

## **NUTRITION - PAPER**

### **SUMMARY**

We are what we eat. How many times have you heard that phrase? As an ageing society, we are becoming increasingly aware of the impact of food on our health and the economy.

But, if we know that eating nutritious food is so important, why do we eat so poorly?

Food is a controversial subject to debate as eating is a necessity (to subsist) but can also be a very social act. There are multiple stakeholders who have an interest in what people eat, yet policing what foods the public consumes is difficult, as anything that might impact freedom of choice would step upon fundamental individual rights.

The objective of this report is to understand the concept of nutrition. We will do so by exploring:

- Why is our diet so important?
- What factors affect how we eat?
- Which actors can help introduce changes?

We intend to use this nutrition report to guide our engagement and investment process at Montanaro Asset Management to understand the changes (opportunities and threats) that are affecting the food and beverages space. This will allow us to make better informed investment decisions.

## 1) WHY IS NUTRITION IMPORTANT?

To answer that question, first we have to understand what malnutrition is.

- According to the NHS, malnutrition occurs when a person is either not getting enough nutrients (undernutrition) or getting more nutrients than they need (overnutrition).

Malnutrition can take different forms - from diet related non-communicable diseases (e.g. diabetes, heart disease...) to weight problems (underweight or overweight) - and can appear simultaneously in one individual (e.g. a person can be overweight and have an iron deficiency).

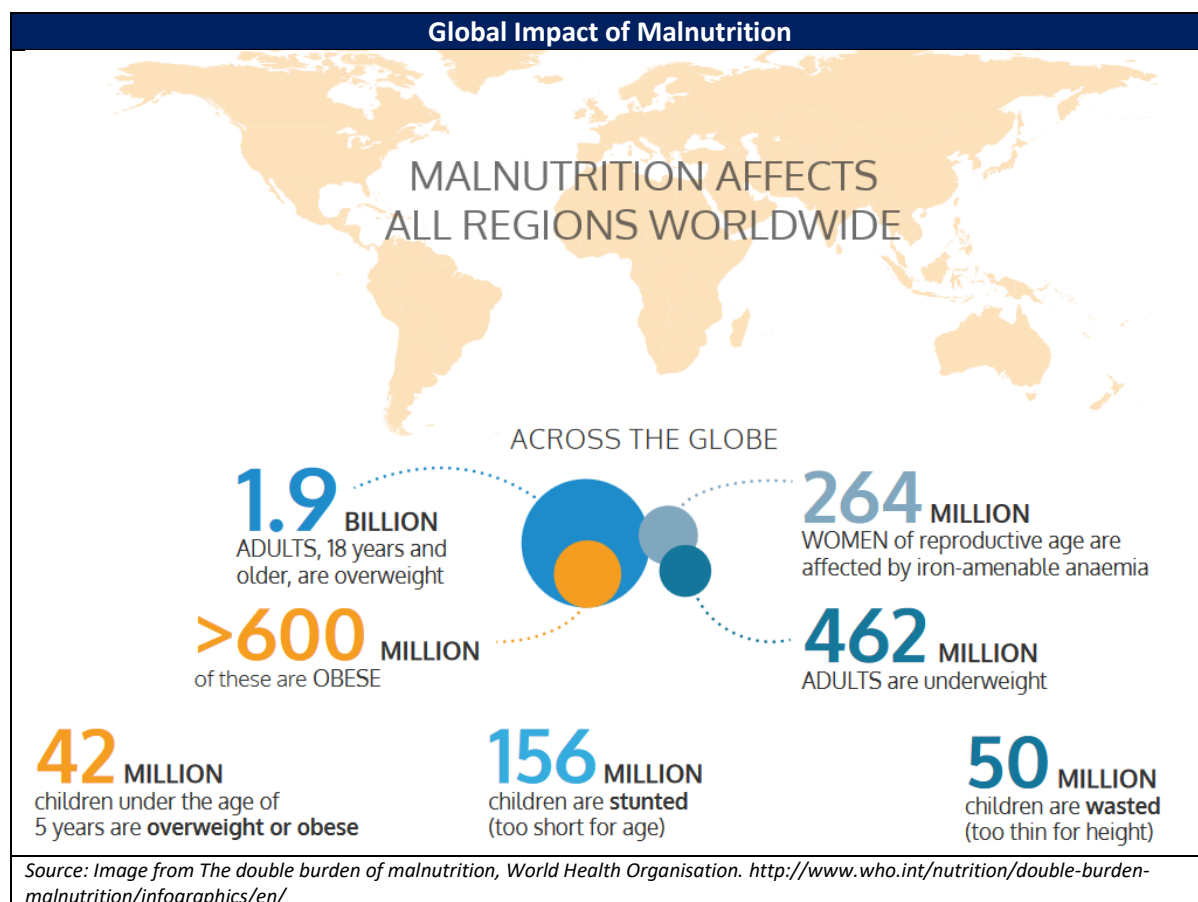
### Why should we care about malnutrition?

High profile food safety issues tend to be widely covered in the news as their effects on our health tend to be immediate, and can have economic and political implications.<sup>1</sup> We also tend to hear about food supply issues whenever war or draught threaten to break out.

Despite the lack of immediacy, we should be concerned about the long term effects of malnutrition because:

#### 1. The WHOLE WORLD is affected.

As the chart from the World Health Organisation shows, malnutrition (or poor nutrition) is a problem of global proportions, affecting people of all ages and genders, across all regions of the world.



<sup>1</sup> [http://www.who.int/nutrition/publications/Food\\_and\\_health\\_Europe%20newbasis\\_for\\_%20action.pdf](http://www.who.int/nutrition/publications/Food_and_health_Europe%20newbasis_for_%20action.pdf)

## 2. It is a major CAUSE of DEATH.

An unhealthy diet is increasingly seen as a major risk factor for the development of diseases such as cancer, diabetes and cardiovascular diseases. According to the WHO, non-communicable diseases ("NCDs") are responsible for almost 70% of deaths around the world.

### Mental health

In this note we are not discussing the link between food and mental health, but there seems to be a growing recognition of the importance of food when preventing and managing mental health problems.

According to the Mental Health Foundation, *"Nearly two thirds of those who do not report daily mental health problems eat fresh fruit or fruit juice every day, compared with less than half of those who do report daily mental health problems. This pattern is similar for fresh vegetables and salad. Those who report some level of mental health problem also eat fewer healthy foods (fresh fruit and vegetables, organic foods and meals made from scratch) and more unhealthy foods (chips and crisps, chocolate, ready meals and takeaways)"*<sup>2</sup>.

## 3. It COSTS a lot of money.

NCDs not only place our health and well-being in jeopardy, they also have a negative impact on the economy due to lower productivity in the workplace (higher costs for companies) and rising healthcare costs (higher costs for the government and ultimately the tax payer).

