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LITHUANIAN CONSUMERS' VIEWS ON COUNTRY OF ORIGIN LABELLING FOR MILK AND DAIRY PRODUCTS

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Abstract

This study aimed to investigate Lithuanian consumers' views on country of origin labelling for milk and dairy products. In order to get necessary information, Lithuanian residents were interviewed. A multi-stage stratified random sampling was used to select the respondents. A survey of 1,000 Lithuanian consumers on milk and dairy products was undertaken. The analysis of collected data was performed using the methods of mathematical statistics. The survey results reveal that for two-third of Lithuanian consumers, when buying milk and dairy products, it is important to know the country where the milk is milked. Respondents who perceive origin labelling indicating the country of milking as very important and important information tend to be female, middle-aged and have a higher education. While Lithuanian consumers are interested in origin labelling indicating the country where the milk is milked, they are not ready to buy milk and dairy products at a higher cost to have that additional information. Only one-third of interviewed persons are prepared to pay a price premium to know the country of milking. Respondents who are prepared to pay a little more to have that additional information tend to be young, have a higher education and the highest income.

Key words: *consumers, milk, dairy products, country of origin, labelling, Lithuania.*

INTRODUCTION

Milk and dairy products are traditional components of the Lithuanian kitchen and widely consumed by Lithuanian population. Due to globalization, consumers are confronted with a wide range of dairy products. The majority of dairy products sold on the domestic market are manufactured in Lithuania. Nevertheless, the share of imports is tending to increase. In 2011, the imported dairy products accounted for 14.2% of the total dairy products sold on the Lithuanian market, and in 2015 for 20% [7]. Taking this tendency into account, domestic dairy products face growing competition from other countries. In addition, the dairy processing enterprises lack raw milk purchased in Lithuania, therefore they import certain quantities of this milk from other countries. In 2015, import of raw milk reached 334.6 thousand tonnes and if compared to 2011 increased by 14% [5]. This milk is used for the production of dairy products, which are exported or sold on the domestic market. In this respect, if dairy products are labelled as Lithuanian products it does not mean that the milk in them came from Lithuania.

The results of a survey performed in Lithuania show that the vast majority of consumers regularly buy domestic livestock products. The top reasons for purchasing are freshness, good taste and favourable prices. Consumers consider Lithuanian origin as an important factor when choosing livestock products, but only after freshness, taste, price and healthiness [3].

The concept of country of origin labelling information is widely used in various countries to protect their own products from international competition [8].

A large body of research has studied the effect of country of origin on consumers' preferences. Most confirm that consumers prefer foods produced in their own country or region [12].

Several studies have analysed the effect of the place of production on consumers' willingness to pay a price premium for milk and dairy products. They point out that consumers are willing to pay more for domestic or local milk and dairy products that contain only milk and milk ingredients produced in their own country [2, 4, 6, 10, 11]. According to these studies, the traceability of milk and dairy products may become an important marketing tool [10].

In the European Union (EU), it is not mandatory to label milk and milk used as ingredient in dairy products with the country of origin. Dairy processors can include this origin information voluntarily. The results of a survey conducted in Sweden, France, Poland and Austria reveal that a substantial majority of consumers want to know the origin of milk and dairy products [1]. According to the Eurobarometer survey 2013, most EU citizens consider necessary to indicate the origin of milk, whether sold as such or used as an ingredient in dairy products [9].

MATERIALS AND METHODS

This study aimed to investigate Lithuanian consumers' views on country of origin labelling for milk and dairy products. In order to achieve this aim and collect data, a survey method was used. In total, 1000 Lithuanian residents aged 18 year and over were interviewed across the country. A multi-stage stratified random sampling was used to select the respondents. All interviewed persons were screened to be consumers of milk and dairy products. The survey was carried out in July 2015 by the market and opinion research centre "Vilmorus Ltd.". Respondents were interviewed face-to face in their homes. A standardized questionnaire containing close-ended questions was employed as the main instrument of the survey. Respondents were asked to express their perception on the importance of origin labelling indicating the country where the milk is milked, willingness to pay a little more to know the country of milking and understanding of the label "Made in Lithuania with 100% Lithuanian milk" when placed on milk and dairy products. Finally interviewed persons were asked to indicate their socio-demographic characteristics (gender, age, educational level and income).

The socio-demographic characteristics of respondents are presented in Table 1. Out of the 1,000 respondents, males and females constituted 46.9% and 53.1% respectively. In relation to the age, the largest proportion of respondents 35.4% was from the 46–65 year age bracket while the smallest proportion 14.1% was from the 18–30 year age bracket. As concerns the educational level, most of respondents (46.9%) had a higher education. Regarding the household income, the majority of respondents (45.6%) indicated a household income per capita of less than 250 EUR per month.

