BUSINESS STRATEGIES OF SNACK FOOD PRODUCT EXPORT PERFORMANCE: A STRUCTURAL EQUATION MODEL ANALYSIS

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Abstract

Over the past several years the COVID-19 pandemic has devasted Thailand's economy while simultaneously destroying the ability of numerous snack food enterprises to sell their home-grown products domestically and to export to the broader international community. Therefore, the purpose of the research was to investigate which factors affected the export performance (XPE) of Thai One Tambon One Product (OTOP) entrepreneur snack food products. From a list of OTOP export producers, the authors used systematic random sampling across six Thai regions to select the study's 311 export entrepreneurs. The structural equation model (SEM) analysis used LISREL 9.1 to determine the validity of the causal model and the variable interrelationships and how they affected OTOP snack food XPE. The SEM results revealed that innovative products (IPT), innovative processes (IPS), packaging design (PAD), the marketing mix strategy (MMS), and product quality (PDQ) all positively influenced XPE. Also, the total effect values for MMS, PAD, PDQ, IPT, and IPS, were 0.27, 0.22, 0.21, 0.15, and 0.05, respectively. Nine of the eleven hypotheses examined were supported, with PAD being shown to strongly influence MMS. This paper makes a significant contribution to the global discussion concerning rural poverty reduction, rural employment, and entrepreneurial handicraft export performance.

Keywords: Innovative Processes, Marketing Mix Strategy, One Tambon One Product (OTOP), Packaging Design, Product Quality, Thailand

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1. INTRODUCTION

In 1979, the governor of Japan's poorest prefecture (Oita) initiated a poverty reduction program named One Village One Product (OVOP) or *"Isson Ippin Undo"* in Japan (Kimura, 2016). OVOP was intended as a 'grassroots' initiative to help Oita's poor lower their dependence on government subsidies while also stemming the worsening crisis of the loss of youth to the big cities while also improving each community's quality of life (Sitabutr & Paitoon, 2017; Anh, 2013). Under the motto of "*think globally, act locally*," Governor Hiramatsu inspired countless others globally to lift themselves out of poverty through entrepreneurial endeavors and locally made products.

Some years later, Thailand was trying to exit the economic ravages of the 1997 Asian Economic Crisis and find ways to strengthen its rural poor and small-to-medium enterprises (SMEs) (Sitabutr & Paitoon, 2017). Seeing the success of Japan's OVOP program, Thailand initiated a similar program in 2001 for its 7,000 plus tambons (sub-districts) which was labeled "One Tambon One Product" (OTOP).

The critical strategy then became for the Thai government to develop community-based enterprises (CBEs) through a top-down managed program that promoted locally-produced handicrafts and agricultural products into bigger, export-focused SMEs (Anh, 2013). The development and the sustainability of the rural regions and citizens have been codified in both Thai government and Royal programs, such as the Eighth National Economic and Social Development Plan (1997–2001) and Thailand's King Rama IX's "Theory of Economic Self-Sufficiency" (von Feigenblatt et al., 2021).

Although OTOP had meager beginnings reaching only $7 million in 2001, it quickly grew to a $2.24 billion export powerhouse by 2008 (Changsorn, 2015). Since then, the Thai OTOP has been instrumental in helping many Thais increase their incomes, find new job opportunities, and motivate many to find productive and long-lasting employment, especially in rural and impoverished remote areas (Muslim et al., 2020). Noting the success of the Japanese OVOP programs, the Thai OTOP programs, and the Philippines' One Town One Product (OTOP) programs, the United Nations Industrial Development Organization (UNIDO) has also initiated similar programs in Africa starting in 2008 to help rural development and poverty reduction (Haraguchi, 2008).

Today, Thailand's OTOP program has grown past 70,000 entrepreneurs, with the Thai government heavily supporting current and new initiatives, supply chain development, entrepreneurial workshops, consulting networking, and the development of new OTOP product markets. The central idea behind OTOP today is to have each tambon (sub-district) focus on the development, production, and sales/export of a single product that is best suited for each tambon's location and local skills and wisdom (Changsorn, 2015).

Towards these goals, the Thai Interior Ministry's Community Development Department has reported that over 10,000 SMEs were awarded "five stars", thus enabling them to export their products to foreign markets. In 2015, 5,687 exporters took advantage of their five-star ranking and exported over $2.88 billion in products (Changsorn, 2015).

For this study, recent domestic and foreign OTOP sales data were analyzed from the Thai Community Development Information Center website http://logi.cdd.go.th/cddcenter/. According to the 2021 Excel data, total OTOP sales, both domestic and foreign, were THB 264.151 billion, and THB 276.562 billion, respectively. In US dollar terms, this was approximately USD 7,215 billion and USD 7,553 billion, respectively (CDIC, 2022). When viewed by the food group only, these numbers changed to THB 126.368 billion for domestic OTOP sales and THB 7.339 billion for foreign OTOP sales in 2021. In US dollar terms, this was approximately USD 3,447 billion and USD 200 million, respectively.

Furthermore, a study from Frost & Sullivan (2019, p. 23) discusses the Thai domestic snack food industry. In it, a chart details the Thai domestic retail sales of biscuits, wafers, and extruded and stick crackers, which in 2021 was reported at THB 29.992 billion or nearly USD 820 million. This is expected to rise to THB 32.009 billion in 2022 (USD 875 million) and THB 34.086 billion (USD 932 million) in 2023. Interestingly, the report contributes some of this growth to Thai smaller households, which drives the demand for smaller packages and less quantity. There is also the convenience factor and the need for less time to clean up after consumption. Finally, the above numbers do not include sales for cuttlefish snacks (THB 2.046 billion), seafood snacks (THB 5.904 billion), meat snacks (THB 16.500 billion), and other snacks such as health food bars.

Thus, the incentive for CBEs and local entrepreneurs to become OTOP SMEs and ride the wave of OTOP branding marketed by the Thai government domestically and in foreign markets is very high. This is consistent with Tock and Baharun (2013), who stated that the OTOP brand now personifies perceived value, with the brand opening up many doors to foreign markets. The Thai OTOP product project encourages communities and villages to develop the quality of their local products by selecting outstanding products from each sub-district which are then evaluated using 1–5 stars. OTOP products consist of a wide range of local products developed from local community wisdom that distinctively reflects the local culture. This is perceived as a strong selling point with high export potential under the Thai government's push using various investment promotion measures until each community can build a reputation with products known to foreigners and in demand in the international market.

Today, over 40% of the OTOP CBEs and SMEs are engaged in handicraft production and food processing, which is heavily concentrated in Thailand's northern and northeastern provinces. Also, Thailand is the world's number one exporter of rice flour snacks such as biscuits to countries such as Germany and Sweden, as foreign consumers are increasingly interested in products made from natural raw materials.

Therefore, based on the national importance of OTOP product production, the authors saw the need to examine how product and process innovation influence snack product quality. The investigation also explores how packing design, the production

process, and the 4P marketing mix are involved and can be improved to boost international sales and foreigner appeal.

The paper adopts the following structure. Section 2 reviews the relevant literature and the six latent variables and their conceptualized hypotheses. Section 3 analyses the methodology that has been used to conduct empirical research on 311 individuals involved in the export of Thai handicraft products. Section 4 details the results from the structural equation modeling (SEM), while Section 5 presents a discussion of the research results. Finally, Section 6 gives a conclusion, suggests some ideas for future research, and offers some limitations to the study.