- *"Cardio-vascular diseases are the cause of 52% of deaths in Europe and is estimated to cost the EU economy €192 billion annually."*<sup>3</sup>
- *"The £956.7 million spend makes up 10.6 per cent of the total cost of all prescribing in primary care in England, and is almost double the cost of a decade ago, when it was £513.9 million, or 6.6 per cent of the overall spend."*<sup>4</sup>
- *"Diabetes is thought to cost the NHS about £10bn, once the cost of treatment, including amputation and hospitalisations for life-threatening hypoglycaemic attacks, is included."*<sup>5</sup>

The second step in our journey to nutrition is to understand what and how we are eating (our eating habits).

<sup>2</sup> <https://www.mentalhealth.org.uk/a-to-z/d/diet-and-mental-health>

<sup>3</sup> <http://eurohealthnet.eu/sites/eurohealthnet.eu/files/publications/EPHAC-Position-Paper.pdf>.

<sup>4</sup> <http://content.digital.nhs.uk/article/7327/Rising-cost-of-drugs-for-diabetes-approaches-1-billion-per-year>

<sup>5</sup> <https://www.theguardian.com/society/2016/aug/03/diabetes-drugs-cost-nhs-1bn-a-year-prescription>.

## 2) UNDERSTANDING WHAT WE EAT

If we want to simplistically understand the impact that a particular food<sup>6</sup> has on our health we could ask ourselves two questions:

### 1. What are we eating?

Here we are dealing with the composition of the food which determines the *nutritious quality* of the physical product. A scientist could analyse a food product and objectively give us an opinion, whether it is nutritiously good or bad. It is highly unlikely that Buddy the Elf's food categories (candy, candy canes, candy corns and syrup)<sup>7</sup> would make it into the list of nutritious foods for humans.

- What type of ingredients does it contain? Ingredients that are currently under scrutiny by public health agencies include salt, sugar, artificial colours, preservatives and saturated fats. There is also growing concern about traces of pesticides in agricultural produce.
- In what proportion are ingredients included in the recipe? What is the impact (on the human body) of consuming a mix of certain ingredients? Some products can be consumed unprocessed (e.g. an apple) but processed food can have an ingredient list that fluctuates in length. Usually the first product in the list is the one contained in the largest quantity.

We compared two flavour varieties of the same brand of crisps and we were surprised by the list of ingredients needed to add black pepper flavour to a bag of potato crisps.



<sup>6</sup> Note that we will use food indistinctively to denote food or drink throughout the paper.

<sup>7</sup> Elf. Dir. Favreau, J. New Line Cinema. 2003.

<sup>8</sup> All images from Montanaro.

## 2. How much are we eating?

It is not enough to eat food that is objectively nutritious. Eating a certain food can provide pleasure, become a ritual, and in some cases an addiction. Even if the ingredients of the product are considered healthy, excessive consumption will lead to significant calorie accumulation.

The *quantity* of food that we eat during a meal and *how often* we eat it, can be impacted by different types of variables that we have divided into three buckets:

### i) Accessibility

- Availability of products. This could be affected by a country's food production self-sufficiency rate, its distribution and storage facilities, international trade deals and tariffs, as well as more extraordinary events such as natural disasters, social conflicts and war.

Convenience has been a huge trend in the last years, and in some countries food has become ubiquitous with the explosive growth of the snacking and food delivery sectors. In London, we can just pop into Tesco at any time or use mobile phones to order food delivery directly to our doorstep. However, this is not the case everywhere in the world.

#### **Mexico and water**

Mexico is one of the most valuable bottled water markets in the world, as people don't usually drink tap water. This mistrust of tap water could be derived from the cholera outbreaks of the 1990s which led people to drink safe bottled water.<sup>9</sup> Mexico was ranked 106<sup>th</sup> out of 122 countries by the UN Development Programme in terms of drinking water quality in 2010.

Although potable (tap) water may not be available in all of Mexico, it seems that the delivery network of soft drinks does reach many parts of the country.<sup>10</sup> There have been reports linking Mexico's high levels of childhood obesity with their love for sugary soft drinks.<sup>11</sup>

- Purchasing power. According to a 2008 study by Darmon and Drewnowski, individuals from a higher socioeconomic status tend to have a higher micronutrient intake and overall diet quality (lower calorie density, higher vitamins and minerals) due to the consumption of foods such as wholegrains, fresh vegetables and fruit, lean meats and fish.<sup>12</sup> Furthermore, during recessions consumers tend to choose comfort foods like biscuits.<sup>13</sup>
- Portion size. Attitudes about what constitutes a regular portion size vary between countries. E.g. A regular fruit juice in the US is likely to be larger than one purchased in France.

<sup>9</sup> <https://www.forbes.com/sites/ivancastano/2012/02/22/mexicos-water-war/2/#42a8c01f2603>

<sup>10</sup> <https://www.theguardian.com/global-development/2015/oct/19/mexico-soda-tax-cut-pop-fizzy-drinks>

<sup>11</sup> <http://www.bbc.co.uk/news/magazine-35461270>

<sup>12</sup> <http://ajcn.nutrition.org/content/87/5/1107.long>

<sup>13</sup> <http://www.telegraph.co.uk/foodanddrink/foodanddrinknews/8520274/Biscuit-sales-soar-as-recession-drives-people-to-comfort-food.html>

## ii) Product appeal

- **Palatability.** Why do some foods only give us a transient feeling of fullness? Are you more likely to feel like you want a second helping of a donut (a mixture of fat, carbohydrates and lots of sugar) or a salad (higher water content)? According to a 2008 study by Darmon and Drewnowski foods that are energy dense tend to have higher palatability.<sup>14</sup>

Sugar is one of the ingredients that is currently under scrutiny due to its suspected addictive properties. An article in the British Journal of Sports Medicine states that: *“Animal data has shown significant overlap between the consumption of added sugars and drug-like effects, including bingeing, craving, tolerance, withdrawal, cross-sensitisation, cross-tolerance, cross-dependence, reward and opioid effects.”*<sup>15</sup>

Could this have anything to do with our bodies being still wired to the life of the hunter-gatherers? Our ancestors had to forage food or hunt it, and when they encountered a calorie rich meal their brain would be primed to make them eat as much as possible, because they didn't know when they were going to eat their next meal. Are we primed to eat lots of calorie rich foods?

- **Marketing.** Staying top of mind is crucial for consumer companies as customers tend to pay a premium for brands that they associate positively with. Some companies have also used marketing to introduce health claims that are sometimes not backed by science.

### **Targeting children and teenagers with marketing**

Children and teenagers are the most targeted age groups in marketing. This is due to their purchasing influence (parents buy for the whole household), spending power and longevity as a consumer (one day they will become adults).<sup>16</sup>

Children start requesting things at an early age, specifically when they get to two years old. A child's first store visit tends to be a supermarket, with the most requested item being cereals, followed by snacks and toys.<sup>17</sup>

### **Food retail promotions in the UK**

Price promotions increase the amount of food and drink people buy by around one-fifth.<sup>18</sup> Food retail price promotions are more widespread in Britain than anywhere else in Europe, with foods on promotion accounting for around 40% of all expenditure on food and drinks consumed at home. Note that higher sugar products are promoted more than other foods.

