



Food consumption and ethical issues

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No Monkey Business

No Monkey Business

An ill-informed campaign by **PETA (People for the Ethical Treatment of Animals)** to **ban a coconut milk company** is **threatening local livelihoods in Thailand** and is notable for being patently false and terrifically orientalist.

According to findings made by the group in 2019:

“A PETA Asia investigation reveals that **terrified young monkeys in Thailand are kept chained, abusively trained, and forced to climb trees to pick coconuts** that are used to make coconut milk, meat, flour, oil, and other products.”

The report goes on to single out Thai coconut-milk producer **ChaoKoh** – which **exports to both the EU and the United States**.

<https://www.thaienquirer.com/40824/petas-orientalist-threatens-local-jobs-in-thailand-with-ill-informed-monkey-campaign/>





What will

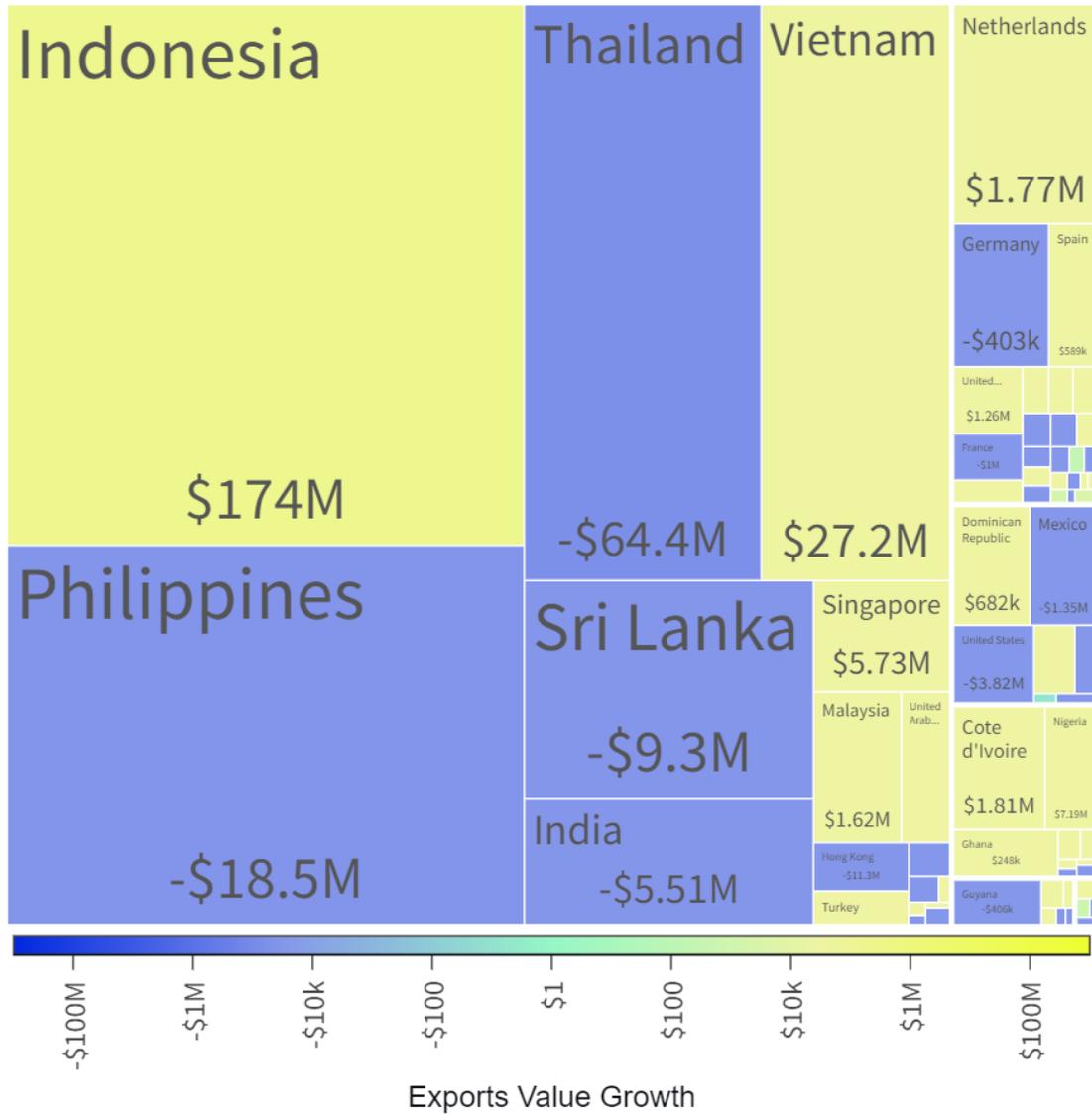
happen next?

<https://simplegreensmoothies.com/coconut-milk-brands>



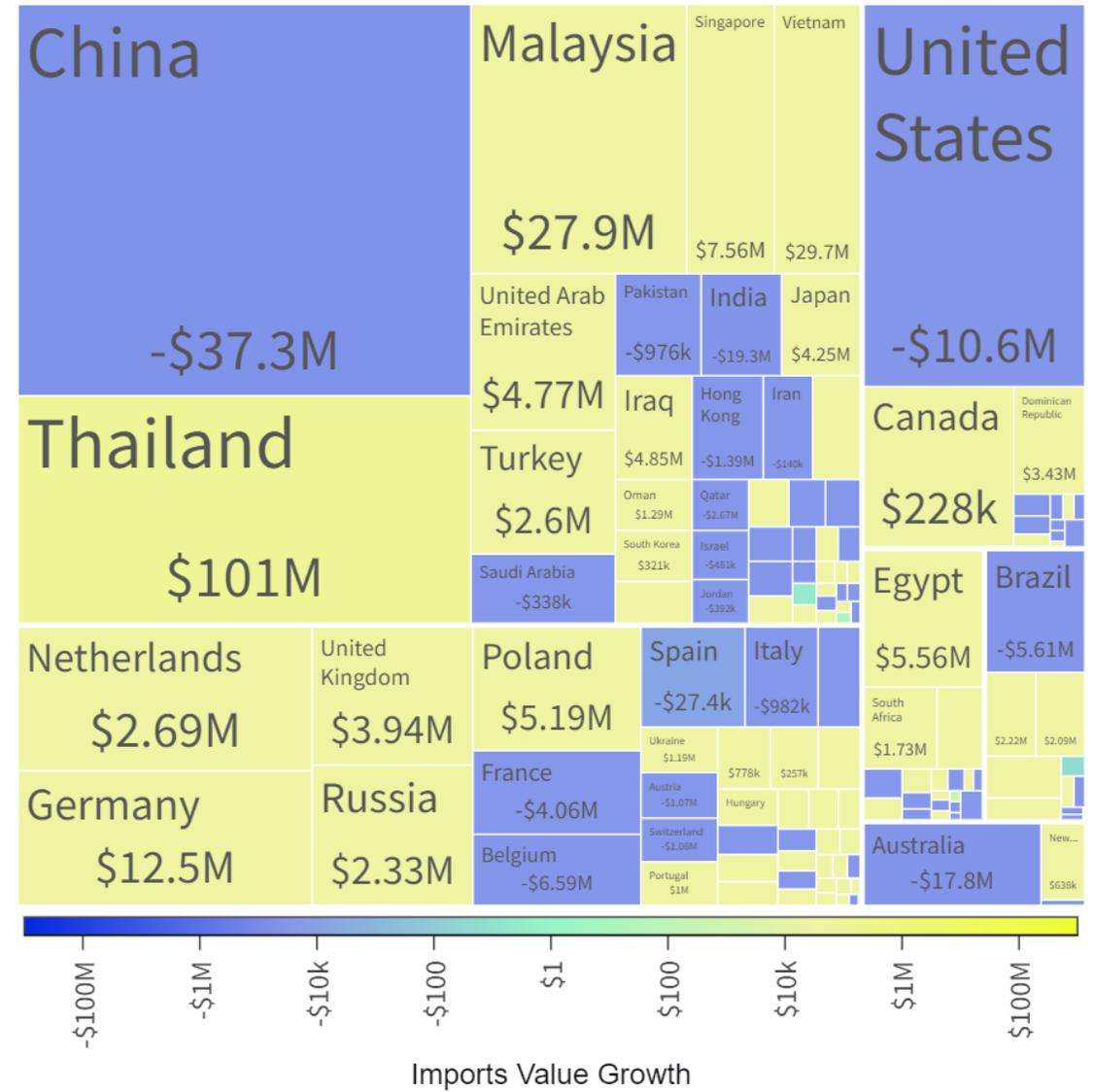
<https://www.epicurious.com/ingredients/best-coconut-milk-canned-taste-test-article>