2. LITERATURE REVIEW

2.1. Innovative products (IPT)

Cooper and Edgett (2010) have stated that many firms lack clear innovative products (IPT) and technology strategies, which is critical and strongly linked to positive performance in IPT. The authors also determined that there are five IPT indicators. These include: 1) improving existing products and launching them into the market as new products, 2) developing new forms of products, 3) creating a production system that operates at maximum efficiency and low cost, 4) innovative products, and 5) being able to meet the needs of customers. Yin et al. (2020) also saw that sustainable IPT was enabled by new generations of information communication technology (ICT) and intelligent technologies, which were identified as sustainable and smart products (SSP). Moreover, IPT is knowledge-intensive and requires collaboration between multiple stakeholders (Ketonen-Oksi & Valkokari, 2019).

In an examination of innovation practices within the electronics sector, Sánchez et al. (2011) also saw the need for 1) creative products, 2) the development of new forms of products, and 3) the creation of production systems for maximum efficiency and low cost. Also, in Thailand, Suwannapusit and Chayomchai (2018) determined that innovative products (IPT) and innovative processes (IPS) had significant and positive effects on OTOP enterprise financial performance. Anuntarumporn and Sornsaruht (2022) also determined that IPT significantly influenced competitive advantage, with innovative capability determined by how well resources get used. Therefore, learning innovation requires a learning process that changes how learners use digital technology as a tool to stimulate learning motivation (Ruenphongphun et al., 2022). Therefore, this results in a continuing demand for innovation, expertise, and entrepreneurial management abilities development. Therefore, the authors propose the following four hypotheses:

H1: Innovative products (IPT) have a direct influence on innovative processes (IPS).

H2: Innovative products (IPT) have a direct influence on the marketing mix strategy (MMS).

H3: Innovative products (IPT) have a direct influence on product quality (PDQ).

H4: Innovative products (IPT) have a direct influence on packaging design (PAD).

2.2. Innovative processes (IPS)

Once again, Khan et al. (2021) have pointed out the importance of being "green" in their study on process innovation, in which the authors' content concerns energy consumption and environmental pollution and whether sustainable development goals drive green process innovation. Likewise, Awan et al. (2021) explored 239 manufacturing firms' development of green products through innovative processes (IPS) and determined that consumer-driven knowledge activities had a more significant and positive influence on green IPT than green IPS.

Najafi-Tavani et al. (2018) examined 258 Iranian technology manufacturing firms in Iran. They warned the readers of their study that caution was needed when collaborative innovation networks were being developed for IPT or IPS purposes as they were only significant in managerial absorptive capacity. Moreover, in IPS capability, collaboration with research organizations and suppliers was determined to be the most critical factor.

Hullova et al. (2019) begin their discussion by comparing the 50-year-old discussion between IPT and IPS and their ability to increase competitive advantage. It is also suggested that even though the literature seems to favor IPT in its discussions, IPS is equally essential in innovation capability with simultaneous consideration of both yielding significant benefits. Therefore, the authors propose the following two hypotheses:

H5: Innovative processes (IPS) have a direct influence on the marketing mix strategy (MMS).

H6: Innovative processes (IPS) have a direct influence on product quality (PDQ).

2.3. Packaging design (PAD)

Bucci and Forcellini (2007) have written that consumer product packaging is as essential as the product itself and that product development is not finished until the packaging is finished. Chen (2014) has added that a product's packaging design is a critical element in the consumer 4P mix in making consumers happy. Olsson and Györei (2002) added that efficient packaging is more important than brand advertising, and packaging design is critical for retail environments.

Also, Olander-Roese and Nilsson's (2009) discussion on packaging design suggested that the critical element is to minimize the number of parts. The authors also suggest that packaging design (PAD) must be safe, easy to handle and transport, easy to distribute and store, and designed for ease of use. Furthermore, focusing on production is more important than sales and subsequent profits.

Additionally, other consumer research has suggested that consumers are becoming more receptive to sustainable packaging and its implications for a better environment (Steenis et al., 2018). Wandosell et al. (2021) also reported a growing awareness concerning "green packaging" among companies and consumers as a sustainable development method. Wikström et al. (2019) also suggested that PAD should be involved in saving food and preventing food waste. In another study about PAD and how it affects online consumer

buying, the authors suggested that packaging graphics, colors, label information, and the country of origin were vital elements (Al-Samarraie et al., 2019).

Finally, Ririn et al. (2019) reported how PAD, product quality, and promotion influenced consumer buying intention. Therefore, the authors conceptualized the following two hypotheses:

H7: Packaging design (PAD) has a direct influence on marketing mix strategy (MMS).

H8: Packaging design (PAD) has a direct influence on product quality (PDQ).

2.4. Marketing mix strategy (MMS)

McCarthy, in 1960 has been attributed to the first use of the "marketing mix" 4Ps as promotion, price, product, and place, although the actual term had been discussed as early as 1946 by Borden (Lahtinen et al., 2020). Kotler and Armstrong (2010) later confirmed these aspects as essential tactical marketing tools organizations need to implement their marketing strategies. Pearce and Robinson (2009) have also noted that retaining existing customers through relationship marketing activities is far cheaper than finding new ones.

Saif (2015) confirmed these points by reporting that using a marketing mix strategy, the product must be different from the competition, the pricing must be reasonable, the product is adequately promoted, and the strategies must be innovative. However, in an extensive review of the marketing mix literature, Birnik and Bowman (2007) determined that pricing was the least standardized element in the marketing mix. In Oman, Al Badi (2018) also found that all four marketing mix (MM) elements for the country's SMEs were essential and significantly impacted achieving competitive advantage, with price being the most critical aspect.

Therefore, the authors propose the following hypotheses:

H9: Marketing mix strategy (MMS) has a direct influence on product quality (PDQ).

H10: Marketing mix strategy (MMS) has a direct influence on export performance (XPE).

2.5. Product quality (PDQ)

Cappelli and Cini (2021) examined supply and components related to bakery product production chains and determined an imperative need for sustainable technological innovations and improvements from the beginning to the end. Specifically, the authors identified the wheat milling process as critical in its influence on flour quality and bread characteristics and detailed how technology improvements were necessary through every step of the production process.

In Indonesia, Wantara and Tambrin (2019) discussed the local making of Madura batik and how competitive it had become. They concluded that both the price and the product quality (PDQ) were significant contributors to customer satisfaction, but interestingly PDQ had no effect on customer loyalty. In another Indonesian study concerning popular cake products, the authors determined that PDQ and price were necessary for a purchase decision (Hatta et al., 2018). Finally, when Fischer (2010) examined European Union food PDQ and export performance, they determined that the product's destination was more important than when it was shipped. Therefore, the authors propose the following hypothesis:

H11: Product quality (PDQ) has a direct influence on export performance (XPE).

