Economics in the News: Micro Behavior – Markets in the News of 2025

Part A (39%): "Retail demand for beef continues to suffer as prices rise" (Meat Management, 2025/9/22)[1]

Beef and veal inflation was 24.9% in August 2025, according to the Office for National Statistics (ONS) data, driven by a constrained supply. To estimate the impact that further inflation rises could have on beef volumes, the Agriculture and Horticulture Development Board (AHDB) and Quality Meat Scotland (QMS) jointly funded research into the market from Worldpanel by Numerator. According to the research, average price per volume for total beef in retail has increased 15% year-on-year, which is the highest increase seen in the last two years and has resulted in a -7.5% volume decline, equivalent to -9,460 tonnes (Worldpanel by Numerator UK, 12 w/e 10th August 2025)…(omitted)…The Worldpanel research shows that frozen beef, which typically has a lower average price per kg than chilled beef, is showing "modest volume growth", at 0.1%, which according to AHDB suggests that "consumers are starting to turn to frozen offerings to manage their spend". Frozen volumes for beef burgers have grown by 8.8%, in contrast to chilled volumes, which have declined by 12.9%, with the average price per kg at £7.59 and £9.49, respectively.

Beef mince showed a 26.3% increase in average price per volume, with a corresponding decline in volume of 6.5% over the period. AHDB stated that trends over the past five months "suggest that shopper behaviour has changed as inflation has increased", adding that in May and June, beef mince was losing shoppers in favour of cheaper proteins, and in July and August, those shoppers that remained were seen to buy less volume of beef mince in an attempt to "stretch the volume further in their everyday meals". In August, the majority of switching from beef mince went to primary chicken, however, there was also a rise in switching to pork mince. Economy-tier beef mince, which accounts for 4.9% of total beef mince, showed volume growth of 4%, which, said AHDB, suggests that "consumers are prepared to down trade tiers to help manage their spend".

For beef steak, the data for the latest period shows a 23% increase in the average price per volume to £21.49, with a corresponding decline in volume of 12.8%. For roasting joints, the data shows a 15.6% increase in average price per volume and a corresponding 25.7% decline in volume, with consumers switching predominantly to primary chicken, whole chickens or chicken breasts/wings/legs/thighs. AHDB said that this "potentially suggests that some consumers retain the need for a roast meal utilising whole chickens, while other consumers are changing not only the protein they consume but the type of meals they are preparing".

Answer the following questions:

1. (6%) What is the percentage change in average price for total beef in retail? What is its percentage change in volume? Calculate the price elasticity of demand for total beef in retail. Is demand elastic or inelastic? Justify your answer briefly.
2. (4%) Would your above answers be the same if you calculated the percentage changes using the midpoint method? Why or why not?
3. (3%) What is the percentage change in chilled volumes of beef burgers? What is the percentage change in prices of chilled beef burgers, assuming it has the same price elasticity of demand as total beef in retail?
4. (4%) What is the percentage change in frozen volumes of beef burgers? What is the cross-price elasticity of demand for frozen beef burgers against chilled beef burgers? Are they substitutes or complements?
5. (12%) Calculate the price elasticity of demand for (a) beef mince, (b) beef steak, and (c) roasted joints. Are their demand elastic or inelastic? How do your estimates reflect product differences? Explain.
6. (6%) According to the article, what is driving this price hike (or "beef and veal inflation")? Draw a supply and demand diagram to analyze its effect on equilibrium price and quantity of the total beef market.
7. (6%) How does consumer surplus, producer surplus and total surplus change after this price increase? Illustrate the changes in a diagram.

