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The catalyzing role of customer pressure on environmental initiatives and export intensity: A study of family firms

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ABSTRACT

Predominantly, firms' adoption of environmental initiatives has been driven by regulatory and economic incentives. Yet, recognizing mounting evidence that family firms demonstrate superior environmental proactivity, it is likely that other drivers also inspire their environmentalism. To assess this possibility, an integrated stakeholder, institutional and resource-based perspective is espoused. Thus, this inquiry assesses how environmental pressure from customers stimulates environmental initiatives and the extent to which this constitution would boost export intensity. Based on 620 observations of Turkish family firms, a robust path analysis procedure revealed that customer pressure positively increases the adoption of environmental planning and energy management. In turn, these instruments work in concert to reduce environmental regulatory obstacles and enhance export intensity, with environmental planning playing a key role. Theoretically, customer pressure is introduced as a fresh antecedent. Practically, family firms in Turkey can grasp the virtuous knock-on effect of acceding to the environmental pressure exerted by customers.

1. Introduction

Marketing is described as the processes for identifying, facilitating, and communicating customer value, as well as the procedures for mutual exchange and maintaining beneficial relationships with customers (Grönroos, 2006). Prior to Robin's (1991) inquiry on the role of marketing planning in the family firm, the marketing discourse was largely focused on large and middle-sized concerns. In the ensuing years, only a few studies emerged in the area, such as File et al.'s (1994) comparison of marketing practices in family vs. nonfamily firms. Thus, the shortage of evidence on marketing practices in family firms remained manifest as Brockhaus (1994:33) remarked that 'because of the limited amount of research done in the marketing aspect of entrepreneurship, there is very little theoretical base for family business market research to build upon.' In due course, Reuber and Fischer (2011: 193) also observed that 'there is little prior literature on marketing by family firms or on the marketing of family firms'. Recognizing this shortage, a stream of evidence eventually accrued as scholars sought to address the vacuum by examining how the unique attributes of family firms influence their marketing practices and vice-versa. These works include to mention a few, Teal et al.'s (2003) comparison of the strategic marketing practices of high-growth family vs. nonfamily firms, and Okoroafo and Koh's (2009) examination of the impact of family firms' marketing activities on purchase intention.

Concerning conveying customer value, Blombäck and Craig (2014: 423) reasoned that 'regardless of the organizational or industry context, marketing essentially centers on the process of delivering customer satisfaction at a profit without damaging current or future generations' ability to maintain the social, economic and environmental sustainability.' To stress this point, public awareness of environmental and climate issues reached a new peak during the 2021 United Nations Climate Change Conference (COP26) held in Glasgow (Kythreotis et al., 2021). Global citizens are already enforcing climate action by requiring firms to obtain environmental certifications and/or adherence to

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environmental standards as a condition for doing business. In this sense, it is arguable that pressures to meet the environmental requirements of customers would set in motion firms' enactment of environmental initiatives that bode well for lowering environmental barriers while, correspondingly, boosting performance. This premise if conceivable following Berrone et al.'s (2010) demonstration that family firms generate higher levels of environmental performance than their nonfamily counterparts. File et al. (1994) also found that family firms are more disposed to engage in protracted discussions with their customers. Yet, it is surprising that few studies have examined the family business–marketing nexus from an environmental sustainability stance. In the literature, the mainstream focus has been on family firms' image (Zellweger *et al.*, 2012), strategic marketing behavior (Kashmiri and Mahajan, 2014), marketing resources (Covin et al., 2016), reputation and trust (Beck and Prügl, 2018) brand authenticity (Lude and Prügl, 2018) and communication behavior (Chen et al., 2019). Moreover, in Baliaeva *et al.*'s (2022) exhaustive review of marketing in family firms, the dominant themes discerned in order of research intensity were family firms' (1) brand and image, (2) resources and performance, (3) reputation, (4) market orientation, and (5) marketing strategy. Environmental concerns were clearly unidentified as an integral theme.

In the wider literature, there is ample evidence that family firms prioritize environmental issues to a greater extent than their nonfamily counterparts (Onjewu *et al.*, 2022a). Ferreira *et al.*'s (2021) review reported that family businesses were more prone to adopting socially responsible practices due to their ties with future generations and unique connections with local communities. Additionally, Miroshnychenko and De Massis (2022) explain that long-term-oriented family firms are eager to sustain operations across generations to preserve their legacy and maintain local ties with key stakeholders. Similarly, Curado and Mota (2021: 4) posit that 'families that are more rooted in a community and have a greater focus on maintaining the good reputation of the family name and so are more inclined to adopt sustainability practices that will benefit the firm in reputational terms and, consequently, in profitable terms.' Decision-making in family firms is subject to higher social considerations, which make them more stakeholder-focused and closer to their communities (Ernst *et al.*, 2022). Venturelli *et al.* (2020) identify the quest for reputation and image as the two main drivers stimulating family firms to adopt socially responsible behavior, reflecting 'socioemotional wealth' that emphasizes nonfinancial objectives in the form of socioenvironmental commitment. Yet, family firms are also rent-seeking entities (Onjewu *et al.*, 2022a). They are partly incentivized to 'pursue sustainability not because it is good for the world but because it is profitable' (Mezias et al., 2020: 4). To this end, Miroshnychenko and De Massis (2022) argue that environmental initiatives may, in theory, open up new untapped green markets which are key to perennity, while generating long-term opportunities for family firms to exploit compared to their non-family counterparts. They [Miroshnychenko and De Massis (2022)] also add that environmental practices could reduce costs associated with environmental hazards. By and large, the indications that family-owned businesses in developed and developing contexts are more likely to exhibit pro-environmental behaviors due to the higher pressures they face to engage in sustainability practices are extensive (Singh *et al.*, 2021).

To appraise the contention that family firms assent to customers' ecological requirements and engage in sustainability activities to boost performance, this inquiry isolates customer environmental pressure as a precursor to initiatives including environmental planning, energy monitoring, and energy efficiency enhancement measures. It is also opportune to determine whether such initiatives would lower firms' environmental regulatory obstacles, such as operational and compliance costs. Such impediments are particularly rife in developing countries where firms lack the capacity for research and development and means for ecological product designs and environmental accreditation (Karuppiah et al., 2020). Mangla et al. (2018) state that while the know-how and infrastructure for reusing, recycling, and remanufacturing exist in developed countries, their developing counterparts are trailing in these aspects. In theory, these issues put developing country firms under greater environmental compliance pressure, especially when required by customers, to the extent that their access to international markets could be more challenging. In this vein, Turkey is an interesting context to examine as environmental inspections by authorities and fines issued to firms for non-compliance have been on a steady rise since 2008 (OECD, 2019).

The motivation to assent to customer pressure and embrace initiatives that may reduce environmental obstacles is presumably conditioned on how much this chain of activities will improve productivity. On this note, internationalization, as measured through export intensity, is deemed to be a particularly challenging activity for SMEs (Abubakar *et al.*, 2019), and only the most productive of firms may perform in this regard through self-selection (Monreal-Pérez *et al.*, 2012). In developing markets, such productivity will include family firms' ability to internationalize with limited resources (Haddoud et al., 2021). Thus, it is timely to examine, if at all, the likelihood that customer pressure, environmental initiatives, and reduced environmental obstacles may predict export intensity as an exacting but ultimately desired firm outcome. Firstly, this acquiesces Baliaeva *et al.*'s (2022) appeal for new research to address how family firms tackle current sustainability concerns in society with their marketing activities. Secondly, it heeds Arsić et al.'s (2018) call for future research to appraise aspects of internationalization to fully uncover the complexity of marketing relationships in the family business environment.