2.6. Export performance (XPE)

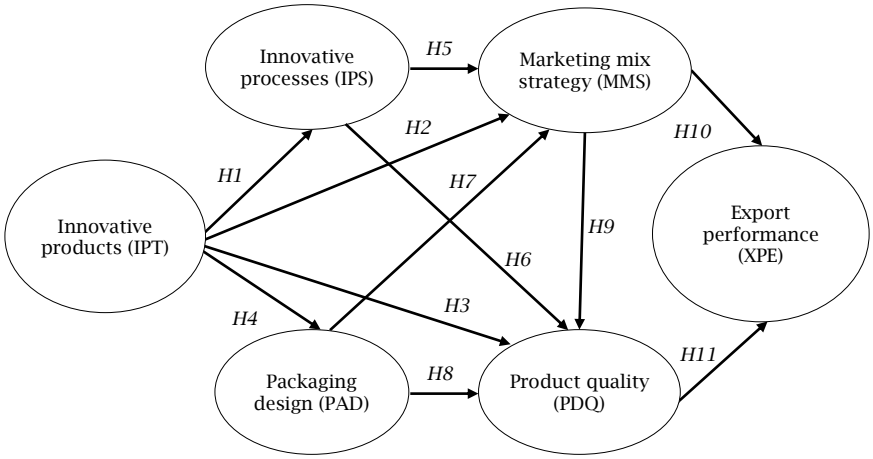
According to Safari and Saleh (2020), export performance (XPE) consists of two bodies of literature. These include the internal factors (enterprise and product-related aspects) and the external environment's characteristics (industry-level aspects and export market elements). However, Ural (2009) has demonstrated a positive impact when information sharing occurs. The author also stated that XPE indicators included profitability, sales volume, rapid growth, competitiveness, strategic position, market share, and customer satisfaction.

This is similar to the EXPERF (export performance scale) model which uses financial, strategic, and satisfaction as determinants (Iri & Gürbüz, 2022). For Indonesian SMEs, Rekarti et al. (2018) suggested that company orientation was a key strategic aspect that drives XPE. In Thailand, Racela and Thoumrungroje (2020) also saw the importance of ICT utilization and Web 2.0 applications in SME XPE. In Turkey, Uyar and Oralhan (2017) highlighted the importance of innovation in XPE in a globalized, highly competitive world. Also, in Thailand, Laosirihongthong et al. (2013) reported that XPE depended on sales growth, market growth, market share, and profitability.

2.7. Research objectives

The objectives of the study were first to review the theory and literature and determine which factors potentially played a role in an OTOP firm's export performance (XPE). Secondly, use confirmatory factor analysis (CFA) of the factors and then analyze their relationships using a structural equation model (SEM). Thirdly, to recommend to OTOP export entrepreneurs and government officials how to better secure a competitive advantage within the international export sector.

Figure 1. Proposed research model



3. METHODOLOGY

3.1. Population and sample

To assure statistical sampling validity from the 902 potential OTOP snack producers identified across Thailand, the authors collected questionnaires from six Thai regions, including the central region and the Bangkok metropolitan area, the northeast (Issan), eastern, western, northern, and southern regions (see Table 1). Systematic random sampling was utilized according to the proportion from the list of OTOP export producers in the one snack product category. The final number of questionnaires collected from these six regions were 87, 64, 42, 33, 46, and 39 (311 total or 74.12% of the targeted 420 samples).

Statistical support for collecting 311 questionnaires comes from numerous studies and sampling theories which have suggested that collecting 10–20 questionnaires for each observable variable is sufficient for CFA studies. Hair et al. (2021) and Schumacker and Lomax (2015) have also suggested that for CFA/SEM studies, samples of 200 or more are adequate. After all the questionnaires were collected and reviewed, 311 were judged to be complete enough for use in the study's analysis (Alguacil et al., 2021).

Table 1. Population and sample collection process

Region	*Population*	*Sample group*		
		Target	*Collected*	*Percent*
Central region and Bangkok	254	118	87	73.56
Northeast region	184	86	64	74.70
Eastern region	121	56	42	74.55
Western region	95	44	33	74.60
Northern region	135	63	46	73.18
Southern region	113	53	39	74.12
Combined	902	420	311	74.12

Source: CDIC (2022).

The instrument used to collect entrepreneur opinion information was an opinion questionnaire about OTOP snack product export performance (Sitabutr & Pimdee, 2017), consisting of seven parts as follows:

Part 1 was concerned with each entrepreneur's personal and business information, including items on gender, age, level of education, job title, business model, business longevity, number of employees, and types of snacks produced.

Part 2 was concerned with five opinion items about IPS, in which a 5-level opinion scale was used to determine each entrepreneur's consensus about *process continuity* (such as continuous improvement in production or services and adjusting the management system to be effective and reducing the production process) (y1); *service* (such as after-sales service and develop communication channels with customers) (y2); also, *modern technology* (such as the use of modern technology in the production process and factory management process and distribution) (y3); *system evaluation and analysis* (such as continuous system evaluation and system analysis) (y4); *competitive advantage* (such as creating advantages and enhancing competitiveness) (y5) (Suwannapusit & Chayomchai, 2018). The reliability of the items before the survey was determined to be 0.78, which is substantial (Taber, 2018).

Part 3 was concerned with four opinion items about new IPT (such as the development of a model according to market demand while reviewing and adjusting investment plans for the cost of developing new products), in which a 5-level opinion scale was used to determine each entrepreneur's consensus with *new product innovations* (x1); *improved products* (x2) (such as improving existing products in a new manufacturing sector and launching into the market as a product); *production system efficiency* (x3) (creating an efficient production system that results in low manufacturing costs); *demand response* (x4) (such as meeting the needs of customers and giving fast service) (Suwannapusit & Chayomchai, 2018). The reliability of the items before the survey was determined to be 0.77, which is acceptable (Taber, 2018).

Part 4 was concerned with four opinion items about the MMS, in which a 5-level opinion scale was used to determine each entrepreneur's consensus about *product* (such as product development to meet customer needs and continuous development) (y10); *price* (such as setting the right price that is fair to consumers) (y11); *place* (promotion locations through intermediaries, distributors, sales agents, and online systems) (y12); *promotion* (such as having multiple distribution channels and have a promotional strategy that meets the needs) (y13) (Al Badi, 2018; Lahtinen et al., 2020). The reliability of the items before the survey was determined to be 0.76, which is acceptable (Taber, 2018).

Part 5 was concerned with four opinion items about PDQ in which a 5-level opinion scale was used to determine each entrepreneur's consensus about *ready to offer for sale* (such as availability of products for sale and having a system to maintain quality products that are ready for consumption) (y14); *product efficiency* (such as product development is efficient with cost-effective products and able to respond promptly) (y15); *product reliability and product confidence* (such as building consumer trust and confidence in the product through reliability and confidence in the product) (y16); *after-sales service* (such as the service of skilled staff and focus on after-sales service efficiency) (y17). The reliability of the items before the survey was determined to be 0.80, which is good (Taber, 2018).

Part 6 was concerned with four opinion items about PAD, in which a 5-level opinion scale was used to determine each entrepreneur's consensus about *fewer components* (y6) (such as choosing the suitable material and reducing the number of components) *package safety* (y7) (such as designing the packaging with an emphasis on consumer safety and the product's safety) *transportation management* (y8) (such as choosing packaging to prevent damage) and *convenience* (y9) (such as design for convenience and ease of use). The reliability of the items before the survey was determined to be 0.75, which is acceptable (Taber, 2018).

Part 7 was concerned with four opinion items about XPT, in which a 5-level opinion scale was used to determine each entrepreneur's consensus about *market share* (such as exports and business expansion, global market share, and market share proportional to a brand's sales relative to its sales value) (y18); *increasing sales volume* (such as generating high volumes of sales and expanding the market from existing customers) (y19); *profitability* (such as profitable exports and the efficient use of capital inflows) (y20); and finally, *rapid growth* (such as logistics expansion has helped export growth) (y21). The reliability of the items before the survey was determined to be 0.79, which is acceptable (Taber, 2018).

