

Original Research Article

<https://doi.org/10.20546/ijcmas.2017.604.233>

Study on Gap Estimation between Market Potential and Market share of Gluten-Free Market

Jolly Masih^{1*}, Amita Sharma¹, Ashish Sharma² and Jonathan Deutsch³

¹Institute of Agribusiness Management, SKRAU, Bikaner, India

²Big Data Practice and Innovation Lab, NJ, USA

³Culinary Arts and Food Science, Drexel University, Philadelphia, USA

**Corresponding author*

ABSTRACT

Keywords

Gluten-free, Celiac, Market potential, Market share, Allergy.

Article Info

Accepted:

15 March 2017

Available Online:

10 April 2017

Gluten-free food was among the top five most-searched words on Google in 2013. The global gluten-free market is projected to reach US\$6.2 billion by 2018. Celiac disease is a systemic autoimmune syndrome involving a gluten-induced chronic inflammation of the small bowel mucosa, with extensive short and long-term negative health consequences if untreated including GI cancer. The present study aimed to find the potential of gluten-free foods in world, USA and India. Since USA is the largest market of gluten-free foods and India has largest population of celiac patients in world being a major wheat consuming country. The study has also explained the gap between expected potential and current market share of gluten-free foods. The gap estimates could be used by leading manufacturers of gluten-free brands to grab the untapped potential of gluten-free foods market. Study told about the reasons for market expansion and sections of gluten-free foods which can perform well in India and USA. Study also explained the market potential according to age and gender demographics for both the nations and reasons behind them.

Introduction

Gluten-free food was among the top five most-searched words on Google in 2013. Gluten-free products are as those specialty products that were intentionally directed to the consumer who needs or wants to buy a substitute for wheat-, barley- or rye-based products. In baking, gluten is the binding agent within the flour that prevents the baked goods from crumbling (Sheluga, 2014).

Celiac disease is a systemic autoimmune syndrome involving a gluten-induced chronic inflammation of the small bowel mucosa, with extensive short and long-term negative health consequences if untreated including GI

cancer. It is often misdiagnosed as irritable bowel syndrome (IBS) or stress. Currently the only treatment for celiac disease is a strict, 100% gluten-free diet. 2.2 million children under five years of age probably have undiagnosed celiac disease in India. Celiac disease constitutes 4% of all childhood diarrheal mortality (Missbach, 2015). The estimated population prevalence of diagnosed celiac disease in many Western countries approaches 1% to 2–5%. Gluten-free products may be purchased by people having celiac disease (CD), for whom a strict gluten-free diet (GFD) is compulsory or other allergies including non-celiac gluten sensitivity, wheat

allergy, autism, ADHD, multiple sclerosis and irritable bowel syndrome (IBS). The market for gluten-free products has grown to about 40 million consumers, amongst them 4 million have celiac disease, 18 to 22 million have gluten sensitivity, 12 million consumers are classified as gluten-intolerant and experience GI distress, but have not given up gluten completely, 3million purchase gluten-free products for fad or non-medical reasons (Anonymous, 2016). According to Food navigator 2016, the top reasons shoppers seek out for gluten free foods were because 25% considered it healthier, 19% bought it to manage their weigh, 18% they witnessed a friend or family member benefit from a gluten-free diet, 17% considered the products to be a “generally higher quality” and 16% bought “low-carb” gluten-free foods.

The global gluten-free market is projected to reach US \$6.2 billion by 2018, with North America contributing about 59% of the share (Anonymous, 2013). The U.S. is the largest and fastest-growing gluten-free market globally. North America is the largest market for gluten-free products which accounted for a market share of 52% in 2014. With the increasing rate of diagnosis and awareness about celiac disease, the demand for gluten-free products is projected to grow in terms of value at the highest CAGR of 10.7% from 2015 to 2020 in the Asia-Pacific region. The demand has also been increasing in other parts of India as consumers are seeking more processed varieties of gluten-free products. In spite of high growth, gluten-free foods are facing problems to establish themselves market due to high price, lack of awareness about the products, increased number of undiagnosed cases and inefficient value chain for gluten-free products. The present study aimed to find out the potential of gluten-free foods in world, USA and India. Since USA is the largest market of gluten-free foods and India has largest population of celiac patients

in world being a major wheat consuming country. This study also tried to explain the gap between expected potential and current market share of gluten-free foods. The gap estimates could be used by leading manufacturers of gluten-free brands to grab the untapped potential of gluten-free foods market.