Exporters of Coconuts, fresh or dried (2019 - 2020)



Exports Value Growth

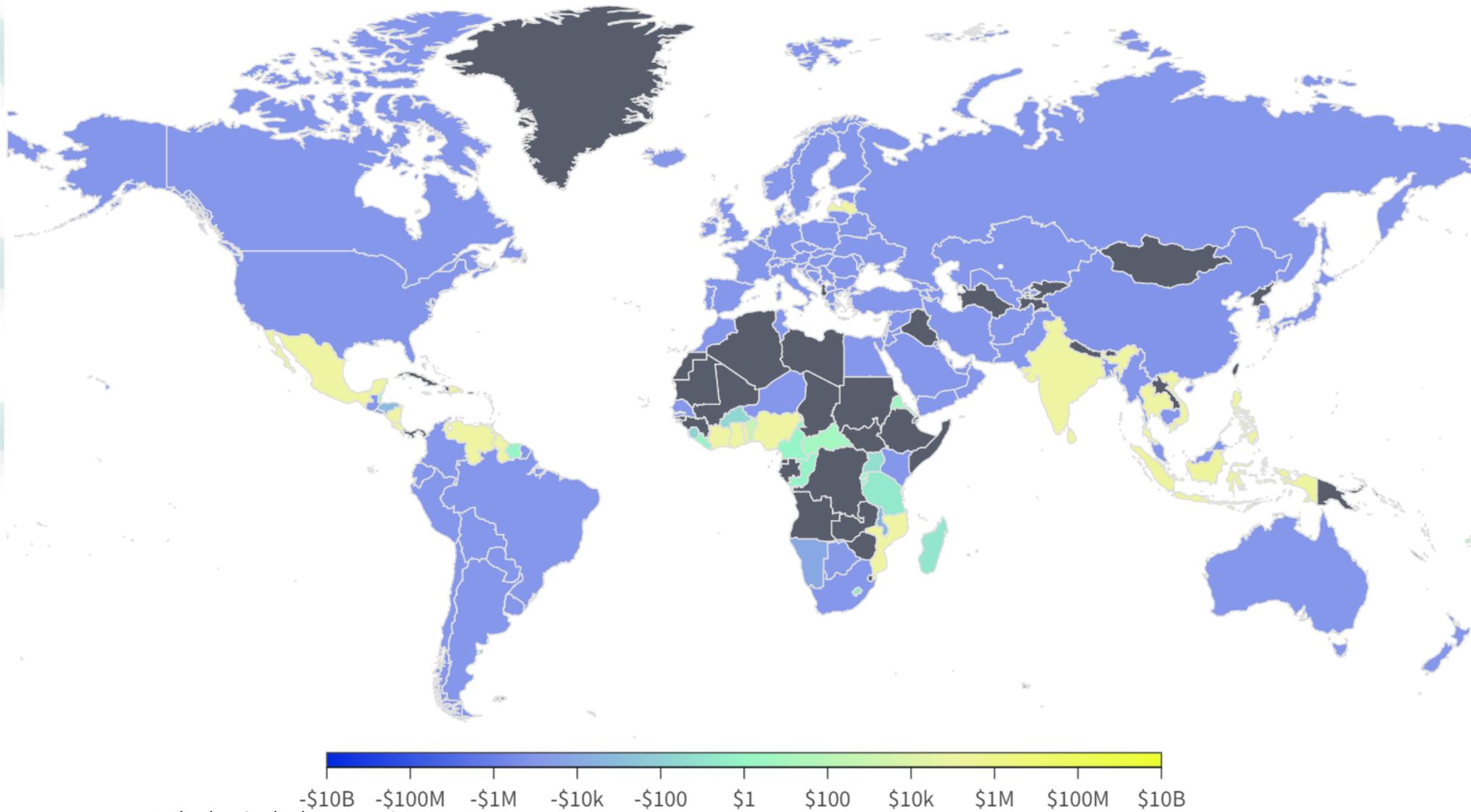
Importers of Coconuts, fresh or dried (2019 - 2020)



Imports Value Growth

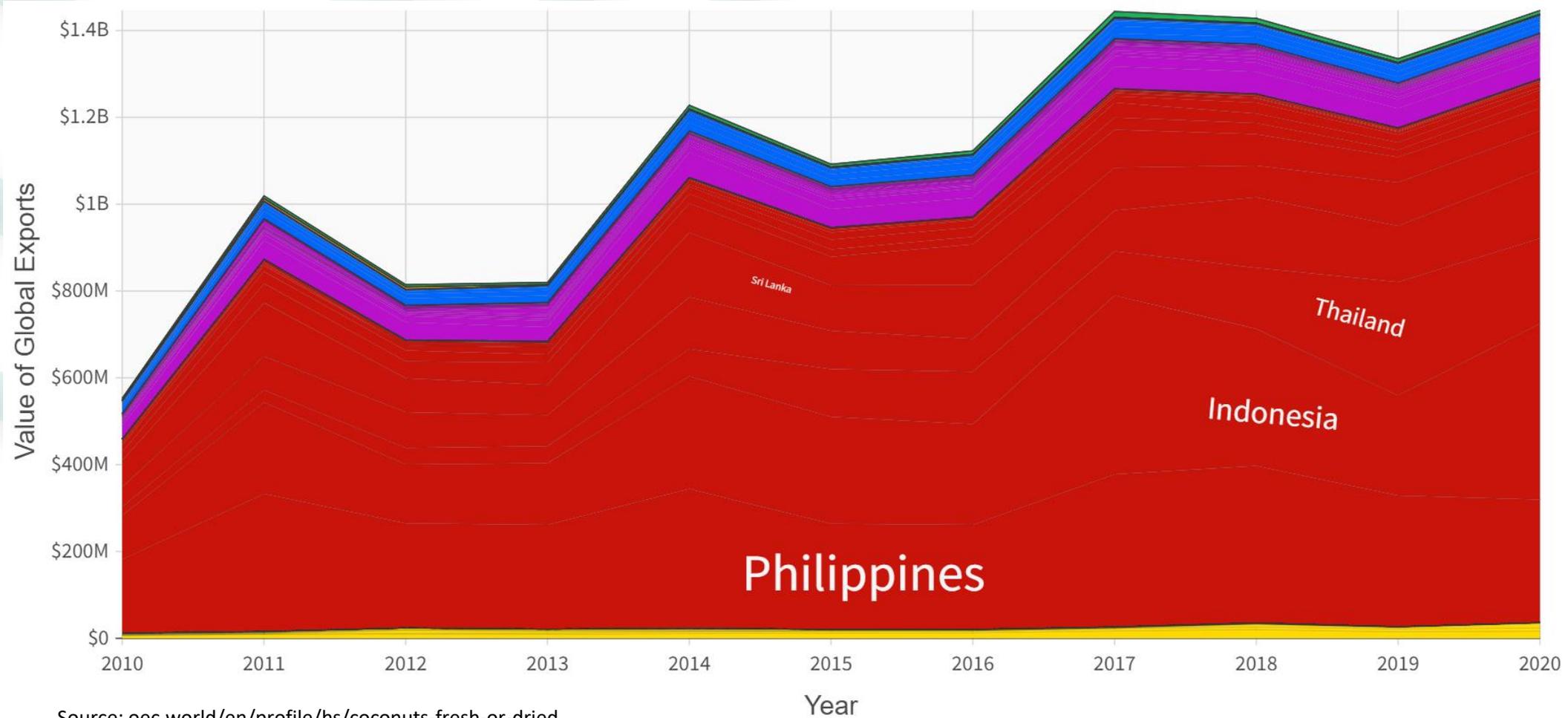
[https://oec.world/en/profile/hs/coconuts-fresh-or-dried#:~:text=In%202020%2C%20the%20top%20exporters,and%20Netherlands%20\(%2464.6M\).](https://oec.world/en/profile/hs/coconuts-fresh-or-dried#:~:text=In%202020%2C%20the%20top%20exporters,and%20Netherlands%20(%2464.6M).)