- **Labelling.** Front of pack labelling is an accessible reminder for consumers of the nutritional profile of a product. Systems like traffic lights per portion size (e.g. in the UK) provide a quick visual

<sup>14</sup> <http://ajcn.nutrition.org/content/87/5/1107.long>

<sup>15</sup> DiNicolantonio JJ, O'Keefe JH, Wilson WL. Sugar addiction: is it real? A narrative review. Br J Sports Med. Published Online First: 23 August 2017. doi: 10.1136/bjsports-2017-097971

<sup>16</sup> <https://ijbnpa.biomedcentral.com/articles/10.1186/1479-5868-1-3>

<sup>17</sup> Source: 28. McNeal J: The Kids Market: Myth and Realities. 1999, Ithaca, NY, Paramount Market Publishing

<sup>18</sup> [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/470179/Sugar\\_reduction\\_The\\_evidence\\_for\\_action.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/470179/Sugar_reduction_The_evidence_for_action.pdf)

snapshot. Back of pack labelling tends to be more regulated, and thus gives more details, but few consumers have the time to read through a chart and make calculations.

Consumers look out for different things in each product: low salt, calories or sugar, but not all food products in the UK come with traffic lights.

See below for an example of products sold in UK supermarkets with and without traffic lights.



### iii) Consumer Behaviour

In addition, we have to bear in mind that consumers have their own personal circumstances, values and habits that shape their eating habits. This is the behavioural part of the eating decision but generally we don't think too much about its long term effects on our body because:

- Eating is an everyday decision (frequent)
- We tend to know what we like so there is a lot of repetition (habit)
- It is not an expensive decision like buying a house (low cost)
- There are usually no obvious immediate effects (excluding for people with allergies or intolerances)

<sup>19</sup> Pictures by Montanaro. Traffic lights and back of pack labelling.



## Why are habits important?

Humans are creatures of habits. A new habit can take anywhere from two to eight months to form.<sup>20</sup> That means that things can change in less than a year, and we can sometimes take a relatively new phenomenon as something that has been there for many years and not question it.

We think that out of the factors discussed in the previous section, there are three that stand out for me in terms of having a large impact on the development of our eating habits:

**Marketing.** What does Santa look like? Did an image of a jolly plump man in the red velvet suit and hat form in your head?

Previous incarnations of Santa Claus (St. Nicholas) saw him wearing green, red and white suit, and coming in different shapes and sizes, and not always looking happy.

In 1931 Coca-Cola introduced an ad of a friendly image of a Santa in a red suit (same colour as the brand) holding a Coca-Cola bottle. This image was created by Haddon Sundblom, who would later create until 1964 holiday ads for Coca-Cola featuring the red suited Santa that would be displayed around the world.<sup>21</sup>

So, although Coca-Cola might not have created the red suited Santa, their powerful global reach helped popularise and cement in the minds of consumers around the globe the image of the Coca-Cola Santa as the traditional Santa.



*Image source: Pixabay.*

How many things that we see as standard or tradition are the product of well-run marketing campaigns?

<sup>20</sup> [https://www.huffingtonpost.com/james-clear/forming-new-habits\\_b\\_5104807.html](https://www.huffingtonpost.com/james-clear/forming-new-habits_b_5104807.html)

<sup>21</sup> <http://www.coca-colacompany.com/stories/did-coke-create>



**Availability.** Lowering of trade barriers, a more connected society and improved supply chains have had a tremendous influence on the availability of food available to our modern society. Introduction of new food products has been a constant trend throughout history: potatoes, tomatoes and chocolate did not arrive in Europe, from the Americas, until the sixteenth century.

These changes have also happened more recently. For example, the UK is not self-sufficient in a large number of food items, yet you can find olive oil in practically any supermarket. This was not the case before the millennium when the aisle at the local grocery store was stocked up with sunflower and other vegetable oils. Getting a bottle of olive oil often required a trip to a delicatessen or a Mediterranean specialty shop.

How about other products like avocado or mangos that are imported from farther away and we now consume all year round?

**Affordability.** Can't seem to find any products that are free of added sugars? Centuries ago sugar was seen as a luxury item, yet today we find it inside many processed foods as it has become so affordable. The lowering of the price of sugar has been aided by the development of:

- The sugar beet industry in the 19<sup>th</sup> century. This meant that sugar could be produced outside the Tropics as it could be extracted from beets grown in temperate climates instead of sugarcane, and
- Technology. Improvements in sugar refining meant that by the 1920s sugar refineries were producing in a single day what would have taken a decade in the 1820s.<sup>22</sup>

How many things do we take as standard that have a relatively new history? Humans are primed to evolve and adapt to new habits but once we gain a new habit we also stick with them, especially if it is a repetitive action with few short term consequences.

However, the fact that we can change our habits and have done so repeatedly throughout history, gives us hope that our eating habits can change, for the better.

So, who can help us make those changes?

---

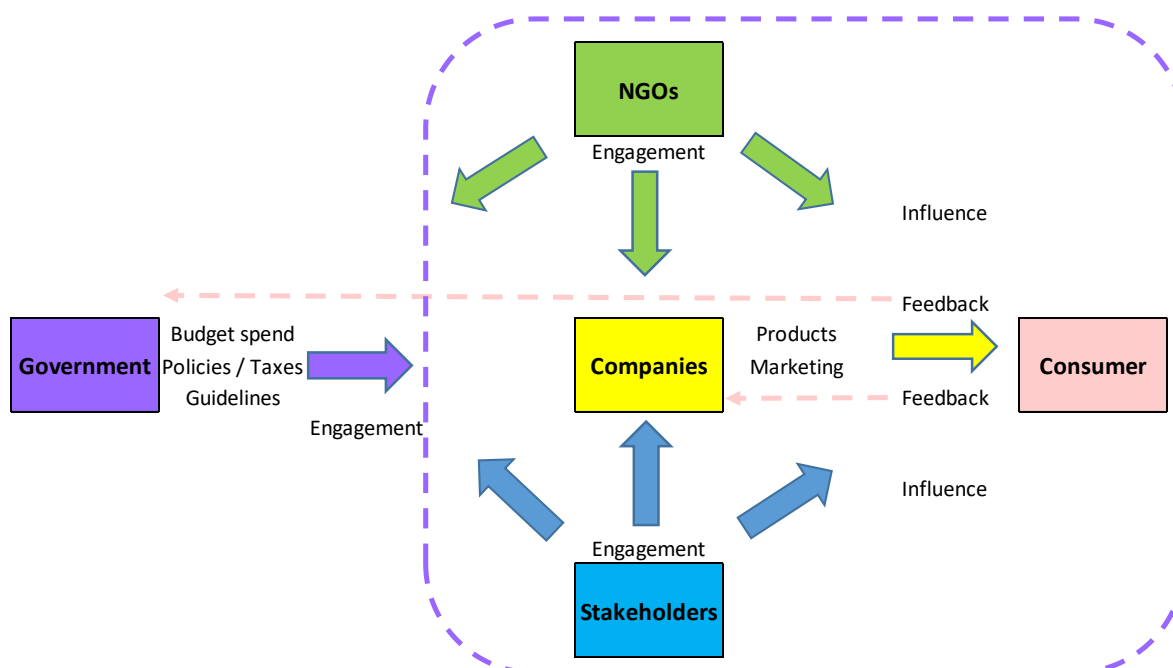
<sup>22</sup> Taubes, Gary. The case against sugar. London: Portobello Books, 2016. Print.

