FBMS
Journal of Family Business and Management Studies
Journal of Family Business and Management Studies
ISSN 2821-9643 (online) Volume 16 Number 1, January-June 2024

Factors Influencing the Adoption of CICOT Halal Certification in Thai Halal Entrepreneurs: The institutional Theory

Revised: 20.07. 2023
Accepted: 25.11. 2023
Received: 26.12.2023

Akekaluk Gunsun[1] and Suthawan Chirapanda[2]
School of Business, University of the Thai Chamber of Commerce
126/1 Vibhavadi Rangsit Rd., Dindang, Bangkok 10400, Thailand
[1]akekaluk_gunsun@icloud.com, [2]suthawan_chi@utcc.ac.th

Abstract

This study applies institutional theory to understand why food processors seek CICOT halal certification. The study relies on new institutional theory, which argues in brief that organizations that perform similar functions take similar forms due to isomorphic pressures that shape their objectives. The conceptual framework incorporates the isomorphic pressures, forces, and resulting strategic decisions that proposed a total of five hypotheses. The research surveyed firms that had begun the certification process (n = 350). The survey addressed a total of 15 possible factors. This survey was distributed using a self-administered online questionnaire. Confirmatory factor analysis was used to investigate the factor structure, including internal consistency and convergent validity. Multiple regression analysis was used to evaluate the effects of isomorphic forces. The results showed that mimetic isomorphism and coercive isomorphism had significant and positive effects with much higher effects of mimetic isomorphism than coercive isomorphism. While the effect of normative isomorphism was significant, it was also negative, contrary to expectations. One-way ANOVA was used to investigate group differences in mean levels of CICOT halal certification. The results indicated that the Consumer Products category had lower levels of CICOT halal certification than other categories, which was significant in seven of the nine other categories. However, there were no significant mean differences in levels of CICOT halal certification between firms of different sizes. The study concluded that it is mimetic isomorphism, which encompasses the pressure to compete and adoption of competitor strategies, that is the main influence on the level of CICOT halal certification. The main implications of the study were discussed.

Keywords: food standards certification, halal certification, institutional theory

Introduction and background of the study

The demand for halal food is constantly growing, halal products and services has increased confirm by report of Reuters 2014 State that The Muslim population comprised 1.7 billion people in 2014 and is expected to rise to 2.2 billion by 2030. The total Muslim population continues to grow at 1.5 percent annually. To increase the confidence in Muslim market, it is necessary to have a halal certification that allow firm use Halal logo on the product. Halal certification is recognized internationally and accepted by the Muslim consumer all around the world. The important of halal certification presents a competitive advantage and entrepreneurs become adopt halal certification. Many entrepreneurs also realize the benefits of Halal certification that affect to business performance (Razalli, 2013); (Talib, 2017) Additional Halal certification is a new market scope important for all Muslim consumers in the world. It was reported that the global market value for halal product was approximately 45.3 billion US$ in 2016 and are expected to reach 58.3 billion US$ in 2020 (Statista, 2018) Thereby the demand for Halal certification is growing globally and at a rapid pace with the growing Muslim population across the world. There are over two billion Muslims around the world and the growth of Muslim population has increased the demand for halal products (Pew Research Center, 2015).

Problem statement

Presently, the number of firms adopting Halal food certification has significantly increased (Marzuki, 2012) (Abdul-Talib, 2013) The research in Halal certification continues to grow and is gaining popularity in academia. However, despite its emergence, there remains a lack of theoretical understanding of what motivates firms to adopt Halal certification (Ab Talib, 2015). As suggested by (Aziz, 2013), research in Halal certification lacks theoretical application and is still in its early stages. Similarly, (Mukhtar, 2012) considered theory application in Halal-related research incomplete, as scholars did not include prevalent factors such as the role of religiosity. Furthermore, (Tieman, 2013) argued that certain areas within the Halal academic research lack sturdy theoretical models, with more studies required. Despite its importance, an entrepreneurs have limited knowledge and lack a clear understanding and appreciation of the need to adopt Halal certification. Hence, this studies have revealed Halal certification in perspective of business and management to discover the contributing factors in halal certification adoption. To date, there has been little research conducted into motivation for halal certification in non-majority Muslim countries. In fact, only a single recent study could be identified, which investigated the certification decision among food supply firms in Taiwan (Amalia *et al.*, 2023). Thus, this is an area which has largely remained unexplored. As there are no studies that have investigated Halal certification adoption among Thailand Halal entrepreneurs, this study has attempted to fill this gap in the literature. This research is concerned with the adoption of halal certification in Thailand.

The Central Islamic Council of Thailand (CICOT) is the governing body for halal certification in Thailand (CICOT, n.d.). The certification process, which has been in place since 1948 although recently much more developed, is a complex process involving multiple organisations and actors, as well as a relatively high fee for the producers seeking certification (CICOT, n.d.). The aim of this research is to investigate the role of various factors in the adoption of CICOT halal certification by halal entrepreneurs in Thailand. To achieve this aim, institutional theory is adopted as an explanatory theory for the adoption of certification practices, which allows for consideration of different forms of causal forces (including regulatory, cognitive, and normative forces) in the choice of firm actions.

Objectives of the study

- To analyse the relationships between the isomorphic mechanisms of institutional theory and the adoption of CICOT halal certification.
- To investigate the impact of firm characteristics (product category and firm size) on the adoption of CICOT halal certification.

Scope of the study

Halal certification in Thailand is mainly focused on food product not only on manufacturing sector also including in a hospital hotel and tourism sector which focused on halal food with halal kitchen. This research aims to study Thai entrepreneurs' factors, knowledge and understanding that influencing to adoption CICOT halal certification by studying in scope of 10 categories. CICOT has established regulation on the management of Halal Affairs. The target respondents of this research were managers or decision-makers on behalf of Thai food processing firms that have received CICOT halal certification at some level. Furthermore, this research conducted in the quantitative research was used as dominant role to verify the conceptual framework and the test research hypotheses. The hypothesis tests, which were performed using multiple regression. After the presentation of the findings is complete, a discussion of these findings is conducted. The discussion draws on the literature review, which aim of explaining the findings and their academic and practical importance and contributions.