Net trade in 2020



Source: oec.world/en/profile/hs/coconuts-fresh-or-dried

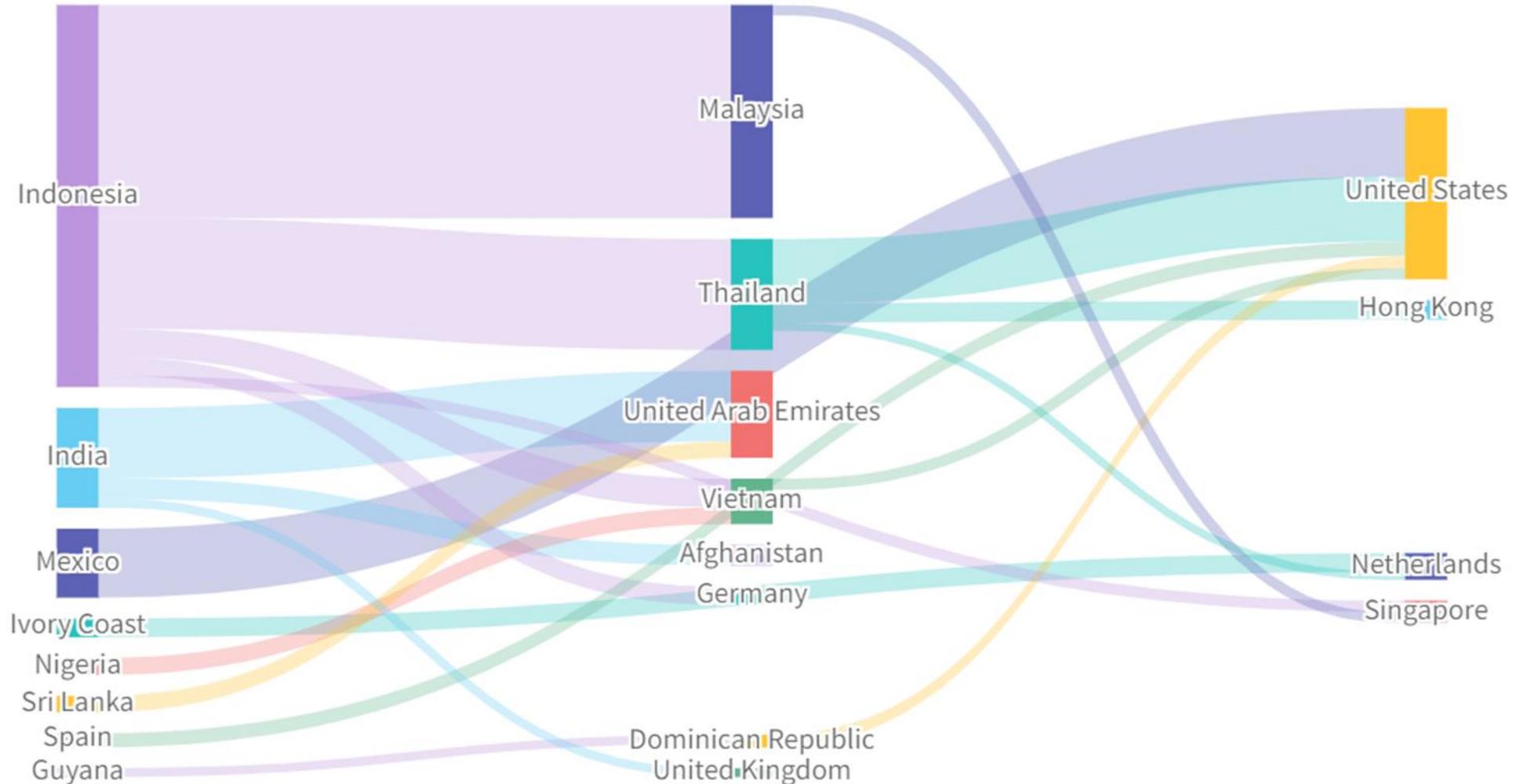
Value of exports in coconuts, fresh or dried



Source: oec.world/en/profile/hs/coconuts-fresh-or-dried

Top Import Flows of Other Fresh Coconut

Discover the top import flows of Other Fresh Coconut in 2021. The top import flow in 2021 was from Malaysia to Indonesia, with an import value of USD 59.51M.