### 3. WHO CAN HELP MAKE A CHANGE?

If we want to make a change and improve our nutritional habits, who are the agents best placed in our society to make the maximum impact?

A variety of stakeholders (industry, NGOs, government, social media, etc.) interact with each other and end up influencing the eating habits of a nation. All are important because they either produce the products that we eat, promote certain ideas about nutrition and lifestyle, or have an economic interest.

All players have biases and non-negotiables which makes engaging between all parties essential (including the foodservice sector which tends to be very fragmented), especially if we want to find common ground to introduce policies that have the greatest degree of acceptance across all levels of society.



Source: Picture from Montanaro.

When assessing these players we should ask the following questions:

- What are their interests? Are they aligned with the health of the consumer?
- What tools do they have available to implement change? How powerful are they?

#### The government

If we had to pick just one agent to lead the charge and engage with other players, we would choose the government. Even, despite the drawback of the temporary nature of administrations.

There are three reasons why we think that the government can lead the change:

- **Holistic view of society.** The government has a rounded view of a country's resources, the wants and needs of stakeholders and the public. Governments can allocate and coordinate resources across departments such as healthcare, agriculture and education, making sure that there are certain common goals across them. They can also liaise with other governments around the world to share best practice.

- 
- **Executive powers.** Mandatory policies introduced by parliament would have a direct impact across industries. Every single business operating in that country would have to comply or they could face a penalty. This would force the hand of consumers who find their choices restricted.
    - Mandatory targets. During our conversations with stakeholders, mandatory targets (for product composition and marketing) seemed to be the preferred course of action, as they are seen as levelling the playing field for all players. Note that in the UK, the government has used voluntary targets to reduce salt content in food.
    - Fiscal policy. Governments can tax an unhealthy product but also provide subsidies for healthy foods, which are generally more expensive. Do fat taxes have a higher negative impact on the lower socioeconomic parts of the population? Are meat taxes next on the agenda?
  - **Duty to serve society.** A democratically elected government has a duty to serve in the best interests of its country. In sickness and in health. Governments across Europe are incentivised to take preventative measures to minimise the ballooning costs of a less healthy society suffering from non-communicable diseases developed as a result of years of poor nourishment. Are any other players going to pick up the healthcare bill?

## What about the other stakeholders?

All actors play an important part in shaping the nutrition of a society but some have a more limited influence on society or are ruled by more specific interests that don't necessarily align with the consumer.

### Industry

Do companies have a legal duty to protect people's health?

When was the last time you harvested some onions? Today we rarely produce the food that we will consume. Industry has a massive impact on our diets, not only through the products and services they provide but also through the marketing tactics employed that get us to overeat certain foods. These for profit organisations are focused on maximising returns for their owners.

However, due to growing demand from consumers for healthy products, companies focused on health and wellness are outpacing the growth of the market. There is a clear incentive for companies to move into the Health & Wellness space.

So, why don't all companies make the switch and sell a healthier version of their products?

- **Costs** are a major detractor, including extensive changes to fundamental business processes, from product reformulation to supply chain redesign.
- **Consumer preferences.** Can you find Coca-Cola Life in your local shop? A healthier version of a flagship product can be a total flop if consumers don't like it.

- **Geographic organisation.** Some multinationals make decisions on a regional basis, grouping various countries. Will these corporations act straightaway when one country announces voluntary plans to reduce sugar in children's cereal by 20%?

Why are Tony the Tiger's Frosties now an adult cereal? (See appendix)

## Non-Governmental Organisations (NGOs)

There are multiple organisations that are not for profit and operate independently from any governments - some take the form of charities - that look into different aspects of nutrition (e.g. obesity, diabetes, etc.).

These organisation are funded by private donations, which could sometimes lead to conflicts of interest.

Which company was behind the now defunct Energy Balance Network NGO? (See appendix)

## Other Stakeholders

There are multiple other stakeholders. Here we are just going to touch upon two of them:

### Social Media

Have you escaped the sight of a bright green kale, spinach, avocado smoothie sprinkled with super-seeds that promises to clean your gut and restore your energy levels?

Although some wellness bloggers endorse certain products for a fee, this type of marketing is seen as more genuine as the recommendation doesn't come straight from the mouth of a big corporation but from a person who connects on a personal level with their followers and embraces a healthy lifestyle.

Some wellness gurus may be experts in their fields, but not everyone who pontificates about the healing power of food is minimally qualified to do so.

Why was Belle accused of being a fake?<sup>23</sup> (See appendix)

### Investors

Over time, society has placed more importance on Environmental, Social, and Governance factors. This has influenced investors who have incorporated these "ESG" factors into investment processes. One way this has manifested itself is through greater engagement with investee companies in order to better understand how these businesses are run.

As long term quality investors, what can we do about nutrition at Montanaro?<sup>24</sup>

<sup>23</sup> <https://www.bbc.co.uk/news/world-australia-41423491>.

<sup>24</sup> If you turn to the appendix, you can read further in-depth commentary about the different stakeholders and how they work, including some thoughts about the supply chain.

## 4. WHAT CAN WE DO AT MONTANARO?

At Montanaro Environmental, Social and Governance (“ESG”) factors play a fundamental role in our assessment of a company’s “Quality”. ESG analysis is imbedded within our fundamental company analysis. ESG checklists – completed by our analysts - feed into our models, helping us to identify ESG Leaders and those companies who need to improve aspects of their ESG profile.

In cases where a problem is identified, our philosophy is to engage with the company to better understand the issue and then support and monitor the company’s progress towards improvement.

A further step in our commitment to ESG is the launch of the Montanaro Better World Fund. The Fund will invest in companies whose products or services are helping to solve some of the major problems facing the world by supporting the United Nations Sustainable Development Goals. We have identified six themes which align with the UN Goals. Three of these have a direct link to food and healthy eating: Healthcare; Well-being; and Nutrition.

### What is next for nutrition?

This “learn, engage, and monitor” philosophy can be applied to the topic of nutrition. We think that by becoming better informed shareholders, we can ask better questions to examine the practises of corporations and nudge them towards better nutritional practices.

This involves two steps:

#### 1. Understand nutrition (and the influencers)

With this report on nutrition we have taken the first step to deepen our knowledge on nutrition (given that we don’t hold a nutrition degree or have a scientific background).

- So far, we have spoken with members across the stakeholders including members of the UK government (from Public Health England), charitable societies such as Which? and Action on Salt.
- These interviews have mainly helped us form an idea of how different stakeholders engage and the challenges they face.