[1] https://meatmanagement.com/news/retail-demand-for-beef-continues-to-suffer-as-prices-rise/85181.article

Part B (48%): Excerpts from "台鐵漲價 TPASS 年虧損增至 3.8 億元" (聯合報 2025/6/23)[2]

凍漲卅年的台鐵票價今天調漲，交通部強調，使用 TPASS 通勤月票旅客完全不受影響，但票價上漲，中央實際補貼金額也跟著提高，估每年 TPASS 票收差額達三點八一億元，外界憂 TPASS 恐淪爲「財政黑洞」；學者呼籲，交通部須針對外部效益及財務收益做更精細的分析。台鐵票價今起調漲，平均漲幅 26.8%，票價漲幅費率採遞遠遞減計算，台北至花蓮自強號票價，從 440 元漲至 583 元，台北至台東自強號票價從 783 元漲至 936 元，台北至高雄自強號從 843 元漲到 994 元，台北至台中自強號從 375 元漲到 500 元；區間車部分，台北至基隆從 41 元漲至 62 元，台北至新竹從 114 元漲至 163 元。交通部強調，使用 TPASS 通勤月票旅客完全不受影響，短程旅客不受影響、中程價格仍保有競爭力、長程遞遠遞減降低漲幅，但 TPASS 採中央與地方共同補助機制，票價一旦上漲，中央實際補貼金額也跟著提高。…(omitted)…成大交通管理科學系教授鄭永祥說，…(omitted)…目前大衆運輸缺司機、缺人力，導致服務未到位，TPASS 政策後續要觀察的不僅是財務收益，還要看外部效益，若還能吸引更多使用私有運具的民衆改搭公共運輸，就能同時減緩交通噪音及空氣汙染，這就是外部效益，因此呼籲交通部需做更細緻的分析。

Translation of "TRA fare hike pushes annual TPASS deficit to NT$380 million"

With the first fare adjustment in three decades taking effect today, the Ministry of Transportation and Communications (MOTC) emphasized that TPASS monthly commuter pass users are completely unaffected. However, as ticket prices rise, the central government's subsidy amount also increases, and it is estimated that the annual shortfall for TPASS will reach NT$381 million, raising concerns that TPASS could become a "fiscal black hole." Scholars urge the MOTC to conduct more detailed analyses of both external benefits and financial impacts. TRA fares were raised today, with an average increase of 26.8%. The rate schedule follows a "greater distance, smaller increment" formula. Take Tze-Chiang Limited Express as an example, Taipei–Hualien: 440 to 583 TWD, Taipei–Taitung: 783 to 936 TWD, Taipei–Kaohsiung: 843 to 994 TWD, Taipei–Taichung: 375 to 500 TWD. For slow trains, Taipei–Keelung: 41 to 62 TWD, Taipei–Hsinchu: 114 to 163 TWD. The MOTC stressed that TPASS users remain unaffected, short-distance travelers are shielded, medium distance fares retain competitiveness, and long-distance fares see a decreasing rate of increase. But because TPASS subsidies are shared by the central and local governments, any fare hike automatically raises the central government's subsidy burden…(omitted)…Cheng Yung-hsiang, professor of Transportation and Management Science at National Cheng Kung University, (omitted)…noted that the current mass-transit sector faces driver and manpower shortages, leading to service gaps. He said that TPASS evaluation should consider not only financial returns but also external benefits: if the policy attracts more private-vehicle users to switch to public transit, it can reduce traffic noise and air pollution. Therefore, he called on the MOTC to conduct a more refined analysis of these external effects.

Excerpts from "台鐵漲價後 運量少 2%營收增 24% 新董座鄭光遠:未來定期討論票價機制" (聯合報 2025/6/25)[3]

台鐵長年虧損，公司化後總算盼來近 30 年的首次調漲票價，本周一 6/23 已正式上路，盼能改善台鐵營收。旅客雖對台鐵漲價正反聲音都有，但台灣台鐵新任董事長鄭光遠今天在立法院強調，未來會定期討論票價機制。台鐵票價調漲對營運有何改變？鄭光遠說，目前因爲調整才剛上路，初步數據是運量減少2%，但營收增加24%，跟原本規畫是一樣的。…(omitted)

Translation of "Taiwan Railways fare hike leads to 2% drop in ridership but 24% increase in revenue; new chairman Cheng Kuang-yuan: future regular reviews of fare mechanism"

