ECONOMIC ANALYSIS OF PARLE – G BISCUITS

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ROLL NUMBER: 07

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INTRODUCTION:

Biscuits are widely consumed in India, especially with the cultural influences and demographics present in the country. You would be hard pressed to find any tea stand that sells its products without biscuits and cigarettes as accompaniments. Biscuits are an extremely accessible and affordable source of nutrition and cater to the numerous economic and demographic clusters prevalent in India. This project aims to capture the consumption trends and economic aspects of biscuits, particularly Parle – G.

Parle Products company was founded in 1929 in India by the Chauhan family of Vile Parle, Bombay. They started the manufacture of biscuits in 1939 and exploded into the still nascent FMCG market in India post-independence in 1947. Unlike most of its major competitors, Parle has remained a private limited company, still run by the Chauhan family that started the company almost a 100 years ago.

Parle-G has been the face of the parle brand and arguably been a household name in our country for the better part of this past century. It is among one of the most affordable biscuits that money can buy and caters to much of the Indian population. Almost every Indian has at least heard of the brand of biscuits if not consumed the product outright. A 2011 Nielsen survey reported it is the best-selling brand of biscuits in the world. Its packaging is easily recognisable by its iconic white and yellow stripes that features a young girl. Parle also offers its products overseas in countries like the USA, the European Union, and the United Kingdom to name a few. Apart from being famous, Parle-G biscuits are extremely affordable, with packets starting at Rs.2.

The report below attempts to provide a detailed economic analysis of the economic trends that are relevant to Parle-G. The project starts by giving a brief about the product and the biscuit market in India, then delves deeper into the characteristics of Parle-G as a product. To expand on this further, data has been collected from primary sources (77 responses to a Google form) and from secondary sources to perform a more detailed analysis on the product. A section to highlight the effect of Covid on the industry and Parle-G has been included as well.

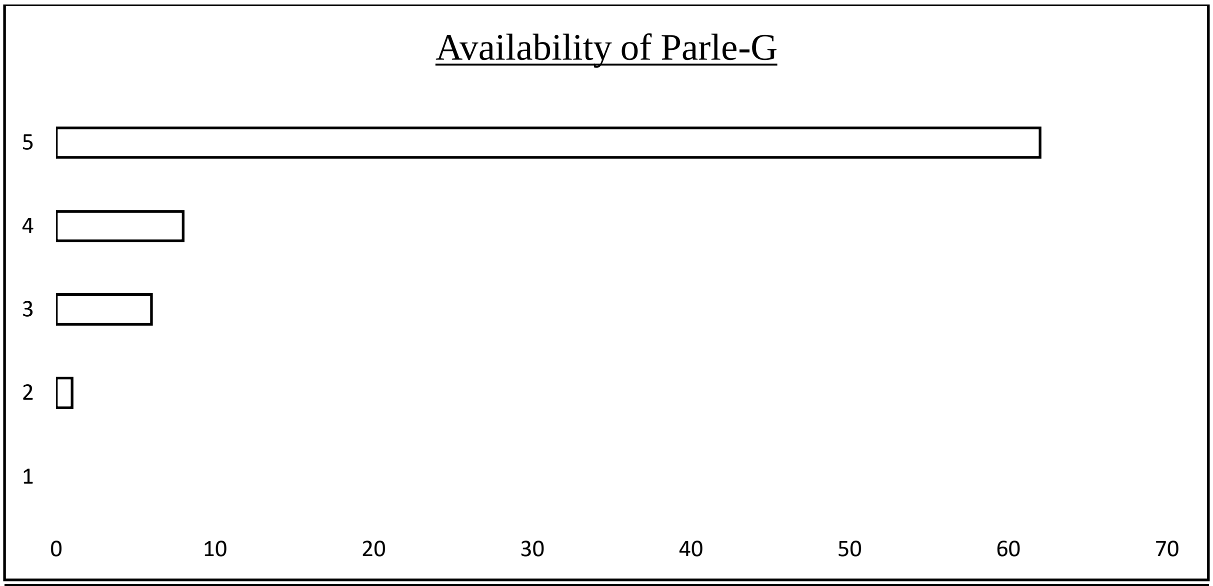
The concluded report aims to give the reader a good understanding of the product, its demand and supply characteristics and report findings in a clean and concise manner.