Materials and Methods

Sources of Data-For primary data expert’s interview were conducted in India and USA. 20 experts were taken from both countries. Experts included doctors, retailers, manufacturers and store managers. All the secondary data was majorly collected from, research journals, reviews and forums. Celiac Society of India, Celiac Society of America, National Celiac Society of USA, Markets and Markets report 2014, 2015, Mintel and Nielsen database.

Market potential is defined as maximum capacity of a defined market for a specific product/ service within a defined time period (Sharma, 2015).

Market Potential per year = Number of patients x average per day consumption of gluten-free foods x 365

Results and Discussion

Table 1 shows market potential of gluten-free foods in world, India and USA. To calculate the market potential average per day calories consumption for males was taken as 2500 calories and for females as 2000 calories according to WHO standards.

Calories were converted into gram of fats, protein and carbohydrate using the following thumb rule according to The Institute of Medicine, USA and Indian Medical Association that ideal percentage of

carbohydrate should be 45-65%, proteins 10-35% and less than 30% fat in daily calories of diet. Dietary fat contains 9 calories per gram, while protein and carbohydrates provide 4 calories per gram. An estimate of 1% population of each region including world's population was considered as user of gluten-free foods. Estimated potential tells about the size of market which could be tapped but it is different from market share. Market share tells about the current market sales that how much gluten-free food is actually been sold, but market potential tells that how much gluten-free food could be sold. It is estimated that only 10-20% of celiac patients are currently been diagnosed, in some countries diagnosis rate is only up to 5%. Approximately 70-80% of all cases remain undiagnosed, in many cases sufferers represent either ambiguous symptoms or no symptoms at all. Price sensitivity is another challenge retailers and manufacturers need to be aware of as it is restricting the gluten-free foods to reach to their maximum potential. According to The Packaged Facts 53% consumers of gluten-free foods were considered overpriced and 41% said they would buy more gluten-free products if they were more affordable.

Total world's potential of gluten-free foods is about 13,000 Kilotons. According to Markets and Markets, 2016 report, USA accounted for nearly 50% market share, Europe 30%, Asia-Pacific 12-15 % and rest of the world 5%. The US has the globe's largest gluten-free market, followed by Europe and Asia-Pacific. Users of gluten-free foods demand for clean labels, ease of digestion, the need or desire to avoid allergens, compatibility with vegetarian and vegan lifestyles and concerns about sustainability among the general population. Legumes, beans, pulses ancient grains and sprouted grains, are found in the growing array of gluten-free foods available as they provide high fiber, nutrition and proteins.

USA has potential of 511.89 Kilotons and in 2016 its market share was 205 Kilotons. In USA, rate of diagnosis of gluten allergy or celiac disease is 20-30%. According to Packaged facts purchase motivations for gluten-free foods were-30% of consumers purchased gluten-free products randomly because many products now a days were labelled gluten-free or naturally gluten e.g. pop-corn and potato chips, 29% considered them healthier, 20% bought them to manage weight or reduce weight and 18% bought them because of higher quality than normal foods 15% consumed them because either themselves or a household member had gluten sensitivity or food allergies, while 9% consumed because either themselves or household member has celiac disease. The key players in this market were the Boulder Brands Inc., The Hain Celestial Group, Inc., General Mills, Inc., Kellogg's Company, The Kraft Heinz Company., Dr. Schar, Udi's, Pamela's and Glutino.

USA has many exclusive gluten-free restaurants, bakeries and stores which also increased its potential as people from distant place come to buy gluten-free products or to get customized gluten-free cakes, cookies and other products. Many celiac clubs and gluten-free clubs existed in New York where members created awareness about gluten-free foods and gluten-related allergies. Few states in USA like New Jersey had less potential because population is highly scattered, thus gluten-free products are available in few big food stores like Walmart, Whole foods, Trader Joe's, Wegman's etc and small stores keep very limited gluten-free foods or naturally gluten-free labels general foods like chips, pop-corn, tortillas and energy drinks. Few traditional states Pennsylvania prefer semi-processed gluten-free foods like flours and mixes and love to experiment and cook their own dishes. Local bakeries are very famous due to customized and personalized gluten-free foods.