<https://www.tridge.com/intelligences/coconut/import>

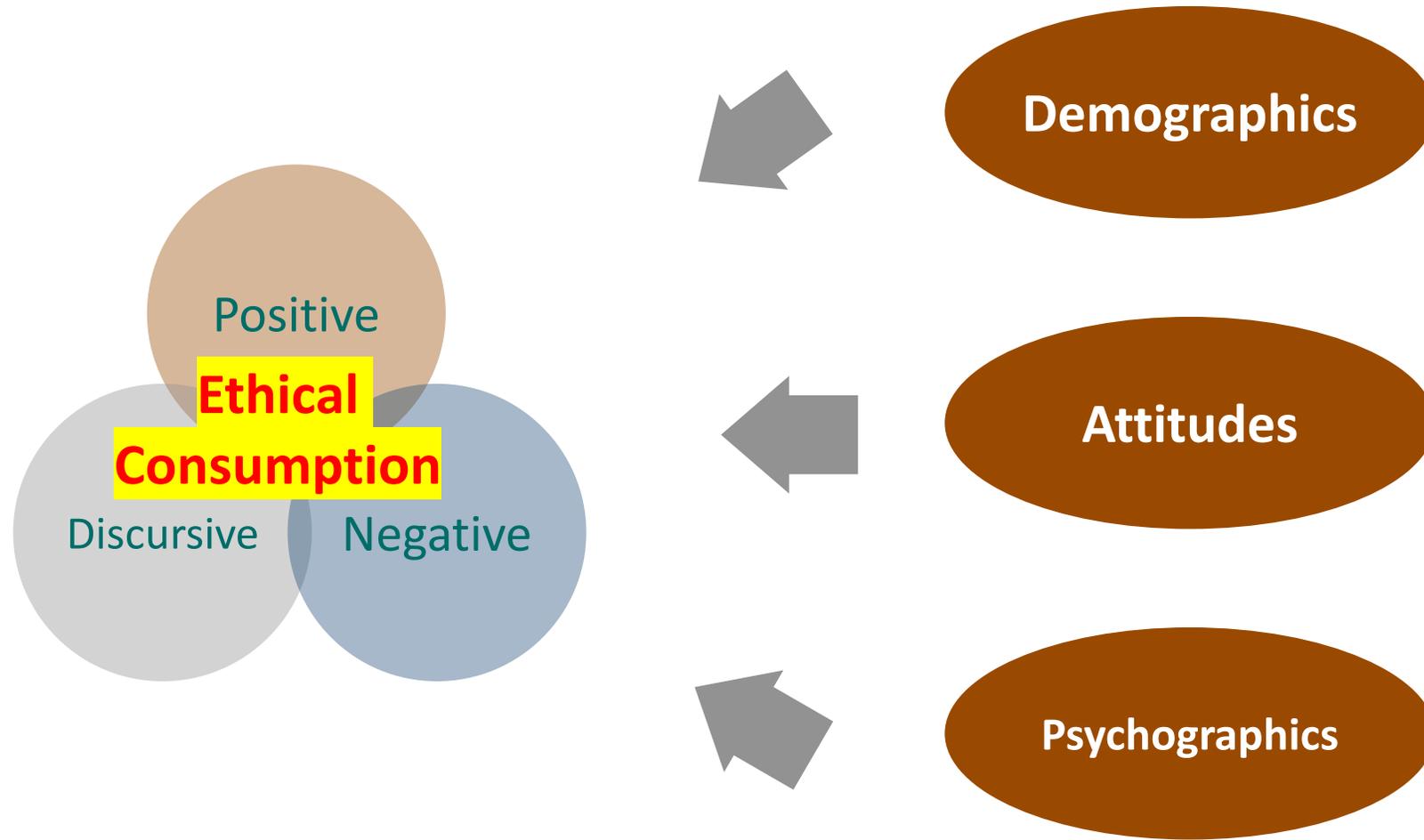


Market cap and revenue figures (exchange rates) calculated on May 2, 2018. Figures rounded to nearest billion.

Maslow's Hierarchy of needs Theory of Motivation



Theoretical framework of ethical consumption



Delistavrou, A., Katrandjiev, H., & Tilikidou, I. (2017). Understanding Ethical Consumption: Types and Antecedents. *Economic Alternatives*(4), 612-633.



Ethical claim

GMO

- **What a controversy?**
 - **Is it bad?**
 - **It's food innovation solving hunger issues, isn't it?**
 - **We should ban or label on it?**



Which product does **not**
contain GM ingredients?



- Soybeans



- Corn



- Cotton



- Canola



- Rice



- Tomato



- Fish



- Fruits



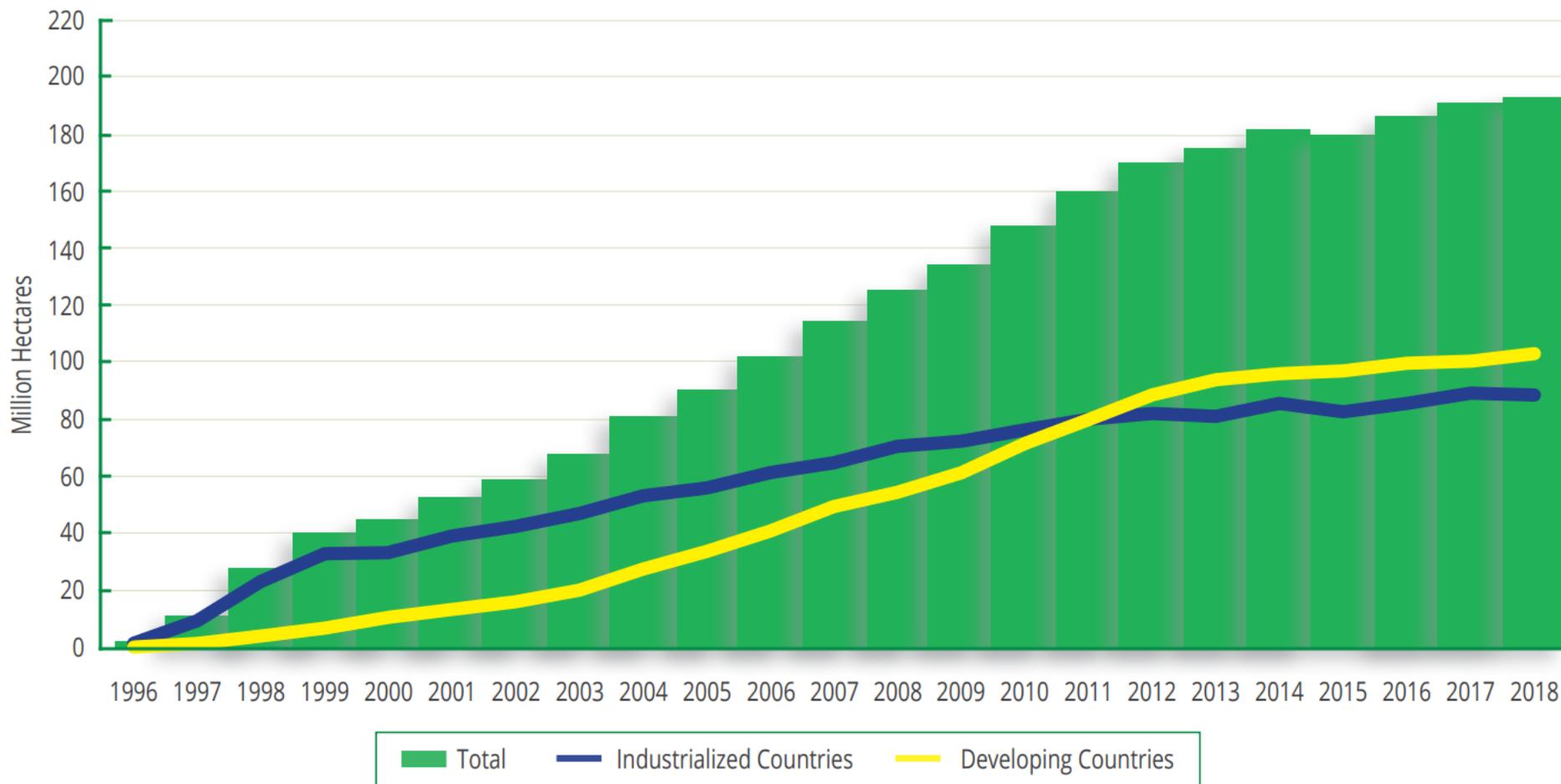


Figure 1. Global Area of Biotech Crops, 1996 to 2018: Industrialized and Developing Countries (Million Hectares)

Source: ISAAA, 2018

History of food technology

Food nanotechnology has its history from Pasteurization process introduced by Pasteur to kill the spoilage bacteria (1000 nanometers), made the first step of revolution in food processing and improvement in quality of foods.



Metal and glass packaging invented

1810 patent of Peter Durand of England: Using tin coated iron cans instead of bottles

1810

AD 1795

1800 BC

Using **microorganisms (yeast)** to create food



Hybrid corn achieved by

cross-breeding

1922

Genes and traits identified

1865

1856

Pasteurization

invented



Louis Pasteur- The Most Significant Scientist of his time: 1800's

- made alcohol from sugar beet

Genetic engineering: The first genetically modified organism to be created was a bacterium, in 1973

Genes transferred from

one organism to another

1973

1953

DNA discovered

1914

Quick frozen foods

invented

1985

Commercialisation of biotechnology products
US approved 1st biotechnology product

Genentech received approval from the U.S. Food and Drug Administration (FDA) to market its first product, a growth hormone for children with growth hormone deficiency. It was the first recombinant **biotech drug** to be manufactured and marketed by a biotechnology company

End of nomadic era, **agriculture begins**

8000 BC

Food technology

- Chemistry:
 - Food analysis and chemistry
 - Food quality factors and measurement
- Biology
 - Food microbiology, mycology, toxicology
- Physics:
 - Food processing and engineering
 - Food packaging and labelling
- **Genetic engineering:** changing the genetic makeup of cells by introducing or eliminating specific genes using molecular biology techniques, also known as **biotechnology**
 - Drying and dehydration
 - Refrigeration and freezing
 - Novel techniques(Ohmic heating, Irradiation)
 - Thermal processing (Canning, sterilisation, pasteurisation)
 - Curing methods
 - Nanotechnology
 - Encapsulation technology

GCTACCGGTCAGGAGTCAACAGTTTAAGGCTAT

GMO

5 Myths about GMOs (Antoniou et al, 2012)

Myth1 Genetic engineering is just an extension of natural breeding.