PRODUCT ANALYSIS:

Biscuits are primarily consumed as a snack, with tea in the mornings or evenings. The product is seen as extremely affordable and accessible to the masses. Parle-G is arguably the most famous biscuit brand in the country. It has been dubbed the best-selling brand of biscuits by Nielsen in 2011. With its trademark packaging, the Parle-G brand of biscuits requires very little to virtually zero advertising. Parle-G is sold in packets that start at Rs.2 for a pack of 7 biscuits. The major inputs required to produce glucose biscuits are wheat, sugar, milk powder and glucose.

According to my analysis, 50.6% of the people surveyed believe that biscuits are an essential good, this shows that biscuits are a great source of cheap nutrition that has good demand drivers behind it.

Parle-G biscuits are easily available with Parle having a distribution network of over 6 million distributors all over the country. Additionally, out of the people I surveyed, an overwhelming majority felt that Parle-G is easily available. The chart below shows the responses on a scale from 1 (Not accessible) to 5 (Easily Available) on the Y-axis and the number of responses on the X-axis.



Given below is a SWOT analysis of the product:

Strengths:

- Huge market and strong sales: India is the largest market for biscuits in the world and has a major market share of the biscuits segment worldwide. Parle G has the highest market share within India and is the largest sold biscuit brand in the world. It enjoys a market share of close to 80% in the glucose biscuit segment.
- Trusted brand: In 2014, Parle G was ranked the 42nd most trusted brand in India.

Weaknesses:

- Manufacturing issues: Distribution at this scale requires massive manufacturing capacity. Due to the enormous demand for Parle-G, the company faces issues with manufacturing on a regular basis.
- Regional players: Localised players seem to affect sales in remote areas

Opportunities:

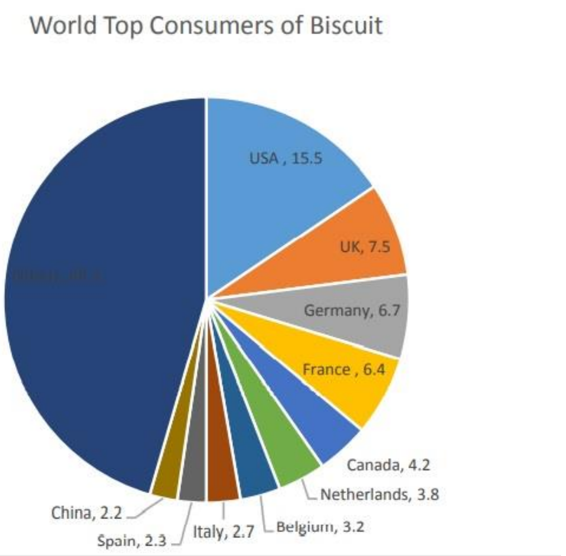
- Marketing: Given that Parle-G is such a massive brand and household name, the product itself requires little marketing. But, Parle has spent close to zilch in the marketing of the product over the past years. There is room for improvement in this regard and can improve the sales and reach in localised markets as a result.
- Tie up with schools as part of the mid-day meal program: Such a tie up could boost sales and recognition among the youth of the country.

Threats:

- Cut-throat competition: The competition in the biscuit market is intense, with brands like Britannia and ITC constantly vying for a greater market share and opportunities to dethrone Parle-G.
- Rising Costs: The major selling point of Parle-G is the low cost. However, with ever rising distribution and manufacturing costs, this advantage could be at threat.

INDUSTRY ANALYSIS

Biscuits come under the Fast-Moving Consumer Goods (FMCG) sector, and the packaged foods industry. This is a relatively crowded space as there are many brands that are already well-settled, and the industry seems to be in the mature phase of its life cycle. As of 2020, the sales volume in the Indian biscuits industry stands at $5.69 billion and is expected to grow over the coming years as market penetration increases. Additionally, 632,000 metric tons of biscuits was produced in the country in the previous year. This is an increase from the amount produced in 2019 despite the pandemic woes; this shows strong faith in the segment and the success of expansion activities undertaken by the major players in the industry. NGO’s, governmental entities and not for profit organisations provide substantial business because of tie ups to provide nutrition to the underprivileged. Under the latest GST revisions, biscuits incur a 18% tax rate. Indian companies which are one of the largest manufacturers in the world also have enormous export opportunities as countries in the EU and USA are the largest importers of biscuits in the world and have substantial population of Indians. The global market is expected to grow at a CAGR of 5% and expected to reach a value of $135 Billion by 2023.



