Assessment of Consumers' Confidence on Halal Labelled Manufactured Food in Malaysia

Golnaz Rezai, Zainalabidin Mohamed* and Mad Nasir Shamsudin

Department of Agribusiness and Information Systems,
Faculty of Agriculture, Uiversiti Putra Malaysia,
43000 Serdang, Selangor, Malaysia
*E-mail: zam@agri.upm.edu.my

ABSTRACT

Consumers' confidence in Halal labelled food is shaped by numerous factors. These include advertising, information on food ingredients and announcements, various Halal claims, and warnings on non Halal food products which carry a Halal logo. A survey was conducted among 1560 Muslim respondents all over Malaysia via a structured questionnaire to evaluate and assess consumers' degree of confidence in manufactured Halal labelled food products and the Halal logo that comes with them. A descriptive statistic was used to identify the socio-economic/demographic characteristics and confidence of the respondents toward the Halal labelled food. The logit model was used to determine the extent to which selected socio-economic/demographic characteristics and attitudinal factors influenced the respondents' opinions towards and confidence in Halal labelled food products. In general, various socio-economic/demographic and attitudinal characteristics were found to significantly influence the likelihood of the respondents' degree of confidence in the "halalness" of manufactured food products that carry the Halal logo. The older generation, particularly the rural folk, and those with higher education level and higher level of religiosity seemed to be likely less confident with the Halal labelled food products. Meanwhile, attitudinal factors such as without JAKIM Halal logo, food products from non-Muslim countries, unfamiliar brand and no clear list of ingredients make consumers feel less confident with the products. Thus, most Malaysians are still unsure or do not have the full confidence in the Halal labelled food products with regard to its "halalness". Thus, monitoring and enforcement of the Halal laws and regulations have to be carried out on a regular basis to build consumers' confidence towards these products.

Key words: Manufactured food, Halal logo, confidence, Muslim consumers, logit model

INTRODUCTION

In general, consumers' attitude and behaviour towards food are determined by individual and environmental factors, such as marketing, information, situation and food specific properties. Religion is one of the potential individual factors that will shape consumption decisions, especially among the Muslims. Ample evidence has shown that religion influences consumers' attitude and behaviour in general (Pettinger, Holdsworth, & Gerber, 2004), as well as food purchasing decisions, and eating habits in particular (Shatenstein & Ghadirian, 1997; Asp, 1999; Mullen Williams, & Hunt, 2000; Blackwell, Miniard, & Engel, 2001). In many societies, the vegetarian Hindus, among other, are very strict with their food and the orthodox Jews are very particular about their kosher principles. Thus, religion plays one of the most influential roles in food choices (Dindyal, 2003). The impact of religion on food consumption depends on the religion itself and on the extent to which individuals follow the teachings of their respective religion. Islam is a way of life

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*Corresponding Author

which is governed by rules and customs built on the five pillars which every Muslim has to observe; these include *shahadah* or witnessing, *salat* or prayer, *zakah* or charity, *sawm* or fasting, and *hajj* or pilgrimage. In addition to these, Muslims have to oblige to a set of dietary laws intended to advance their well-being. However, not only religious motives determine the Halal consumption, health, hygiene, being friendly to the environment, respect for animals' welfare and social issues (such as religious identity and degree of acculturation) have also reported as determining factors influencing it (Vermeir & Verbeke, 2005; Bonne & Verbeke, 2006).

Credence characteristics of food have become very important to consumers (Grunert, 2005). Halal is a typical credence process attribute, i.e. a quality characteristic that can hardly be evaluated or ascertained by an individual consumer, even upon or after consuming the food (Darby & Karni, 1973). As a product characteristic, Halal refers to the nature, the origin and the processing method of the food, which entail similarities with organic food or food that is produced by taking into consideration animals' welfare or sustainability issues. These characteristics are not visible and cannot be validated by the consumers even after experiencing the product, and thus, yield potential quality uncertainties during the pre-purchasing stage. As a result of the complexity of the Halal food production system, consumers have to rely on several factors in the food chain to provide Halal food products. Moreover, Muslim consumers have no other means of ensuring that the food they eat is truly Halal in term of its "halalness". Hence, conferring trust onto the factors in the Halal food chain, such as farmers and food manufacturers, as well as the trust in advertisements and Halal logos, enables consumers to compensate for the lack of knowledge and information they have about the cultivation and production process of Halal food (Andersen, 1994). In this regard, the roles of information, knowledge and Shariyah approval are undeniably crucial in consumers' Halal food choice.