Table 1. Socio-demographic characteristics of respondents

Socio-demographic characteristics (N=1000)	Frequency	Percentage
Gender		
Male	469	46.9
Female	531	53.1
Age		
18–30	141	14.1
31–45	216	21.6
46–65	354	35.4
>66	289	28.9
Educational level		
Incomplete secondary	110	11.0
Secondary	420	42.0
Higher	469	46.9
Not answered	1	0.1
Household income		
<250 EUR	456	45.6
251–500 EUR	390	39.0
501–750 EUR	46	4.6
>751 EUR	30	3.0
Not answered	78	7.8

The statistical analysis was performed using SPSS (Statistical package for the social science). The Chi-square (χ^2) test was used to compare the frequencies of the answers among the different groups. A p value of less than 0.05 was considered to indicate a statistically significant difference ($p<0.05$). In order to make comparisons between all pairs of groups, post hoc tests were conducted.

RESULTS AND DISCUSSIONS

All respondents were asked to indicate, when buying milk and dairy products how important or unimportant it is that milk and dairy products would be labelled with additional information indicating the country of origin of raw milk from which these dairy products are manufactured. The substantial majority of interviewed persons perceived origin labelling indicating the country of milking as very important and important information: 67% shared this view, of which

33% said very important and 34% said important. One fifth of respondents considered it to be unimportant (10%) and very unimportant (10%). The remaining interviewed persons (13%) were indifferent. The perceived importance of origin labelling indicating the country where the milk is milked was significantly different by gender, age and educational level. There was no statistical difference by income (Table 2). Consumers who perceived origin labelling indicating the country of milking as very important and important information tended to be female, middle-aged and highly educated. Consumers who perceived that origin labelling as very unimportant and unimportant tended to be male, the youngest and less educated.

Table 2. Association between social-demographic characteristics of respondents and perception on the importance of origin labelling indicating the country where the milk is milked

Socio-demographic characteris-tics	Perceived importance of origin labelling indicating the country where the milk is milked			χ^2	p-value
	Very impor-tant/ Impor-tant Frequency (%)	Neither impor-tant nor unimpor-tant Frequency (%)	Very unimpor-tant/ Unimpor-tant Frequency (%)		
Gender				14.37	0.001*
Male	62.0	13.4	24.5		
Female	72.1	12.4	15.4		
Age				13.22	0.040*
18–30	58.9	14.9	26.2		
31–45	69.0	13.4	17.6		
46–65	73.2	10.7	16.1		
>66	63.3	14.2	22.5		
Educational level				30.26	0.000*
Incomplete secondary	51.8	20.0	28.2		
Secondary	62.6	14.0	23.3		
Higher	75.3	10.2	14.5		
Household income				6.21	0.400
<250 EUR	64.9	14.9	20.2		
251–500 EUR	67.7	12.3	20.0		
501–750 EUR	76.1	4.3	19.6		
>751 EUR	76.7	10.0	13.3		

*Statistically significant: p<0.05 (Chi-square test).

Women were significantly more likely to perceive origin labelling indicating the country where the milk is milked as very important and important information (72.1%) compared to men (62%) (p=0.001). The highest proportion of consumers who perceived that origin labelling as very important and important information was found for respondents from the 46–65 year age bracket (73.2%). This proportion was significantly greater compared with respondents from the 18–30 year age bracket (58.9%) (p=0.007) and respondents from the 66 year old and over bracket (63.3%) (p=0.027), but not significantly greater compared with respondents from the 31–45 year age bracket (69.0%) (p=0.513). Respondents with higher education (75.3%) were significantly more likely to perceive origin labelling indicating the country of milking as very important and important information than respondents with incomplete secondary education (51.8%) (p=0.000) and respondents with secondary education (62.6%) (p=0.000).

All respondents were asked to indicate whether they would be prepared to pay a little more if milk and dairy products were labelled with information indicating the country of origin of raw milk from which these dairy products are manufactured.

About one-third of interviewed persons declared they would be prepared to pay a little more to know the country where the milk is milked: 32% shared this view, of which 28% would pay up to 2% a premium price, 2% would pay up to 5% a premium price and only 1% would pay more than 5% a premium price. The majority of respondents (68%) would refuse to pay more to have that information.

In the socio-demographic characteristics, three of four characteristics indicated significant differences between consumers who would be prepared to pay a little more to know the country of milking and consumers who would not be prepared to pay a little more to have that information (Table 3). Specifically, there were significant differences between these two groups for age, educational level and income. There was no statistical difference in gender.

Consumers who would be prepared to pay a premium price to know the country where the milk is milked tended to be the youngest, with higher levels of education and income.

Conversely, consumers who would not be prepared to pay a premium price to have that information tended to be the oldest and with lower levels of education and income.