Market Intelligence Report for Biscuit.
Available at: https://agriexchange.apeda.gov.in/Weekly_eReport/Biscuit_%20Report.pdf

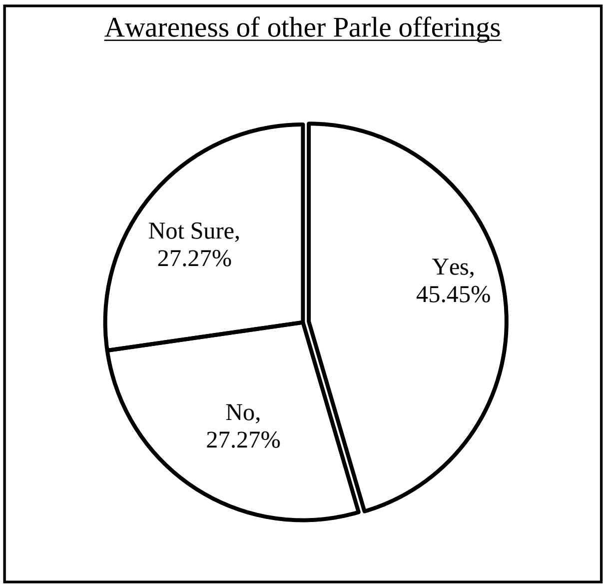
ANALYSIS OF DEMAND

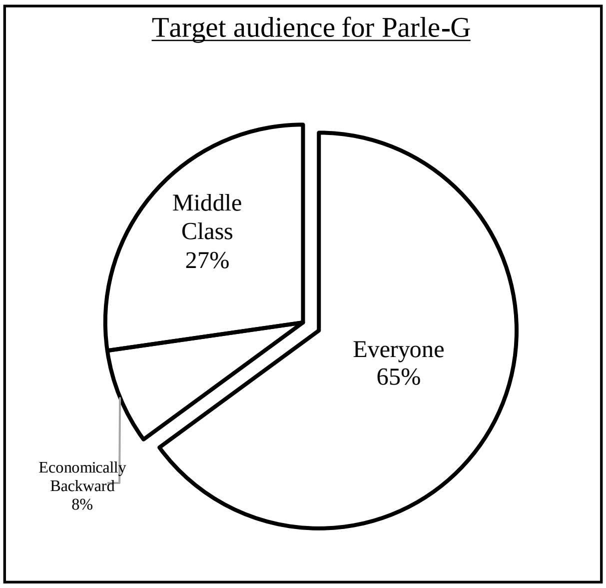
Parle-G biscuits cater to all demographics. That being said, my survey was mainly aimed at students and working professionals whose age ranges between 15 and 65, with most of the study group being in the age bracket of 35 to 65.

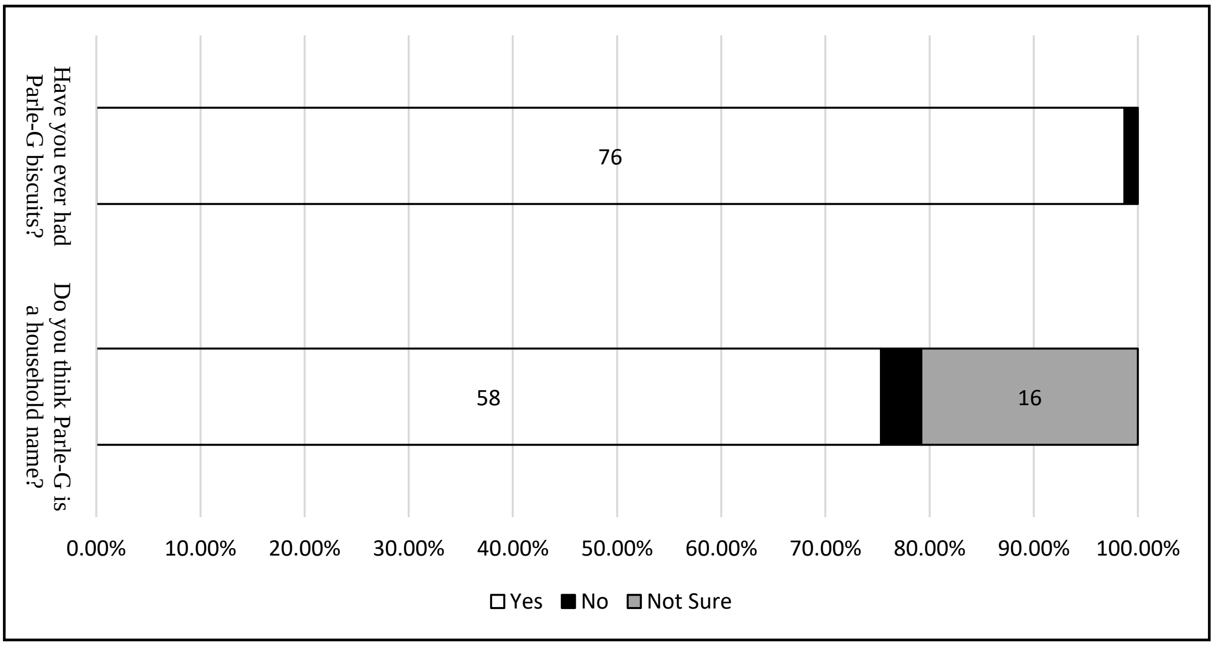
Most of the participants in the study had annual incomes that were in the excess of Rs. 10 Lakh.