#### 2. Understand the companies we invest in

As investment managers with minority shareholdings, we have some influence in the companies that we invest in. When meeting the consumer companies that we invest in, we could use the table below to flag malnutrition related issues, monitor their progress, and decide where we need further topic specific engagement.

Company	Issue	Target	Progress
Company name	Product [cereals]	E.g. Reduce sugar in cereals by 20% by 2020	Started reformulation process and launching new product next year.
	Marketing	Products aimed at young adults.	

---

As a guide to fill the table we could return to the two questions we raised at the beginning of this paper when we were trying to understand how we eat:

**What are we eating?**

- What products do they sell? Do any of their products have any certified improvements in nutritional value?
- Are any of the first three ingredients listed are controversial?
- What are they doing in relation to government or WHO (voluntary) targets?

At this stage, we wouldn't formulate a strict nutrition policy or ban any products as many European consumer companies are currently immersed in product reformulations to reduce artificial ingredients, reduce sugar, salt and calories. We don't propose to track the percentage of sales from a specific product, as some products are consumed very sporadically.
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

**How often are we eating?**

- What type of marketing policies do they employ?
- Are any of their products specifically targeting children?

This is a continuous cycle. At Montanaro, we will continue engaging both with experts and our investee companies to build our knowledge of nutrition and help influence decisions that can take us a step closer to eradicating malnutrition.



---

## 5. CONCLUSION

Malnutrition is costing humans around the world a healthy and more prosperous future. We can't close our eyes to it, as its side effects will be painfully felt in our aching bodies later in life, when we are at our most vulnerable. We have to wake up to the importance of nutrition, even if we only start by making more conscious personal choices.

With this report we have aimed to expand our knowledge of nutrition and the main influencers. In my opinion, governments are the actors with the greatest ability to lead change due to their ability to engage with stakeholders across different industries, their executive powers to introduce compulsory nutritional targets and their rounded view of a country from its resources to its growing healthcare bill.

Yet we acknowledge that nutrition is still an incredibly complex topic to tackle due to:

- Tasty immediacy versus long term health. If a food tastes so good, why is it so bad for my health in the long term?
- Information and education. Do we really understand what we eat, and how often we should eat?
- Resources are constrained. Doing a statistically significant study is lengthy and costly. How do you avoid conflicts of interest regarding the funding?
- Coordination and engagement amongst stakeholders with different agendas is vital to ensure successful adoption of changes.
- Freewill. We live in a democratic society that has to respect consumers' choices and preferences.

### What about Montanaro?

At Montanaro, we invest in small and mid-sized companies who tend to have limited reach and resources. As such, we recognise that our impact is limited compared to big corporations. Small as though our role may be, we still want to contribute to this topic.

ESG has been an integral part of our investment process for years, and in 2016, we put a bigger spotlight on malnutrition when we engaged with Professor MacGregor from Action on Salt. Since then our engagement with experts and companies has steadily grown, and will continue in the future. Today nutrition is a fundamental screening tool when researching consumer investment ideas, especially for the Montanaro Better World Fund.

## APPENDIX. WHO CAN HELP MAKE A CHANGE?

If we want to make a change and improve the nutritional habits, who are the agents that are best placed in our society to implement this change?

### i) THE GOVERNMENT

In my view, the government is probably the agent whose actions can have the largest impact on society. Any regulations or policies introduced by parliament have industry wide impact - every single business that operates in that country would have to comply. Depending on the country, some have government agencies to provide research, engage with other stakeholders, support their message, or even have executive powers to act and punish businesses that don't comply.

The main downside of the government of a democratic country is their temporary nature. In European countries elections tend to happen every four to five years. Changes in administration can affect policies, as political parties favour different approaches, so some of projects might never get to a conclusion, or be scrapped when a new administration comes in.

However, the greater awareness by consumers of the importance of nutrition is being reflected on political parties. Victoria Targett from Public Health England agreed that she saw different political parties in the UK acknowledging the growing importance of nutrition and its impact on public health.

To promote this goal, the government can use a series of tools including:

#### 1. Industry wide regulation.

During our conversations with stakeholders including charities, food and beverage manufacturers, food retailers and foodservice companies, mandatory targets (for product composition and marketing) seemed to be the preferred course of action, as it was seen as levelling the playing field for all actors.<sup>25</sup>

In 2007, France introduced health guidelines that must run inside every ad (TV, print, online, radio, etc.) from a food or beverage company.<sup>26</sup>

This strategy also has its risks. During our meeting with Sue Davis, the head of Strategic Policy Adviser at Which?, she voiced her concern of how the impending Brexit process could have an impact on food safety regulations in the UK, which are currently aligned with the EU, or how attention on nutrition could move away from "essential" to "nice to have".

Currently there is a lot of uncertainty and media speculation surrounding Brexit and its impact on the agriculture and food sectors in the UK. We probably won't know until closer to March 2019, when Britain is scheduled to leave the EU, the outcome of the following issues which could have a direct impact on UK food standards and product availability:

- Subsidies. UK farmers depend on subsidies to be profitable which have been funded by the Common Agricultural Policy ("CAP"). Will the UK government substitute the funding that came

<sup>25</sup> Note: We also emailed Dr. Sarah Wollaston MP, the Chair of the Health Committee to ask for a meeting to get some understanding about how the government works with these issues, but her office responded saying she doesn't give out interviews.

<sup>26</sup> [http://www.nbcnews.com/id/17402161/ns/health-diet\\_and\\_nutrition/t/french-cracking-down-junk-food-ads/](http://www.nbcnews.com/id/17402161/ns/health-diet_and_nutrition/t/french-cracking-down-junk-food-ads/).

from the EU or will they change the amount of subsidies and the conditions attached, favouring certain crops or types of agriculture over another?

- **Imports.** The US and the UK are trying to agree on a trade deal. Given that US food standards are viewed as lower than the EU, the fear is that it could see the entry into the UK of products such as chlorinated chicken or genetically modified crops.

## 2. Fiscal policy: Taxes and Subsidies.

Taxing an unhealthy product is becoming increasingly popular around the world. The rationale is that higher taxes discourage consumer consumption by raising product prices while providing an additional source of funding for the treasury. On the other hand, governments can also provide subsidies for healthy foods, which are generally more expensive.

### **Sugar Taxes around the World**

Following the introduction of the sugar tax in Mexico in 2014 (where 14% of adults have diabetes)<sup>27</sup>, the country has seen a drop of 5.5% in sugary soft drinks sales in the first year, and a further 9.7% the following year.<sup>28</sup>

France is updating their initial soda tax which was introduced in 2013 and taxed €7.5 per 100 litres. The new initiative adds a sliding scale that could see sugary drinks with over 11g of sugar per 100 ml taxed at €20 per 100 litres. Is this because the initial tax hasn't worked?

Using fiscal policy is not without drawbacks:

- **Implementation can be tricky**, especially when determining the reach of the taxes across subsectors. Should sugar be taxed at source? Should both food and beverages be taxed? Finland's confectionary excise tax will be abolished as it was seen as favouring biscuits and puddings vs. candies and chocolates.<sup>29</sup>
- **Taxing the poor.** Some people argue that fat taxes can have a higher negative impact on the lower socioeconomic parts of the population. According to Engel's law as income rises the proportion spent on food drops.