To press forward, the purpose of this investigation is to explore how customers as stakeholders, environmental regulatory barriers as institutional factors, and environmental initiatives as a resource converge to enhance export performance. The theoretical contributions are fivefold. First, this inquiry is one of the first to capture customer pressure as an antecedent to environmental initiatives in the scant literature examining the family business marketing and consumer behavior nexus. Extant works [such as Schellong et al.'s (2019) investigation of consumers' perception of the family firm brand, Orth and Green's (2009) study of consumer loyalty to family firms, and Kashmiri and Mahajan's (2014) review of family firms' strategic marketing behavior] have not addressed the incidence of customer pressure in the family business marketing and consumer behavior nexus. In this regard, this study also ratifies calls for more studies examining the antecedents of family firms' performance. These solicitations include Chen and Hamilton's (2020) invitation for papers assessing the drivers of environmental responsibility. Likewise, Baah et al.'s (2021) observed a shortage of evidence on the mechanism by which stakeholder pressures increase firms' adoption of green production and performance in developing contexts. Not least, Arora and De (2020) have also stressed the importance of understanding institutional antecedents of environmental sustainability practices in emerging markets firms. Second, scholars have yet to demonstrate how the aggregation of environmental initiatives may reduce the environmental obstacles faced by firms. This study addresses this gap by showing environmental planning, energy monitoring, and energy efficiency enhancement measures as viable routines for this purpose. Third, the manner in which unaddressed environmental obstacles curtail performance has largely been a paradox. In this regard, Li *et al.* (2020) noted that scholars have devoted minimal attention to the influence of environmental regulations on firms' market entry, while Qiu et al. (2020) highlight a void in the knowledge of the relationship between environmental regulations and firm performance. Accordingly, new knowledge is developed by conceptualizing and testing a novel link between environmental obstacles and internationalization. Fourth, family firms in developing contexts operate in highly constrained environments in which the optimization of scarce resources is essential. This attribute affords the espousal of the resource-based view to explain the positive correlations between environmental initiatives and export intensity in the encumbered terrain of Turkey. Accordingly, this paper addresses inconclusive evidence in the environmental commitment-

export performance nexus where two conflicting views reside: (1) environmental practices as a source of competitiveness and (2) environmental practices as an additional cost (Liu and Xie, 2020; Haddoud et al., 2021; Rokhmawati, 2021). To explain the latter view, some scholars have reasoned that family firms' environmental practices are a profitless venture (Zellweger et al., 2013, Seaman *et al.*, 2018). Lastly, this study integrates the stakeholder, institutional, and resource-based view theories to expound new insights in the family business marketing and consumer behavior nexus. This offers an alternative perspective from the socioemotional wealth view that is prevalent in family business papers.

The rest of this paper is laid out as follows: Section 2 describes Turkey as the setting of the study. Section 3 conceptualizes customer pressure as a catalyst for environmental initiatives, and the latter as having a negative association with environmental obstacles but a positive one with export intensity. Also, in section 3, a link between environmental barriers and export intensity is hypothesized, and the moderating effect of energy efficiency-enhancing measures on this association is considered. Next, section 4 outlines the measures and items in the study, the analysis and findings are presented in section 5, and section 6 initiates a discussion. To conclude, theoretical and practical implications are contemplated in section 7.

2. Family businesses and the environmental context of Turkey

Family businesses in Turkey comprise 90% of all enterprises, and their prevalence grew in the aftermath of the country becoming a republic in 1923 (Campden FB, 2013). Cirpan and Alayoglu (2018) write that interest in Turkish family firms is justified by virtue of their dominance in business life and substantial contribution to the country's job creation and exports. Well-known family businesses such as Koç Holding, Sabancı Holding, Zorlu Holding, Anadolu Group, and Yıldız Holding are the foremost economic players in Turkey and, historically, led the country's foray into international markets (Kayacı and Ataay, 2020). Besides, Kayacı and Ataay (2020) add that multinational companies in developed countries consider Turkish family businesses as ideal partners because of their unique knowledge. As regards Turkey's environmental scorecard, it is ranked 172 out of 180 countries in the global environmental performance index (Wolf et al., 2022). The OECD (2019) reported that Turkey is a highly carbon-intensive economy owing to its heavy reliance on fossil fuels. Air and surface water quality is also poor, greenhouse gas emissions are rising, and there is inadequate recovery and recycling of solid waste across the country (OECD, 2019). In fact, 'Turkey's (49%) increase in greenhouse gas emissions over 2005–16 was the largest in the OECD. Emissions per capita are still below the OECD average but are rising rapidly' (OECD, 2019:12). For such reasons, Turkey has long been classified as a highly susceptible country in the environmental vulnerability index (Agan et al., 2013). Nevertheless, through the Ministry of Environment and Urbanisation, the government has sought to enforce environmental regulations on industry encompassing pollution prevention, development of green areas, promotion of a circular economy, and zero-waste policies (Ceylan and Aydın, 2021; Esmeray and Eren, 2021). Specifically, the Ministry of Environment and Urbanisation requires firms to undergo an environmental impact assessment as well as obtain an environmental permit to trade (Atılgan *et al.*, 2021). Firms' failure to comply with these environmental regulations has led to an increase in administrative fines being issued by the Ministry of Environment and Urbanisation (OECD, 2019). Against this backdrop, studies isolating Turkish family firms to examine their environmental practices are limited to Onjewu *et al.*'s (2022a) investigation of energy management and sales performance. To the best of the authors' knowledge, scholars have yet to predict the internationalization of Turkish family firms through the antecedents of customer pressure and environmental initiatives.

3. Theory and hypothesis development

3.1. An integrated Stakeholder, Institutional, and Resource-Based view

To explain the knock-on effect of environmental customer pressure among family firms, the theoretical grounding of this paper resides in the integration of the stakeholder theory, institutional theory, and the resource-based view. It is presumed that no single perspective can exclusively nor fully capture this effect. Consistent with Acquah *et al.* (2021) and Baah et al.'s (2021) conceptualization, the social influence and accepted industry norms shaping family firms' environmental practices are captured by the institutional theory, whereas the stakeholder theory explains how pressure is exerted by key players such as customers in the present study. In this regard, a growing awareness of environmental issues has led customers to demand green practices, which firms oblige in their quest for legitimacy. Moreover, although this course of events offers an inkling into the effect of institutional and stakeholder pressures on firms' green practices, it fails to rationalize the impact of environmental initiatives on firm performance. Chu *et al.* (2018) recognize this void and argue that the resource-based view should be integrated with the institutional view to capture the influence of green practices on performance. Equally, Dubey et al. (2019) maintain that institutional theory is intertwined with the resource-based view. Primarily, institutional pressures have a positive effect on the development of firm resources, which sequentially enhance firm performance.

Therefore, based on Acquah *et al.* (2021), Baah et al. (2021), Chu *et al.* (2018), and Dubey et al.'s (2019) stance, this study links the three theories to contrive the proposed model (in Fig. 1). All things considered, stakeholders' interest in the form of customer environmental pressures will influence family firms' adoption of environmental initiatives [stakeholders theory]. Furthermore, in their quest for legitimacy and compliance to mitigate the impact of environmental barriers [institutional theory], the antecedents (of customer pressure and environmental initiatives) would augment family firms' resource base and enhance their international performance [resource-based view]. Fig. 1 depicts the theoretical framework espoused by this study.

First, beginning with stakeholder theory, stakeholders are entities who affect or are affected by the activities and decisions of the organization (Sharma et al., 2003). In the family business discourse, there is an understanding that this breed of firms 'have a higher incentive to ensure the particular satisfaction of related individual stakeholders and stakeholder groups' (Zellweger and Nason, 2008: 205). Importantly, in varying degrees, stakeholder communities bestow material or immaterial resources on which firms' long-term performance depends (Cabrera-Suárez et al., 2011). It follows, therefore, that both family and nonfamily firms exude diligence in satisfying the demands of stakeholder groups in order to retain their support (Maignan and Ferrell, 2004). Yet, in comparison, it has been reported that family firms take a more relational approach to engage with stakeholders than nonfamily firms and demonstrate greater social performance as a consequence (Bingham et al., 2011). It has also been proven that family firms perform better and are more competitive when they accede to the concerns of environmental stakeholders such as customers (Neubaum et al., 2012). Based on these claims, it is arguable that the stakeholder theory may explain family firms' consideration of environmental initiatives upon customers' request.