Parle as a company has cemented its place in the Indian market, with 45% of respondents being aware of multiple product offerings by the company despite its meagre spending on advertising.

Many of the people believe that the biscuit is not targeted towards any specific economic class of people, however a few respondents felt that demand may be greater in the economically backward and middle classes due to its low price point and easy availability.







According to the analysis, a significant number of participants (97.8%) said that they have had Parle-G biscuits at least once and 75% believe that Parle-G is a household name. This shows immense brand reach.

Parle-G has sales of a hundred million packets of Parle-G every month, or 14,600 crore biscuits in the entire year, which adds up to 121 biscuits each for 1.21 billion Indians. These mind-boggling numbers reflect the strong demand and accessibility of the product and the level of stronghold that Parle-G has in the market. However, offerings from Britannia (Milk Bikis) and Sunfeast pose a threat to the sheer dominance over demand that Parle-G has over the glucose biscuit segment.

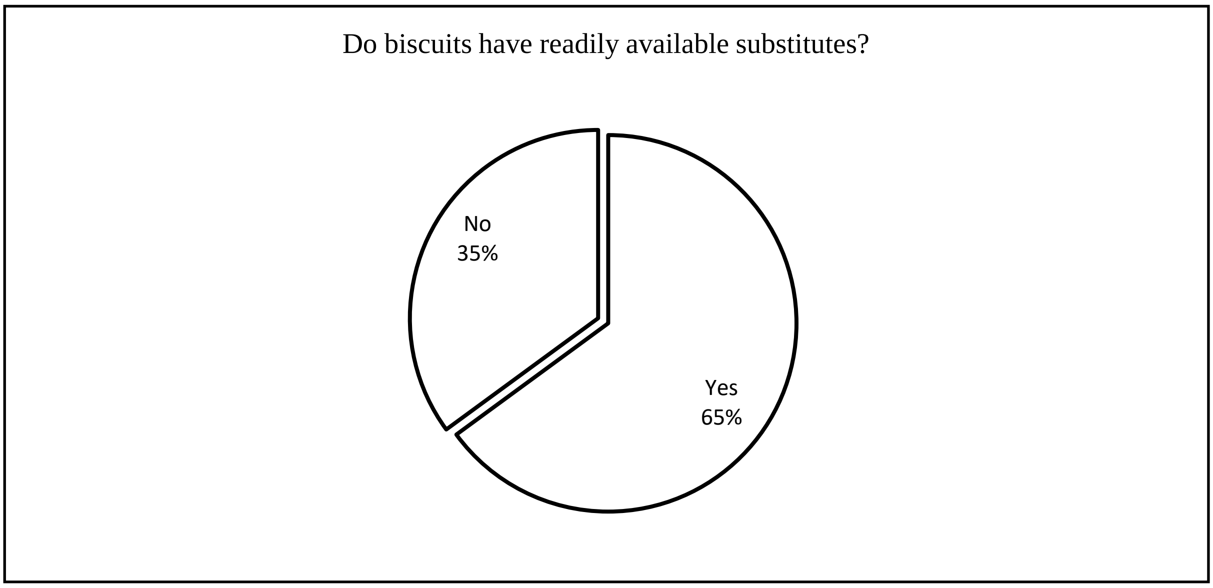
ANALYSIS OF SUPPLY

A precursor to such levels of demand and sales is a strong supply chain and distribution network that ensures products reach their consumers. Parle employs about 100,000 people including direct and contract workers spread across 10 company owned facilities and 125 contract manufacturing plants. Additionally, Parle has a strong network of over 6 million distributors and Parle-G is available in rural as well as urban areas. Regardless of the size of a grocery store, one can find Parle-G available.