Table 3. Association between social-demographic characteristics of respondents and willingness to pay a little more for information indicating the country where the milk is milked

Socio-demographic characteristics	Willingness to pay for information indicating the country where the milk is milked		χ^2	p-value
	Prepared to pay a little more Frequency (%)	Not prepared to pay a little more Frequency (%)		
Gender			3.01	0.083
Male	29.2	70.8		
Female	34.3	65.7		
Age			8.06	0.045*
18–30	38.3	61.7		
31–45	34.3	65.7		
46–65	32.9	67.1		
>66	26.0	74.0		
Educational level			14.17	0.001*
Incomplete secondary	16.4	83.6		
Secondary	32.9	67.1		
Higher	34.8	65.2		
Household income			10.64	0.014*
<250 EUR	27.6	72.4		
251–500 EUR	35.5	64.5		
501–750 EUR	32.6	67.4		
>751 EUR	50.0	50.0		

*Statistically significant: p<0.05 (Chi-square test).

The highest proportion of consumers who would be prepared to pay a little more was found for respondents from the 18–30 year age bracket (38.3%). This proportion was significantly greater compared with respondents from the 66 year old and over bracket (26.0%) (p=0.009), but not significantly greater compared with respondents from the 31–45 year age bracket (34.3%) (p=0.437) and respondents from the 46–65 year age bracket (32.9%) (p=0.731). The proportion of consumers who would be prepared to pay a premium price was slightly higher for respondents with higher education (34.8%) compared to respondents with secondary education (32.9%), and the difference was not statistically significant (p=0.568). Respondents with higher education and respondents with secondary education were significantly more likely to be prepared to pay a little more than respondents with incomplete secondary education (16.4%) (p=0.000 and p=0.001, respectively). The highest proportion of consumers who would not be prepared to pay a premium price was found for respondents with the highest income (50.0%). This proportion was significantly greater compared with respondents with the lowest income (27.6%) (p=0.009), but not significantly greater compared with respondents with income of 251–500 EUR (35.5%) (p=0.111) and respondents with income of 501–750 EUR (32.6%) (p=0.129).

All respondents were asked to indicate if milk and dairy products had the label “Made in Lithuania with 100% Lithuanian milk” what this label would mean. A list of potential definitions was presented to consumers. The vast majority of interviewed persons thought this label would mean that the product had been produced, processed and prepared in Lithuania. 17% of respondents chose the option “A guarantee of traditional character” and 12% selected the option “A guarantee of specific flavor or taste”. 12% of interviewed persons thought this kind of logo on milk and dairy products would be purely for advertising purposes while 19% believed it would not mean anything (Fig. 1).

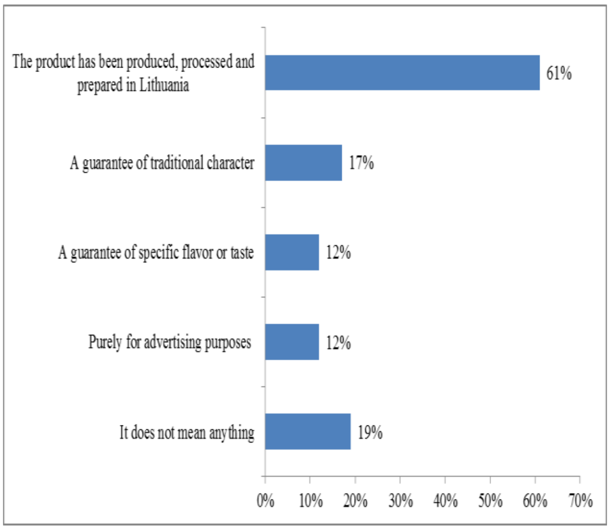

Fig. 1. Meanings of the label “Made in Lithuania with 100% Lithuanian milk” when placed on milk and dairy products

The meaning that the product has been produced, processed and prepared in Lithuania was more indicated by women, the respondents from the 46–65 year age bracket, the consumers with higher education and income of 501–750 EUR. A guarantee of traditional character was more declared by women, the respondents from the 31–45 year age bracket, the consumers with higher education and income of 501–750 EUR. A guarantee of specific flavor or taste was more mentioned by women, the youngest respondents, the consumers with higher education and the highest income.

CONCLUSIONS

The aim of the study is to investigate Lithuanian consumers' views on country of origin labelling for milk and dairy products. The results reveal that for two-third of Lithuanian consumers, when buying milk and dairy products, it is important to know the country where the milk is milked. Those who are female, middle-aged (between 46 and 65 years of age) and have a higher education are significantly more likely to perceive origin labelling indicating the country of milking as very important and important information. While Lithuanian consumers are interested in origin labelling indicating the country where the milk is milked, they are not ready to buy milk and dairy products at a higher cost to have that additional information. Only one-third of interviewed persons are prepared to pay a price premium to know the country of milking. Those who are the youngest (between 18 and 30 years of age), have a higher education and the highest income are significantly more likely to be prepared to pay a little more to have that information.

Most of Lithuanian consumers think that the label "Made in Lithuania with 100% Lithuanian milk" when placed on milk and dairy products would mean that the product has been produced, processed and prepared in Lithuania.

The results of this study are useful to both Lithuanian milk producers and dairy processing enterprises in defining marketing strategies that would help to strengthen the competitiveness of domestic and local production and to grow the market share.

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