Second, as regards institutional theory, family firms' behaviors and outcomes have been reported to be influenced by context-specific formal and informal institutions (Soleimanof et al., 2018). The said influence is manifest in a complementarity mechanism by which family firms seek to be compatible with the formal and informal rules guiding their activities (Carney et al., 2009). Specifically, institutional processes such as regulatory pressure and institutional support influence family firms' decision-making in the face of trade-offs between economic and non-economic objectives (Fan et al., 2021). In practice, such institutional

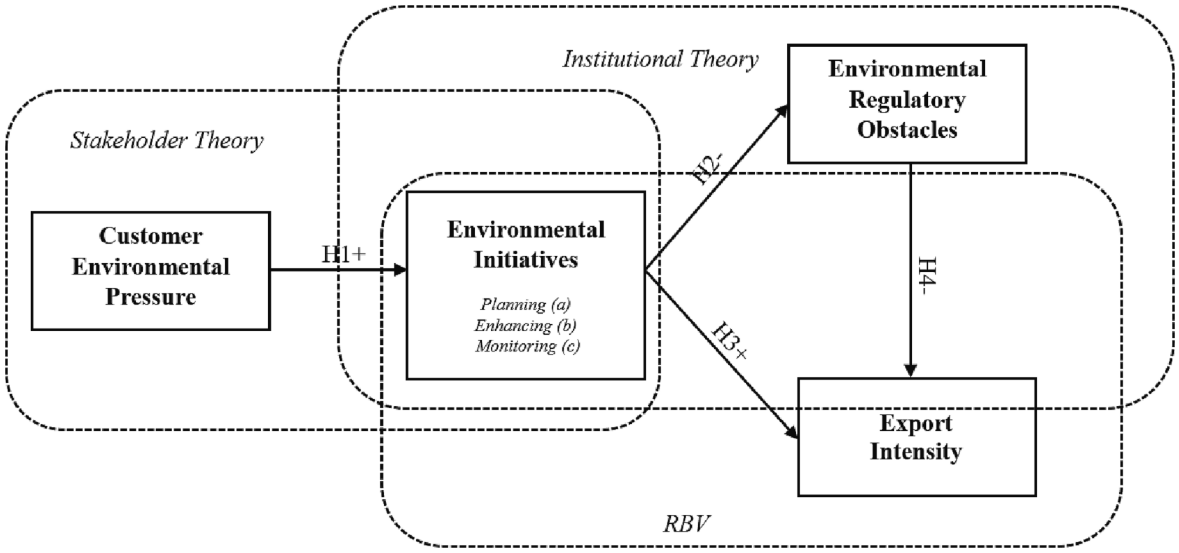

Fig. 1. Theoretical Framework.

adherence to social responsibility could be explicit or implicit (Matten and Moon, 2008). In the first instance [explicit social responsibility], firms voluntarily and willingly engage with stakeholders to fashion strategies that address social and commercial interests (Campopiano and De Massis, 2015). In the second instance [implicit social responsibility], firms react reflexively to the institutional pressures that they have been exposed to (Campopiano and De Massis, 2015). Notwithstanding this distinction, it is presumable that institutional theory clarifies the link between environmental initiatives and environmental regulatory obstacles in the current conceptualization. As Fan et al. (2021) show in their investigation of family firms in China, regulatory pressures weaken the negative effect of family firms' environmental performance in terms of pollution prevention, while institutional support boosts this outcome. Thus, it can be argued that institutions may coax firms to conform to environmental guidelines or assume behaviors that are consistent with environmental performance.

Third, the resource-based view [RBV] has been espoused to rationalize firms' performance through the unique resources held (Nason and Wiklund, 2018; Jafari-Sadeghi et al., 2021). It describes firms' development of competitive advantage by acquiring bundles of strategic resources or how they bolster their capabilities (Dubey *et al.*, 2021). The family business literature is no exception, as RBV has been harnessed to describe how family ventures differ from non-family firms as well as explain the determinants of their performance (Hillebrand et al., 2020). On this premise, firms' resource base is significantly determined by the level of family control (Sirmon and Hitt, 2003; Sharma, 2008). Hence, Habbershon and Williams (1999) broached the idea of firms' 'familiness' to denote the distinctive resources that accrue from family involvement in the enterprise. It follows that, compared to non-family firms, the long-term nature of family firms' ownership compels a continuous dedication to resource development for the generation of products and processes that propel entrepreneurial growth (Zahra *et al.*, 2004). In this study, RBV is espoused to comprehend the influence of environmental initiatives, deemed strategic assets, on firms' international performance. Recognizing that family businesses are typically undermined by a shortage of resources and limited capabilities (Kammerlander et al., 2015), environmental initiatives may offset this deficiency by developing unique capabilities that facilitate their involvement in export markets.

We now proceed to hypotheses development.

3.2. Customer environmental pressure and environmental planning

Conserving the natural environment is one of humanity's most pressing challenges (Bolis et al., 2021), and businesses have largely contributed to global ecological degradation (Wabba, 2008; Carballo-penela and Doménech, 2010). However, compared to their non-family counterparts, family firms show greater levels of environmental commitment owing to the unique way in which they oblige stakeholders' trust and loyalty (Adomako et al., 2019). The public appetite for such qualities has been intensified by rising awareness of environmental malaise such as air and water pollution, toxic emissions, and poor hazardous waste management (Siddiqua et al., 2022), leading to family firms developing proactive environmental strategies (Sharma and Sharma, 2011). These strategies materialize from the environmental planning process by which family firms outline objectives and stipulate courses of action to safeguard the natural environment. Hence, in erstwhile studies [such as Samara et al., 2018] examining the extent to which other parties influence the environmental planning and strategy formulation of family businesses, pressure from influential stakeholders (and customers in particular) has been found to trigger firms' environmental planning (González-Benito and González-Benito, 2010; Zhu and Sarkis, 2006). Moreover, Betts et al. (2015) posited that pressure exerted by external stakeholders obliges firms to adopt plans that lessen pollution and augment environmental sustainability. Likewise, from a marketing perspective (Marolt et al., 2020), the duress exerted by environmentally conscious customers elicits environmental planning within firms, especially in societies with a high sense of social responsibility (Kim et al., 2017). This is especially true in the case of family businesses that have been reported to take innovative approaches in the course of pursuing environmental commitment (Haddoud et al., 2021). Therefore, the link between customer environmental pressure and environmental planning is prompted by family firms' pro-customer orientation (Mura, 2020). Such an orientation makes family firms more likely to make environmentally friendly choices and embark on initiatives that ratify customers' voices as important stakeholders. Furthermore, associating customer environmental pressure with the adoption of environmental initiatives elicits a reflection on stakeholder theory. According to Jones (1995), stakeholder theory stresses the benefits that accrue to firms from maintaining trust-based relations with important groups. In the family business context, consumers perceive family firms as being more humane and therefore trust that they [family firms] will act in their interest (Beck and Prügl, 2018) while exuding social goodwill (Carrigan and Buckley, 2008). On this basis, it is

probable that acceding to customers' environmental demands in the marketing process will induce family firms to undertake environmental planning. To interrogate this possibility, it is hypothesized that:

H1a: Customer environmental pressures positively and significantly drive family firms toward environmental planning.

Additionally, along with non-family firms, family businesses are summoned to adopt energy management mechanisms such as measures to enhance energy efficiency. Echoing Campopiano and De Massis' (2015) notion of explicit and implicit social responsibility, Caragliu (2021) asserted that firms either install energy efficiency measures or are forced to put them in place. The uptake of energy efficiency measures has also been triggered by recent increases in energy rates in response to which family firms, in particular, seek to control their overheads in order to remain competitive (Ulrich, 2018). Furthermore, as per the stakeholder view, customers have long demanded sustainable products that are less dependent on the depletion of natural resources (Vandermerwe and Oliff, 1990). Thus, installing energy efficiency-enhancing measures is an opportunity that has been recognized by family firms and exploited in the marketing process to attract and retain customers (Guoyou, 2013; Iaia, 2019). In view of this, Heilala et al. (2010) explain that energy efficiency enhancement measures are the alternate ways in which firms strive to expend less energy in their operations. These measures may include fuel-saving steam boilers, heat recovery units, and bioenergy systems (Chowdhury et al., 2018). James (1999) argued that family firms with succession plans typically show more concern for efficient energy usage than non-family firms. Correspondingly, in Onjewu *et al.*'s (2022a) study, the authors found that energy efficiency-enhancing measures have a positive effect on family firms' sales performance. Yet, little is known about the likelihood and mechanism by which customer environmental pressure may influence family firms' adoption of energy efficiency-enhancing measures. There is seemingly no empirical precedent of a link between customer pressure in the marketing process and the adoption of energy efficiency-enhancing measures among family firms. If evident, this relationship will constitute fresh and supplementary proof of the influence of customers as important stakeholders inciting environmental initiatives within family firms. To verify this contention, we hypothesize that:

H1b: Customer environmental pressure positively and significantly drives family firms towards adopting energy efficiency-enhancing measures.