As stated, the questionnaire used a 5-level scale which used "5" to indicate the "most agreement" (4.51–5.00), "4" to indicate "strong agreement" (3.51–4.50), "3" to indicate "moderate agreement" (2.51–3.50), "2" to indicate "little agreement" (1.51–2.50), and "1" to indicate "no agreement" (1.00–1.50). Finally, the range of Cronbach's alpha values was from 0.75 to 0.80 (Table 2), which is acceptable to good (Taber, 2018).

3.2. Data collection

The data was obtained by the researchers using Google online forms questionnaires. OTOP participants included export entrepreneurs, production managers, or marketing managers from six Thai regions in 2022. The list of names was obtained from the Thai OTOP Community Development Department's database for snack export products (Sriboonrueng & Sripokangkul, 2020). Systematic random sampling used every second name, from which researchers and their student assistants made coordinating phone calls, after which a link to a Google Form questionnaire was sent via e-mail or Line social media. The first data collection phase was in May 2022, which only achieved a 29.56% response rate. This was followed up with a more vigorous collection effort again in June 2022, from which 311 completed questionnaires were finally obtained.

3.3. Data analysis

Data analysis used LISREL 9.1 to determine the validity of the causal model and the variable interrelationships and how they affected OTOP snack food export performance. Before the SEM analysis, a goodness-of-fit (GoF) and CFA were also done.

4. RESULTS

4.1. Export entrepreneur demographics

Table 2 shows the summation of the input from part 1 of the questionnaire. From this, it can be seen that slightly more women are participating in the survey than men (52.00% to 48%). We also can see that 62.60% of the entrepreneurs and managers were between 31–50 years of age, while one significant number of 58.20% had obtained a BS or BA degree and another 9% had a graduate degree. Moreover, 71.40% identified themselves as the firm's owner, while the remaining 28.60% identified themselves as managers or executives. Of these, 61.40% indicated that the firm was a registered company, while the remaining 38.60% marked the firm as a limited partnership. Most respondents indicated that their firms were 11–20 years old (50.60%) and had 100 workers or less (68.40%). Finally, very interestingly, OTOP snack product exporters were focused on fruit products (32.00%), corn (22.60%), and rice (17.60%).

Table 2. Export entrepreneur and management demographics

Items		*Frequency*	*Valid %*
Gender	Men	149	48.00
	Women	162	52.00
Age	20–30 years old	32	10.20
	31–40 years old	92	29.60
	41–50 years old	103	33.00
	51–60 years old	49	15.60
	61 years old up	34	11.60
Education	High school or lower	102	32.80
	Bachelor's degree	181	58.20
	Postgraduate	28	9.00
Position	Owner	222	71.40
	Manager/Executive	89	28.60
Firm type	Company	191	61.4
	Limited partnership	120	38.6
Firm age	1–10 years	26	8.40
	11–20 years	157	50.60
	21–30 years	68	22.00
	31–40 years	40	12.80
	41 years or older	19	6.20
Number of employees	10–50 people	116	37.20
	51–100 people	97	31.20
	101–150 people	74	23.80
	151 people or more	24	7.80
Type of snack product	Made from rice	55	17.60
	They are made from corn	70	22.60
	They are made from meat	21	6.60
	Made from fruit	100	32.00
	They are made from beans	35	11.20
	They are made of flour	30	9.60
	Other ingredients	1	0.40

4.2. Goodness-of-fit (GoF) assessment

According to Jöreskog et al. (2016), CFAs should be done to assess a model's construct validity (CV), with strong CVs indicated by high discriminate and convergent validity values. LISEL 9.1 software suggests values for the goodness-of-fit index, GFI ≥ 0.90, the comparative fit index, CFI ≥ 0.95, and the root mean square error of approximation, RMSEA ≤ 0.05 (Table 3). The study established that the GoF analysis significantly exceeded all established requirements from these established indices and their criteria. Finally, Cronbach's alpha values (0.75–0.80) also exceeded the accepted value ≥ 0.70 (Taber, 2018).

Table 3. Criteria indices, criteria, theory, and values of the GoF assessment

Criteria index	*Criteria*	*Supporting theory*	*Values*	*Results*
Chi-square: $\chi 2$	p ≥ 0.05	Hooper et al. (2008)	0.06	passed
Relative Chi-square: $\chi 2$/df	p ≤ 2.00	Hooper et al. (2008)	1.16	passed
RMSEA	p ≤ 0.05	Hooper et al. (2008)	0.02	passed
NFI	p ≥ 0.90	Schumacker and Lomax (2015)	0.95	passed
CFI	p ≥ 0.90	Schumacker and Lomax (2015)	0.99	passed
RMR	p ≤ 0.05	Schumacker and Lomax (2015)	0.01	passed
SRMR	p ≤ 0.05	Schumacker and Lomax (2015)	0.05	passed
GFI	p ≥ 0.90	Jöreskog et al. (2016)	0.94	passed
AGFI	p ≥ 0.90	Schumacker and Lomax (2015)	0.91	passed
Cronbach's alpha	p ≥ 0.70	Taber (2018)	0.75–0.80	passed

Note: RMSEA: Root mean square error of approximation; NFI: Normed fit index; CFI: Comparative fit index; RMR: Root mean square residual; SRMR: Standardized root mean squared residual; GFI: Goodness-of-fit index; AGFI: Adjusted goodness-of-fit index.

4.3. CFA assessment results

The results shown in Table 4 from CFA reliability and validity testing determined that the Cronbach's alpha values (0.75–0.80) (Taber, 2018), the average variance extracted, AVE, values (0.40–0.62), and the construct reliabilities, CR, (0.76–0.86). Hair et al. (2016) have also indicated that CV determination should use the AVE, main loading correlations, and CR. Finally, although acceptable R^2 values are difficult to pinpoint in the literature, numerous articles have suggested that R^2 values of 0.25, 0.50, and 0.75 are weak, moderate, and substantial, respectively.

Table 4. The results of the CFA analysis of endogenous latent variables and exogenous latent variables

Latent variables	*α*	*AVE*	*CR*	*Manifest variables*	*Loading*	R^2
Innovative processes (IPS)	0.78	0.40	0.76	Process continuity (y1)	0.51	0.26
				Service (y2)	0.70	0.50
				Modern technology (y3)	0.62	0.38
				System evaluation and analysis (y4)	0.53	0.28
				Competitive advantage (y5)	0.76	0.58
Packaging design (PAD)	0.75	0.42	0.78	Fewer components (y6)	0.78	0.60
				Package safety (y7)	0.60	0.36
				Transport management (y8)	0.74	0.55
				Convenience (y9)	0.42	0.17
Marketing mix strategy (MMS)	0.76	0.47	0.77	Product (y10)	0.79	0.63
				Price (y11)	0.49	0.24
				Place (y12)	0.76	0.57
				Promotion (y13)	0.66	0.44
Product quality (PDQ)	0.80	0.62	0.86	Ready to offer for sale (y14)	0.67	0.45
				Product efficiency (y15)	0.92	0.84
				Product reliability and product confidence (y16)	0.90	0.81
				After-sales service (y17)	0.61	0.37
Export performance (XPE)	0.79	0.45	0.76	Market share (y18)	0.74	0.54
				Increasing sales volume (y19)	0.48	0.23
				Profitability (y20)	0.73	0.53
				Rapid growth (y21)	0.70	0.48
Innovative products (IPT)	0.77	0.51	0.80	New product innovations (x1)	0.77	0.60
				Improved products (x2)	0.86	0.74
				Production system efficiency (x3)	0.68	0.46
				Demand response (x4)	0.51	0.26

4.4. Latent variable analysis results

Table 5 shows the correlation coefficient testing results for the latent variables and the mean, standard deviation (SD), skewness, and kurtosis.