Truth: Genetic engineering is different from natural breeding and poses special risk.

Myth2 GM is just another form of mutation breeding and is nothing to worry about.

Truth: Mutation breeding its own problems and should be strictly regulated.

Myth3 GM foods are strictly regulated for safety.

Truth: GM food regulation in most countries varies from non-existent to weak.

Myth4 GM foods are safe to eat.

Truth: Studies show that GM foods can be toxic or allergenic.

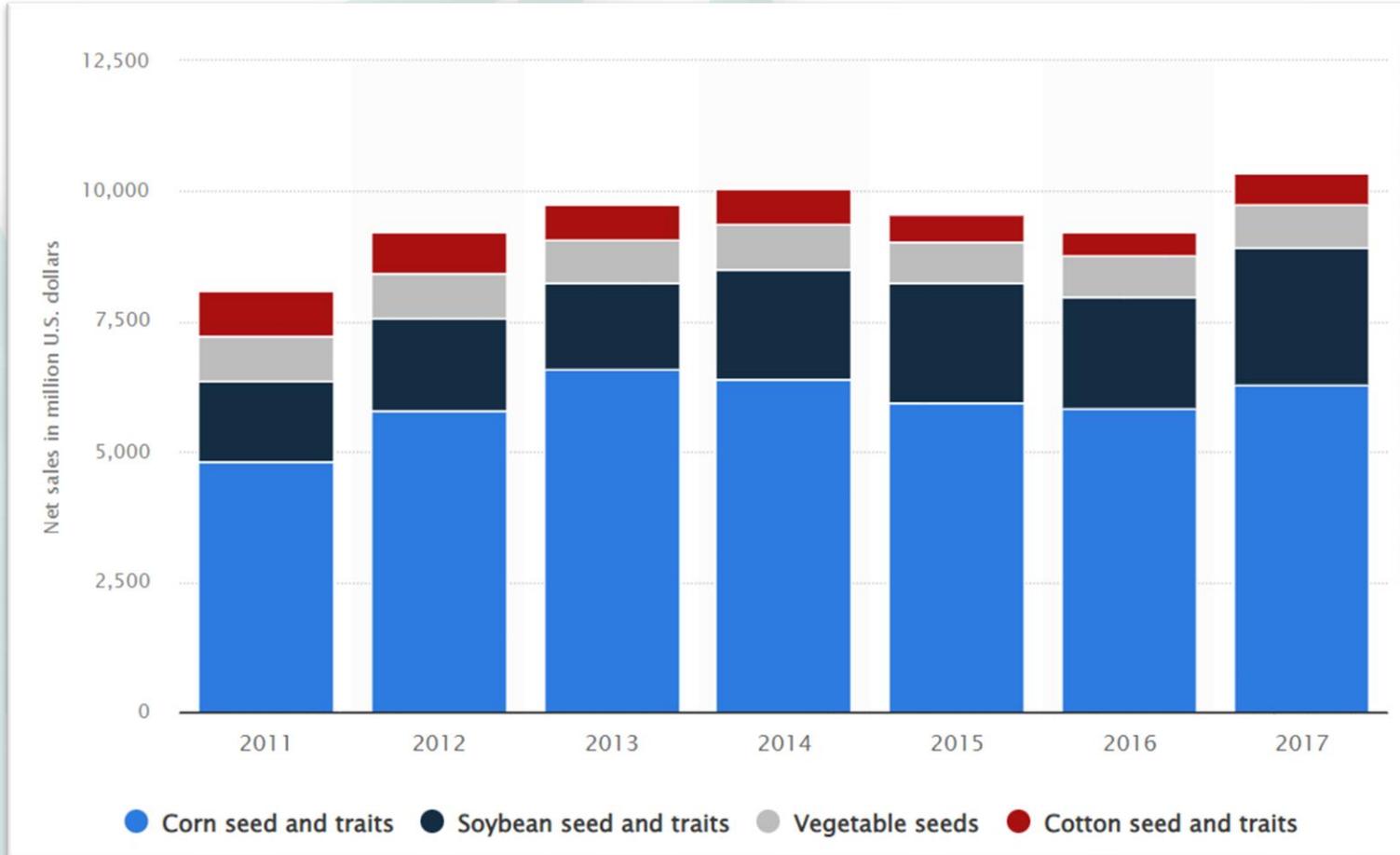
Myth5 GM foods have been proven safe for human consumption.

Truth: The few studies that have been conducted on humans show problems.



Antoniou, M., Robinson, C., Fagan, J. 2012, «GMO Myths and Truths. An evidence-based examination of the claims made for the safety and efficacy of Genetically Modified Crops» EARTHOPENSOURCE.

Monsanto's net sales in the seeds and genomics segment from 2011 to 2017 by specialty (in million U.S. dollars)*

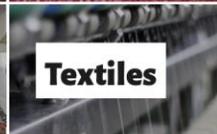


Statista. "Monsanto's net sales in the seeds and genomics segment from 2011 to 2017 by specialty (in million U.S. dollars)." *Statista*, 2018. Retrieved June 28, 2018, from <https://www.statista.com/statistics/276279/monsanto-seed-and-genomics-segment-net-sales/>

Kim, Y., Kim, S. and Arora, N., 2022. GMO Labeling Policy and Consumer Choice. *Journal of Marketing*, 86(3), pp.21-39.

Abstract:

Most scientists claim that genetically modified organisms (GMOs) in foods are safe for human consumption and offer societal benefits such as better nutritional content. However, many consumers remain skeptical about their safety. Against this backdrop of diverging views, the authors investigate the impact of different GMO labeling policy regimes on the products consumers choose. Guided by the literature on negativity bias, structural alignment theory, and message presentation, and based on findings from four experiments, the authors show that consumer demand for GM foods depends on the labeling regime policy makers adopt. Both absence-focused ("non-GMO") and presence-focused ("contains GMO") labeling regimes reduce the market share of GM foods, with the reduction being greater in the latter case. GMO labels reduce the importance consumers place on price and enhance their willingness to pay for non-GM products. Results indicate that specific label design choices policy makers implement (in the form of color and style) also affect consumer responses to GM labeling. Consumer attitudes toward GMOs moderate this effect—consumers with neutral attitudes toward GMOs are influenced most significantly by the label design.



- Ribeiro-Duthie, A.C., Gale, F. and Murphy-Gregory, H., 2021. Fair trade and staple foods: A systematic review. *Journal of cleaner production*, 279, p.123586.