Literature review

Institutional theory is one of many theories applied in the context of halal manufacturing, supply chain, and logistics research. The classical model of institutional theory, there are three different firm responses to environmental pressures (or forces), which serve to shape the firm's activities. These responses are coercive isomorphism, normative isomorphism and memetic isomorphism (Dimaggio & Powell, 1983). Each of these three firm responses, which reshapes the structure and operations of the firm, results from a different kind of environmental pressure. Institutional theory as used in this research uses one of these later revisions, which more clearly defines the types of isomorphic pressures or forces that can influence the firms' choice of strategic movements (Kostova, 1999; Kostova & Roth, 2002; Kostova & Zaheer, 1999). Kostova (1999), in the initial statement of the theory, was concerned with a specific type of organisational strategy.

The institutional environment**,** Dimaggio and Powell (1983) defined this context in terms of the organizational field, or "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products." In Kostova's model of institutional theory, the institutional context is slightly different. Here, it is defined as the institutional profile, or "the issue-specific set of regulatory, cognitive, and normative institutions in a given country (Kostova & Roth, 2002. However, this conceptualization is more specific; while Dimaggio and Powell (1983) acknowledged that the institutional field must be defined empirically, Kostova and Roth (2002) go further by stating that the pressures involved also vary by both issue and country.

Coercive isomorphism and regulatory forces is the firm's change in structure and behaviour in response to regulatory pressure or other pressures against the firm's institutional framework (Dimaggio & Powell, 1983; Furusten, 2013). In other words, firms that change through coercive isomorphism are changing because they have been required to, through the application of direct pressure in the regulatory environment or through strong social pressure that requires adaptation (Dimaggio & Powell, 1983). While coercive isomorphism can stem from direct application of pressure from the state, it can also stem from other sources, for example industry self-regulation, use of standards, or imposition of specific practices from parent companies of subsidiaries (Dimaggio & Powell, 1983).

Normative isomorphism and normative refers to the way the organisation is shaped in response to social pressures and norms (Dimaggio & Powell, 1983; Furusten, 2013). In Dimaggio and Powell's (1983) model of institutional theory, normative isomorphism stems from the normative pressure of professionalization. They posit that professionals such as accountants, managers, engineers and so on, who have all been trained in similar ways and use similar tools, tend to make similar decisions. This leads the organization, which is commonly managed and directed by such professionals, to take on similar forms (Dimaggio & Powell, 1983). However, Kostova and Roth (2002)

expand the concept of normative isomorphism to include general norms held within a country or other social context, which can similarly have an influence on the organization. As with coercive isomorphism, normative isomorphism varies from place to place, as it "reflects the values, beliefs, norms and assumptions about human nature and human behaviour held by the individuals in a given country (Kostova & Roth, 2002, p. 217)." Therefore, since these values and norms vary from place to place, so do the pressures of normative isomorphism.

Mimetic isomorphism and cognitive is the firm's process of adaptation to the pressures placed within the competitive environment, for example pressures from the firm's competitors, business partners, suppliers, and customers (Dimaggio & Powell, 1983; Furusten, 2013). Mimetic isomorphism, therefore, relates to changes in the organisation's strategies and practices in response to other firms operating in the same environment, which serves to either align the firm's activities with others, allowing for cooperation, or against others, allowing for competition through differentiation (Dimaggio & Powell, 1983; Furusten, 2013). Mimetic isomorphism can take the form of modelling (in which the firm emulates or follows the strategic decisions of competitors viewed as more legitimate or successful) (Dimaggio & Powell, 1983). While firms can also seek to differentiate themselves from these competitors, as Dimaggio and Powell (1983) point out, these efforts may not be fully successful, because often there is not much heterogeneity to choose from. Thus, firms may seem mimetic even if they have not directly chosen these strategies.

The firm's response to isomorphic pressures**,** the final component of institutional theory relates to the firm's response to isomorphic pressures, or forces. Dimaggio and Powell's (1983) institutional theory statement did not identify different levels of organizational response, although they did suggest that the degree to which the organization complies with isomorphic pressures may vary depending on the organization. However, there are more formalized theories of organizational response, such as that proposed by Meyer and Rowan (1977), which is used by Kostova (1999). This statement of institutional theory argues that organizations seek legitimacy through their rational choices (strategic practices) (Meyer & Rowan, 1977). However, not all aspects of organizational legitimacy will be treated in the same way, which will influence the firm's adoption of the strategic practice.

Hypothesis development: Forces influencing Halal certification adoption

Hypothesis 1: Mimetic isomorphism positively influences the level of CICOT halal certification.
Hypothesis 2: Coercive isomorphism positively influences the level of CICOT halal certification.
Hypothesis 3: Normative isomorphism positively influences the level of CICOT halal certification.
Hypothesis 4: Businesses operating in different business categories will have different levels of CICOT halal certification.
Hypothesis 5: Firms of different sizes will have different levels of CICOT halal certification.