Table 5. Latent variable *r* testing, mean, standard deviation, skewness, and kurtosis results

Latent variables	*IPS*	*PAD*	*MMS*	*PDQ*	*XPE*	*IPT*
IPS	1.00					
PAD	0.41**	1.00				
MMS	0.46**	0.44**	1.00			
PDQ	0.42**	0.47**	0.46**	1.00		
XPE	0.34**	0.27**	0.20**	0.19**	1.00	
IPT	0.49**	0.45**	0.43**	0.50**	0.26**	1.00
Mean	4.50	4.49	4.48	4.48	4.49	4.49
SD	0.17	0.22	0.21	0.24	0.24	0.23
Skewness	0.45	0.60	0.75	0.78	-0.33	0.80
Kurtosis	2.23	0.00	0.40	0.03	1.46	0.11

*Note: ** Sig. < 0.01.*
Source: Authors' LISREL 9.1 analysis.

4.5. Mediation effects

Table 6 shows that *innovative products (IPT)*, *innovative processes (IPS)*, *packaging design (PAD)*, the *marketing mix strategy (MMS)*, and *product quality (PDQ)* all positively influenced OTOP snack food *export performance (XPE)*, which, when combined, had a total effect R^2 value of 10%. Also, the *total effect (TE)* values of the latent variables *MMS, PAD, PDQ, IPT,* and *IPS*, were 0.27, 0.22, 0.21, 0.15, and 0.05, respectively. Nine of the eleven hypotheses examined were supported, with innovative products determined to have nearly equal and greatest influences on the IPS and PAD.

Table 6. Standard coefficient of influence for OTOP snack food export performance

Dependent variables	R^2	*Effect*	*Independent variables*				
			IPT	*IPS*	*PAD*	*MMS*	*PDQ*
Innovative processes (IPS)	0.12	DE	0.35**				
		IE	-				
		TE	0.35**				
Packaging design (PAD)	0.12	DE	0.34**				
		IE	-				
		TE	0.34**				
Marketing mix system (MMS)	0.48	DE	0.03	0.12*	0.65**		
		IE	0.27*	-	-		
		TE	0.30*	0.12*	0.65**		
Product quality (PDQ)	0.25	DE	0.25**	0.08	0.23*	0.22*	
		IE	0.17*	0.03	0.14*	-	
		TE	0.42**	0.11	0.37**	0.22*	
Export performance (XPE)	0.10	DE	-	-	-	0.22*	0.21*
		IE	*0.15	0.05	*0.22	0.05	-
		TE	*0.15	0.05	*0.22	0.27**	0.21*

*Note: * Sig. ≤ 0.05, ** Sig. ≤ 0.01.*

4.6. Testing of the hypotheses

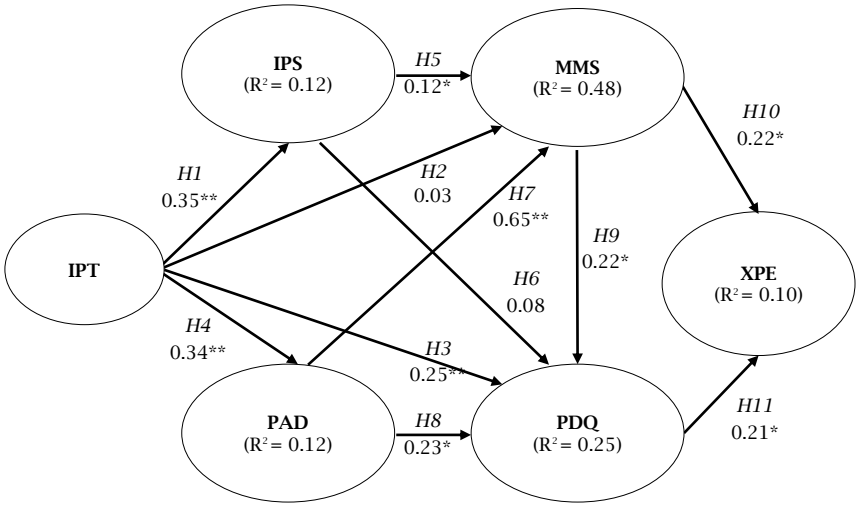
This subsection presents the results of the hypotheses testing. The results revealed that nine of the eleven hypotheses were consistent with the data and supported (Figure 2 and Table 7).

Table 7. Research hypotheses test results

Hypotheses statements	*Coefficients*	*t-test*	*Results*
H1: Innovative products (IPT) have a direct influence on Innovative processes (IPS).	0.35	4.98**	Consistent
H2: Innovative products (IPT) have a direct influence on the marketing mix strategy (MMS).	0.03	0.47	Inconsistent
H3: Innovative products (IPT) have a direct influence on product quality (PDQ).	0.25	4.00**	Consistent
H4: Innovative products (IPT) have a direct influence on packaging design (PAD).	0.34	4.76**	Consistent
H5: Innovative processes (IPS) have a direct influence on the marketing mix strategy (MMS).	0.12	2.36*	Consistent
H6: Innovative processes (IPS) have a direct influence on product quality (PDQ).	0.08	1.44	Inconsistent
H7: Packaging design (PAD) has a direct influence on marketing mix strategy (MMS).	0.65	8.70**	Consistent
H8: Packaging design (PAD) has a direct influence on product quality (PDQ).	0.23	2.49*	Consistent
H9: Marketing mix strategy (MMS) has a direct influence on product quality (PDQ).	0.22	2.38*	Consistent
H10: Marketing mix strategy (MMS) has a direct influence on export performance (XPE).	0.22	2.60*	Consistent
H11: Product quality (PDQ) has a direct influence on export performance (XPE).	0.21	2.38*	Consistent

*Note: * Sig. ≤ 0.05, ** Sig. ≤ 0.01.*

Figure 2. Research model validation for OTOP snack product export performance



5. DISCUSSION

The results revealed that all five causal variables positively influenced OTOP snack food export performance (XPE), which, when combined (TE), had an R^2 value of 10%. Also, the latent variable TE values for MMS, PAD, PDQ, IPT, and IPS, were 0.27, 0.22, 0.21, 0.15, and 0.05, respectively.

5.1. Innovative products (IPT) hypotheses testing

Hypotheses testing for IPT determined that three of the four hypotheses were supported, with *H1* (IPT to IPS) showing a moderate relationship with r = 0.35, t-value = 4.98, p ≤ 0.01. *H3* was also weak with IPT to PDQ having an r = 0.25, t-value = 4.00, p ≤ 0.01, and *H4* showed that the relationship from IPT to PAD was also weak as r = 0.34, t-value = 4.76, p ≤ 0.01. However, the relationship conceptualized between IPT and MMS was deemed unsupported. Furthermore, the descriptive statistics analysis in Table 8 showed that OTOP snack food exporters felt that IPT was best achieved through *improved products* (x2) and *production system efficiency* (x3). However, new product innovation was considered the least important (x1).

