profit […] We started exporting perhaps within a year since it was established" (R4) "Most people here have grown up with an export department, so it is viewed as important" (R5) "Senior management see exporting as profitable [...] there's no need to sell it to the rest of the company" (R7) "to increase, increase our turnover really [… but] I mean it's quite expensive to export" (R7) "This company is committed to customers, wherever they are located [...] we know that we can't sell everything in the UK" (R8)
Value of experience in making informed export decisions (export experiential skills)	"You learn through experience to make better export decisions" (R1) "one works with experience, but also we need to talk with the same customers you get a feeling" (R2) "our managing director has been in this business for many many years… so he knows the market intimately, and has a huge experience. So it's mainly driven by him" (R3) "I think good people are… err… people with the experience" (R3) "A lot, a lot of our decisions based on past experience" (R4) "Good decision making comes from our own knowledge of the business" (R5) "we are fairly small in numbers, my job is about 70 per cent export sales" (R6) "Experience and practice are the only way you learn to make good business decisions [...] once you have the commercial experience, like I have been in this business for a long time, decisions we've made with little knowledge of the customer have come out right [...] you sense that you can trust people" (R7) "we had a lot of personal contacts around the globe, emmm I suppose they built up over years, and you tend to find persons in the same trade as you, you get to know overseas, and they give it a try, the things progress in it, you know. It seams to be a snowball really" (R7) "Experience is a very useful thing to have [...] a person with experience is likely to make better decisions in a

	somewhat shorter time than one without" (R9)
Importance of market research and responsiveness to export market demands (export market orientation)	"We are very reactive sales team rather than proactive […] We don't have to go through the process… accessing size of the market, accessing what percentage of this market we can get, looking at competition, have stronger competition in that area. We don't need to do that. [But] we know the market before we invest. We will come back more looking at the market, looking at the competition, looking to see if it is worthwhile or if it's too risky, which comes back to the traditional sort of market research" (R2) "You have to maintain those areas where you are currently exporting. So that's a heavy-duty maintenance job. But you also you have to be always on the lookout for new markets" (R3) "We have responded to market demand" (R3) "[Market research] would be handled by the managing director. He would commission research through a business link to the embassies, and they would make that report for him, and there would be established links, if necessary, have translators, and then he would go and visit those countries […] If something fails it's perhaps because we haven't done a preparatory work, perhaps being a little bit casual" (R3) "Literally an hour and the information can be out of date [...] maintaining current information is vital" (R3) "We do more research into some other areas, and move a plan to some other areas, so you have got to have a look at all other business all the time" (R4) "I think you need to be able to respond to what your customers want. So, for instance, if they suddenly have a breakdown, then we will try to take the necessary part to get them out of trouble" (R4) "The market tends to tell us what is needed […] so we tend to listen to what they want" (R6) "You know it needs a little bit more of research really" (R7) "We undertake a serious export market survey, which identifies the serious export markets" (R10)
Importance of learning from experience and documenting best practices (export learning)	"After looking at the couple of different customers you get you feeling what works what doesn't work, we know this works and we know this doesn't work, this makes the decision process perhaps easier" (R2) "One way to improve would be to document what you've done, when you found out this what happened, and then document it and then next person comes along export 'oh, yes, this is what I need' […] to document any unusual export requirements that would improve the process" (R2) "We apply principles that we've learned to wherever we are dealing in the world [...] over time we've whittled down our network of agents to those that are reliable […] We are always learning from experience. Maybe letter of credit, the rejections what we have, we burry that in mind for the next time" (R3) "We've learned don't just go for the first distributor that comes along. If you find a good one, and build a good relationship with them, then it's a lot safer [...] once you've been stung you learn that you'll not go down that path again" (R6)