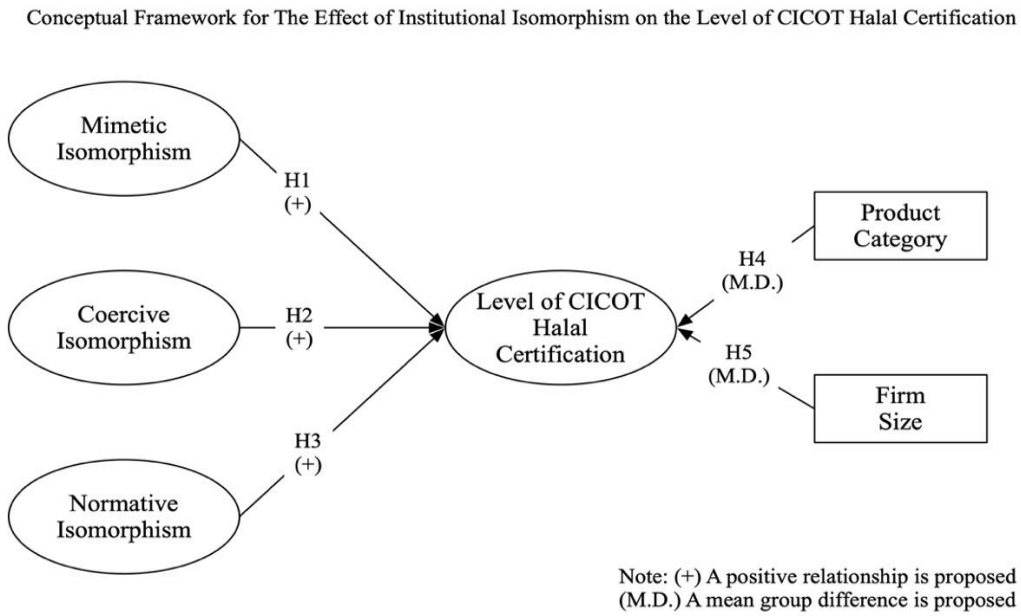

Figure 1 Conceptual framework

Methodology

The research methodology that were used to test the conceptual framework in primary research. As will be explained, the research was designed as a quantitative survey of Thai food processing firms that have begun or completed the CICOT Halal Certification process at some level. The research employed a deductive research logic. Deductive research begins with a theoretical position based on what is already known, and then makes observations to determine whether this theoretical position describes or explains the situation (Flick, 2020). Deductive research is appropriate for conducting explanatory research in areas where there is already an existing theory that can be applied, although it cannot be used to develop theories (Flick, 2020). Since this research was mainly concerned with using existing theory (institutional theory) to explain a new situation (firms seeking halal certification), it was more appropriate to use deductive research to test the existing theories first.

Research design and data collection

For this research, the survey design was used. In survey research designs, data is collected from a broad, and ideally representative, sample of a population.

The survey was conducted using a questionnaire, which is a self-administered set of standard questions, or

items, that are meant to measure the variables of interest (Krosnick, 2018). Such self-administered questionnaires are commonly used in consumer and business research and are typically familiar to participants (Saris & Gallhofer, 2014). The data collection was conducted using an online questionnaire distributed via Google Forms. The questionnaire (attached in the Appendix) was developed by the researcher. The questionnaire also collected firm information (e.g., firm size and industry), to provide a brief participant overview of the firms that were included in the study. Face validity, or the extent to which the instrument seems to measure what it is intended to measure (Brace, 2018), was assessed using volunteer peer review and supervisor review. The internal consistency of the questionnaire's multi-item Likert scales was also a concern, since multi-item scales can end up measuring different constructs (Brace, 2018). A pilot test was conducted using the first 40 questionnaires collected to address this issue, with Cronbach's alpha coefficient calculated to evaluate internal consistency using Brace's (2018) recommendation of 0.80 or higher for measures.

Table 1 Cronbach's alpha coefficients calculated during the pilot test (n= 40)

Scale	Items	Alpha
Economic competitiveness (EC)	4	.855
Legislative requirement (LR)	2	.889
Internal stakeholder (IS)	2	.949
External stakeholder (ES)	4	.863
Regulatory enforcement (RE)	2	.935
Export/import barrier	2	.944
Potential market value	2	.902
Degree of interconnectedness	5	.873
B2B fulfilment	2	.914
International firm standards	2	.925
Level of CICOT Halal Certification	3	.899

Source: Author

Population and sample

This study was conducted at the firm level. Therefore, the questionnaires were filled out by managers or decision-makers on behalf of the firm, rather than reflecting personal information. The research was cross-sectional, with data collected in 5 August, 2022 – 15 October, 2022. Therefore, the population and sample were selected from the businesses that were in place at the time of data collection.

The population of interest were Thai food processing firms that have received CICOT halal certification at some level. This could include being in the stage of adoption of certification policies and planning practices, adoption of the certification organizing and responsibility practices, or in the final stage of adoption

of the certification control practices. Identifying members of this population required cooperation from CICOT to access lists of firms that had engaged at some level with the organization. These firms included those that had obtained or were in the process of obtaining certification, but also included those that had contacted the organization for more information, suggesting that they may contemplate the certification process. Owing to data protection rules surrounding the use of company data, the full population could not be accessed, as only the firms that had given permission to use email or other contact data could be included. Another problem was identifying whether firms had intended certification when contacting CICOT for information, and the fact that some organizations may choose not to contact the organization prior to certification. Therefore, the population was further constrained, to reflect this limitation.

To ensure that the firm's management decisions were accurately reflected, the sample was limited to current certification holders, excluding those whose certification had lapsed. This can be estimated at a population of around 5,000 firms, mostly small and medium firms producing food for export (Zulkifli, 2019). Using a standard calculation for sample size, and assuming a 95% confidence level and 5% confidence interval, the minimum sample was 357 members (Krejcie & Morgan, 1970).

The sample was initially selected using simple random sampling, with a listing of halal food producers obtained from CICOT randomized and participants selected from this sample. Firms were screened to ensure their current certification status prior to enrolment. After the screening process was complete, the firms were organized into an alphabetical list and a random number generator was used to select 20% of the firms (or a total of 1,012 at the time of the survey). These firms were contacted using the contact email in the CICOT data and asked for participation. Firms who were interested in participation could reply to the email for additional information or could choose to proceed directly to the survey link provided. 28 firms replied asking for more information, of which a total of 22 continued to the survey and six did not continue to the survey. This initial round of sampling yielded a total of 219 participants, which was not large enough to meet the minimum standards for the sample size.