This is consistent with OTOP research from Suwannapusit and Chayomchai (2018), who determined that managing innovation along with IPT and IPS positively and significantly influenced non-financial performance. They also reported that focusing on innovation was a critical aspect that increased OTOP firm performance.

Table 8. OTOP snack food product descriptive statistics

Manifest variables	*Mean*	*SD*	*Skewness*	*Kurtosis*	*Level*
Innovative products (IPT)	4.49	0.23	0.80	0.11	SA
New product innovations (x1)	4.45	0.40	0.17	-1.41	SA
Improved products (x2)	4.51	0.38	-0.08	-1.10	MA
Production system efficiency (x3)	4.51	0.37	-0.03	-1.15	MA
Demand response (x4)	4.49	0.38	0.03	-1.23	SA
Innovative processes (IPS)	4.50	0.17	0.45	2.23	MA
Process continuity (y1)	4.48	0.27	0.33	-0.23	SA
Service (y2)	4.54	0.39	-0.28	-0.96	MA
Modern technology (y3)	4.52	0.30	0.32	-0.77	MA
System evaluation and analysis (y4)	4.49	0.36	-0.08	-0.83	SA
Competitive advantage (y5)	4.46	0.35	-0.18	0.10	SA
Packaging design (PAD)	4.49	0.22	0.60	0.00	SA
Fewer components (y6)	4.43	0.39	0.21	-1.21	SA
Package safety (y7)	4.50	0.39	-0.04	-1.20	MC
Transport management (y8)	4.48	0.38	0.08	-1.28	SA
Convenience (y9)	4.57	0.36	-0.26	-0.84	MA
Marketing mix strategy (MMS)	4.48	0.21	0.75	0.40	SA
Product (y10)	4.52	0.35	-0.07	-0.98	MA
Price (y11)	4.52	0.36	-0.05	-1.02	MA
Place (y12)	4.47	0.35	0.09	-1.00	SA
Promotion (y13)	4.43	0.38	0.25	-1.24	SA
Product quality (PDQ)	4.48	0.24	0.78	0.03	SA
Ready to offer for sale (y14)	4.49	0.36	0.02	-1.05	SA
Product efficiency (y15)	4.47	0.38	0.05	-1.15	SA
Product reliability and product confidence (y16)	4.50	0.37	-0.01	-1.15	MA
After-sales service (y17)	4.43	0.39	0.20	-1.21	SA
Export performance (XPE)	4.49	0.24	-0.33	1.46	SA
Market share (y18)	4.47	0.36	-0.23	0.01	SA
Increasing sales volume (y19)	4.49	0.40	-0.36	-0.49	SA
Profitability (y20)	4.47	0.38	-0.11	-0.75	SA
Rapid growth (y21)	4.51	0.39	-0.44	-0.05	MA

Note: SC = strong agreement, MA = most agreement.

5.2. Innovative processes (IPS) hypotheses testing

The hypotheses testing for IPS revealed that *H5* (IPS to MMS) was supported but very weak, as r = 0.12, t-value = 2.36, p ≤ 0.05. However, the conceptualized relationship in *H6* between IPS and PDQ was unsupported.

Also, the descriptive statistics in Table 8 showed that OTOP snack food product exporters felt that IPS was best achieved through *service* (y2) and *modern technology* (y3). However, *competitive advantage* was judged as the least important (y5).

The need and use of technology in innovation are also consistent with Lee and Xuan (2019), who determined that the total factor productivity from high-technology exports and innovation and patent applications is positively related to the total output increase. Aujirapongpan and Jutidharabongse (2020) have added that developing strategic intuition capability and finding the solution to a problem using correct thinking requires in-depth knowledge of the job to perform one's job daily.

5.3. Packaging design (PAD) hypotheses testing

The hypotheses testing for *H7* showed a very strong and positive relationship between PAD to MMS (r = 0.65, t-value = 8.70, p ≤ 0.01), as well as a weak but positive relationship in *H8* from PAD to PDQ (r = 0.23, t-value = 2.49, p ≤ 0.05).

Moreover, the descriptive statistics in Table 8 showed that OTOP food product exporters felt that effective PAD was best achieved through *convenience* (y9) and *package safety* (y7). However, fewer components (y6) were judged as least significant (y6).

These findings are consistent with Olsson and Györei (2002), who added that efficient packaging is more important than brand advertising, and packaging design is critical for retail environments.

5.4. Marketing mix strategy (MMS) hypotheses testing

The hypotheses testing for *H9* showed a weak but positive relationship between MMS to PDG (r = 0.22, t-value = 2.38, p ≤ 0.05). The same was true for *H10* and the relationship from MMS to XPE (r = 0.22, t-value = 2.60, p ≤ 0.05).

Also, the descriptive statistics in Table 8 showed that OTOP snack food product exporters felt that the MMS was best achieved through *price* (y11) and *product* (y11). However, marketing *promotion* (y13) was judged as the least important.

Birnik and Bowman (2007) have added that central to any international marketing strategy is the decision as to which marketing mix elements should be standardized and to what degree. However, Sriboonrueng and Sripokangkul (2020) found many difficulties with Thai government OTOP community development officers and their ability to support and promote enterprise entrepreneurs in obtaining a national standard for their products.

5.5. Product quality (PDQ) hypotheses testing

In the study's final hypothesis, *H1*, the relationship between PDQ and XPE was weak as r = 0.21, t-value = 2.38, p ≤ 0.05. Also, the OTOP exporters felt that *product reliability and product confidence* (y16) was most important, closely followed by *ready-to-offer for sale* (y14) (Table 8). However, they viewed *after-sales service* as the least important.

5.6. Export performance (XPE) descriptive statistics results

Finally, The OTOP snack food exporters indicated that they perceived *rapid growth* (y21) as the most critical element when considering their firm's export performance. Non-surprisingly they consider their firms' ability to *increase sales volume* (y19).

6. CONCLUSION

The authors used an SEM to investigate the interrelationships of six latent variables, their eleven hypotheses, and their importance on a Thai OTOP entrepreneur's opinion on what factors contributed most significantly to their enterprise's export performance. The results revealed that all five causal variables positively influenced OTOP snack food export performance, which when combined had an R^2 total effect value of 10%. Also, the latent variable total effect values for MMS, PAD, PDQ, IPT, and IPS, were 0.27, 0.22, 0.21, 0.15, and 0.05, respectively. Nine of the eleven hypotheses examined were supported, with innovative products determined to have nearly equal and greatest influences on the innovative process and packaging design. Therefore, product quality is essential to an OTOP export firm's successful growth and sustainability in a highly competitive world. The marketing mix 4Ps must also be remembered, with special attention given to product price.

Furthermore, the authors believe that success within the export sector for OTOP product snacks depends on innovative, colorful, and environmentally friendly packaging, especially if the snack food product is sold through retail locations. Also, numerous studies have pointed to the critical nature of customer satisfaction, which is tied to maintaining efficient and cost-effective production levels while maintaining a high level of product quality, durability, and standards. Trust between the OTOP export firm and their overseas customers is also critical, which entails delivering products on time as promised with the number of units specified. At the same time, price is a critical factor that must be factored into the firm's marketing mix. Pricing must be competitive, follow market trends, and is reasonable and acceptable. When possible, firms should monitor social media to see how their products are received in the international marketplace and adjust according to features and specifications based on the comments.

It is suggested that future studies focus on comparing top-town marketing styles used in the Thai OTOP programs to other similar programs in Japan and the Philippines. Future studies might also wish to review how the COVID-19 pandemic affected sales promotion export programs due to the catastrophic loss of international tourists, and what processes are being put in place to mitigate similar problems in the future.