A recent study done in France showed that fiscal policies tend to favour higher income consumers, as unhealthy food taxes increased prices paid more for lower income women, but subsidies for healthy food reduce prices more for higher income women. Reasons cited in the study were that the diets of the high income women were healthier and during the study their choices were more responsive to price changes.<sup>30</sup>

<sup>27</sup> <http://edition.cnn.com/2016/11/01/health/soda-tax-benefits-mexico/index.html>

<sup>28</sup> <https://www.theguardian.com/society/2017/feb/22/mexico-sugar-tax-lower-consumption-second-year-running>.

<sup>29</sup> <http://www.confectionerynews.com/Regulation-Safety/Confectionery-taxes-doomed-to-fail-in-EU-after-Finland-ruling>

<sup>30</sup> Muller, L., Lacroix, A., Lusk, J. L. and Ruffieux, B. (2017), Distributional Impacts of Fat Taxes and Thin Subsidies. The Economic Journal, 127: 2066–2092. doi: 10.1111/eoj.12357

### 3. Budget allocation.

Governments also have a holistic view of the economy and can use the national budget to allocate resources to fund healthcare services, nutritional education, agriculture, school meals, etc.

Coordination between different government departments is vital. According to the WHO, “Discordant agricultural, industrial and food policies can harm health, the environment and the economy, but harmful effects can be reduced and health promoted if all sectors are aware of the policy options.”

A study done across 24 countries found huge disparities between the percentage of budgets allocated to nutrition (from 0.01% to over 7%) and allocations per capita (10 cents to \$57 per capita).<sup>31</sup>

### 4. Voluntary Programmes

In recent years, the UK government has used the voluntary approach of publishing targets of ingredient content to achieve with a certain food. The targets are developed and agreed by the four UK administrations who engage with industry, NGOs and stakeholders.<sup>32</sup>

Recent initiatives have focused on reduction the amount of:

- **Salt.** The initial targets were established in 2012 and covered 80 food categories. Since its implementation 11 million kg of salt have been removed from foods but average salt consumption of 8.1-8.8 g/day is still above the recommended 6g daily intake, which came out of the 2003 report on Salt and Health published by the Scientific Committee on Nutrition (“SACN”). As a result the salt targets were reviewed and updated in 2014 with a deadline to be achieved by 2017.

#### How long until...?



These processes take a long time, between engagement with stakeholders, industry, NOGs, public consultations, development of models, technical difficulties in product reformulation and monitoring of compliance.

The Salt and Health report was published in 2003, in 2005 the Food Standards Agency published the FSA Strategic Plan 2005-2010 to reduce the UK population’s average salt intake to 6g per day by 2010, and four sets of targets have been published (2006, 2009, 2011 and 2014). Progress has been made and there has been a gradual reduction of salt content in food but by the end of 2017 the maximum 6g daily target has not been achieved.

- **Sugar.** Fuelled by the widespread adoption of the salt reduction targets, the UK government launched another initiative focusing on sugar reduction that extended to all sectors.

Image from Pixabay.

<sup>31</sup> <http://docs.scalingupnutrition.org/wp-content/uploads/2016/04/MQSUN-Report-Nutrition-sensitive-Allocations-160311.pdf>

<sup>32</sup> <https://www.food.gov.uk/northern-ireland/nutritionni/salt-ni/salt-targets>

Childhood obesity: a plan for action was published in 2016 and aims to “reduce the amount of sugar in the foods that contribute most to children’s intakes by 20% by 2020, with a 5% reduction in the first year.

The initial focus will be on the top nine food categories that contribute the most to children’s sugar intakes (yogurts, biscuits, cakes, morning goods (such as croissants, buns and waffles), puddings, ice-cream, breakfast cereals, confectionery, sweet spreads and sauces).

The programme covers products that are intended for the very young and children up to the age of 18 years. From 2017, the programme will be extended to include setting targets to reduce total calories in a range of products and across all sectors.”<sup>33</sup>

### **Criticism**

According to a Sunday Times article, celebrity chef Jamie Oliver criticised the lack of marketing and PR around the Childhood obesity plan.<sup>34</sup> Furthermore, some of the criticisms that the report attracted were related to the lack of mention of the role of other influencing factors in calorie reduction such as fat (from Action on Sugar) or food promotions.<sup>35</sup>

Looking ahead the SACN will publish in 2018 a review on **saturated fat** reduction, which is expected to lead to further work to reduce its content in food, alongside the continuation of work to reduce salt and the sugar reduction programme.

## **ii) PUBLIC AGENCIES**

Most governments tend to rely on public agencies to help them research, develop and implement nutrition policies. During our research we found a growing recognition of the need to cooperate and share information to tackle malnutrition across the world, as well as the need to integrate food safety, food supply and nutrition policies.

### **WHO**

The World Health Organisation (“WHO”) is an agency of the United Nations (“UN”) that was set up in 1948 and focuses on international health. It has 194 member states and it works alongside governments and other partners. The EU and the UK seem to take into account the WHO guiding principles when formulating their nutrition policies.

In 2015 the WHO formulated the new Sustainable Development Goal for health: Ensure healthy lives and promote well-being.<sup>36</sup> In 2016, the UN declared 2016-2025 the United Nations Decade of Action on Nutrition which is being addressed through the World Health Organisation (“WHO”) and the Food and Agriculture Organisation (“FAO”) of the United Nations.

The FAO also supports programmes to increase productivity of crops, livestock, forestry and fisheries while ensuring sustainability.<sup>37</sup>

<sup>33</sup> Source: email from Public Health England.

<sup>34</sup> The Sunday Times, 9 August 2017.

<sup>35</sup> <https://conversation.which.co.uk/food-drink/childhood-obesity-strategy-public-health-government/>.

<sup>36</sup> The Global Guardian of Public Health. WHO.

<sup>37</sup> <http://www.fao.org/3/a-i4185e.pdf>

“The latest Food and Agriculture Organization estimate of the Prevalence of Undernourishment shows that, despite abundant food supplies and considerable progress in reducing hunger in some regions, more than 795 million people had chronically inadequate levels of dietary energy intake during 2014–16 (FAO,2015).”<sup>38</sup>

Over three quarters of the WHO’s funding comes from voluntary contributions from Member States and partner organisations such as foundations and civil societies. Less than a quarter comes from the contributions of Member States, and less than 1% from the private sector. The WHO does not accept funding from the food and beverage manufacturers for work on NCD prevention and control.<sup>39</sup>

### iii) INDUSTRY

Do companies have a legal duty to protect people’s health?

Industry has an impact in the nutrition of a society through:

- The products and services provided.
- Their marketing policies. For branded companies, marketing is an important revenue driver and they allocate millions of pounds to keep their brands at the forefront of the consumers’ minds. E.g. Domino’s Pizza allocates 5% of system sales to its National Advertising Fund.