A secondary sampling wave was conducted in order to increase the sample size and ensure geographic distribution of participants, as the initial survey overrepresented firms from Central Thailand. In this sampling wave, additional members of the sample were recruited through convenience sampling, with participants identified by the researcher that meet the study requirements. To select the convenience sample, the researcher used the CICOT email list and emailed every 10th entrant on the list, for a total of about 502 further contacts. As a second stage of sampling selection, the researcher excluded those firms whose headquarters was in the Bangkok and central provinces, and emailed every fourth remaining firm. This process of contacting participants continued until the minimum sample size of 350 respondents (excluding incomplete questionnaires) was reached.

Data analysis

Data analysis was conducted in SPSS (Version 27). The analysis process can be broken into three stages: descriptive statistics, confirmatory factor analysis (CFA), and hypothesis testing. The second stage of analysis was confirmatory factor analysis (CFA). To indicate internal consistency, the recommended thresholds for CR (> 0.7) and AVE (> 0.5) were adopted from Fornell and Larcker's (1981) criteria, which are standard for investigation of reliability and validity of scales (Hair et al., 2016). The final process of hypothesis testing began. Hypothesis testing was performed using inferential statistics. The hypotheses were structured around two different kinds of relationships: causal relationships between central constructs (Hypotheses 1 to 3) and associative relationships between different groups (Hypotheses 4 and 5). These different types of hypotheses required a different analytical approach, and so were conducted separately.

Table 2 Summary of the questionnaire items and construction

Variable	Items	Source
Economic competitiveness (EC)	1.The benefits will outweigh the costs. 2.Product quality will improve. 3.Product image will improve. 4.Complaints will reduce.	Arpanatud (2015)
Legislative requirement (LR)	1.There are legal requirements for adoption of halal certification in our main markets. 2.The government pressures the company for halal certification.	Fernando et al. (2015)
Internal stakeholder (IS)	1.Employees will support the certification process. 2.Suppliers will support the certification process.	Arpanatud (2015)
External stakeholder (ES)	1.Customers will support the certification process. 2.Government agencies will support the certification process. 3.The media will support the certification process. 4.Communities will support the certification process.	Arpanatud (2015)
Regulatory enforcement (RE)	1.The government and agencies enforce regulations for halal certification. 2.The government and agencies fully support firms to adopt halal certification.	Fernando et al. (2015)
Export/import barrier	1.We require halal certification to export our products to major markets. 2.With halal certification we can export more widely.	Adapt from AB Talib et al.(2016/2019)
Potential market value	1.There is a large Muslim market that prefers halal certified foods. 2.If we have halal certification we can reach a wider market.	Adapt from AB Talib et al.(2016/2019)
Degree of interconnectedness	1.Halal certification information is available and can be accessed from Seminars and workshops 2.Government agencies 3.Food producer organizations 4.CICOT (the halal certifier) 5.Consultants	Arpanatud (2015)
Social legitimacy	1.The firm will have a better reputation.	Arpanatud (2015)
Firm image	1.The firm will have a better image.	Arpanatud (2015)
B2B fulfilment	1. Our buyers require halal certification. 2.Our buyers prefer halal certification.	Adapt from AB Talib et al.(2016/2019)
International firm standards	1.Our international competitors are halal certified. 2.Halal certification is an international firm standards.	Adapt from AB Talib et al.(2016/2019)
Competitor forces	1.Competitors in the industry have adopted Halal certification	Fernando et al. (2015)
Level of CICOT Halal Certification	1.The firm has adopted the Halal certification policy and planning practices. 2.The firm has adopted the Halal certification organizing and responsibility practices. 3.The firm has adopted the Halal certification control practices.	Adapt from Arpanatud (2015)

Source: Author

Findings and discussion

Respondent and Company Information**,** the final sample size was 350 members. The respondents to the survey were predominantly female (73.4%). They were overall highly educated, with most holding Bachelor (67.1%) or master's degrees (25.4%). The participants held a variety of positions within the firm, including board of directors (10.9%), top managers (14%), quality assurance managers (22.6%), manufacturing managers (8.9%) and other roles (43.7%). The largest groups of firms are food service and halal kitchen providers (54.6%). Most of the firms were small (1 to 50 employees) (44.3. This indicates that the sample represents a wide sample of firms and industries.

Descriptive Statistics, the Likert items were treated as interval variables, since they would be analysed using linear regression, mean and standard deviation were selected as the appropriate descriptive statistics. The measures were calculated on a five-point Likert scale, the maximum possible mean is therefore 5.00, while the minimum possible mean is 1.00. In order to interpret the means based on the original perceptual variables, the five interpretation intervals were redistributed along the range of four points, leading to an adjusted interval width of 0.80. For the institutional forces. The descriptive statistics have identified trends within the data, which are relevant to the firms' current competitive environment and the isomorphic pressures that exist within them.

Table 3 Summary of scale descriptive statistics

Scale	Items	Mean	S.D.	Interpretation
Regulatory forces				
Economic competitiveness	4	3.89	0.899	Agree
Legislative requirement	2	3.40	1.088	Agree
Internal stakeholder	3	3.73	1.024	Agree
External stakeholder	4	3.70	0.927	Agree
Regulatory enforcement	2	3.56	1.117	Agree
Export/import barrier	2	4.23	0.997	Strongly agree
Normative forces				
Potential market value of the firm	2	3.62	0.965	Agree
Degree of interconnectedness	5	3.88	0.907	Agree
Social legitimacy	1	4.09	0.967	Agree
Firm image	1	4.09	0.967	Agree
Cognitive forces				
B2B fulfilment	2	4.18	0.932	Agree
International firm standards	2	4.18	0.929	Agree
Competitor forces	1	4.14	0.954	Agree
Level of CICOT Halal Certification	3	4.23	0.932	Very high

Confirmatory Factor Analysis (CFA) was used to investigate the factor structure of the central model, specifically the components of mimetic isomorphism, coercive isomorphism, and normative isomorphism, along with level of CICOT halal certification. The CFA process investigated the factor structure of the four constructs. The internal consistency and reliability of the questionnaire is investigated using the composite reliability (CR) and average variance extracted (AVE) (Hair et al., 2016). The values for each of these criteria are summarized according to standard thresholds for acceptance (Fornell & Larcker, 1981; Hair et al., 2016), adequate internal consistency and convergent validity is indicated by values of CR > 0.7 and AVE > 0.5, all four of the constructs met these criteria with the factor structures. Therefore, there were no changes that were necessary to the model structure, such as removal of any individual items.