In addition to energy efficiency-enhancing measures, energy consumption monitoring is also an optional environmental initiative. This [energy consumption monitoring] refers to routinized behaviors adopted by firms to improve their understanding of energy use patterns, usually with the aid of various data points (Foulds et al., 2017). Owing to their environmental disposition, it is also likely that family firms explore energy consumption monitoring routines not only to control their energy costs but also to satisfy environmentally concerned stakeholders such as customers. With this in mind, it is presumable that family firms will be inclined to access data points via artificial intelligence to monitor the energy consumption of their operations (Ageed et al., 2021; Ibaseta et al., 2021). Al-Turjman et al. (2019) find that cloud-enabled smart meters help firms to achieve better visualization and synthesis of energy consumption data, which can lead to a significant change in energy consumption behavior. There is evidence from Serbia that SMEs, like family businesses, benefit from embedding energy monitoring equipment and software in their operations (Jovanović et al., 2017). At the same time, these tools can provide an opportunity for stakeholders, such as customers, to accurately track the environmental impact of firms' operations (Sala and Castellani, 2019). Hence, in addition to cost-cutting motives, energy consumption monitoring could be adopted to address customer pressures. Campopiano and De Massis (2015) cited the responsible use of energy as a likely reaction of family firms facing environmental pressure from stakeholders. Nevertheless, like the preceding hypothesis, there is a shortage of evidence associating customer pressure with family firms' energy consumption monitoring. Therefore, a new link is contrived to examine the likelihood that customer environmental pressures instigate the adoption of energy consumption monitoring. It is now inferred that:

H1c. Customer environmental pressure positively and significantly drives family firms towards monitoring energy consumption.

3.3. Environmental initiatives and environmental regulatory obstacles

Alongside customer pressure, governments and their instructed regulators increasingly issue operational guidelines aimed at safeguarding the environment, such as carbon emission controls (Li et al., 2018; Wu and Deng, 2020). These guidelines are prescriptive or binding policies geared towards directly or indirectly reducing environmental pollution (Eiadat et al., 2008; Xing et al., 2019). Practically, family firms that adopt environmentally friendly routines are naturally more likely to satisfy formal regulations, but also demonstrate compliance with informal guidelines (Agostino and Ruberto, 2021; Berrone et al., 2019). Yet, Chen et al. (2014) note that unfavorable regulations impede family firms' performance in comparison to non-family firms. This view is corroborated by Neubauer and Lank's (1998) and Du and Li's (2020) assertion that, despite their good intention, environmental regulations lower firms' competitiveness, especially within family firms. However, managers are still obliged to comply with the environmental regulations set by domestic and international institutions (López-Gamero et al., 2010). To pose a predicament, as it seems, family firms must choose between economic performance and compliance with environmental regulations. Having said that, in the study of family firms in Poland, Haddoud et al. (2021:2) drew attention to a virtuous trade-off that 'transcends the choice of underperforming in order to demonstrate environmental commitment, to becoming high performing because of it'. In other words, environmental performance may, in fact, be a path towards lowering environmental obstacles such as costs, while increasing performance (Peng and Lin, 2008; Marcus and Fremeth, 2009). If evident, family firms' uptake of environmental initiatives to overcome environmental regulations could be clarified by institutional theory. As a thesis, institutional theory explains 'why organizations engage in activities that are legitimate in the symbolic realm rather than the material one,' as well as 'why organizations adopt behaviors that conform to normative demands but conflict with the rational attainment of economic goals' (Suddaby, 2010: 15). Hence, based on this logic, we hypothesize that:

H2a: Family firms' strategic environmental planning has a negative and significant association with environmental regulatory obstacles.

Institutional theory has also been espoused to illustrate how family firms' environmental practices are associated with the perception of environmental regulations (Agostino and Ruberto, 2021). This is because they are predisposed to protecting and promoting their family brand through environmental compliance (Berrone et al., 2010). Hence Cruz et al. (2014) argue that environmental practices such as pollution prevention assist family businesses in increasing their reputation and develop marketing relationships. In this vein, there is a substantial discourse exploring the relationship between energy efficiency, environmental pollution, and formal environmental regulations (Costantini and Crespi, 2008; Bi et al., 2014; Sun et al., 2019). Evoking institutional theory, it is likely that firms' familiness shapes the adoption of routines that provide organizational stability through regulatory compliance (Butler, 2011). Thus, Brunel and Levinson (2020) alluded to a positive relationship between responsible energy consumption and environmental regulatory compliance. Even though environmental regulations often prove onerous and increase enterprise costs, they remain important tools for conserving resources and nurturing good environmental behavior (Pan et al., 2019). Given that energy efficiency enhancement measures help family firms to expend less energy in their operations (Heilala et al., 2010), they may, seemingly, be more likely to abide by environmental regulations. On this basis, Chen and Zhang (2012) assessed the link between energy efficiency and the intensity of

environmental enforcement. They [Chen and Zhang, 2012] found that enhanced energy efficiency measures decrease regulatory challenges at both the national and international levels. In other words, particularly for family businesses, more intensive energy efficiency-enhancing measures may lead to fewer environmental regulatory obstacles being perceived. To test this possibility, we hypothesize that:

H2b. Family firms' energy efficiency-enhancing measures have a negative and significant association with environmental regulatory obstacles.

According to Wu et al. (2022), emerging technological developments have availed family firms with various technologies to optimize their operations, upgrade their products and minimize environmental pollution. They often do this by substituting carbon-intensive materials and products with more environmentally friendly alternatives (Cadez et al., 2019), or by modifying their operating models to reduce pollution (Cadez and Czerny, 2016). Relatedly, family firms have been known to monitor their pollution (output) and energy consumption (input) by leveraging the intelligence obtained from data visualization tools (Vijayaraghavan and Dornfeld, 2010; Lenz et al., 2017; Liu et al., 2020). Irizar-Arrieta et al. (2020) note that energy monitoring equipment, such as smart meters, make it possible for firms to track consumption either qualitatively [changes in color depending on the volume of energy used] or quantitatively [kilowatt hour or monetary value]. Under the European Union's Directive on Energy Efficiency [2018/2002], EU countries have been tasked to reduce energy consumption by 0.8% annually from 2021 to 2030 (Poschmann et al., 2022). Notably, Turkey has perennially sought to comply with EU directives (Okay et al., 2008). In 2007, it passed its own Energy Efficiency Law No: 5627, mandating firms and households to monitor and optimize energy use in a bid to reduce consumption by 25 – 30% (Okay et al., 2008; Duzgun and Komurgoz, 2014). Yet, as Sundramoorthy et al. (2010) long argued, financial constraints discourage firms from performing energy consumption monitoring. This is in spite of Onjewu *et al.*'s (2022a) determination that family firms' energy consumption monitoring routines positively correlate with sales performance. Thus far, no prior studies have distinctly examined the link between energy consumption monitoring and environmental regulatory obstacles. Nevertheless, it is also reasonable to conjecture that effective energy consumption monitoring would pre-empt firms from unsustainable energy use, thereby reducing their perception of environmental regulation as obstacle. Once more, such behavior can be explained by familiness leading to the adoption of routines to sustain operations at the same time as demonstrating regulatory compliance (Butler, 2011). In turn, regulatory compliance is of greater concern among family firms focused on protecting their socio-emotional wealth and long-term orientation (Campopiano and De Massis, 2015). It is also presumable that direct energy monitoring is necessary for environmental reporting that bodes well for family firms' reputation and image building while satisfying regulatory requirements. Thus, it is hypothesized that:

H2c. Family firms' energy consumption monitoring has a negative and significant association with environmental regulatory obstacles.