It is difficult to provide a single definition of trust, and its interpretation is often confused with confidence. In general, trust refers to interpersonal relations, whereas confidence relates to institutional relations (Weber & Carter, 1998), which can be measured by the level or the degree of confidence. The credence characteristics of Halal food are a matter of trust and confidence in sources that provide information on how the product being manufactured or process (Morrow, Hansen, & Person, 2004).

For Muslim consumers, the degree of confidence in Halal food is related to the certainty and uncertainty about the process attributes (i.e. processing and handling leading to the Halal status), as well as the safety in terms of the wholesomeness and "halalness". Previous research has shown a very strong link between slaughtering method and health and safety perception; the Islamic slaughtering method is believed to lead to a complete bleed out of the animal whereby consumers believe less bacterial contamination can occur and hence, resulting in healthier meat (Bonne & Verbeke, 2006). However, the lack of enforcement in monitoring the usage of certified Halal food has caused the public to question the validity of some products that were claimed to be Halal. Several food-related lawsuits against food manufacturers on the "halalness" of their product have caused Muslim consumers to become cautious about what they buy and eat. For example, JAKIM once confiscated two containers of a famous brand of chewing gum worth RM 2.3 million from a warehouse at Hicom Glenmarie in Subang, Selangor, believed to be using a fake Halal logo (Harian Metro, 8th July, 2004). High 5[1] claimed that its bakery products were baked using 100% Halal oil when in fact it was imported from Israel or Germany, whereby its halal status was being doubt (The Malay Mail, 14th September, 2006). Dinding[2] poultry was

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[1] High 5 is a local manufacturer producing bread and other bakery products which carry JAKIM Halal logo.
[2] Dinding is a local poultry farm and manufacturer of poultry products, such as burgers, frankfurters, chicken nuggets, chicken balls, etc., that carry the JAKIM Halal logo.

also sued for not ensuring that its products were slaughtered according to the Islamic principle and thus the products were not considered as Halal, and this suit was settled for RM100 million (New Straits Times, 20 January, 2006). The settlements in court, i.e. the payment of RM100 million and a stern warning or fine, however, do not resolve the issue of Halal and ethics among the food manufacturers or even revert the decisions on food that is non-halal being labelled as halal. Nonetheless, it does affect the level of confidence among the Muslim consumers with regards to the food products in the market place that carry Halal logo. If one reads the book on Halal and Haram food products published by the Consumer Association of Penang (CAP) 2006, one will surely have a negative perception and become more careful in choosing the products they consume by ensuring that they are authentically Halal. Thus, this study investigated the degree of confidence among Malaysian Muslims consumers towards the Halal labelled food products and also determined the factors that were more likely to influence their attitude towards the "halalness" of the food products which carry the Halal logo.

METHODOLOGY

Consumers' behaviour is very complex and it is determined by emotions, motives and attitudes (Alvensleben, 1997). Under the theory of reasons action (TORA) attitudes and belief play a fundamental role in a consumer's behaviour because they determine his/her disposition to respond positively or negatively to an institution, person, event, object or product (Azjen & Fishbein, 1997; Ajzen, 2002). According to the researchers, the link between the altitudinal characteristics and behaviour suggests that consumers are more likely to engage in the behaviour they feel to have control over and prevented from crying out behaviour which they feel they have no control over. Meanwhile, control factors such as the level of confidence and the level of religiosity may facilitate or inhibit the decision in purchasing Halal food products. A

randomized sample of 1560 Muslim respondents was surveyed via structured questionnaires to gauge their level of confidence in the "halalness" of food products that carry the Halal logo. In specific, these respondents were approached and selected randomly while shopping at several supermarkets, such as Carefour, Giants, Tesco, Jusco, Eco-Save and Maydin in the Klang Valley and in the surrounding suburb areas such as Banting, Semenyih, Morib and Kuala Selangor. These suburb areas are formally categorized as rural areas in the state of Selangor and are still considered as the traditional rural Malay areas. The supermarkets were chosen to get the respondents from every walk of life and the availability of the manufactured food products in the supermarkets.