	"It is normally based on what we sold there in the past. So, we will get an idea what works in that country and then go forward rather than just jump in and then see what happen" (R8) "Guys who do the travelling, including myself, bring back information which is valuable to our operations" (R9) "We have identified a recipe of what we believe is a successful way to do business" (R10)
Importance of close-knit teamwork (inter-functional coordination)	"It is a family company, it's not a PLC, it's small number of employees, so everybody knows each other and directors have open doors, so you can get more or less instant decisions." (R3) "Some people wear more than one hat and sometimes when we go to foreign markets we go with people drawn from a number of functions, colleagues from R&D, engineering, production" (R4) "If it is a little bit complicated, we are going to lots of different areas, then yes, we would write it down, then everybody remembers what we've said. It is about making notes on what was discussed. The actual system we have set up here is a special package written for our exporters. Anyone of us can go into a customer's file in the computer and see what is in there [because] I like them to feel to be the part of the company, be interested in what we are doing" (R4) "What allows a firm to be flexible… I suppose because we all know how to work the system, how to work every part of the system, and so if somebody goes of sick someone else can handle this basically" (R4) "We've got few people in the sales department, who share one office, so often it's a question of shouting across if there is an issue to sort out" (R5) "The departments are small, we have monthly meetings, our Chair of the meeting is production manager, our quality manager who looks after developments as well […] This what we call PDQ meetings, production, development and quality meetings, so I am a Chair of one of those […] I think we are lucky because we've been a small part of the big organization and a small management team; we can be quite dynamic with our decision-making, and we are rather open with each other. We can give each other a hard time" (R6) "We can do things very quickly if we need to [because] we keep very close relationship between production and sales and the management" (R8) "Information flows very easily [...] we've all known each other a long time" (R9)

SUPPLEMENTARY FILE C
Post-hoc tests and analysis

Table C1
Structural (quadratics) model fit statistics

Structural Model	χ^2(d.f.)	*p*-value	RMSEA	CFI	NFI	NNFI	Standardised RMR
Action Orientation	205.08 (174)	0.05	0.03	0.99	0.95	0.97	0.02
Spontaneity	248.26 (174)	0.00	0.05	0.98	0.94	0.94	0.04
Creativity	247.66 (174)	0.00	0.05	0.98	0.94	0.94	0.04

Table C2
Results for quadratic effects

	Outcome Variables and Parameter Estimates					
	Action-Orientation		Spontaneity		Creativity	
Variable	**Gamma**	**t-value**	**Gamma**	**t-value**	**Gamma**	**t-value**
Export Commitment	-0.09	0.16	0.29	2.58**	0.34	2.89**
Export Experiential Skills	0.02	-0.70	0.11	0.82	0.14	1.00
Export Market Orientation (Intelligence Generation)	-0.06	-0.43	-0.23	-1.80*	-0.19	-1.46
Export Market Orientation (Intelligence Dissemination)	0.54	4.48**	0.18	1.72*	0.13	1.24
Export Market Orientation (Responsiveness to Intelligence)	-0.22	-1.78*	0.02	0.18	0.07	0.62
Export Learning Orientation	0.44	2.48**	-0.00	-0.02	-0.11	-0.68
Inter-Functional Coordination	0.04	0.27	0.51	3.88**	0.57	4.09**
Export Market Dynamism	-0.29	-2.11	-0.05	-0.42	0.08	0.61
Export Competitive Intensity	0.33	2.48**	0.35	2.88**	0.21	1.71*
Export Technological Turbulence	0.03	0.28	-0.05	-0.52	-0.11	-1.12
Export Resources	-0.13	-1.53	-0.10	-1.28	-0.07	-0.96
Years Exporting	0.04	0.37	0.01	0.14	0.12	1.23
Firm Age	-0.09	-0.90	-0.04	-0.48	-0.09	-0.95
Export Commitment^2	-0.26	-2.88**	0.02	0.22	0.11	1.30
Export Experiential Skills^2	0.16	1.42	-0.01	-0.13	0.03	0.31
Intelligence Generation^2	0.14	1.63	0.00	0.04	0.02	0.20
Intelligence Dissemination^2	0.11	1.22	0.16	1.83*	0.13	1.47
Responsiveness to Intelligence^2	-0.16	-1.35	0.01	0.07	-0.04	-0.36
Export Learning Orientation^2	0.21	1.52	0.19	1.56	-0.01	-0.04
Inter-Functional Coordination^2	-0.05	-0.38	0.36	2.83**	0.31	2.35**