Although supply numbers are not available for Parle-G because of Parle being a private company, taking numbers from Statista and FBMI we can approximate the volume of Parle-G produced every year to around 200,000 metric tons every year.

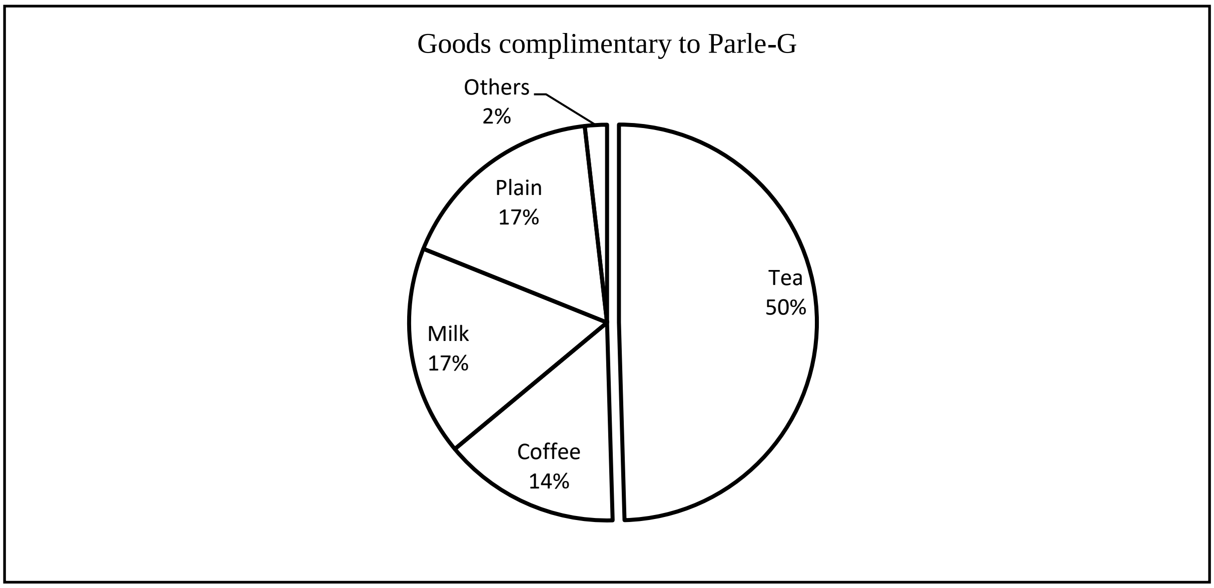
Substitute goods:

Based on the survey, respondents believe that biscuits in general have readily available substitutes. The responses to what those substitutes varied greatly, of which the most common responses were Indian snacks (like puffs and samosas), brownies/cakes and chips. As a product, glucose biscuits itself has substitute goods like cream biscuits, biscotti etc. and Parle-G has substitutes from competitors like Britannia and Sunfeast.



Complimentary goods:

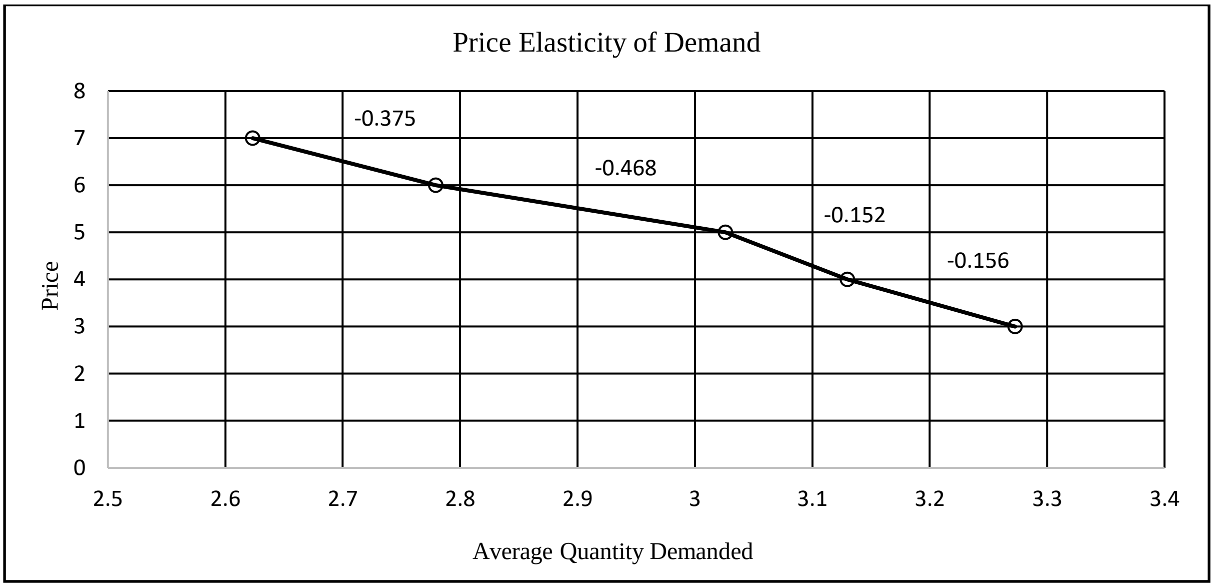
The responses to complimentary goods were not as varied as the responses received for the substitutes. Based on this analysis I was able to conclude that tea is the best compliment to Parle-G biscuits followed by coffee and milk. Given below is a chart of the responses received to the question “Which of the following do you think accompany biscuits the best?”



PRICE ELASTICITY

Demand:

Given the data that I have collected, in general we see that demand for Parle-G is inelastic. However, on more detailed evaluation of the data provided we can come to certain interesting conclusions. Firstly, from the graph, we see that as price rises, demand becomes more price elastic as expected. But the rate at which elasticity of demand changes is not constant. Between prices (3 - 4) and (4 - 5) price elasticity of demand remains virtually the same. We then see a big jump in elasticity between (5 – 6) and interestingly enough, price elasticity decreases between (6 – 7).



Supply:

Supply for Parle-G like its demand tends to be price inelastic, given the rising costs of inputs such as wheat, sugar, milk and even packaging material, the price for the biscuit has moved little from Rs. 5 for 80g to Rs.5 for 76g.

The low cost of Parle-G is what gives it a competitive advantage in the market, this is one of the major reasons behind opting out of price hikes in recent years. Unlike its competitors, Parle is a private company, this allows them to dictate their price without the worry of pleasing shareholders and single-minded pursuit of profits at the cost of quality of product and deviance from their USP.

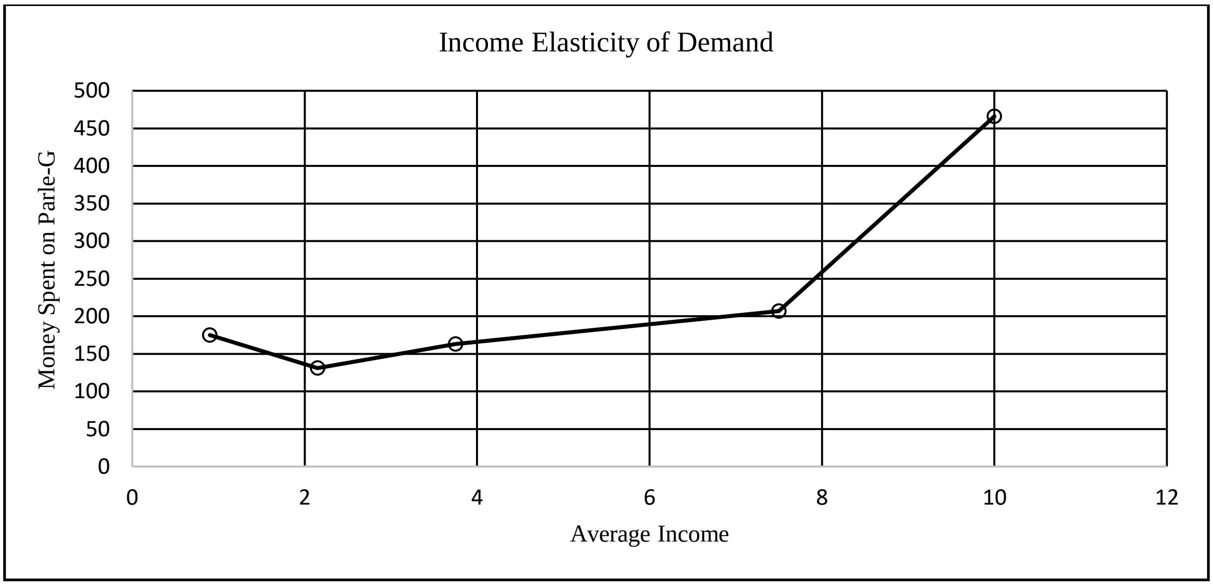
Unless there is a substantial rise in the factors underlying supply, one can expect supply for Parle-G to be price inelastic. As with any good, the supply for Parle-G is inelastic in the short run and elastic in the long run.