India had potential of 2,347 Kilotons, but had very less market share of 7.55 Kilotons in 2016. In India, rate of diagnosis is only 5-7% because 70% of Indian popular lives in villages where medical facilities are not very sound. Also in many cases doctors got confused with other allergies and patients could not get proper treatment on time. In India, ancient grains like rice, corn, sorghum, buckwheat, quinoa and amaranth are mostly used to prepare gluten-free flour. Also legumes and nuts are used to prepare flour and mixes. In India, the disposable income and increasing health-conscious among consumers has been driving the demand for processed food products. Consumers demand wholesome and balanced nutrition in the form of processed food products. Gluten-free product categories are projected to be an important segment in the growth of processed food industry in this region. The demand for gluten-free crackers, breads, biscuits and cookies have increased in last few years. The rising population and the increasing demand for healthy food coupled with rising health concerns strengthened the demand for gluten-free products in India. The demand for soups and sauces with corn and rice flour ingredients is projected to boost the savories segment. In big cities like Delhi, Chandigarh, Jaipur and Bangalore people are also demanding gluten-free pizza, pasta and noodles. Few exclusive gluten-free restaurant also opened in big cities of India. Northern India is majorly wheat consuming belt, thus potential of gluten-free food was maximum here. In India mainly flour and mixes lead the market segment of gluten-free foods but along with increasing awareness people are getting attracted towards other food categories like snacks, pizza, pasta, fast foods and desserts. However sections like cereals and cornflakes, energy drinks and gluten-free liquor has not picked the market yet due to lack of product demand and availability. Few leading brands in India were Dr. Schar, Dr. Gluten, Gluten-

free foods at Nature's Basket, Zero G, Beewell, Savorlife, Anmolpreet, Kalpana foods, Nagrain etc.

Table 2 shows gap estimation between market potential and existing market share. According to the existing market share, world has achieved only 3.31% market share out of total world potential of gluten-free foods in 2016. Major reasons were lack of awareness, low rate of diagnosis of celiac disease and other wheat allergies, lack of purchasing power in developing and developed countries which has nearly 50% celiac patients like India, Pakistan, Morocco, few parts of China. Market of gluten-free products is irregularly arranged and is clustered mostly near America and Europe. However opportunity lies in Asia-Pacific region as well. USA being the largest market of gluten-free foods has acquired market share up to 40.05% of its total potential. USA offers highest variety in all sections of gluten-free foods. However due to lack of fibre, nutrition, taste and high price, people in USA often demand for products made from ancient grains, legumes and nuts which are good in taste and high in nutrition at affordable prices.

Organic gluten-free foods and veganism had also picked the trend in last few months. India had huge disparity between market share and market potential. According to the experts and estimated market share only 0.5-2% of market had been captured till now. Major reasons were lack of diagnosis of gluten-free products, difference in taste preferences in products offered by American or European countries, low quality of local products, products generally lack nutrition, fibre and taste. Product awareness is very less in rural areas and small towns, also many doctors has done lobbying to promote few particular brands only which do not allow other brands specially the global ones to enter into the market.

Table 3 shows market potential and market share of India for 2016-2020. The market share of gluten-free products is expected to grow at 8.7% growth rate. Market share would increase in coming years due to increased rate of diagnosis of celiac disease, awareness amongst people about quality gluten-free foods. Coming five years would provide ample of opportunities to global brands of gluten-free products to make their steps in Indian markets through existing channels, especially in big cities where people have already started demanding for better products. Also online marketing would provide an efficient medium to global companies to tap small and scattered markets especially in small cities. Preparing attractive product combos at reasonable prices and launching small packaging for flour, cookies, biscuits and noodles could help to get higher market share and to reduce the wide gap between actual potential and existing market share.

Table 4 shows market potential and market share of USA from 2016-2020. The market of gluten-free products is expected to grow at 6% growth rate. In coming years demand for organic and nutritious gluten-free products would increase. Gluten-free products prepared from multi-grains, sea weeds, legumes are getting more popular instead of traditional gluten-free foods made from corn and rice. Concept of whole grains is building up amongst the users of gluten-free foods.

Table 5 shows market potential according to gender demographics. In case of world and India, males are expected to have more potential. In USA, females are expected to have more potential. However few doctors believe that females are more susceptible to celiac allergy than males.