NOTES: The Gamma coefficients presented are standardised; one-tailed tests are used due to directional hypotheses; * significant at 5% level (critical t-value: 1.65) ; ** significant at 1% level (critical t-value: 2.33)

Table C3
Structural (moderation) model fit statistics

Structural Model	χ^2(d.f.)	*p*-value	RMSEA	CFI	NFI	NNFI	Standardised RMR
Action Orientation	232.83 (209)	0.12	0.02	0.99	0.96	0.97	0.02
Spontaneity	259.18 (209)	0.01	0.04	0.99	0.95	0.97	0.03
Creativity	(209)	0.00	0.05	0.98	0.94	0.94	0.04

Table C4
Results for moderation effects

	Outcome Variables and Parameter Estimates					
	Action-Orientation		Spontaneity		Creativity	
Variable	**t-value**	**Moderation effect[a]**	**t-value**	**Moderation effect[a]**	**t-value**	**Moderation effect[a]**
Export Commitment	0.23		0.66		0.20	
Export Experiential Skills	0.20		1.78*		1.57	
Export Market Orientation (Intelligence Generation)	-1.04		-2.76**		-2.13*	
Export Market Orientation (Intelligence Dissemination)	4.61**		2.31*		1.78*	
Export Market Orientation (Responsiveness to Intelligence)	-2.04*		-1.76*		-1.57	
Export Learning Orientation	1.61		1.56		1.59	
Inter-Functional Coordination	0.16		-1.41		-1.36	
Export Market Dynamism	-1.92*		-1.45		-1.20	
Export Competitive Intensity	2.30*		2.94**		2.08*	
Export Technological Turbulence	0.67		1.09		0.97	
Export Resources	-1.33		-1.66*		-1.46	
Years Exporting	0.09		0.12		0.45	
Firm Age	0.26		0.48		0.23	
IG x Export Commitment	-0.45		0.32		0.47	
IG x Export Experiential Skills	2.43**	Pure moderator	1.29		0.98	
IG x Export Learning Orientation	-0.33		-0.01		0.33	
IG x Inter-Functional Coordination	1.73*	Pure moderator	2.48**	Quasi-moderator	1.96*	Quasi-moderator
ID x Export Commitment	-0.66		0.39		0.69	
ID x Export Experiential Skills	-0.59		-3.10**	Quasi-moderator	-2.24*	Quasi-moderator
ID x Export Learning Orientation	1.08		3.00**	Quasi-moderator	2.17*	Quasi-moderator
ID x Inter-Functional Coordination	-0.87		-2.34**	Quasi-moderator	-2.08*	Quasi-moderator
IR x Export Commitment	-0.05		0.47		0.25	
IR x Export Experiential Skills	-0.08		2.19*	Quasi-moderator	1.94*	Pure moderator
IR x Export Learning Orientation	-1.95*	Quasi-moderator	-2.70**	Quasi-moderator	-1.99*	Pure moderator
IR x Inter-Functional Coordination	1.84*	Quasi-moderator	2.68**	Quasi-moderator	1.91*	Pure moderator

NOTES: [a] Interpreted following the guidance of Sharma et al (1981); IG = Intelligence Generation; ID = Intelligence Dissemination; IR = Responsiveness to Intelligence; one-tailed tests are used due to directional hypotheses; * significant at 5% level (critical t-Value: 1.65); ** significant at 1% level (critical t-Value: 2.33)