INCOME ELASTICITY

Given the low prices and profit margins that Parle-G operates at, demand is bound to be income inelastic. As per the data I have collected 96.1% of respondents believe that Parle-G is fairly price at Rs.5 for a packet of 12 biscuits. Furthermore, 62.3% of the surveyed believe that a change in income would not affect the consumption pattern for a person who has already been consuming the product and a further 22.1% of people are on the fence regarding the same.

Looking at the statistics, I have run a hypothesis test at the 5% level of significance to test whether the mean response to the question is significantly different from "Change in income does not change consumption pattern". Looking at the test results we get a p-value of 0.35. Hence, we have insufficient evidence to reject the null hypothesis at the 5% level and it is reasonable to assume that demand for Parle-G is income inelastic.

Despite the result, inferring from the graph below we see that demand for Parle-G is income elastic between incomes 7.5 and 10. Our hypothesis holds true between incomes ranging from zero to 7.5.



CROSS ELASTICITY

Although data regarding cross elasticity for my product is unavailable, inferring from all the analysis done above I am confident that a change in price of complimentary goods will not affect the price of Parle-G by a lot. However, in case competitors try to under-cut Parle-G we can expect Parle to retaliate. Since Parle-G already captures around 80% of the market, a decrease in demand for any of the substitutes would not affect the price of Parle-G a lot. But an increase in the price of Parle-G can cause the demand for its substitutes to go up.

REGRESSION ANALYSIS

Running a regression analysis based on collected data, with cost as the response variable and a backward selection methodology for determining the explanatory variables we see that the major factors affecting Parle-G are:

- Occupation
- Income
- Number of complimentary goods
- Number of Substitutes
- Accessibility
- Popularity

This is in line with the expected factors that affect our product to be.

IMPACT OF COVID

Contrary to expectations, the pandemic and lockdown was a boon to the Parle-G brand as sales skyrocketed to record levels. This has been pinned on the exodus of people from their working bases back to their homes and the mass stockpiling of resources that took place once the lockdowns were announced. Parle-G was an elegant solution for many as people were struggling to find food to feed their families. Parle-G sales soared and enabled Parle to increase its market share by 4.5 to 5% during the lockdown.

However, all was not rosy for our beloved biscuit brand. In order to meet such an increase in demand, manufacturing had to be racked up - quickly. Due to the health and safety restrictions put in place this was not feasible, and plants were only able to function at 60% capacity. This caused delayed deliveries to distributors and ultimately caused a shortage for the good.

Overall, the pandemic was a positive time for Parle apart from a few supply side issues. The market for glucose biscuits is expected to increase in double digits even after the easing of lockdown restrictions.

CONCLUSION

Insights:

Parle-G is a staple in the Indian society and is one of the best-selling biscuits ever manufactured. Despite the occurrence of unforeseen events, its sales have not been impacted this is a testament to how strongly the brand is cemented in the Indian market. The demand for the product is price and income inelastic, which means that a change in its price or people's incomes doesn't alter the demand for the product by much.

The company does seem to struggle at times with supply and distribution related issues as a shortage for the product exists in the market.

According to the study conducted, goods complimentary to Parle-G biscuits are mainly milk based products and it is generally consumed as a tea-time snack. The substitutes to Parle-G undoubtedly are offerings by its customers. On a broader scale, the substitutes to a glucose biscuit would be other kinds of biscuits (like Oreos, or biscotti) and substitutes to biscuits in general are primarily Indian snack offerings (like puffs and samosas), and other snack offerings.