Table 4 Summary of CFA test of internal consistency and reliability

Construct	AVE	CR
Coercive Isomorphism	0.551	0.895
Normative Isomorphism	0.638	0.875
Mimetic Isomorphism	0.606	0.821
Level of CICOT Halal Certification	0.977	0.992

Hypothesis testing results

The third stage of the analysis was investigating the relationships proposed in the conceptual framework. The conceptual framework included five hypotheses. The first three of these hypotheses involved the relationship between one of the forms of institutional isomorphism and the outcome variable, which was the firm's level of CICOT halal certification. The first of these forms of institutional isomorphism was mimetic isomorphism, which included regulatory forces (economic competitiveness, legislative requirement, internal stakeholders, external stakeholders, regulatory enforcement, and import/export barriers). The second hypothesis investigated the effects of coercive isomorphism, which included various normative forces (potential value of the Muslim market com a degree of firm interconnectedness, social legitimacy, and firm image). Thirdly, normative isomorphism and its cognitive forces (B2B Fulfilment, standards of international firms, and competitor forces), was investigated. These three hypotheses were tested using multiple regression. The second set of hypotheses, which examined the effect of business category and firm size on level of CICOT halal certification, were tested using one-way ANOVA. The results of each of these tests are presented in the following sections.

Effects of institutional isomorphism on level of CICOT halal certification (Hypothesis 1 to Hypothesis 3). The model summary indicates that the model was well fitted, with the R-square value indicating that 89.7% of variance in level of CICOT halal certification was

predicted through variance in the three isomorphic forces (r-square = .897). The ANOVA test confirms that the model did significantly predict the outcomes (F = 1005.554, p < .001). Therefore, the multiple regression model was a good predictor of the outcomes. The coefficient table shows the relative effects and significance of the three forms of institutional isomorphism on level of CICOT halal certification. These coefficients can be used in the construction of a regression equation as follows:

$$Y_{Level\ of\ CICOT\ halal\ certification} = 0.140 + 1.113X_{Mimetic\ Isomorphism} + 0.126X_{Coercive\ Isomorphism} - .260X_{Normative\ Isomorphism}$$ (Unstandardized form)

$$Y_{Level\ of\ CICOT\ halal\ certification} = 1.047X_{Mimetic\ Isomorphism} + 0.116X_{Coercive\ Isomorphism} - .235X_{Normative\ Isomorphism}$$ (Standardized form)

These regression equations indicate that the effect of mimetic isomorphism on level of CICOT halal certification is higher than the other factors, and is positive. The t-test for this coefficient also indicates that the relationship is significant (t = 28.859, p < .001). Therefore, Hypothesis 1 is supported. The effect of coercive isomorphism on level of CICOT halal certification is also positive, although it is not as strong as the effect of mimetic isomorphism. The t-test indicates that this coefficient is also significant within the model (t = 3.009, p = .003). Therefore, Hypothesis 2 is supported. The effect of normative isomorphism on the level of CICOT halal certification, unlike the other factors, is negative, although it is stronger than the effect of coercive isomorphism. The t-test indicates that this was a significant effect (t = -5.671, p < .001). Therefore, normative isomorphism did have a significant influence on the outcomes. Hypothesis 3, it is not supported.

Table 5 Model summary: Multiple regression of forms of institutional isomorphism on level of CICOT halal certification (H1 to H3)

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.947[a]	.897	.896	.300

a. Predictors: (Constant), Mimetic Isomorphism, Coercive Isomorphism, Normative Isomorphism

Table 6 ANOVA test: Multiple regression of institutional isomorphism forms on level of CICOT halal certification (H1 to H3)

ANOVA[a]						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	271.939	3	90.646	1005.554	.000[b]
	Residual	31.190	346	.090		
	Total	303.129	349			

a. Dependent Variable: Level of CICOT Halal Certification
b. Predictors: (Constant), Mimetic Isomorphism, Coercive Isomorphism, Normative Isomorphism

Table 7 Coefficient table: Multiple regression of institutional isomorphism forms on level of CICOT halal certification (H1 to H3)

Coefficients[a]						
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	*Std. Error*	*Beta*		
1	(Constant)	.140	.080		1.741	.083
	Mimetic Isomorphism	1.113	.039	1.047	28.859	.000
	Coercive Isomorphism	.126	.042	.116	3.009	.003
	Normative Isomorphism	-.260	.046	-.235	-5.671	.000

a. Dependent Variable: Level of CICOT Halal Certification

Business category and level of CICOT halal certification (Hypothesis 4). The ANOVA test confirms that there is a significant between-groups difference in level of CICOT halal certification ($F = 2.429$, $p = 0.015$). Investigation of the post-hoc comparisons shows that the significant differences were all related to the Consumer Products category, which had significantly lower mean levels of CICOT halal certification than seven of nine other categories of certification. Although it was not a significant difference, Consumer Products also had lower mean levels of CICOT halal certification than both Household Goods and Packaging. These differences can be seen in the descriptive statistics as well, with the mean level of CICOT halal certification in the Consumer Products category ($M = 3.35$) being much lower than all other categories ($M = 4.17$ to $M = 5.00$) as well as the full sample average ($M = 4.23$). Given these findings, it can be stated that while most product categories had similar mean levels of CICOT halal certification, the Consumer Products category had significantly lower levels of certification than most other categories. Therefore, Hypothesis 4 is supported.