Although this study was conducted across a broad spectrum of Thai OTOP exporters, it is limited only to Thai exporters. The study was also limited to the four marketing mix factors, which included the product (y10), price (y11), place (y12), and promotion (y13). Future studies should expand this to the 7Ps and add people, processes, and physical evidence.

Although numerous methods can be used to conduct research, the authors would like to suggest that for a similar study and sample it would be possible to conduct in-depth interviews with each enterprise's management team. Also, the use of focus groups would be a useful technique or maybe using a combination of the above (mixed methods).

REFERENCES

1. Al Badi, K. S. (2018). The impact of marketing mix on the competitive advantage of the SME sector in the Al Buraimi Governorate in Oman. *SAGE Open, 8*(3). https://doi.org/10.1177/2158244018800838
2. Alguacil, M., Núñez-Pomar, J., Calabuig, F., Escamilla-Fajardo, P., & Staskeviciute-Butiene, I. (2021). Creation of a brand model through SEM to predict users' loyalty and recommendations regarding a public sports service. *Heliyon, 7*(6), Article e07163. https://doi.org/10.1016/j.heliyon.2021.e07163
3. Al-Samarraie, H., Eldenfria, A., Dodoo, J. E., Alzahrani, A. I., & Alalwan, N. (2019). Packaging design elements and consumers' decision to buy from the Web: A cause and effect decision-making model. *Color Research & Application, 44*(6), 993–1005. https://doi.org/10.1002/col.22427
4. Anh, N. T. (2013). One Village One Product (OVOP) in Japan to One Tambon One Product (OTOP) in Thailand: Lessons for grass root development in developing countries. *Journal of Social and Development Sciences, 4*(12), 529–537. https://doi.org/10.22610/jsds.v4i12.794
5. Anuntarumporn, N., & Sornsaruht, P. (2022). The impact of innovation capability of firms on competitive advantage: An empirical study of the ICT industry in Thailand. *The Journal of Asian Finance, Economics, and Business, 9*(2), 121–131. https://doi.org/10.13106/jafeb.2022.vol9.no2.0121
6. Aujirapongpan, S., Ru-Zhe, J., & Jutidharabongse, J. (2020). Strategic intuition capability toward performance of entrepreneurs: Evidence from Thailand. *The Journal of Asian Finance, Economics and Business, 7*(6), 465–473. https://doi.org/10.13106/jafeb.2020.vol7.no6.465
7. Awan, U., Arnold, M. G., & Gölgeci, I. (2021). Enhancing green product and process innovation: Towards an integrative framework of knowledge acquisition and environmental investment. *Business Strategy and the Environment, 30*(2), 1283–1295. https://doi.org/10.1002/bse.2684
8. Birnik, A., & Bowman, C. (2007). Marketing mix standardization in multinational corporations: A review of the evidence. *International Journal of Management Reviews, 9*(4), 303–324. https://doi.org/10.1111/j.1468-2370.2007.00213.x
9. Bucci, D. Z., & Forcellini, F. A. (2007). Sustainable packaging design model. In G. Loureiro & R. Curran (Eds.), *Complex systems concurrent engineering* (pp. 363–370). Springer. https://doi.org/10.1007/978-1-84628-976-7_41
10. Cappelli, A., & Cini, E. (2021). Challenges and opportunities in wheat flour, pasta, bread, and bakery product production chains: A systematic review of innovations and improvement strategies to increase sustainability, productivity, and product quality. *Sustainability, 13*(5), Article 2608. https://doi.org/10.3390/su13052608

11. Changsorn, P. (2015, March 27). 3 categories seen as rising stars for OTOP exports. *The Nation.* https://www.nationthailand.com/business/econ/30256929
12. Chen, J. C.-C. (2014). The impact of nostalgic emotions on consumer satisfaction with packaging design. *Journal of Business and Retail Management Research, 8*(2), 71–79 https://www.jbrmr.com/cdn/article_file/i-18_c-169.pdf
13. Community Development Information Center (CDIC). (2022). *Report on the results of product sales according to the One Tambon One Product project, fiscal year 2021*. https://tinyurl.com/4haf2yp9
14. Cooper, R. G., & Edgett, S. J. (2010). Developing a product innovation and technology strategy for your business. *Research-Technology Management, 53*(3), 33–40. https://doi.org/10.1080/08956308.2010.11657629
15. Fischer, C. (2010). Food quality and product export performance: An empirical investigation of the EU situation. *Journal of International Food & Agribusiness Marketing, 22*(3–4), 210–233. https://doi.org/10.1080/08974431003641265
16. Frost & Sullivan. (2019, August). *Independent market research report on the premium snacks and RTD drinks market in Thailand and CLMV* (IMR Final Report). https://tinyurl.com/mwaekwav
17. Hair, J. F., Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). SAGE Publications.
18. Haraguchi, N. (2008). *The One-Village-One-Product (OVOP) movement: What it is, how it has been replicated, and recommendations for a UNIDO OVOP-type project* (Research and Statistics Branch Working Paper No. 03/2008). United Nations Industrial Development Organization (UNIDO). https://tinyurl.com/55xmynk2
19. Hatta, I. H., Rachbini, W., & Parenrengi, S. (2018). Analysis of product innovation, product quality, promotion, and price, and purchase decisions. *South East Asia Journal of Contemporary Business, 16*(5), 183–189. https://tinyurl.com/2wbp8sfc
20. Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Electronic Journal of Business Research Methods, 6*(1), 53–60. https://doi.org/10.21427/D7CF7R
21. Hullova, D., Simms, C. D., Trott, P., & Laczko, P. (2019). Critical capabilities for effective management of complementarity between product and process innovation: Cases from the food and drink industry. *Research Policy, 48*(1), 339–354. https://doi.org/10.1016/j.respol.2018.09.001
22. İri, R., & Gürbüz, E. (2022). The impact of countries' credit rating scores on the export performance of companies. *Istanbul University Journal of the School of Business Administration, 51*(1), 327–358. http://doi.org/10.26650/ibr.2022.51.912569
23. Jöreskog, K. G., Olsson, U. H., & Wallentin, F. Y. (2016). *Multivariate analysis with LISREL*. Springer Cham. https://doi.org/10.1007/978-3-319-33153-9
24. Ketonen-Oksi, S., & Valkokari, K. (2019). Innovation ecosystems as structures for value co-creation. *Technology Innovation Management Review, 9*(2), 25–35. https://doi.org/10.22215/timreview/1216
25. Khan, S. J., Kaur, P., Jabeen, F., & Dhir, A. (2021). Green process innovation: Where we are and where we are going. *Business Strategy and the Environment, 30*(7), 3273–3296. https://doi.org/10.1002/bse.2802
26. Kimura, R. (2016). Analysis of visioning approaches of Oita's 'best practice' rural revitalization cases and its implications to the transfer of Oita model to developing countries. *Journal of International OVOP Policy, 2*, 4–21. https://tinyurl.com/9y8e84dk
27. Kotler, P., & Armstrong, G. (2010). *Principles of marketing* (13th ed.). Pearson College Div.
28. Lahtinen, V., Dietrich, T., & Rundle-Thiele, S. (2020). Long live the marketing mix. Testing the effectiveness of the commercial marketing mix in a social marketing context. *Journal of Social Marketing, 10*(3), 357–375. https://doi.org/10.1108/JSOCM-10-2018-0122
29. Laosirihongthong, T., Teh, P.-L., & Adebanjo, D. (2013). Revisiting quality management and performance. *Industrial Management & Data Systems, 113*(7), 990–1006. https://doi.org/10.1108/IMDS-02-2013-0058
30. Lee, J. W., & Xuan, Y. (2019). Effects of technology and innovation management and total factor productivity on the economic growth of China. *The Journal of Asian Finance, Economics and Business, 6*(2), 63–73. https://doi.org/10.13106/jafeb.2019.vol6.no2.63
31. Muslim, A. R., Sinaga, O., Bainus, A., & Darmawan, W. B. (2020). Implementation of rural development policy in Thailand through the One Tambon One Product (OTOP) movement. *Systematic Reviews in Pharmacy, 11*(1), 585–587. https://tinyurl.com/2m67mwpy
32. Najafi-Tavani, S., Najafi-Tavani, Z., Naudé, P., Oghazi, P., & Zeynaloo, E. (2018). How collaborative innovation networks affect new product performance: Product innovation capability, process innovation capability, and absorptive capacity. *Industrial Marketing Management, 73*, 193–205. https://doi.org/10.1016/j.indmarman.2018.02.009
33. Olander-Roese, M., & Nilsson, F. (2009). Competitive advantage through packaging design — Propositions for supply chain effectiveness and efficiency. In *Proceedings of the International Conference on Engineering Design ICED 09* (pp. 279–290). Stanford University. https://tinyurl.com/45b96pp8
34. Olsson, A., & Györei, M. (2002). Packaging throughout the value chain in the customer perspective marketing mix. *Packaging Technology and Science: An International Journal, 15*(5), 231–239. https://doi.org/10.1002/pts.585
35. Pearce, J. A., & Robinson, R. B. (2009). *Formulation, implementation & control of competitive strategy* (11th ed.). McGraw-Hill Irwin.
36. Racela, O. C., & Thoumrungroje, A. (2020). Enhancing export performance through proactive export market development capabilities and ICT utilization. *Journal of Global Marketing, 33*(1), 46–63. https://doi.org/10.1080/08911762.2018.1549302
37. Rekarti, E., Doktoralina, C. M., & Saluy, A. B. (2018). Development model of marketing capabilities and export performance of SMEs: A proposed study. *European Journal of Business and Management, 10*(22). https://ssrn.com/abstract=3414938
38. Ririn, Y., Rahmat, S. T. Y., & Rina, A. (2019). How packaging, product quality and promotion affect the purchase intention? *Russian Journal of Agricultural and Socio-Economic Sciences, 92*(8), 46–55. https://doi.org/10.18551/rjoas.2019-08.06
39. Ruenphongphun, P., Sukkamart, A., & Pimdee, P. (2022). Developing Thai undergraduate online digital citizenship skills (DCS) under the new normal. *Journal of Higher Education Theory and Practice, 22*(9), 16–30. https://doi.org/10.33423/jhetp.v22i9.5358