In USA, as far as the product preferences are considered, males like gluten-free snacks like rice krispies, chips, fish, gluten-free beer, nachos, chicken wings, energy drinks, barridos and pastas. Female has little different taste, they like gluten-free flours and mixes where they could show their creativity and could cook different recipes. Also they like gluten-free desserts like cup-cakes, muffins, even chocolates. In snacks they like pop-corn, multigrain chips. There are few dishes which are equally liked by both the gender like gluten-free pizzas, noodles, wraps, cakes, breads and buns and soups. In India, since much gluten-free options are not available, thus clear distinction between the two categories is little difficult. However males in India most the times prefer home cooked roti made from rice or corn or cooked rice and vegetable. In snacks, chocolate cookies and plain cookies are preferred. Females also most of the times like to prepare dishes from flour and mixes. Noodles and snacks like namkeen, smosa, and biscuits are liked by females, also gluten-free desserts like cakes and pastries are demanded more by females.

Table.1 Market potential of gluten-free foods in world, India and USA

Region	Approx users of gluten-free foods	Total Potential in KiloTons
World	73466330	13000.17
India	13268015	2347.31
USA	3257269	511.89

Source: Authors own compiled data

Table.2 Gap estimation between market potential and existing market share

	Market share (KT)	Estimated value (Mn USD)	Market Potential (KT)	Estimated value (Mn USD)	Gap in potential (KT)	Gap in value (Mn USD)
World	430	4515	13000.17	136501.785	12570.17	131986.785
India	7.55	79.275	2347.31	24646.755	2339.76	24567.48
USA	205	2152.5	511.89	5374.8	306.89	3222.3

Source: Authors own compiled data

Conversion factor 1KT=10.5 Mn USD from MarketsandMarkets report, 2015

Table.3 India: Market potential and market share 2016-2020

	2016e	2017p	2018p	2019p	2020p
Market Potential	2347	2376.86	2408.14	2439.81	2471.63
Market Share	7.55656	8.372668	9.276917	10.27882	11.38894

e – Estimated; p – Projected

Source: Expert Interviews, Related Associations/Institutes, Related Research Publications, Government Publications, and MarketsandMarkets Analysis

Table.4 USA: Market potential and market share 2016-2020

	2016e	2017p	2018p	2019p	2020p
Market Potential	511.89	512.33	515.8012	519.2882	522.8066
Market Share	217.3	230.338	244.1583	258.8078	274.3362

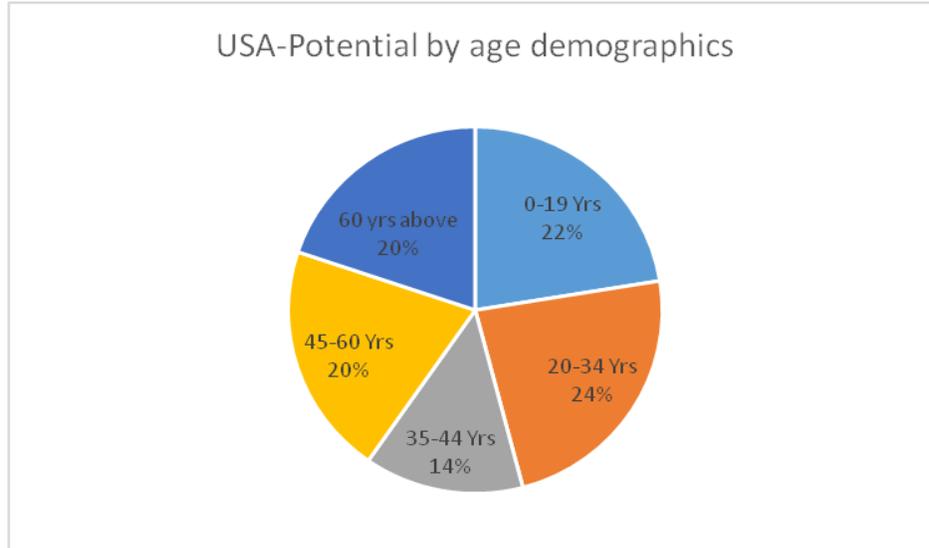
e – Estimated; p – Projected

Source: Expert Interviews, Related Associations/Institutes, Related Research Publications, Government Publications, and MarketsandMarkets Analysis