3.4. Environmental initiatives and export intensity

Hessels and Terjesen (2010) infer that, as small firms seek to build legitimacy and win acceptance from key external stakeholders, their decision-making will reflect courses of action deemed to be equally legitimate and acceptable. When it pertains to family firms, Haddoud et al. (2021) offer evidence from the Polish context demonstrating that their intrinsic environmental commitment directly enhances international performance. Family firms view environmental responsibility as crucial for building their international reputation. Hence, they are inclined to self-regulate when it concerns environmental issues (Christmann and Taylor, 2001). This is commensurate with RBV, which stresses the development of environmental initiatives for competitiveness and performance (Barney et al., 2011). For family firms, commitment to environmental initiatives is essential as there is a soaring demand for environmentally friendly offerings (Qui *et al.*, 2019). To this end, Dangelico et al. (2019) assert that family firms have different motivations from non-family firms as their approach to market and product development is linked to their image and reputation. Furthermore, this motivation makes family firms more likely to undertake environmental planning to realize a greater competitive advantage than counterparts without developed environmental plans (Wu and Ma, 2016). Moreover, international concerns for the natural environment have incentivized family businesses to set clear environmental objectives that will make their offerings competitive in overseas markets (Haddoud et al., 2021). These objectives manifest in written policies that outline how firms intend to realize environmental performance (Yu *et al.*, 2019). The competence to undertake environmental planning, as well as export activity, infers RBV because, firstly, internal resources are required to formulate an effective plan (Nurcahyo *et al.*, 2019), and they enable the proactive development of a corporate environmental strategy (Aragón-Correa and Sharma, 2003). Secondly, export performance is influenced by resources in the institutional environment (Faria et al., 2020). Therefore, it is envisaged that family firms' development of environmental plans will intensify their export performance. Accordingly, the ensuing hypothesis presumes that:

H3a. Family firms' strategic environmental planning positively and significantly drives their export intensity.

Recognizing the high cost of energy overheads in firms' operations, the International Energy Agency [IEA] indicated that measures targeted at optimizing energy can enhance market competitiveness (IEA, 2014). It has long been understood that innovative energy management processes exceed the maximization of material savings, but also the minimization of energy consumption for operational efficiency (Surroca et al., 2010). However, according to Schaltegger and Csutora (2012) and Cote et al. (2008), firms are often reluctant to adopt energy management practices unless there are clear (financial or non-financial) benefits. This is compounded by a belief among family firms that they consume less energy than large businesses (Onjewu *et al.*, 2022a). Even if true, family firms' reduced energy consumption can conserve resources for reinvestment in other activities such as, for example, new product development to serve foreign markets or the undertaking of international marketing activities. In this vein, Dangelico et al. (2019) enlist the procurement of energy-efficient machinery and the development of energy-efficient processes as forms of green innovation undertaken by family firms. This is notable because 'energy efficiency investments can increase a company's value proposal through enhanced image and improved product quality and reliability' (Cooremans and Schönenberger, 2019: 269). Thus, defining energy efficiency-enhancing measures as methods for expending less energy for the same amount of output, Onjewu *et al.* (2022a) illustrated that family firms' adoption of energy-efficiency-enhancing measures leads to an increase in sales, albeit domestic sales. Relatedly, this conceptualization is supported by evidence from Montalbano and Nenci (2019) that there is a positive association between firms' energy efficiency and their international activity. This is consistent with Alam et al.'s (2019) natural resource-based view that posits that firms' investment in environmental measures will stimulate greater performance. Therefore, contemplating export intensity as a measure of firm performance, a further hypothesis is prompted:

H3b. Family firms' energy efficiency-enhancing measures positively and significantly drive their export intensity.

Gopinath *et al.* (2010) write that effective energy management requires the monitoring and controlling of assets to optimize energy utilization and reduce waste, and this can be achieved with the aid of advanced energy monitoring systems. Furthermore, it has been argued that the intensity of energy consumption is an important driver of international performance (Dargahi and Khameneh, 2019). In practice, reduced energy intensity is partly achieved by understanding patterns of energy consumption with the aid of multiple data points (Foulds et al., 2017). As such, firms that routinely track their energy consumption

would be in a better position to achieve energy savings and cost leadership. This provides an opportunity for family firms to gain a competitive advantage over their national and international rivals. Continuous energy monitoring also enables exporters (in particular) to be compliant with environmental regulations and showcase the environmental friendliness of the brands to demanding international consumers. From an RBV perspective, family firms can leverage the latest initiatives and use the most advanced technologies to reaffirm their commitment to sustainability, increase their international reputation and gain efficiencies in export performance (Schneider and Clauß, 2020; Wu et al., 2022). Thus, once more evoking the natural resource-based view (Alam et al., 2019), it is probable that energy consumption monitoring is also a viable path for enhancing family firms' export intensity. This prompts a further hypothesis:

H3c. Family firms' energy consumption monitoring positively and significantly drive their export intensity.

3.5. Environmental regulatory obstacles and export intensity

The institutional view of internationalization holds that environmental heterogeneity between home and host context has a crucial influence on the family firms' decision to internationalize (Daspit et al., 2021; Sadeghi et al., 2019). This means that family ventures are required to devote capital toward understanding environmental regulations, but this endeavor depletes the resources available to develop other capabilities (Haddoud et al., 2021). All the more so, environmental regulations oblige family firms to invest in innovative technologies (Miller et al., 2013; Wu et al., 2022), which are crucial for reducing the harmful impact of business activities on the natural environment (Gray and Shadbegian, 2003; Jahanshahi and Brem, 2018). The burden of financial and nonfinancial compliance with environmental regulation is intense to the extent that high-polluting firms are attracted to countries with inadequate environmental regulations or standards (Cai et al., 2018; Yang et al., 2018). In their appraisal of international trade flow and plant location, Copeland and Taylor (2009) observed that free trade agreements have accelerated firms' relocation of operations into countries where there are low environmental expectations. On the other hand, from the outset, environmental regulations pose a palpable obstacle to family firms with environmentally unfriendly operations such as high emissions (Feng et al., 2018; González and González-Galindo, 2022). This discourse bears particular significance for internationalization as logic suggests that the perception of environmental regulatory obstacles makes it less likely for family firms to engage in exporting. Even though Adomako et al. (2019) argue that, in emerging contexts, the presence of mitigating institutional factors may enhance export performance paradoxically, there is still a prevalent view that environmental regulations curtail export activities (Cherniwchan and Najjar, 2022). That said, this study is seemingly the first to consider the association between environmental regulatory obstacles and export intensity in the family firm domain. Thus, the conceptualization concludes by hypothesizing that:

H4: Environmental regulatory obstacles have a negative and significant association with family firms' export intensity.

Fig. 1 below depicts the theoretical framework.

4. Method

The setting of this study is Turkey, the twentieth-largest economy with a population of 84 million (The World Bank, 2021a) and a GDP of $720 billion (The World Bank, 2021b). Some of its key commercial areas are agriculture, automotive manufacturing, banking, consumer electronics, textiles, food, tourism, and mining (Aslan and Topcu, 2018; Akcigit et al., 2020). Notwithstanding the domestic and foreign attractiveness of Turkey, the rate of economic uncertainty in the country is well documented. The convergence of above-normal inflation (Gülşen and Kara, 2019), volatile exchange rates (Kasman and Kasman, 2005), unpredictable economic policies (Jirasavetakul and Spilimbergo, 2018), and political instability (Sahinoz and Cosar, 2018) make Turkey a highly uncertain and resource constrained country for doing business.