The questionnaire was divided into two sections. In the first section, the respondents' socio-economic/demographic characteristics (e.g., age, education, gender, gross household income, and employment status) were asked. For Muslims, eating food that meets the religious requirements of Islam is considered as an obligation to their religion; therefore, it was argued that their confidence with the Halal labelled food products could be viewed within other contexts such the JAKIM[3] logo, the exporting country of the food products, list of ingredients, product brands and level of religiosity. The second section contained questions on the consumers' confidence in the Halal label. The respondents were asked to rank the importance of the following statements based on their confident intention behaviour: "I am confident with the Halal food products with the JAKIM logo", "Products' brands are sufficient enough for me to indicate the "halalness" of the products.", "I am more confident with the "halalness" of Halal foods from Muslim countries", "The products that list all the ingredients used make me feel at ease of it "halalness" and "I am confident

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[3] To manage and reduce public concerns over Halal certification and logo, the government appointed JAKIM (Department of Islamic Development Malaysia) as the sole agent for the Halal certification in Malaysia.

that by purchasing the local food products, the "halalness" of the food is ensured". The respondents were asked to record their responses on a 5-point Likert scale, ranging from 1 (not confident) to 5 (very confident). Meanwhile, the respondents were asked to indicate their level of religiosity using the self-estimating statement "I consider myself as a………. Muslim" on the 4-point scale, ranging from "very religious" to "not religious". The level of religiosity can be interpreted as a label that people use to describe themselves. Here, the influence of the respondents' religiosity level "as a Muslim" was investigated by differentiating the consumers who highly identified themselves as being religious from the Muslim consumers who labelled their religiosity level as otherwise.

The definitions of the socio-economic/ demographic variables, consumers' confidence and descriptive statistics of the sample are presented in Table 2. The binary logit model was applied to estimate the determinants which influenced their degree of confidence in the Halal labelled manufactured food products.

Model Specification

The Logit model was employed for the regression analysis because it represents the complex aspects of the decisions made by individuals and also incorporates important demographic and policy-sensitive explanatory variables. Nonetheless, it does not assume the linearity of relationship between independent and dependent variables, and does not require normally distributed variables (MacFadden 1981, Cramer, 1991).

For this study, the results were interpreted using the odds ratio, which is the exponential coefficient of the logit regression results. The odds ratio is calculated by contrasting each category with the reference category. This also means that the odds ratio shows a multiplicative change in the odds for a unit change in an independent variable. In general, the binary logit model can be specified as:

$$\log\left(\frac{p}{1-p}\right) = \chi\beta \qquad (4)$$

Where, $x\beta$ is the vector of the independent variables and the estimated parameters. $(P/1\text{-}P)$ is called the odds ratio; thus, the left-hand side of the equation is referred to the log of odds or *logit*. The logistic coefficient is interpreted as the change in the logit that is associated with a one unit change in the independent variable, while holding all the other variables constant. The exponential of the logistic coefficient is the effect on the odds rather than probability. It is interpreted as for a one unit change in the independent variable; the odds are expected to change by a factor of $\exp(\beta)$ when other things are equal (McFadden, 1981).

Since the issue of the study was on the degree or the level of confidence, the dependent variable for this study represents the probability of the consumers' degree of confidence towards the Halal labelled food products. The variable was coded as 1 if the consumers were less confident with the Halal labelled manufactured food products and it would be coded as zero if it was otherwise (i.e. if they are confidence). Meanwhile, the independent variables in the choice model represented the factors that might have an influence on the consumers' choice behaviour. The explanatory variables were age, gender, income, level of education, level of religiosity, the JAKIM Halal logo, the exporting country of the products, list of ingredients and residential area. A summary of the explanatory variables (independent variables) included in the models and their coding systems are presented in Table 1. The specific equation of the logit model can be presented as follows:

$$\text{logit } (Model) = \beta_0 + \beta_1\chi_{area} +$$
$$\beta_2\chi_{Ager} + \beta_3\chi_{Level}^{Education} + \beta_4\chi_{reliogiousity} +$$
$$\beta_6\chi_{JAKIMlogo} + \beta_7\chi_{Ingredients} + \beta_8\chi_{Brand} + \varepsilon_i \quad (5)$$