Table.5 Market potential according to gender demographics

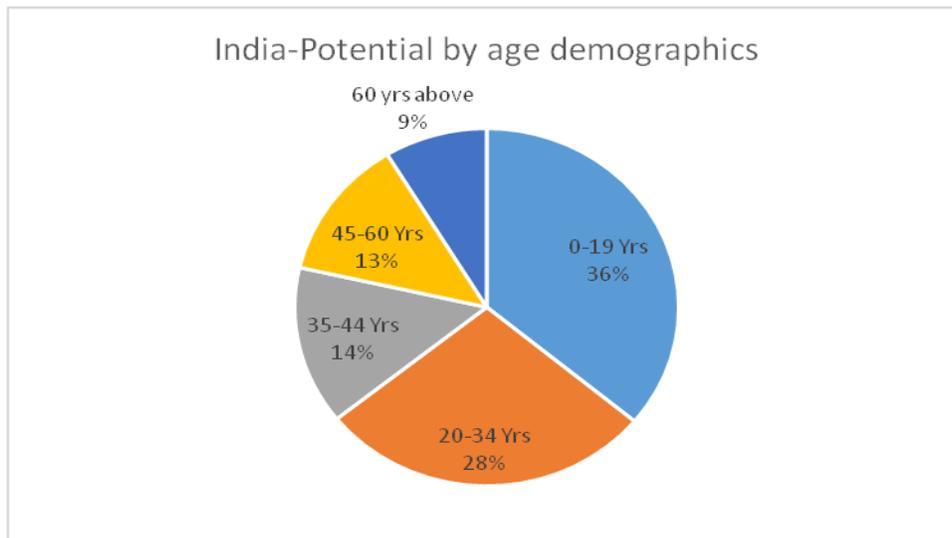
Region	Food potential of males (Kilotons)	Food potential of females (Kilotons)
World	7273.63	5726.54
India	1311.01	1036.3
USA	252.874	259.016

Fig.1 Market potential by age demographics in USA



Source: Authors own compiled data

Fig.2 Market potential by age demographics in India



Source: Authors own compiled data

Figure 1 shows market potential by age demographics in USA. As visible in pie chart that youngsters from age group of 20-34 years has maximum potential of 24% followed by teenagers and children from age group of 0-19 years. This is the reasons that the sales of gluten-free foods in USA is increasing because the young generation is more fond of gluten-free foods and likes to experiment

different variants of gluten-free foods available. It is also considered trendy amongst youngsters to consume gluten-free foods. Some youngsters buy it of manage weight or to be more energetic assuming that gluten induces sleep during working hours.

Figure 1 Shows market potential by age demographics in India. The chart shows that

the maximum potential for gluten-free foods lies in coming generation which is of 0-19 years. Major reasons are increased rate of diagnosis of celiac disease in children, after getting adult the diagnosis becomes difficult. Increased awareness about gluten-free products, increased demands of children to get more food variants of good taste compelled them to buy gluten-free products. Also the food sections like snacks, fast food and desserts has increased due to increase in demand by children. Many bakeries in India now a days offer customised snacks, cakes and cookies. Thus in coming few years the market share for gluten-free foods is expected to grow tremendously in India.

In conclusion from above we could conclude that current market share in USA is about 40% of its expected potential but in India it is only 10% of expected potential. USA has wide range of gluten-free foods but consumers are striving to get nutrients rich gluten-free products mainly through multi-grains, sea weeds and legumes. In India, gluten-free market is at niche stage. Consumers have shown high interest in snacks section and bakery section along with fortified flours and mixes. Online marketing

was very successful in both the countries. More consumers could be attracted by preparing attractive combos ad offers for increased online purchases.

References

- Anonymous. 2013. Gluten-Free Products Market by Type. *Markets and Markets*, Retrieved from <http://www.marketsandmarkets.com/Market-Reports/gluten-free-products-market-738.htm>, on 12/10/2013.
- Anonymous. 2016. Gluten Free Food Market. The Gluten-Free Agency. Retrieved from <http://thegluten-freeagency.com/gluten-free-market-trends/>, on 12/1/2017.
- Missbach. 2015. Gluten-free food database: the nutritional quality and cost of packaged gluten-free foods. *Peer J.*, 13: 1-10.
- Sharma. 2015. The big speciality food consumption opportunity. *India Retailing-Food Grocer*, 6: 1-2.
- Sheluga, D. 2014. The Truth about Gluten Free: Market Size and Consumer Behavior for Successful Business Decisions, *Ardent Mills*, 6: 14.

How to cite this article:

Jolly Masih, Amita Sharma, Ashish Sharma and Jonathan Deutsch. 2017. Study on Gap Estimation between Market Potential and Marketshare of Gluten-Free Market. *Int.J.Curr.Microbiol.App.Sci*. 6(4): 1954-1961. doi: <https://doi.org/10.20546/ijcmas.2017.604.233>