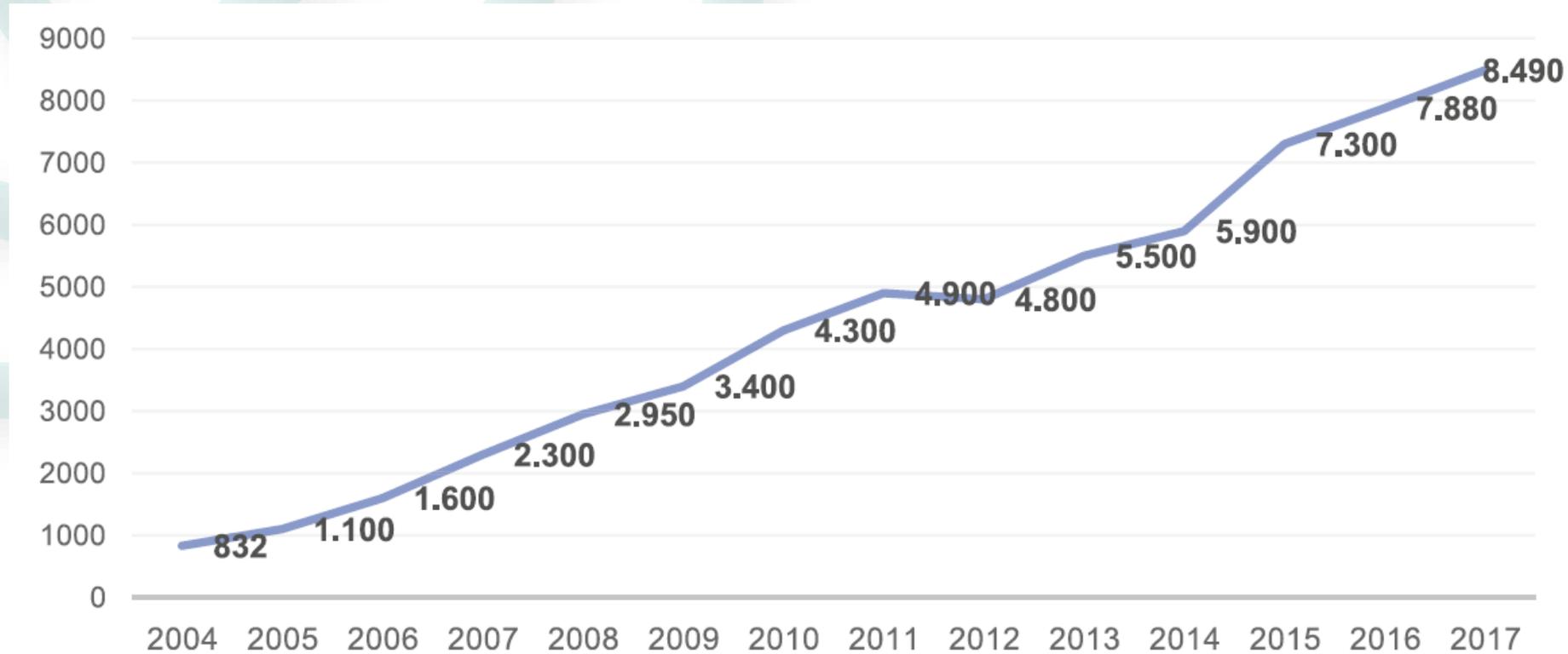
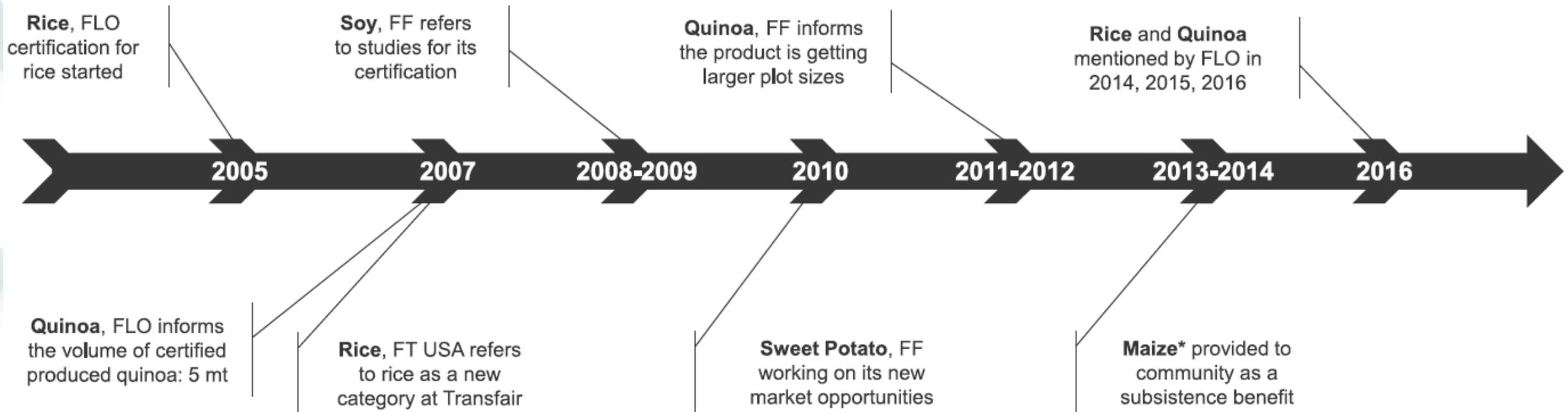


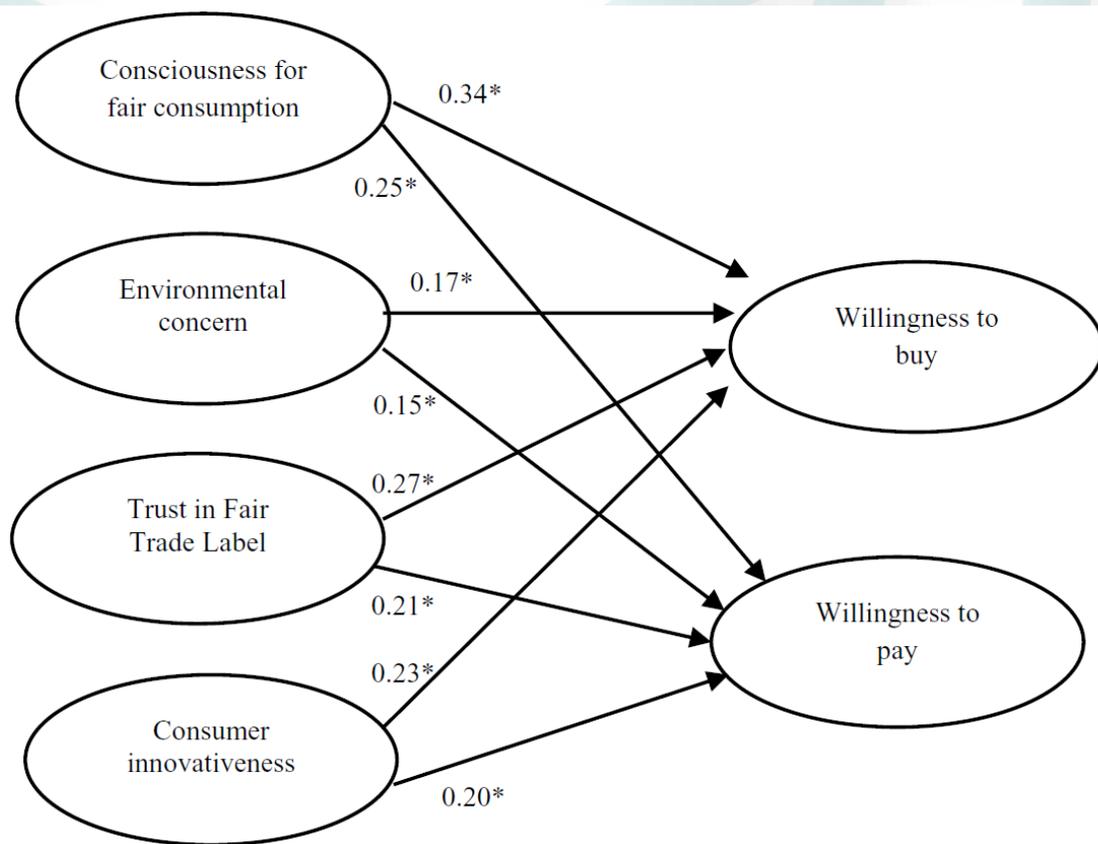
Fig. 1. Ascending trendline of FAIRTRADE revenues, in billions of Euros. Built by authors, source: [FLO Reports 2003–2004 to 2017–2018](#).