Where; $\beta_0 = $ constant
$\beta_i - coeficient\ of\ \mathbf{X}_i$

It was postulated that the above independent variables would generate the more likely less confidence (variables coded as 1) than their

TABLE 1
Explanatory Variables to Measure Consumers' Confidence on Halal Labelled Food Products

Variables	Design value (Coding system)	
Residential Area	0.	Urban
	1.	Suburb
Age	0.	< 40 year old
	1.	> 40 year old
Level of Religiosity	0.	Lower Level
	1.	Higher Level
Education Level	0.	Secondary school
	1.	Tertiary
JAKIM Halal Logo	0.	Displaying JAKIM logo
	1.	Not displaying JAKIM logo
Product Brand	0.	Well-known brands
	1.	Not well known brands
Exporting Country	0.	Halal products from Muslim countries
	1.	Halal products from non-Muslim countries
List of Ingredients	0.	list of ingredient is very detail
	1.	list of Ingredient not detail

counterpart (variables coded as 0) on the degree of confidence towards the manufactured food products with the Halal logo. Since the effect is linear between the dependent and independent variables, they are not considered as causal effects (Scott & Massoglia, 2003). Thus, the independent variable represented the different attributes affecting the representative consumers' level of confidence on the Halal manufactured food products bearing the Halal logo. Table 1 shows the explanatory variables used in the logistic regression model which included both the demographic and attitudinal factors to assess the consumers' confidence on the Halal labelled food products.

RESULTS AND DISCUSSION

Descriptive Analysis

Table 2 shows the characteristics of the sample with regard to their socio-economic/demographic background. About two-third of the respondents are from urban areas, while one-third are from suburb. More than 50 % of the respondents are males, and the rest are females.

In this survey, 17.3% (270) of those surveyed identified themselves as very religious, 52.9% (826) claimed to be religious, and 27.7% (432) others as somewhat religious. Only 2.1% (32) of the respondents claimed themselves as not being religious. Most of the respondents are married (54.5%) compared to singles (44.0%) and widows (1.18%). The majority of the respondents interviewed were between 26- 40 years of age (54.8%) and most (69.03%) are educated at tertiary level. The occupations of the respondents were divided into five categories. The majority of the respondents have working experiences in various positions, such as working for government sector (32.1%), private sector (40.9%), and are self-employed (8.01%). The reminders were students (8.87%) and the others (7.1%) which included retirees, unemployed and housewives. In terms of their income distribution, the study found that at least 39.0% of the respondents are earning between RM 1501-3000 per month, 15.0% others are receiving RM 1500 and below. A smaller group of the respondents have monthly income above RM6000 (8.0%).

TABLE 2
Respondents' Socio-economic/Demographic Profile

Characteristics	Number	Percentage
Residential area		
Urban	959	61.45
Suburb	601	38.55
Gender		
Female	759	48.66
Male	801	51.34
Level of religiosity		
Very religious	270	17.31
Religious	826	52.95
Somewhat religious	432	27.69
Not religious	32	2.05
Age		
Below 25 year old	234	15.02
26-40 year old	855	54.83
41-60 year old	421	26.98
Above 61 year old	50	3.17
Education Level		
Never been to school	15	0.97
Primary school	109	6.99
Secondary school	359	23.01
Tertiary	1077	69.03
Marital status		
Single	686	43.98
Married	856	54.84
Widow	18	1.18
Occupation		
Government Sector	501	32.10
Private Sector	637	40.86
Self-employed	125	8.01
Unemployed	48	3.06
Student	138	8.87
Others	111	7.1
Monthly income		
Below 1500	234	15.00
1501-3000	615	39.04
3001-6000	591	37.90
Above 6001	120	8.06

Results of the Binary Logit Model

The binary logit analysis or logistics regression was used to estimate the extent to which the selected socio-economic/demographic characteristics and attitudinal variables discussed above were more likely to influence the respondents' degree of confidence in the Halal labelled manufactured food products. As stated earlier, the dependent variable (i.e. being confident with the Halal labelled food products) has two categories, namely, "consumers are less confident with the food products which carry the Halal logo" coded as one, and the "consumers who are *less confident* coded as zero" which were used as a proxy of *more confident* consumers to unobservable dependent variable. The results of the logistics regression model and its odd ratios are shown in Table 3.