40. Safari, A., & Saleh, A. S. (2020). Key determinants of SMEs' export performance: A resource-based view and contingency theory approach using potential mediators. *Journal of Business & Industrial Marketing, 35*(4), 635–654. https://doi.org/10.1108/JBIM-11-2018-0324
41. Saif, N. M. A. (2015). How does marketing strategy influence firm performance? Implementation of marketing strategy for firm success. *International Journal of Innovation and Economic Development, 1*(3), 7–15. https://doi.org/10.18775/ijied.1849-7551-7020.2015.13.2001
42. Sánchez, A., Lago, A., Ferràs, X., & Ribera, J. (2011). Innovation management practices, strategic adaptation, and business results: Evidence from the electronics industry. *Journal of Technology Management & Innovation, 6*(2), 14–39. https://doi.org/10.4067/S0718-27242011000200002
43. Schumacker, R. E., & Lomax, R. G. (2015). *A beginner's guide to structural equation modeling* (4th ed.). Routledge. https://doi.org/10.4324/9781315749105
44. Sitabutr, V., & Pimdee, P. (2017). Thai entrepreneur and community-based enterprises' OTOP branded handicraft export performance: A SEM analysis. *Sage Open, 7*(1). https://doi.org/10.1177/2158244016684911
45. Sriboonrueng, K., & Sripokangkul, S. (2020). Problems of promoting and supporting OTOP operators in obtaining national standards, of Community Development Officers in Chaiyaphum Province. *Journal of Legal Entity Management and Local Innovation, 6*(3), 221–234. https://so04.tci-thaijo.org/index.php/jsa-journal/article/view/241848
46. Steenis, N. D., van der Lans, I. A., van Herpen, E., & van Trijp, H. C. M. (2018). Effects of sustainable design strategies on consumer preferences for redesigned packaging. *Journal of Cleaner Production, 205*, 854–865. https://doi.org/10.1016/j.jclepro.2018.09.137
47. Suwannapusit, U., & Chayomchai, A. (2018). Innovations and their effects on One Tambon One Product (OTOP) enterprises' performance in Thailand. *University of the Thai Chamber of Commerce Journal Humanities and Social Sciences, 38*(1), 18–35. https://so06.tci-thaijo.org/index.php/utccjournalhs/article/view/153904
48. Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education, 48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2
49. Tock, J. M., & Baharun, R. (2013). Introduction to SMEs in Malaysia: Growth potential and branding strategy. *World Journal of Social Sciences, 3*(6), 189–203. https://tinyurl.com/yckpf5ed
50. Ural, T. (2009). The effects of relationship quality on export performance: A classification of small and medium-sized Turkish exporting firms operating in single export-market ventures. *European Journal of Marketing, 43*(1–2), 139–168. https://doi.org/10.1108/03090560910923274
51. Uyar, K., & Oralhan, B. (2017). Innovation capability and export performance of Turkish export firms. *Chinese Business Review, 16*(10), 481–495. http://doi.org/10.17265/1537-1506/2017.10.002
52. von Feigenblatt, O. F., Cooper, M., & Pardo, P. (2021). Sufficiency Economy Philosophy (SEP): Thailand's emic approach to governance and development as evidence of an Asian-value oriented inclusive leadership management philosophy. *Strategic Analysis, 46*(4), 430–440. https://doi.org/10.1080/09700161.2022.2111765
53. Wandosell, G., Parra-Meroño, M. C., Alcayde, A., & Baños, R. (2021). Green packaging from consumer and business perspectives. *Sustainability, 13*(3), Article 1356. https://doi.org/10.3390/su13031356
54. Wantara, P., & Tambrin, M. (2019). The effect of price and product quality towards customer satisfaction and customer loyalty on madura batik. International *Tourism and Hospitality Journal, 2*(1), 1–9. https://tinyurl.com/2vttdkh8
55. Wikström, F., Verghese, K., Auras, R., Olsson, A., Williams, H., Wever, R., Grönman, K., Pettersen, M. K., Møller, H., & Soukka, R. (2019). Packaging strategies that save food: A research agenda for 2030. *Journal of Industrial Ecology, 23*(3), 532–540. https://doi.org/10.1111/jiec.12769
56. Yin, D., Ming, X., & Zhang, X. (2020). Sustainable and smart product innovation ecosystem: An integrative status review and future perspectives. *Journal of Cleaner Production, 274*, Article 123005. https://doi.org/10.1016/j.jclepro.2020.123005