4.1. Data and measures

The observations in this study are secondary data provided by the World Bank following a firm-level survey of Turkish companies between September 2018 and May 2019 based on stratified random sampling (The World Bank Group, 2020). The dataset of 1,663 firms was filtered for 50% family firm ownership to be consistent with the widely agreed equity threshold (Ferrari, 2020). This selection criterion is commensurate with prior studies, including Stavrou et al. (2005), Bammens et al. (2008), Wilson et al. (2013), and Haddoud et al. (2021). Lee et al. (2018) maintain that 50% control enables such firms to make decisions that are aligned with the family's interests. After erasing all missing data and 'don't know' responses, 620 cases of family firms operating in several sectors were retained. A statistical power analysis was undertaken, and the current sample size is significantly higher than the 498 – 511 range suggested, respectively, by the gamma-exponential and inverse square roots methods recommended for minimum sample size and estimation (Kock and Hadaya, 2018). The six variables isolated in the data were (1) customer requirement for environmental certifications/adherence to environmental standards (PRESSURE), (2) strategic environmental planning (SEP), (3) energy efficiency-enhancing measures (ENGENH), (4) energy consumption monitoring (MONITOR), (5) the degree of environmental regulatory obstacles and (6) direct exports as a percentage of sales (EXINT). The full items measuring these variables are explained in Table 1. The region, size, and sector of the sample were also controlled for.

4.2. Sample characteristics

All observations were family firms. 50.8% of the sample had up to 19 employees, followed by 34.2% with a 20 – 100 workforce, 10.3% of firms had between 100 and 250 employees, while 4.7% employed more than 250 employees. The cases represented 12 regions across Turkey, with most firms from Central Anatolia (21.1%), West Marmara (20%), West Anatolia (16.5%), and Aegean (10.8%). 56.9% of all firms were operating in the manufacturing sector, whereas %16.3 and 26.8% were operating in retail and other services, respectively. In terms of export intensity, the firms in the sample had an average of 42.5% foreign sales as a ratio to total sales. As for the proportion of family ownership within each firm, it was 91.7% within the 50 to 100% equity [held by the same family] range. Table 2 expands on the size, regions, export intensity, family ownership, and sector classification.

Table 1
Measurement Details.

Variable	Item	Scale
PRESSURE	In the last complete fiscal year, did any of the establishment's customers require environmental certifications or adherence to certain environmental standards as a condition to do business with the establishment?	Yes/No
SEP	In the last complete fiscal year, did this firm have strategic objectives that mention environmental or climate change issues?	Yes/No
ENGENH	Over the last three years, did this establishment adopt any measures to enhance energy efficiency?	Yes/No
MONITOR	Over Last 3 Years, Did This Establishment Monitor Its Energy Consumption?	Yes/No
ENVOBS	To what degree are environmental regulations an obstacle to the current operations of this establishment?	Continuous
EXINT	In the last complete fiscal year, what percentage of this establishment's sales were direct exports?	Continuous

Table 2
Sample Characteristics.

Size	Frequency	Percent
0–19	315	50.8
20–100	212	34.2
100–250	64	10.3
250+	29	4.7
Total	620	100.0
Region	**Frequency**	**Percent**
West Black Sea	54	8.7
Northeast Anatolia	2	0.3
Central East Anatolia	20	3.2
East Black Sea	12	1.9
Istanbul	9	1.5
South East Anatolia	40	6.5
Mediterranean	8	1.3
Central Anatolia	131	21.1
Aegean	67	10.8
West Marmara	124	20.0
West Anatolia	102	16.5
East Marmara	51	8.2
Total	620	100.0
Sector	**Frequency**	**Percent**
Manufacturing	353	56.9
Retail Services	101	16.3
Other Services	166	26.8
Total	620	100.0
Export Intensity	Mean (of exporters)	Range (of exporters)
	42.54%	1–100%
Family Ownership	Mean	Range
	91.69%	50–100%

5. Analysis

The associations in this study were tested using the robust path analysis algorithm available in Kock's (2020) WarpPLS software, version 7.0. This approach was deemed relevant as it allows for the testing of the entire model simultaneously, including mediators and moderators (Kock and Gaskins, 2014). Moreover, WarpPLS is able to handle dichotomous variables as the software computes *p*-values using nonparametric techniques that do not assume normality expectations (Demek *et al.*, 2018; Kock, 2014, 2018). The tested model includes both binary and continuous single-item variables.

5.1. Measurement model

Normally, before conducting a path analysis with latent variables, the reliability and validity of those variables ought to be determined. However, when those variables have only been measured by single items, values for Cronbach's alpha, composite reliability and the average variance extracted do not apply (Onjewu et al., 2022b, Onjewu et al., 2023). Multicollinearity issues need to be assessed instead, especially when a moderation analysis is involved. To assess multicollinearity, scores for full collinearity variance inflation factors [VIFs] have been ascertained. As shown in Table 3, the VIF values are lower than both the recommended and ideal limits of 5 and 3.3 respectively (Hair et al., 2011; Kock and Lynn, 2012).

Table 3
Collinearity Diagnostic.

	PRESSURE	MONITOR	ENGENH	SEP	ENVOBS	EXINT
VIF	2.2	1.5	2.7	1.8	1.4	1.3

5.2. Structural model and hypothesis testing

The inner model associations were observed by estimating the path coefficients (β) and *p*-values as shown in Fig. 2 below:

In the first segment of the model, the path analysis shows that customer environmental pressure is significantly and strongly associated with family firms' environmental efforts in terms of energy efficiency-enhancing measures (β = 0.70***), strategic environmental planning (β = 0.59***), and energy consumption monitoring (β = 0.35***). In turn, environmental efforts [i.e., enhancing, planning, and monitoring] significantly decrease perceived environmental regulatory obstacles (β = -0.19***, −0.30***, and −0.10**, respectively) and significantly increase export intensity (β = 0.12**, 0.27*** and 0.17*** respectively). Moreover, perceived environmental regulatory obstacles are significantly and negatively associated with export intensity (β = -0.08*). Overall, the full model explains 32% and 27% variances in the perceived environmental regulatory obstacles and export intensity of family firms in the sample. The results of hypothesis testing are summarized in Table 4.

5.3. Conditional probabilistic analysis

The path coefficient results suggest that the family firms' perception of environmental regulatory obstacles and export intensity (the main dependent constructs in our model) are directly influenced by environmental initiatives, as well as indirectly by customer environmental pressure. Essentially, in probabilistic terms, this means that increases in the direct and indirect predictors also lead to increases in the conditional probability that family firms' export intensity will be above a certain value.

However, since conditional probabilities cannot be directly estimated based on path coefficients, the 'explore conditional probabilistic queries' function in WarpPLS can be used to estimate possible scenarios (see Kock, 2020). Such probabilities are of interest to researchers and practitioners. In this study, the query took the form of: 'What is the probability that export intensity will be high (i.e., above average) if environmental initiatives in terms of energy monitoring, environmental planning, and energy enhancing are implemented.' Since the latent variables are standardized, with a mean of zero and standard deviation of 1, the statement 'export intensity will be high (i.e., above average)' refers to instances in the dataset where the latent standardized variable corresponding to export intensity is greater than 0. The same interpretation applies to other latent variables.

The conditional probabilities could be seen as a stepwise sequence aimed at illustrating the incremental contribution of direct and indirect predictors to the probability that firms' export intensity will be high. Table 5 depicts the results. As shown, of the three initiatives, strategic environmental planning is the most important. In fact, if energy consumption monitoring and energy efficiency-enhancing measures are high, the probability that export intensity will be high is 60%. Even more so, when environmental planning is high, the probability that export intensity will be high is 100%. This suggests that, when strategic environmental planning is practiced, family firms' export intensity will be high in 10 out of 10 cases. Comparatively, when only energy consumption monitoring and energy efficiency-enhancing measures are practiced (without environmental planning), family firms' export intensity will only be high in 6 out of 10 cases.