The price of complimentary goods does not seem to affect the demand for Parle-G – it is relatively cross inelastic with its compliments. Nonetheless, I do believe that in a price and value conscious market like India an attempt by competitors to under-price their offerings might chip away the 80% market share that Parle-G currently has.

This study helped give perspective to the scale at which Parle-G operates and its subsequent dominance over the glucose biscuit segment.

Suggestions:

As has been laid out earlier, Parle-G is a dominant force in the glucose biscuit market. Having said that, there are certain issues in the supply and distribution side of things that can be ironed out to fully cement its place in the Indian biscuit industry. Despite is robust network, substantial investment would be required to overcome these issues by setting up new factories and expanding distribution networks. Furthermore, due to the rising costs of inputs, the biscuit operates on extremely thin margins. A minor price hike will do nobody any harm as it has been shown that the demand for Parle-G is price inelastic. This minute increase could bring about just enough to fund a resurgence in Parle-G advertisements that were famous during the 1980s and 90s. Apart from this, there is nothing that really stands out to me that could be improved in relation Parle-G and how the company functions.

Further Scope:

One of the major limitations that Parle-G faces is the absence of premium offerings that its competitors clearly have. Parle-G gold was an attempt to address this issue, but there was not enough marketing or advertising to sell this product to the public. This is an avenue that Parle can look at to further expand its footprint in the biscuit industry.

Additionally, data that has been collected in this study has been limited to a certain stratum of society, better more diverse data would help to ascertain facts that have been hypothesised in this study.

Bibliography

Anon., 2003. *Industry Profile.* [Online]
Available at: http://www.biscuitfederation.com/profile.html
[Accessed 24 September 2021].

Anon., no date. *APEDA AgriXchange.* [Online]
Available at: https://agriexchange.apeda.gov.in/Weekly_eReport/Biscuit_%20Report.pdf
[Accessed 24 September 2021].

Bahsin, H., 2019. *Marketing91.* [Online]
Available at: https://www.marketing91.com/swot-analysis-parle-g/
[Accessed 23 September 2021].

Bhushan, R., 2011. *The Economic Times.* [Online]
Available at: https://economictimes.indiatimes.com/industry/cons-products/food/parle-g-worlds-no-1-selling-biscuit-nielsen/articleshow/7616188.cms?from=mdr
[Accessed 23 September 2021].

Department, S. R., 2021. *India: biscuits and cookies production volume 2020.* [Online]
Available at: https://www.statista.com/statistics/762057/india-biscuits-and-cookies-production-volume/
[Accessed 24 September 2021].

Jawahar, L., 2020. *The story of Parle G biscuits.* [Online]
Available at: https://timesofindia.indiatimes.com/readersblog/jbl7/the-story-of-parle-g-biscuits-28496/
[Accessed 24 September 2021].

Mahendra, D. G., 2021. *Economic Analysis on Demand of Parle - G biscuit (Google Forms).* [Online]
Available at:
https://docs.google.com/forms/d/e/1FAIpQLSc88JaciEzOEkqM6qV6x2pKBvgq1HfuTcObHbLoTtEo6W_jCg/viewform
[Accessed 25 September 2021].

PTI, 2020. *The Hindu.* [Online]
Available at: https://www.thehindu.com/business/Industry/parle-g-logs-record-sales-during-coronavirus-lockdown/article31792506.ece
[Accessed 25 September 2021].

Purvita, C., 2018. *Parle offers smaller cookie as slowdown, input costs bite.* [Online]
Available at: https://www.thehindubusinessline.com/companies/parle-offers-smaller-cookie-as-slowdown-input-costs-bite/article20650840.ece1
[Accessed 24 September 2021].

Sachin, R., 2019. *Reuters.* [Online]
Available at: https://www.reuters.com/article/parle-products-layoffs-idINKCN1VB09Q
[Accessed 24 September 2021].

Shailesh, M., 2020. *82-year-old Parle-G books 'best sales' in Covid times.* [Online]
Available at: https://economictimes.indiatimes.com/industry/cons-products/fmcg/82-year-old-

parle-g-books-best-sales-in-covid-times/articleshow/76275237.cms?from=mdr
[Accessed 24 September 2021].

Viveat, S. P., 2020. *Business Standard.* [Online]
Available at: https://www.business-standard.com/article/companies/lockdown-2-0-parle-g-maker-bucks-trend-plants-hum-at-60-capacity-120042601093_1.html
[Accessed 25 September 2021].