- Ribeiro-Duthie, A.C., Gale, F. and Murphy-Gregory, H., 2021. Fair trade and staple foods: A systematic review. *Journal of cleaner production*, 279, p.123586.



Synthesised by authors, source: FLO; FF; WFTO; and FT USA reports. *No indication that maize was FT certified.

- Their systematic review confirms the scarcity of publications, and the need for broader understanding of the rationale of the FT system in selecting their products.



* $p < 0.001$

Fig. 2. Parameter estimates of the structural model.

- Konuk, F.A., 2019. Consumers' willingness to buy and willingness to pay for fair trade food: The influence of consciousness for fair consumption, environmental concern, trust and innovativeness. *Food research international*, 120, pp.141-147.

Constructs

Consciousness for fair consumption

- CFC1. It is important that the workers' rights were adhered to in companies
- CFC2. It is important that in companies no worker was subjected to forced labor
- CFC3. It is important that in companies no illegal child labor was involved
- CFC4. It is important that in companies workers were not discriminated against
- CFC5. It is important that the working conditions complied with the international labor standards in companies
- CFC6. It is important that in companies the workers were treated fairly or were fairly compensated

Environmental concern

- EC1. I am extremely worried about the state of the world's environment and what it will mean for my future
- EC2. Mankind is severely abusing the environment
- EC3. When humans interfere with nature it often produces disastrous consequences
- EC4. The balance of nature is very delicate and easily upset
- EC5. Humans must live in harmony with nature in order to survive

Trust in fair trade label

- BT1: I trust FT label
- BT2: I rely on this label
- BT3: FT label is honest

Customer innovativeness

- CI1. Compared to my friends, I purchase more new food products
- CI2. In general, I am first in my circle of friends to know the new food products
- C13. In general, I am among the first in my circle of friends to buy a new food product when it appears
- C14. If I heard that new food products are available in shops, I would be interested enough to buy them
- C15. I will buy new food products, even if I haven't experienced them yet
- CI6. I buy new food products before other people do

Willingness to buy

- WTB1. I consider buying FT food
- WTB2. I will purchase a FT food
- WTB3. There is a strong likelihood that I will buy a FT food

Willingness to pay

- WTP1. I am willing to spend extra in order to buy FT food
- WTP2. It is acceptable to pay a premium to purchase FT food
- WTP3. I am willing to pay more for FT food

Animal welfare

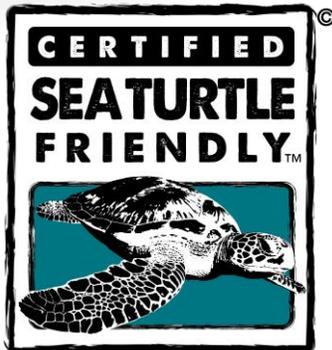


*Meets Humane Farm Animal Care Standards, which include nutritious diet without antibiotics or hormones, animals raised with shelter, resting areas, sufficient space and the ability to engage in natural behaviors.

STEP 5+	ANIMAL CENTERED; ENTIRE LIFE ON SAME FARM
STEP 5	ANIMAL CENTERED; NO PHYSICAL ALTERATIONS
STEP 4	PASTURE CENTERED
STEP 3	ENHANCED OUTDOOR ACCESS
STEP 2	ENRICHED ENVIRONMENT
STEP 1	NO CAGES, NO CRATE NO CROWDING



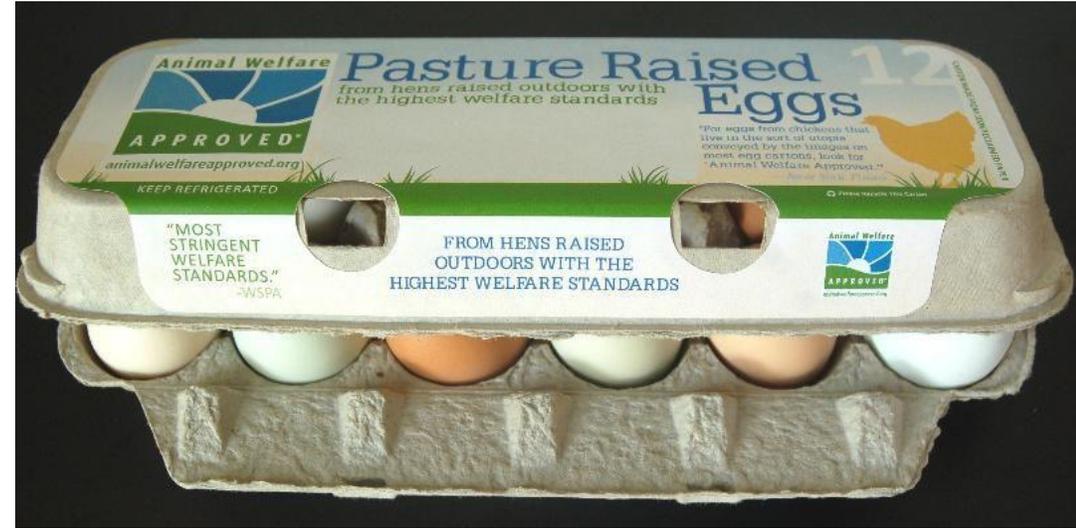
Animal welfare



(Photo: Xerces Society / Cameron Newell.)

<https://beebettercertified.org/bee-better-certified-protecting-bees-and-providing-level-playing-field-farmers-and-companies-support>

Animal welfare



Organic

IFOAM
ACCREDITED



The competitiveness of fair trade and organic versus conventional coffee

- Lee, Y. and Bateman, A., 2021. The competitiveness of fair trade and organic versus conventional coffee based on consumer panel data. *Ecological Economics*, 184, p.106986.