6. Discussion

To discern the knock-on effect triggered by customer environmental pressure on family firms' behavior, this study has investigated the effect on firms' environmental initiatives and perceived barriers on export intensity. The results indicate that pressure from customers increases environmental planning, energy monitoring, and energy efficiency enhancement measures among family firms in Turkey. In turn, these

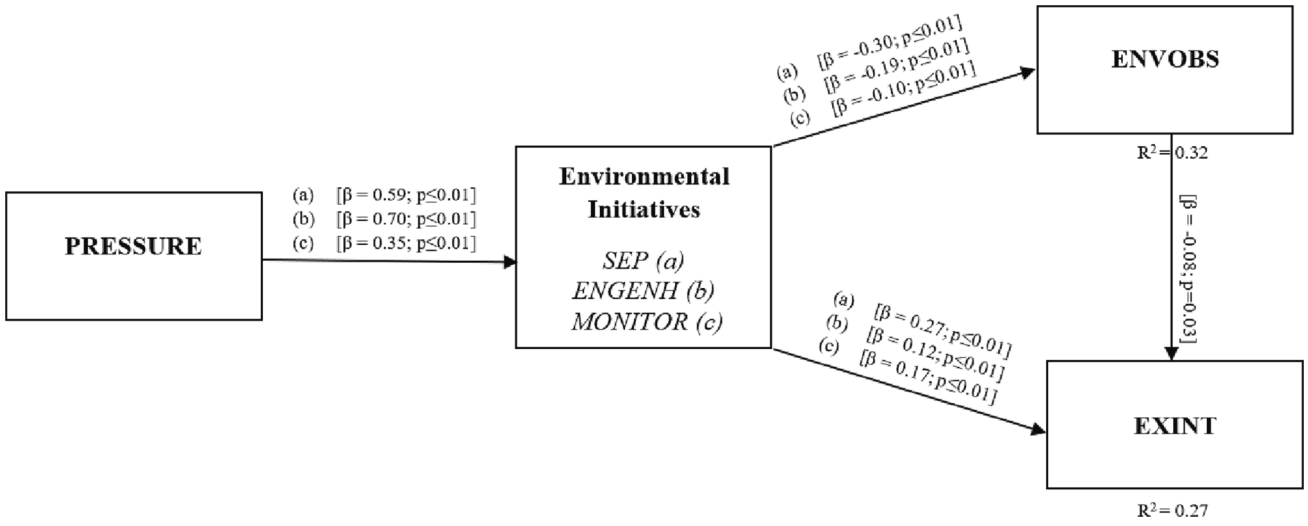

Fig. 2. Structural Model.

Table 4
Hypothesis Testing.

Hypothesized Association	Path Coefficient	P-Value	Test
H1a. PRESSURE SEP	0.59	<0.01	Accepted
H1b. PRESSURE ENGENH	0.70	<0.01	Accepted
H1c. PRESSURE MONITOR	0.35	<0.01	Accepted
H2a. SEP ENVOBS	−0.30	<0.01	Accepted
H2b. ENGENH ENVOBS	−0.19	<0.01	Accepted
H2c. MONITOR ENVOBS	−0.10	<0.01	Accepted
H3a. SEP EXINT	0.27	<0.01	Accepted
H3b. ENGENH EXINT	0.12	<0.01	Accepted
H3c. MONITOR EXINT	0.17	<0.01	Accepted
H4. ENVOBS EXINT	−0.08	0.03	Accepted

Table 5
Stepwise conditional probabilities that export intensity will be high (i.e., above average).

Probability	PRESSURE	SEP	ENGENH	MONITOR	ENVOBS
78.6 %	High				
100 %	High	High			
100 %		High			
60 %			High	High	
65 %			High	High	Low

Note: Only predictors with significant total effects are included; signs of effects considered.

efforts decrease the severity of obstacles perceived by environmental regulations as well as boost their export intensity. It was also found that energy efficiency routines decrease the negative influence of environmental regulations on export intensity. These findings constitute key contributions to the family firm marketing and consumer behavior nexus, as well as to the environmental sustainability and internationalization corpus. First, in a bid to address recent calls, the results accede Baliaeva *et al.*'s (2022) call for scholars to explain how family firms navigate environmental issues, as well as Arsić et al.'s (2018) invitation to shed light on the complexity of marketing relationships within family firms. Second, they acquiesce to Arora and De (2020), Chen and Hamilton (2020), and Baah et al.'s (2021) appeal for inquiries reviewing the institutional triggers of firms' environmental practices, particularly in emerging and developing markets. Third, as highlighted by Li *et al.* (2020) and Qiu et al. (2020), this review tackles the empirical oversight on the influence of environmental regulations on firms' performance. Fourth, it generates further evidence to support the view that environmental practices can serve as a source of international competitive advantage. To this extent, conflicting findings in this discourse are reconciled (Liu and Xie, 2020; Haddoud et al., 2021; Rokhmawati, 2021).

To discuss the correlations, the catalytic effect of customer environment pressure is explained by organizations' relational marketing bias to put customer satisfaction at the heart of their operations, while pursuing economic and environmental sustainability (Blombäck and Craig, 2014) in an age of heightened environmental awareness (Kythreotis et al., 2021). This contention is particularly relevant to the family business situation since they are known to demonstrate greater engagement with their customers (File et al., 1994). Similarly, the results echo previous claims on stakeholders' role in shaping firms' environmental behavior. In this regard, firms' strategic commitment towards environmental issues was found to be triggered by pressures from customers (González-Benito and González-Benito, 2010; Zhu and Sarkis, 2006). This is also consistent with contiguous studies citing this influence. For instance, Zhu and Mazaheri (2020) found that direct customer interactions increase the implementation of sustainability initiatives. Likewise, Gong et al. (2019) showed that public awareness significantly motivates firms' sustainability development, and Gualandris and Kalchschmidt (2014) found that customer pressure was significantly related to sustainable process management, albeit indirectly.

Altogether, the current and extant evidence corroborate the importance of strategic marketing and customer satisfaction in the family business context, as well as the utility of the stakeholder theory when explaining firms' environmental behavior. In fact, it has previously been argued that firms' motivation to implement environmental initiatives is driven by customer pressure to be environmentally proactive (Dai et al., 2018). However, the current findings extend extant understanding by demonstrating that Turkish family firms are uniquely and positively impacted by customer environmental pressure. This enhances their adoption of environmental planning, energy efficiency-enhancing measures, and energy consumption monitoring. This determination echoes Zellweger *et al.*'s (2010) stipulation that it is increasingly important for family firms to communicate with consumers. This is because family firms' effective communication with customers helps to deepen the firm-consumer relationship (Chaudhary *et al.*, 2021). Moreover, an important trait of this effective communication is family firms' capacity to listen to customers as they are predisposed to solving their expressed problems in a manner that will subsequently augment operational performance (Raman and Menon, 2017).

Furthermore, the results revealed that the three environmental initiatives triggered by customer pressure subsequently drive the

internationalization of Turkish family firms. This finding advances the literature by uncovering the mechanism through which barriers related to environmental regulations are mitigated, which in turn have a negative influence on export intensity. In other words, the environmental initiatives adopted by family firms in Turkey potentially influence export intensity indirectly by attenuating environmental regulatory obstacles. These findings can be interpreted through a two-fold institutional-RBV perspective as they show how environmental initiatives may offset institutional pressures that shape internationalization. This stance is further discussed.

On the one hand, the positive influence of environmental initiatives on firms' internationalization has, once more, been confirmed (Haddoud et al., 2021; Sadeghi et al., 2019; Zeriti et al., 2014). Unequivocally, environmental commitment provides firms with a unique international competitive advantage and offsets potential costs (Zeriti et al., 2014; Liu and Xie, 2020). Like Craig et al. (2008) suggest, they are able to persuade customers to make purchase decisions based on family values and beliefs. Thus, Haddoud et al. (2021) observed that there is a positive and direct relationship between family firms' environmental commitment and export intensity. It is thought that environmental initiatives enhance firms' reputations, which would then facilitate access to international markets (Martin-Tapia *et al.*, 2010). This obtains because the family component of the firm added to embarking on environmental initiatives, acts as a signal to consumers that the firm is doing good (Schellong et al., 2019). In turn, this is likely to boost foreign consumers' purchase intention as they perceive family firms' products to be 'made-with-love' (Rauschendorfer et al. 2022). This would be particularly relevant to the present context since Turkish firms tend to export to developed markets where importers show higher environmental awareness. In short, the confluence of firms' familiness and environmental initiatives would bestow international competitive advantage to Turkish family firms. However, the probabilistic analysis has stressed the crucial role of strategic planning in this set of initiatives, showing that with planning, the probability of export intensity to be high increases to 100%, as opposed to 60% when only monitoring and enhancing are implemented. This suggests that while firms should sustain environmental initiatives, strategic planning for such initiatives remains key.