To assess how well the model fits the data, the Goodness-of-Fit test statistic was developed and a chi-square test from the observed and expected frequencies was computed. As shown in Table 3, the model has a probability value that is significant at 0 percent level, confirming that the fit of the models is good. The estimated coefficients were tested by using standard errors. A positive sign on the statistically significant parameter estimates of one variable indicates the likelihood of the response increasing, holding other variables constant, and *vice versa*. However, in the logistic regression, the positive sign should not be considered as causal effects. Seven variables were all positive and statistically significant, suggesting that the response categories were indeed ordered properly. Thus, the demographic factors and the consumers' attitudes variables in the ordered model equation are relevant in explaining the consumers' confidence in the Halal logo on the food products. The results indicated that the demographic variables (such as residential area, education level, level of religiosity and age) play important roles in explaining the consumers' degree of confidence intention behaviour with the Halal labelled manufactured food products in Malaysia. Meanwhile, the attitudinal variables indicated that the consumers did pay attention

to the information printed on the packaging of the food products in deciding their degree of confidence on the "halalness" of such products. Based on the statistically significant coefficients, displaying the JAKIM Halal logo on food products is an important determinant for consumers' confidence (Table 3). This finding indicates that on average, the absence of the JAKIM Halal logo on food products results in an increase of 1.66 on the log-odd of less confident consumers relative to more confident consumers. The other method to interpret the results in Table 3 is by looking at the odd ratios in which the associations are relational. Thus, using the odd ratio, without the JAKIM Halal logo on the food products was 5.25 times more likely to cause consumers to be less confident with the food products (henceforth, the odd ratios is used for the logistic regression results as it is easier to comprehend). This proved that the displayed JAKIM Halal logo has a significant role in determining the degree of confidence in certain food products. Similarly, the Halal labelled food products from non-Muslim countries were 1.2 more likely to gain less confidence or trust as compared to the locally produced products. The result indicates that the Halal certified food products from non-Muslim countries do not seem to get trustworthiness from the Malaysian

TABLE 3
Estimates logit model for consumers' degree of confidence in food products that carry the Halal logo

Variables	Estimated Coefficients	Standard Error	Ratio
JAKIM logo displays on food products	1.658***	.429	5.247
Exporting Country of the food products	.162*	.128	1.176
List of Ingredients	.0526	.0297	1.054
Product Brands	.342**	.349	1.408
Residential Area	.761*	.403	2.140
Education Level	.927**	.402	2.527
Level of Religiosity	1.417***	.423	4.125
Age	.0290*	.0055	1.030
C	-.910	.526	.402
P-value for the Goodness of Fit test	0.0000	McFadden R-squared	0.6434

*, ** and *** are significant at 10%, 5% and 1%, respectively.

Muslims because to them, the JAKIM Halal logo is a recognized sign which ensures them the "halalness" of the food products.

The brand of products also positively influences the probability of consumers' confidence in the Halal labelled food. Consumers were found to be 1.4 times less confident in the halal labelled food products that are not well-known brands. This indicates that the company's brand is an important factor in determining the consumers' recognition of the "halalness" of the food products. The respondents were also found to be very concerned about food labelling or information on the ingredients used in manufacturing food products. In particular, the products that do not carry detail information on the ingredients used were 1.05 times more likely to attain less confidence among the consumers. Although the effect is small, it does play an important role in ensuring consumers the "halalness" of the products.

On the aspect of demographic factors, consumers from suburb areas were 2.14 times more likely to be less confident with the Halal labelled manufactured food products as compared to those from the urban areas. Meanwhile, those consumers aged 40 years old and above seemed to be less confident with the Halal labelled food products. The estimated coefficient for the level of religiosity is positive and significant at 99 percent level of confidence, suggesting a higher positive effect as the religious level increases. Thus, the consumers with a high level of religiosity were 4.13 more likely to be less confidence in the Halal labelled food products than the individuals who regarded themselves as less religious. The estimated coefficient for the consumers with tertiary education is positive and statistically significant at 90 percent level of confidence. This result indicated that educated consumers were 2.5 times more likely, than those with lower education level, to become less confident. It is generally believed that educated people are more discriminating in using information and data as compared to less educated consumers. Lastly, consumers from older generation were found to be more cautious in dealing with the "halalness" of the food products compared to the respondents of younger group, and were 1.03 times more likely to become less confident on the Halal labelled food. This could be due to their experience, whereby they gone through a lot of cases or they have been hearing at lot hearsay about the Halal and "halalness" issues in their life.