Table 8 One-way ANOVA: Business category and level of CICOT halal certification (H4)

ANOVA Level of CICOT Halal Certification	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	16.342	8	2.043	2.429	.015
Within Groups	286.787	341	.841		
Total	303.129	349			

Table 9 Group descriptive statistics: Business category and level of CICOT halal certification (H4)

Descriptives Level of CICOT Halal Certification	N	M	SD	S.E.	95% Confidence Interval for Mean		Min	Max
					Lower Bound	*Upper Bound*		
Household Goods	4	4.17	.882	.441	2.76	5.57	3	5
Consumer Products	17	3.35	1.498	.363	2.58	4.12	1	5
Food Processing	46	4.39	.649	.096	4.20	4.58	3	5
Food Services	191	4.24	.894	.065	4.11	4.37	1	5
Halal Products	6	4.33	1.033	.422	3.25	5.42	3	5
Pharmaceuticals and Cosmetics	35	4.18	1.004	.170	3.84	4.53	1	5
Packaging	4	4.00	.000	.000	4.00	4.00	4	4
Documents	2	5.00	.000	.000	5.00	5.00	5	5
Other	45	4.33	.929	.139	4.05	4.61	1	5
Total	350	4.23	.932	.050	4.13	4.32	1	5

Note: Some categories have been shortened for display. Full category names are: Meat processing - The animals for slaughtering, cuttings, and further meat processing; Food services - Food services and Halal kitchen; Halal products - Halal products, finished products or raw materials, ingredients and Halal meat Imported from abroad; Documents - Document papers for export; Other - Other matters which approved by the Board.

Firm size and level of CICOT halal certification (Hypothesis 5) For this test, the ANOVA outcome indicated that there was not a significant mean difference between groups of different size firms (F= 0.394, p = .675). The group descriptive statistics showed that while medium firms (M = 4.13) had slightly lower mean levels of CICOT halal certification than either small (M = 4.26) or large (M = 4.23) firms, these were all similar to the group mean (M = 4.23). The post-hoc analysis also did not identify any significant mean differences between groups. In summary, the findings do not indicate a mean difference between groups based on firm size. Therefore, Hypothesis 5 is not supported in the study

Table 10 One-way ANOVA: Firm size and level of CICOT halal certification (H5)

ANOVA Level of CICOT Halal Certification	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.686	2	.343	.394	.675
Within Groups	302.443	347	.872		
Total	303.129	349			

Table 11 Group descriptive statistics: Firm size and level of CICOT halal certification (H5)

Descriptives Level of CICOT Halal Certification	N	M	S.D.	S.E.	95% Confidence Interval for Mean		Min	Max
					Lower Bound	*Upper Bound*		
Small	155	4.26	.868	.070	4.12	4.40	1	5
Medium	62	4.13	.998	.127	3.88	4.39	1	5
Large	133	4.23	.975	.085	4.07	4.40	1	5
Total	350	4.23	.932	.050	4.13	4.32	1	5

Note: Firm sizes are defined as Small firms (1 to 50 employees), Medium firms (51 to 100 employees) and Large firms (More than 100 employees)

Summary of hypothesis outcomes

The key findings and outcomes of the hypothesis tests. As this shows, Hypotheses 1, 2, and 4 were supported within the findings, but Hypotheses 3 and 5 were not supported. In the case of Hypothesis 3, this was due to the influence of normative isomorphism being negative, rather than positive. In the case of Hypothesis 5, this was due to firms not having significantly different levels of CICOT halal certification depending on firm size. The next section discusses these key findings with the literature to provide context and interpretation.

Table12 Summary of hypothesis test outcomes

Hypothesis	Proposed Relationship	Beta	p	Outcome
1	Mimetic isomorphism → Level of CICOT halal certification (+)	1.047	<.001	Supported
2	Coercive isomorphism → Level of CICOT halal certification (+)	.116	.003	Supported
3	Normative isomorphism → Level of CICOT halal certification (+)	-.235	<.001	Not Supported
4	Level of CICOT halal certification varies by Business Category.	2.429	.015	Supported
5	Level of CICOT halal certification varies by Firm Size.	.394	.675	Not Supported

Discussion

Mimetic isomorphism and halal certifications The investigation of mimetic isomorphism and its associated cognitive forces showed that mimetic isomorphism was the strongest positive factor in level of CICOT halal certification. These findings were consistent with several prior studies that have investigated these influences on the strategic decisions made by firms (Arpanutud, 2015; Basir et al., 2018; Fernando et al., 2015; Khan et al., 2019).

Coercive isomorphism and halal certification The second cluster of forces investigated as potential influences on the level of CICOT halal certification were regulatory forces, which stem from coercive isomorphism, in which external pressures, such as legal and regulatory requirements or stakeholder demands, shape the choices of the firm (Dimaggio & Powell, 1983; Furusten, 2013). Coercive isomorphism has been operationalised here as regulatory forces, which include both formal regulations and informal expectations that affect the strategic practices of the firm (Kostova, 1999; Kostova & Roth, 2002; Scott, 1995).

Normative isomorphism and halal certification The third isomorphic pressure investigated was normative isomorphism. Normative isomorphism shapes firm strategies based on social and behavioural norms for what is considered to be correct (Dimaggio & Powell, 1983; Furusten, 2013). The four normative forces investigated here were the potential value of the Muslim market, the degree of firm interconnectedness, social legitimacy, and firm image. The findings showed that normative isomorphism had a significant negative effect on level of CICOT halal certification. This was not consistent with earlier studies, which have found positive relationships between normative forces such as degree of interconnectedness (Ab Talib et al., 2016, 2019; Arpanutud, 2015; Dimaggio & Powell, 1983) social legitimacy (Ab Talib et al., 2019; Arpanutud, 2015; Basir et al., 2018; Fernando et al., 2015), and potential market value (Ab Talib et al., 2016, 2019; Azmi et al., 2020; Han & Lee, 2015; Tri Ratnasari et al., 2019) on halal certification. However, there is known to

be a lesser effect of normative pressure in markets where halal certification is not the norm (Fernando et al., 2015). Thus, this negative finding was overall unexpected, although there is some indication that normative isomorphism may not always be that strong.