The definition of industry that we are using here includes packaged food and soft drinks manufacturers, food retailers and distributors, restaurants and food service, as well as their lobbies and associations (e.g. The British Retail Consortium, the Food and Drink Federation).

Food and beverage companies are well aware of consumers placing greater importance on products that promote health & wellness. So, why don’t companies make the switch and sell a healthier version of their products? Is this a question of making healthy food more palatable?

- **Cost** is a major detractor. Building a more nutritious product portfolio implies added costs in terms of resources across different divisions, including R&D /product formulation (especially if taste is a defining part of the product which usually is for food & beverages), supply chain (it takes time to develop a sustainable supply chain and some ingredients are scarce). It is a sizeable investment for an uncertain payoff, and these companies are run for a profit. Do they pass on the extra cost to the consumer (by hiking the price) or do they absorb it?
- **Consumer preferences.** Some companies have tried selling a healthier version of their flagship product but this switch can sometimes leave consumers confused as to what product they are buying and what it stands for, with sales suffering as a result. (E.g. Coca-Cola Life (with half the sugar and a third of the calories of Classic Coca-Cola) was launched in 2014 in the UK as a healthier alternative to Coca-Cola. It ended up being phased out in June 2017 due to lacklustre sales.
- **Geographic organisation.** Some multinationals make decisions for certain products on a regional basis, with regions covering various countries. As a result, they don’t tend to be quick to adapt to changes in regulations or preferences in a specific country.

---

<sup>38</sup> <http://www.fao.org/3/a-i4921e.pdf>.

<sup>39</sup> [http://www.who.int/mediacentre/news/statements/2012/nutrition\\_20121119/en/](http://www.who.int/mediacentre/news/statements/2012/nutrition_20121119/en/)



### Tony the Tiger... for adults?

Some companies try to get around these issues by switching the consumer segment that they address. Kellogg's decision to rebrand Tony the Tiger's Frosties cereals as an adult cereal in the UK caused controversy in November 2017. Apparently, Kellogg's had tested out a low sugar Frosties (with 30% less sugar)<sup>40</sup> to comply with the UK's Childhood Obesity plan that requires a 20% sugar reduction in children's food products including cereal. In the end, Kellogg's decided not to reduce the sugar content and rebrand Frosties as an adult cereal, scrapping toy promotions but keeping Tony the Tiger, to get past the mandate.



Despite the fast growth of Health & Wellness products, unless the company already specialises in the Health & Wellness space, the sentiment that we got – from engaging with our food and beverages companies – is that they prefer to be followers.

This view has been echoed in the news: “British Retail Consortium says government must move beyond voluntary agreements if it wants to make a difference”.<sup>41</sup>

In our view, ideally the government would decide (after engaging with stakeholders, industry and consumer) a set of mandatory targets to be implemented industry wide, allowing companies to:

- Plan ahead. Companies can budget how many resources they have to allocate to meet those targets in the deadline required.
- Level the playing field. Usually, nutritional guidelines adds additional cost (in product reformulation, marketing, compliance, etc.), so this ensures that it is equally distributed amongst all players. Usually this means that they can pass it on to the consumer (raise prices) as everyone will have the same problem.

Some UK businesses have taken matter in their own hands. Jamie Oliver put his own sugar levy (10p) on sugary drinks at his Jamie's Italian Restaurant.

<sup>40</sup> <http://www.telegraph.co.uk/news/2017/11/30/kelloggs-claims-frosties-adult-cereal-get-around-kids-sugar/>

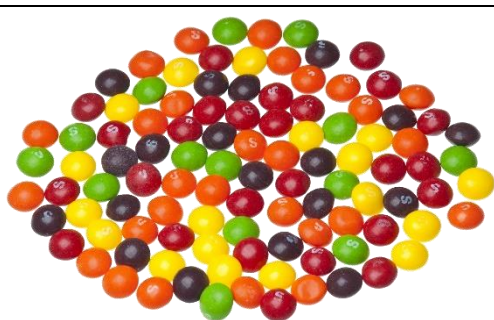
<sup>41</sup> <https://www.theguardian.com/society/2017/aug/18/uk-retailers-say-government-must-be-tougher-on-obesity>

## How about the supply chain?

When reformulating their products, manufacturers can take the opportunity to engage with their suppliers about issues such as food safety and quality.

Reviewing the sustainability of the agricultural and livestock supply chain is important given that the nutritious quality of the roast chicken dish you had for Sunday brunch may depend on the feed and healthcare treatment that chicken received during its lifetime.

- Sweets. Some confectionery companies sell rejected sweets and ingredients to processors, which may end up in animal feed as a cheaper alternative to corn.



In January 2017, a part of a highway in Wisconsin was found covered in what looked like red Skittles without the letter S. In the end, it was confirmed by Mars that overnight the Skittles had fallen from the back of a truck and that the Skittles had been rejected for packing, thus no S, and although they do sometimes sell it for animal feed, that was not the case with that batch.<sup>42</sup>

- Antibiotics. The indiscriminate use of antibiotics in the animal value chain for growth promotion or to protect from illnesses has also attracted media coverage. The main concern is the overuse of antibiotics in the animal supply chain which could ultimately make the people eating those proteins, develop resistant bacteria to antibiotics.

According to the WHO, “Antibiotic resistance is one of the biggest threats to global health, food security, and development today”.<sup>43</sup> However, scientists disagree on the estimated impact on the population.

In 2014, a study cited in the Review on Antimicrobial Resistance estimated that by 2050 resistance to antibiotics will cause 10 million deaths. This study was step up by Prime Minister David Cameron and headed by former Goldman Sachs economist Lord Jim O’Neill and the 10 million figure became widely quoted among the press. However, in 2016 a group of scientists led by Marlieke de Kraker at the HUG<sup>44</sup> published an article in PLOS Medicine where they agreed with the risk of antibiotic misuse, yet they disputed the 10 million estimate as unreliable. The PLOS Medicine article didn’t provide their own estimate as they found that there were too many uncertainties.<sup>45</sup>

- GMO. Genetically Modified Organisms are an area that has generated a lot of controversy as GM food products as the impact on human health has not been quantified. Note that it was only 1994 when the first GM product (Flavr Savr tomato) was approved for sale by the US Food and Drug Administration.<sup>46</sup> This tomato had a longer shelf life than other tomatoes.

Source: Pictures from Pixabay.

<sup>42</sup> <https://www.sciencealert.com/us-farmers-have-been-caught-feeding-red-skittles-to-their-cattle>.

<sup>43</sup> <http://www.who.int/mediacentre/factsheets/antibiotic-resistance/en/>

<sup>44</sup> Geneva University Hospitals

<sup>45</sup> Marlieke de Kraker at the HUG (Geneva University Hospitals).

<sup>46</sup> <http://www.gmoinside.org/gmo-timeline-a-history-genetically-modified-foods/>.

Attitudes to GM food products vary wildly by country with the US and Canada leading the charge, and Latin America rapidly becoming a leading producers of biotech crops such as corn and soybean.<sup>47</sup> On the opposite side, in Europe there is still strong opposition to GM crops. China seems to be looking into GM crops following the acquisition of Syngenta by ChemChina.