On the other hand, the influence of environmental initiatives is also manifest in the mitigation of institutional pressures related to environmental regulations. In accordance with the institutional view, Wang et al. (2018) confirmed a relationship between institutional pressures, particularly regulatory pressures, and environmental management practices. The authors explained that firms adopt environmentally friendly behavior to maintain good relationships with key stakeholders. Similarly, Li et al. (2017) found that firms pay more attention to environmental projects to comply with regulations and be profitable. Baah et al. (2021) also supported the view that firms adopt proactive environmental strategies to address pressures from coercive regulatory stakeholders. In this respect, Dubey et al. (2019) posit that giving in to such coercive pressures, which arise from government regulations and policies, is crucial for building legitimacy and aiding access to scarce resources. Once attained, legitimacy will eventually allow firms to thrive in international markets. Thus, in the present study, the evidence suggests that when Turkish family firms adopt environmental initiatives, it indeed reduces the negative influence of environmental regulatory obstacles.

7. Conclusion

To recall, this study sought to investigate the event that customer environmental pressure compels family firms to develop environmental initiatives, and whether these initiatives are sufficient for reducing environmental regulatory obstacles and increasing exports. The results suggest that the more intense the pressure from customers, the greater the likelihood of family firms taking steps in the direction of environmental planning and energy management. Also, these initiatives effectively position family firms in Turkey to be more compliant with environmental regulations, which ordinarily, have a negative effect on export intensity. Yet, the evidence that, on their own, environmental initiatives can accelerate the rate of exporting is also a key finding for contexts where environmental regulations are lax or do not constitute a barrier. On the current evidence, environmental practices are deemed to be a source of competitiveness for Turkish family firms. This refutes Zellweger et al. (2013) and Seaman *et al.*'s (2018) argument that such practices are lossmaking. To conclude, the paper reflects on its theoretical and practical implications, as well as limitations and areas for future research.

7.1. Theoretical contributions

For a definitive contribution, the novelty of this paper resides in being one of the first inquiries to investigate the interplay of family firms' marketing practices and sustainability activities, as recently solicited by Baliaeva *et al.* (2022). By the same token, it has clarified some of the ambiguity surrounding marketing relationships in the family business environment, as noted by Arsić et al. (2018). In fact, despite the typical customer-centered approach of family firms, few studies have tackled the environmental sustainability orientation from a marketing perspective, via the influence of customer pressures. Hence, this study adds new evidence from the Turkish context to illustrate family firms' mutual pursuit of sustainability and customer satisfaction. For theoretical underpinning, this study espoused an integrated stakeholder, institutional and resource-based perspective. As demonstrated, the stakeholder and institutional views have been widely ratified in extant works considering family firms' environmental behavior and performance. The novelty advanced in this study is the conceptualization and observation of not previously examined variables and correlations between customer pressures, environmental initiatives, regulatory barriers, and export intensity. To the best of our knowledge, this is the first inquiry to explore the stakeholder, institutional, and resource-based perspective as a lens for understanding the repertoire of processes in family firms' environmental sustainability-export performance nexus. For specificity, comparing the distinct environmental initiatives observed, it is postulated that environmental planning is the most effectual environmental initiative for boosting export intensity. This is followed by energy consumption monitoring and then energy efficiency-enhancing measures.

7.2. Practical implications

The practical implications arising for family firms in Turkey relate to their business-to-business customers and future institutional legitimacy. First, nationally, Turkey's leading export destinations include the United Kingdom and Germany (Töngür et al., 2020). Respectively, these countries are ranked 4th and 10th in the global environmental performance index (EPI, 2021). Hence, it is likely that business-to-business customers in the United Kingdom and Germany exert pressure for greener supply chains now and increasingly so in the future. Turkish family firms can reflect on the current findings and grasp the virtuous knock-on effect of acceding to this pressure, as it bodes well for the environment and their bottom lines through exports. More to the point, the current evidence should encourage family firms in the context to develop clear objectives to address environmental and climate change issues, as well as proactively adopt energy management practices. Indirectly, these measures have been shown to reduce the perceived barriers of environmental regulations as impediments to exporting. Likewise, Turkish family firms adopting these measures will also be able to directly increase the volume of their foreign receipts as a ratio to total sales. Secondly, businesses consume 42% of Turkey's energy (Ates and Durakbasa, 2012), but the country's 'Vision 2023' energy policy only addresses issues surrounding energy supply, energy prices, and energy

competitiveness (Aydın, 2020). Stakeholders, including the Ministry of Energy and Natural Resources and the General Directorate of Energy Affairs, can consider the results of this study to formulate a national energy management framework that warrants energy efficiency enhancement measures and energy consumption monitoring as already practiced in Taiwan (Hong et al., 2010). Also, although Turkey's admittance to the European Union seems politically remote, member states in the bloc are required to set up national energy management plans (Monti and Romera, 2020; Trotta, 2020). If legislated, such initiatives will persuade or compel family and non-family firms alike to pursue institutional legitimacy, lower local perceptions of foreign environmental regulatory obstacles, and intensify exports by the same token.

7.3. Limitations and future research directions

There are a number of shortcomings that may find redress in future studies. To begin with, in addition to the 50% cut-off, other criteria such as voting rights, influence over strategic decisions, multigenerational involvement, and active management of family members may suffice for a more robust selection of family business cases. Pertaining to the environmental regulatory obstacles captured in the current data, there is no measurement specificity to clarify whether the family firms faced these challenges in Turkey or in the export markets. Furthermore, the inquiry is a single-country investigation. Therefore, the results may not be valid beyond Turkey, even in countries with identical economic profiles. Also, the World Bank data examined are cross-sectional observations. Consequently, the relationships determined are merely associations and not causal links. Cross-sectional data also generate a static view of firms as opposed to their evolving behaviors, such as other environmental initiatives adopted over time. Lastly, the data were mostly binary in nature, and this could weaken observed relationships. Nevertheless, these limitations also beget opportunities for further research, as explained below.

In further inquiries assessing similar correlations, scholars can isolate and appraise family business cases that meet other selection criteria, such as voting rights and active management of family members (in addition to the 50% ownership threshold). New studies are also invited to replicate the theoretical model in comparative work across neighboring countries, as well as in developed market settings where there is less economic ambivalence than in Turkey. This is because family firms in developing countries may be exposed to greater customer pressure and more profuse environmental regulation. Upcoming studies can also take longitudinal approaches to demonstrate causality in the relationships assessed while exploring the impact of a range of other environmental initiatives. These may include pollution and CO_2 emissions monitoring, water usage monitoring, heating and cooling improvements, machinery, equipment, and vehicle upgrades, recycling and waste management, lighting systems, and external environmental audits. Moreover, it is also probable that firm and managerial attributes may influence the intensity of environmental and export activity. Accordingly, future studies are invited to examine more deeply the moderating effect of characteristics, including age, size, education, and gender. Also, for a more granular understanding, scholars can capture whether family firms face environmental regulatory obstacles in the home market vs. foreign markets and estimate the distinctive effect of this dichotomy on export intensity. Finally, to improve on the binary data investigated, future studies may opt to capture customer pressure, environmental planning, energy efficiency-enhancing measures, and energy monitoring using multipoint scales.

CRediT authorship contribution statement

Adah-Kole Emmanuel Onjewu: . **Vahid Jafari-Sadeghi:** Writing – review & editing, Writing – original draft, Validation, Project administration, Investigation, Conceptualization. **Ned Kock:** Software, Data curation, Conceptualization. **Mohamed Yacine Haddoud:** Writing – original draft, Software, Methodology, Formal analysis, Data curation, Conceptualization. **Georgia Sakka:** Writing – review & editing, Investigation.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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