Firm characteristics and halal certification The final factors investigated in halal certification were firm characteristics, including firm industry and firm size. The findings showed that firms in the Consumer Products industry had a lower level of mean CICOT halal certification than firms in other industries. This finding was consistent with prior studies, which have suggested that there are different isomorphic pressures that influence firms in different industries. Thus, while not studied much in prior research, there are rational explanations for the differences in Consumer Products compared to other industries. However, the finding that there was no difference between firms of different sizes was more surprising, given that several studies have indicated that smaller firms have lower levels of certification overall due to resource constraints, risk appetite and other factors (Andadari & Diyanto, 2019; Rafiki & Abdul Wahab, 2016; Zailani et al., 2015). This is something that could be investigated in additional research, as the cause for this difference is not entirely clear.

Conclusion and recommendations

Theoretical implications

This research contributes to theoretical knowledge on institutional theory and the adoption of halal certification in two ways. First, the study supports a link between the theoretical isomorphic pressures of the institutional environment and the observable strategic forces that shape the firm's decisions. Additionally, the study contributed to theoretical understanding of halal certification as a response to the competitive environment by highlighting the differences between industries and similarities between firms of different sizes. These findings can be used to further develop theories on institutional isomorphism and the interaction of firm characteristics and effects.

Practical implications

The research was mainly intended as a theoretical test, but there are certain practical implications that the findings suggest. The most important of these practical implications is that firm strategies with regard to halal certification, at least in Thailand, are predominantly driven by mimetic isomorphism, or in other words firms' replication of competitor strategies in order to compete within the same environment. It was unsurprising that regulatory forces (or coercive isomorphism) had only a small effect, as both in domestic markets and in most international markets there is no direct regulation requiring halal certification. While it was surprising that normative isomorphism discouraged halal certification, this is likely due to the minority Muslim population of Thailand, which suggests that social norms and social legitimacy may not hinge on, or may even be negatively influenced by, halal certification. Overall, the managerial implication of the study is therefore that firms should only undertake halal

certification if it makes sense given their competitive environment, competitor choices, and industry.

Public policy implications

The findings do provide some implications and recommendations for public policy, particularly relating to export promotion activities for SMEs in Thailand. The study showed that there were some significant factors that promoted or inhibited CICOT halal certification, including economic competitiveness of the firm, export/import barriers, and the effect of external stakeholders (regulatory forces), potential market value of the Muslim market (normative forces), and competitor forces (cognitive forces). These factors could all be addressed through ongoing small business promotion, export facilitation and other activities the Thai government currently uses to promote and engage with small businesses. Thus, there are several possible ways that public policies could be implemented that would make it more feasible for SMEs that would benefit from halal certification to do so, and these should be considered.

Research limitations

Firstly, this research focused on Halal certified entrepreneurs. The survey respondent may understand about concept of halal certification, therefore the generalizability of the findings may be limited. Secondly, this study were limited to 12 factors that influence to adopt Halal certification. Hence, the research should review more about The adoption of Halal certification and motivation and barrier of halal certification to the developed work and present the difference factor. Thirdly, this research did not focus on specific halal industry such as either the animals for halal slaughtering, halal kitchen. which is the result of factor influencing the adoption of halal certification would different for each industry as well. The respondent of this research proposed for all halal industries. The products of each entrepreneurs is different in target marketing. Therefore, the research result is not specific to one industry.

Recommendations for future research

Firstly, this research provide contribution to entrepreneurs in regard factor that influencing to adopt halal certification in Thailand by presenting a beneficial of reason that why entrepreneurs should adopt halal certification. As the generalizability of the findings may be limited due to the scope of this research, future research could study in individual type of Halal certification in 10 categories of CICOT. Secondly, Thailand is the world's 12th leading global exporter of halal products, and 5th largest producer of halal foods and The Department of Industrial Promotion has established a strategy for exporting halal products in 8 categories as the fallowing (Department Of Industrial Promotion, 2015)Therefore, it would be interesting to study in category of The Department of Industrial Promotion. The most interesting in the category of Travel and Hotel Business, and medical facility. The different set of category established by The Department of Industrial Promotion. As a result may provide better insight in the reason why entrepreneurs need to adopt Halal certification.

References

Ab Talib, M. S., Abdul Hamid, A. B., & Too, A. C. (2019). Conceptualizing the implementation of halal food certification: An institutional theory perspective. (pp. 383–393).

Ab Talib, M. S., Md. Sawari, S. S., Abdul Hamid, A. B., & Ai Chin, T. (2016). Emerging Halal food market: An Institutional Theory of Halal certificate implementation. *Management Research Review*, *39(9),* 987–997.

Alzeer, J. and Hadeed, K.A. (2021) 'Halal Certification of Food, Nutraceuticals, and Pharmaceuticals in the Arab World', in I. Laher (ed.) Cham: Springer International Publishing, pp. 1–22.

Arif, S. *et al.* (2021) 'Obstacles in Securing Halal Certification in Malaysia: A Study on Home-Based Business (HBB)'*Journal of Social Science, 14(3),* pp. 1–19.

Arpanutud, P. (2015). Implementation of food safety management system in Thai small and medium food processing enterprises: Institutional and resource dependence perspective. *Journal of Public and Private Management*, *22(2),* 175–203.

Azmi, F. R., Abdullah, A., Musa, H., & Wan Mahmood, W. H. (2020). Perception of food manufacturers towards adoption of halal food supply chain in Malaysia. *Journal of Islamic Marketing*, *11(3),* 571–589.

Basir, N. S. A., Chik, C. T., Bachok, S., Baba, N., Hamid, R., & Salleh, M. M. (2018). Motivational factors for halal certification adoption among small and micro enterprises in Malaysia. *International Journal of Supply Chain Management*, *7(4),* 391–396.

Brown, T. A. (2015). *Confirmatory factor analysis for applied research*. The Guilford Press.