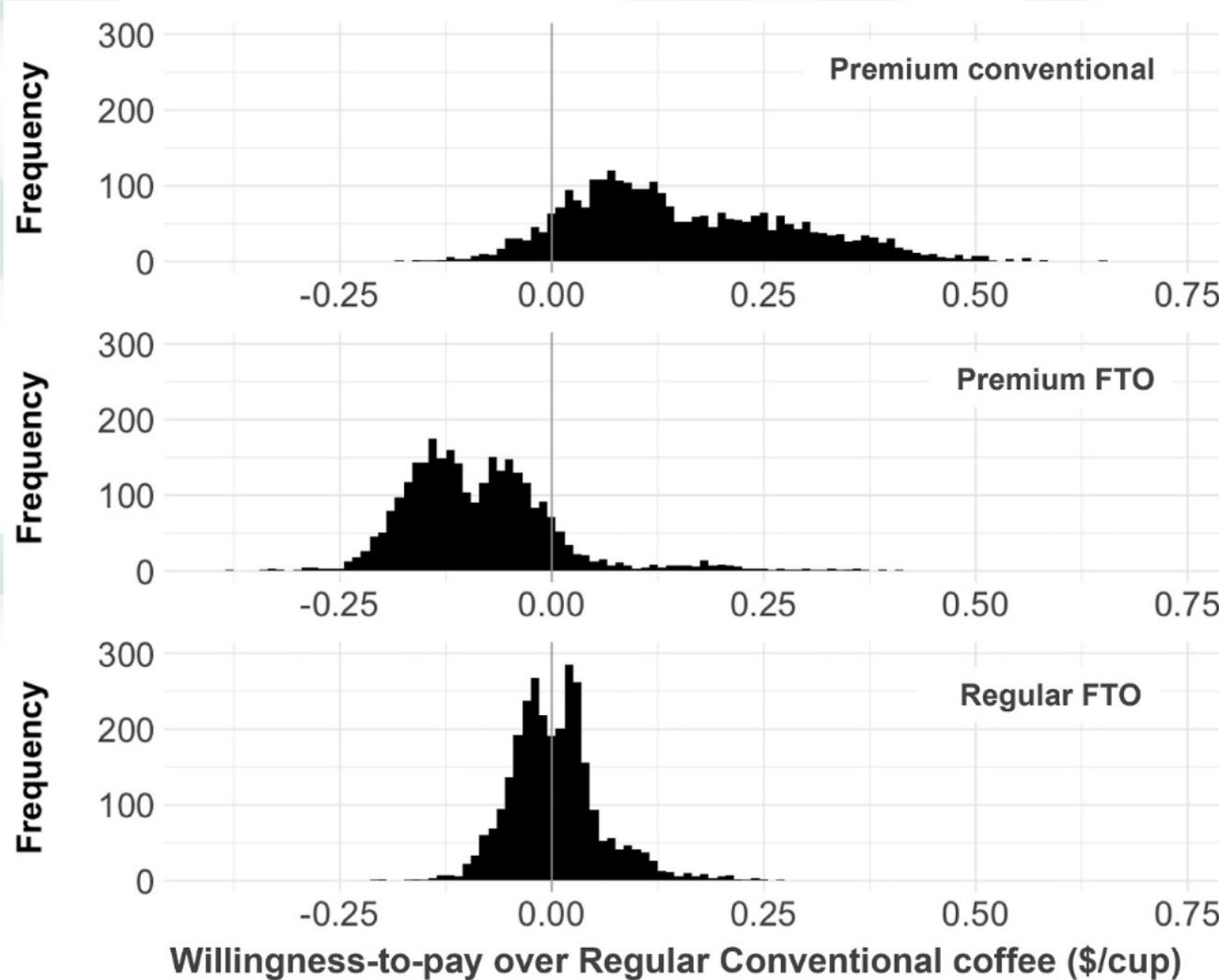
Characteristics of brands within the categories.

Categories	Brands	Number of branded coffee shops in the US ^a	Years of brand establishment in the US ^a	Advertising spending (1000s) ^b
Premium Conventional	Starbucks	13,172	1966	76,994
	Dunkin' Donuts	9200	1950	64,225
	Peets	200	1971	995
Regular Conventional	Green Mountain	0	1981	233
	Folgers	0	1850	41,641
	Donut Shop	0	1972	No record
	McCafé	No record	2001	6778
	Eight O' Clock	0	1859	0
Premium FTO	Green Mountain	0	1981	233
	Laughing Man	0	2015	No record
Regular FTO	Green Mountain	0	1981	233
	Newman's Own Organics	0	2002	2

^a From company websites and annual reports.

^b Advertising spending includes advertising expenditure across television, radio, magazine, newspaper, internet and outdoor channels (Kantar Media, 2016).

- Lee, Y. and Bateman, A., 2021. The competitiveness of fair trade and organic versus conventional coffee based on consumer panel data. *Ecological Economics*, 184, p.106986.



	Premium Conventional	Regular Conventional	Premium FTO	Regular FTO
Observed purchases	5169	5726	450	1444
Market share	40.4%	44.8%	3.5%	11.3%
Average assortment size	28.9 (5.9)	33.9 (5.0)	5.7 (2.7)	9.7 (2.4)
Average price/\$ per cup	0.74 (0.12)	0.58 (0.09)	0.71 (0.12)	0.61 (0.09)

- They found that most consumers were more likely to substitute both FTO products for conventional products, and less likely to substitute out of conventional products.
- Even the core consumers of Premium FTO coffees, who had inelastic demand for that type of coffee, were more likely to switch to Regular Conventional coffees than to Regular FTO coffees, even though both alternatives were similarly low-priced.

Fig. 4. Distributions of Willingness-to-Pay over the Regular Conventional category.

- Lee, Y. and Bateman, A., 2021. The competitiveness of fair trade and organic versus conventional coffee based on consumer panel data. *Ecological Economics*, 184, p.106986.

Table 6

Own-price elasticities and absolute cross-price effect in the aggregate market and the core FTO market segments.

Category <i>i</i>	Market share	Own-price elasticity	Category <i>j</i>			
			Absolute cross-price effect			
			Premium Conventional	Regular Conventional	Premium FTO	Regular FTO
<i>Aggregate market</i>						
Premium Conventional	5201	-1.39 (0.04)	-71.94 (1.44)	57.9 (1.31)	3.31 (0.25)	10.74 (0.44)
Regular Conventional	5915	-1.24 (0.04)	44.92 (1.02)	-73.05 (1.35)	4.32 (0.31)	23.81 (0.85)
Premium FTO	361	-2.50 (0.20)	2.94 (0.24)	4.82 (0.36)	-9.00 (0.51)	1.24 (0.11)
Regular FTO	1311	-2.47 (0.10)	8.02 (0.31)	23.31 (0.84)	1.1 (0.10)	-32.43 (0.95)
<i>Premium FTO market segment</i>						
Premium Conventional	46	-3.28 (0.64)	-1.54 (0.19)	0.38 (0.05)	1.03 (0.16)	0.14 (0.01)
Regular Conventional	52	-3.55 (0.58)	0.30 (0.04)	-1.83 (0.22)	1.35 (0.2)	0.18 (0.02)
Premium FTO	165	-1.81 (0.33)	1.01 (0.16)	1.69 (0.27)	-2.97 (0.34)	0.28 (0.04)
Regular FTO	24	-2.22 (0.26)	0.11 (0.01)	0.17 (0.02)	0.24 (0.03)	-0.52 (0.06)
<i>Regular FTO market segment</i>						
Premium Conventional	64	-4.18 (0.51)	-2.65 (0.24)	1.19 (0.12)	0.06 (0.01)	1.40 (0.15)
Regular Conventional	195	-3.78 (0.37)	0.96 (0.09)	-7.34 (0.54)	0.12 (0.02)	6.27 (0.51)
Premium FTO	9	-3.99 (0.21)	0.05 (0.01)	0.12 (0.02)	-0.35 (0.05)	0.18 (0.03)
Regular FTO	551	-1.43 (0.13)	1.15 (0.13)	6.55 (0.54)	0.16 (0.03)	-7.87 (0.58)

Standard errors are in parentheses. All elasticities are significantly different from zero with p-value <0.05.

Good Agricultural Practice: GAP

ThaiGAP®

World Safety Standard
มาตรฐานโลก บริโภคปลอดภัย



GLOBALG.A.P.
The Global Partnership for Safe and Sustainable Agriculture



กระทรวงสาธารณสุข
Ministry of Public Health

1. Considering the principles of economics, how does the “ethical premium” (the extra cost) on agri-food products (e.g., organic coffee/tea, certified produce) affect demand elasticity and the overall market penetration rate in emerging markets ?
2. Emerging markets are often sources of low-cost production, sometimes due to undesirable labor or environmental standards. In the agri-food supply chain, how can multinational corporations sourcing from emerging markets effectively internalize negative externalities (e.g., farm pollution, unfair labor conditions) into their internal costs, adhering to the Triple Bottom Line (People, Planet, Profit)? How would this cost internalization impact the economic bargaining power of smallholder farmers in emerging markets?

3. The role of government in emerging markets is critical for fostering sustainability. What specific institutional/policy measures (e.g., subsidies, environmental taxes, labeling standards) would you recommend for emerging market governments to promote ethical agri-food production? When proposing these, how do you address the risk of creating an undue economic burden on smallholder farmers or compromising national food security?
4. If you were a manager of an agri-food business, how would you leverage these cultural differences to adapt your Business Model or Value Creation Strategy? Specifically, how can you ensure ethical products generate profitable returns while effectively meeting the distinct needs and motivations of consumers in diverse emerging markets?