CONCLUSION

Considering the confidence level in the food products with Halal logo, the results of the study showed that the consumers are very concerned about Halal food and the logo on food products. In general, the consumers react more positively toward food products with the JAKIM Halal logo, but are less confident with other Halal logos on food products. This finding is also substantiated by the evidence that consumers are more careful in evaluating the "halalness" of the food products by referring to the exporting country of the product brands. It seems that the consumers are a bit sceptical about the food products that are imported from non-Muslim countries such as China, New Zealand, European countries, and even Thailand which has the Islamic Council and Halal logo that comes with the products. The consumers seem to be more comfortable when the products are imported from Muslim countries like Saudi Arabia, Pakistan or Brunei. Another attitudinal factor that might cause Malaysian consumers to become less confident in the Halal labelled food products is an unfamiliar brand name. For instance, although Nestlé is not a local manufacturer (Nestle,is a multinational conglomerate brand), the existence of various Nestlé's products in the country has make some impacts on Malaysian consumers as a local and trusted food manufacturer. Other food brands like Maggie, Dutch Lady, Magnolia, Bratina, to name a few, have become household name food product and are well received by Malaysians.

The findings of this study also indicated that the level of religiosity, education, residential areas and age are significant determinants of the consumers' confidence probability in the Halal labelled food products. In particular, age,

level of religiosity and residential areas seem to have strong associations. Meanwhile, the older generation who normally have higher level of religiosity and are residing in the rural areas seem to be more concerned about the "halalness" of the food products and have lower degree of confidence. This could be due to the fact that there have been cases of "halalness" of food products exposed to the public and there is also no stern action taken when food manufacturers misused the label. Today, if the product is found not Halal or its "halalness" status is being doubted, the department of religious affair will conduct a raid and if the manufacturer is found guilty, it will most likely be given a warning or a fine and charged in court. However, one will be able to find the so-called non-Halal product on the selves at the groceries stores in no time. It is important to highlight that the rectification of one mistake does not make the previous products which have been identified as non-Halal to become Halal, nor does it ensure that the new products produced by the same manufacturer are authentically Halal in its "halalness" sense.

Although religious is a sensitive issue among the general public, it cannot be compromised. Since most of the food manufacturers are multinational conglomerates or owned by non Muslims, the issues of ethic, sensitivity to consumers' needs, trustworthiness, respecting fellow countrymen, understanding one cultures and religion must be taken into consideration by food manufacturers, including Muslim food manufacturers. Most, if not all Muslim consumers, have faith in their Muslim food manufacturers that their products are authentically halal, yet the ingredients used in the food products may come from non-Halal sources. Thus, Muslim food manufacturers need to be reminded about the sources of their food product ingredients and they should be able to trace their origin and confirm their "halalness" status. Meanwhile, the younger generation, those who are less exposed to education and information technology, people who take religion less seriously and the modern urbanite dwellers need to be informed, exposed, educated and made aware of what is Halal and non-halal

so as they can make the right decisions when purchasing food products that carry the Halal logo.

In conclusion, Muslim consumers do not have other means to determine whether the manufactured food products are Halal or not, except by referring to the Halal logo that has been entrusted in the packaging of the food products. In particular, the JAKIM Halal logo and certification have created a great impact on the Muslims in this country. Meanwhile, the Halal certified food products with unfamiliar Halal logo seem to be not favoured among Malaysian Muslims. The issue of Halal food has now found a place in our national agenda. The authorities such as JAKIM, the Minister of Domestic Trade and Consumers Affairs, Custom and other Religious Departments, to name a few, have come under strong criticisms for their failure to adequately enforce laws and take actions on the misuse of the Halal logo when the food and products concerned do not conform to Syariah laws. On the contrary, they have tried their best in emphasizing the Halal concept and principles to all food manufacturers. Thus, their ethic and respect to others in their religious belief remain questionable.

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