Charoenrat, T., & Harvie, C. (2014, February). The contribution of entrepreneurship and innovation to Thai SME manufacturing performance. In *Proceedings of the 2nd International Conference on Innovation and*

Creswell, J. W. (2014). *Research Methods: Qualitative, quantitative and mixed methods approaches* (4th ed.). Sage Publications.

Dimaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, *48(2),* 147–160.

Fernando, Y., Ng, H. H., & Walters, T. (2015). Regulatory incentives as a moderator of determinants for the adoption of Malaysian food safety system. *British Food Journal*, *117(4),* 1336–1353.

Fischer, J. (2015a), "Malaysian diaspora strategies in a globalized Muslim market", *Geoforum*, Vol. 59, pp. 169-177. Fischer, J. (2015b), "Manufacturing halal in Malaysia", *Contemporary Islam, Vol. 10 No. 1,* pp. 35-52,

Fischer, J. (2005), "Feeding secularism: consuming halal among the Malays in London", Diaspora: *A Journal of Transnational Studies, Vol. 14 No. 2*

Fowler, F. J. (2014). *Survey research methods* (5th ed.). Sage Publications Ltd.

Furusten, S. (2013). *Institutional theory and organizational change*. Edward Elgar.

Han, A.-R., & Lee, K.-W. (2015). A study on the Halal food market and Halal certification for Korean firm's access to Halal market. *Food Science and Industry*, *49(1), 87*–93.

Holcomb, Z. L. (2017). *Fundamentals of descriptive statistics*. Routledge.

Katuk, N. *et al.* (2021) 'Halal certification for tourism marketing: the attributes and attitudes of food operators in Indonesia', *Journal of Islamic Marketing*, *12(5),* pp. 1043–1062. Available at: https://doi.org/10.1108/JIMA-03-2020-0068.

Kettani, H. (2010, January). 2010 World Muslim Population. In *proceedings of the 8th Hawaii International Conference on Arts and Humanities* (pp. 12-16).

Kostova, T. (1999). Transnational Transfer of Strategic Organizational Practices: A Contextual Perspective. *Academy of Management Review*, *24(2),* 308–324.

Kostova, T., & Roth, K. (2002). Adoption of an organizational practice by subsidiaries of multinational corporations: Institutional and relational effects. *Academy of Management Journal*,

Krejcie, R. v, & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, *30,* 607–610.

Latif, I. A., Mohamed, Z., Sharifuddin, J., Abdullah, A. M., & Ismail, M. M. (2014). A Comparative Analysis of Global Halal Certification Requirements. *Journal of Food Products Marketing*, *20(S1),* 85–101.

Lawrence, T. B., & Suddaby, R. (2006). Institutions and institutional work. In S. R. Clegg, C. Hardy, T. B. Lawrence, & W. R. Nord (Eds.), *Handbook of organization studies* (2nd ed., pp. 215–254). Sage Publications.

Leaptrott, J. (2005). An Institutional Theory View of the Family Business. *Family Business Review*, *18(3),* 215–228

Marzuki, S. Z. S., Hall, C. M., & Ballantine, P. W. (2012). Restaurant managers' perspectives on halal certification. *Journal of Islamic Marketing*

Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology*, *83(2),* 340–363.

Mukhtar, A., & Butt, M. M. (2012). Intention to choose Halal products: the role of religiosity. *Journal of Islamic Marketing*.

Nasir, N.M., Nair, M.S. and Ahmed, P.K. (2021) 'Institutional isomorphism and environmental sustainability: a new framework from the Shariah perspective', *Environment, Development and Sustainability*.

Ngah, A. H., Zainuddin, Y., & Thurasamy, R. (2014). Barriers and enablers in adopting Halal transportation services: A study of Malaysian Halal Manufacturers. *International Journal of Business and Management*, *2(2)*, 49.

Ngah, A. H., Zainuddin, Y., & Thurasamy, R. (2015). Barriers and enablers in adopting of Halal warehousing. *Journal of Islamic Marketing*.

Othman, S., Darus, F., & Arshad, R. (2011). The influence of coercive isomorphism on corporate social responsibility reporting and reputation. *Social Responsibility Journal*.

Othman, R., Ahmad, Z.A. and Zailani, S. (2009), "The effect of institutional pressures in the Malaysian Halal food industry", *International Business Management, Vol. 3 No. 4,* pp. 80-84.

Pew research center (2015), The Future of World Religions: Population Growth Projections, 2010-2050

Razalli, M. R., Yusoff, R. Z., & Mohd Roslan, M. W. (2013). A framework of halal certification practices for hotel industry. *Asian Social Science*, *9(11)*, 316-326.

Rethel, L. (2019). Corporate Islam, Global Capitalism and the Performance of Economic Moralities. *New Political Economy*, *24(3)*, 350–364.

Risi, D. *et al.* (2023) 'Institutional theory-based research on corporate social responsibility: Bringing values back in', *International Journal of Management Reviews*, *25(1)*, pp. 3–23.

Saris, W. E., & Gallhofer, I. N. (2014). *Design, evaluation and analysis of questionnaires for survey research* (2nd ed.). John Wiley and Sons.

Saunders, M. N. K., & Lewis, P. (2017). *Doing research in business and management*. Pearson Higher Ed.

Scott, W. R. (1995). *Institutions and organizations*. Sage Publications.

Statista. (2018). Global market value of halal food 2017-2023. Published by M.Shahbandeh Jun 29, 2019

Tieman, M. (2011), "The application of *Halal* in supply chain management: in-depth interviews", *Journal of Islamic Marketing, Vol. 2 No. 2,* pp. 186-195

Warne, R. T. (2021). *Statistics for the social sciences: A general linear model approach* (2nd ed.). Cambridge University Press.

Zailani, S., Kanapathy, K., Iranmanesh, M., & Tieman, M. (2015). Drivers of halal orientation strategy among halal food firms. *British Food Journal, 117(8).*

Zulkifli, A. M. (2019). *Thailand eyeing more halal food exports to non-Muslim countries.*