#### **GM in the news...**

A 2015 New York Times investigation reported that both the organic food industry in the US and companies like Monsanto (who sell genetically modified seeds) were recruiting and funding scientists to provide research focusing on the safety of herbicides.<sup>48</sup>

A 2017 Huffington Post article mentioned emails that claim Monsanto recruited academics in the US and Europe to defend the safety of its products without declaring their links to Monsanto.<sup>49</sup>

Forbes severed their relationship with Henry I. Miller, a Robert Wesson Fellow in Scientific Philosophy and Public Policy at the Hoover Institution at Stanford University, after they found out that a 2015 article published on Forbes.com that he claimed as his own, was allegedly ghost-written by Monsanto.<sup>50</sup>

The debate continues...

#### **iv) NON-GOVERNMENTAL ORGANISATIONS**

There are multiple organisations that are not for profit and operate independently from any governments - some take the form of charities - that look into different aspects of nutrition.

These organisations can:

- Be specialised in topics such as obesity (World Obesity Federation) or consumer rights (Which?), or a specific ingredient (e.g. Action on Salt, Action on Sugar)
- Have a local or global reach
- Produce studies that are published to global media attention.

#### **Are all NGOs good?**

Just because an organisation is a registered charity, it doesn't mean everything their actions are without fault. Something to bear in mind is that these organisation tend to be funded by private donations, and as such conflicts of interest may arise.

---

<sup>47</sup> [http://www.soybeansandcorn.com/news/Dec14\\_16-93\\_4-of-the-Three-Major-Crops-in-Brazil-are-GMO-Varieties](http://www.soybeansandcorn.com/news/Dec14_16-93_4-of-the-Three-Major-Crops-in-Brazil-are-GMO-Varieties).

<sup>48</sup> New York Times. <https://www.nytimes.com/2015/09/06/us/food-industry-enlisted-academics-in-gmo-lobbying-war-emails-show.html>

<sup>49</sup> Gillam, Carey. "How Monsanto Manufactured Outrage At Chemical Cancer Classification It Expected." HuffPost. 2017. [https://www.huffingtonpost.com/entry/how-monsanto-manufactured-outrage-at-chemical-cancer\\_us\\_59c17c88e4b0f96732cbc9f3](https://www.huffingtonpost.com/entry/how-monsanto-manufactured-outrage-at-chemical-cancer_us_59c17c88e4b0f96732cbc9f3)

<sup>50</sup> Monsanto Caught Ghostwriting Stanford University Hoover Institution Fellow's Published Work. CBS San Francisco. 2017. <http://sanfrancisco.cbslocal.com/2017/08/04/monsanto-ghostwriting-stanford-university-hoover-institution-fellow/amp/>

There have been examples of scientific papers that were funded by trade groups, food and beverage manufacturers and agricultural companies that are later used to market their own products and influence public opinion.

**Why doesn't the Global Energy Balance Network exist anymore?<sup>51</sup>**

In 2014 a non for profit group called Global Energy Balance Network was set up to fight against obesity and promote physical activity. The group president was James Hill, a professor at the University of Colorado School of Medicine.<sup>52</sup>

In 2015 the Associated Press found emails from James Hill to a Coca-Cola executive:

*"I want to help your company avoid the image of being a problem in peoples' lives and back to being a company that brings important and fun things to them."*<sup>53</sup>

The AP article also revealed that Coca-Cola was sponsoring GEBN with a \$1.5m donation and explained that *"Coke helped pick the group's leaders, edited its mission statement and suggested articles and videos for its website"*.<sup>54</sup>

Following the email leaks, there was an outcry of members of the scientific community<sup>55</sup> and in 2015 GEBN was disbanded and Coca-Cola's Chief Science and Health Officer (Dr. Applebaum) retired.

There is growing evidence that some industry associations might have been using these practices for decades.

The article *"Sugar Industry and Coronary Heart Disease Research - A Historical Analysis of Internal Industry Documents"*<sup>56</sup> published in November 2016 researched the practices of the Sugar Association (formerly known as the Sugar Research Foundation<sup>57</sup> and founded by members of the US sugar industry in 1943).

The article suggests that during the 1960s and 1970s the Sugar Research Foundation sponsored research - including a review published on the New England Journal of Medicine - to promote fat as the main culprit in coronary heart disease, while taking the focus away from the risks of sucrose consumption.

<sup>51</sup> All images from Pixabay.

<sup>52</sup> <https://www.forbes.com/sites/nancyhuehnergath/2015/11/24/emails-reveal-how-coca-cola-shaped-the-anti-obesity-global-energy-balance-network/#4b14f3a179a7>.

<sup>53</sup> Choi, Candace. Associated Press. <https://apnews.com/1fd235360ac94dcf893a87e3074a03a5/apnewsbreak-emails-reveal-cokes-role-anti-obesity-group>

<sup>54</sup> <https://apnews.com/1fd235360ac94dcf893a87e3074a03a5/apnewsbreak-emails-reveal-cokes-role-anti-obesity-group>

<sup>55</sup> <https://well.blogs.nytimes.com/2015/12/01/research-group-funded-by-coca-cola-to-disband/>

<sup>56</sup> Kearns CE, Schmidt LA, Glantz SA. "Sugar Industry and Coronary Heart Disease Research. A Historical Analysis of Internal Industry Documents." JAMA Intern Med. 2016; 176(11):1680–1685. doi:10.1001/jamainternmed.2016.5394.

<sup>57</sup> <https://www.sugar.org/membership/>.



## v) OTHER STAKEHOLDERS

### SOCIAL MEDIA<sup>58</sup>

Have you escaped the sight of a bright green kale, spinach, avocado smoothie sprinkled with super-seeds? Highly unlikely, if you are a millennial or centennial. The younger generations absorb a lot of content from their mobile phones, most from social networks and some of them don't bother to read newspapers.



Health and wellness sells in a virtual world that promotes aspirational lifestyles and social media has contributed to the explosion of self-appointed wellness gurus. Some are experts in the fields of food or fitness, having trained as nutritionists, others have medical backgrounds or have qualified as personal trainers, but not everyone who pontificates about the healing power of food is minimally qualified to do so.

#### **The rise and fall of Belle**

Belle Gibson, an Australian wellness blogger and alternative health advocate, is famous for being the author of The Whole Pantry app and recipe book.

In her blog, she claimed to have cured her terminal brain cancer after turning to eating wholefoods. She also stated that part of the proceeds from her top-rating app, which she launched in 2013, would be donated to charity. The recipe book was published in 2014.

Claims started to emerge that the proceeds were not going to charity, and after months of speculation, in 2016 Belle finally admitted to the Australian edition of Women's Weekly that she never had had any cancer.

In 2017 the Federal Court in Melbourne fined Belle Gibson with \$410,000.<sup>59</sup>

<sup>58</sup> Pictures from Pixabay.

<sup>59</sup> Davey, M. Belle Gibson fined \$410,000 for false charity promises. The Guardian. 2017.