After years of losses, the Taiwan Railways Administration (TRA) finally received its first fare increase in nearly 30 years after privatization. The increase officially took effect on Monday, June 23rd, hoping to improve

[2] United Daily News (記者胡瑞玲／台北報導): https://udn.com/news/story/7266/8824063
[3] United Daily News (記者甘芝萁／台北即時報導): https://udn.com/news/story/7266/8830436

revenue. While passengers have expressed both positive and negative opinions about the fare hike, the new TRA chairman, Cheng Kuang-yuan, emphasized in the Legislative Yuan today that the fare will be reviewed on a regular basis in the future. How will the fare hike affect operations? Cheng Kuang-yuan said that since the fare increase was only recently implemented, preliminary data show a 2% decrease in ridership but a 24% increase in revenue, which matches the original estimates…(omitted)

Answer the following questions:

1. (5%) What is the percentage change in average ticket price for Taiwan Railways Administration (TRA) according to the first news article? What is the percentage change in ridership of TRA according to the second article? Based on these two numbers, calculate the percentage change in TRA revenue. Does your revenue estimates match what the TRA chairman stated in the second article? Why or why not?
2. (6%) Based on your answer to the above question, calculate the price elasticity of demand for average TRA rides. Is demand for TRA rides elastic or inelastic? Given this estimation, should TRA revenue increase or decrease after the fare hike? Did your prediction materialize in the news? Why or why not?
3. (3%) Given your estimates and the actual results of this fare hike, how should TRA increase revenue? Implement additional hikes or provide more discounts? Explain.
4. (6%) Are intercity buses substitutes or complements for the railway? How would the intercity bus market be affected by the TRA fare hike? Draw the supply and demand diagram to illustrate the changes in equilibrium price and quantity.

Assume that TRA passengers can be categorized into three groups: commuters, regulars, and leisure visitors, with the following one-way demand functions: $P = 8{,}000 - 20Q$ for commuters, $P = 160 - 8Q$ for regulars, and $P = 160 - 4Q$ for visitors. Assume that the average one-way fare is 80 TWD, and passengers are price takers, so single-trip prices are unaffected by individual demand. TRA offers a TPASS monthly ticket, which allows unlimited travel for a fixed (monthly) price of 1200 TWD.

Answer the following questions:

5. (6%) For commuters, what are the quantities demanded when (a) they purchase a TPASS or (b) they do not purchase TPASS and instead pay for each trip? What about regulars and visitors?
6. (12%) Draw the demand curves of all three groups and compare the consumer surplus of purchasing the TPASS and otherwise. Which of the three groups would purchase a TPASS (given sufficient budget)?
7. (6%) Now assume the one-way fare increases from 80 to 100 TWD. How would each group's TPASS purchasing decision change? Explain.
8. (4%) How would your above answers change if the assumed demand functions and average one-way fare are inaccurate? Explain.

Part C (51%): Excerpts from "High Rice Prices Jolt Indonesia Consumers Despite Good Crop, Hefty Stocks" (Reuters, 2025/9/23, By Dewi Kurniawati and Bernadette Christina)[4]

Jakarta, Sept 23 (Reuters) - Indonesian rice prices hit record highs recently despite a bumper harvest and vast stockpiles after the government raised its purchase price and lowered state-procurement quality standards, leading to a scramble for the grain and fueling consumer backlash…(omitted)…The market scarcity of the grain that is a staple for most of Indonesia's 280 million people has led to retailers imposing purchase limits, even though domestic output rose nearly 16% in the first seven months of the year. The tightness stems from government efforts to bolster farm incomes and curb imports under President Prabowo Subianto, who took office last October and has sought greater self-sufficiency in food and energy.

In January, Jakarta raised its official purchase price for unhusked rice to 6,500 rupiah per kilogram from 6,000 rupiah and tasked state procurement firm Bulog with buying 3 million metric tons of domestic rice—nearly

[4] https://www.reuters.com/markets/commodities/high-rice-prices-jolt-indonesia-consumers-despite-good-crop-hefty-stocks-2025-09-23/

triple last year's local buying…(omitted)…The result, analysts say, is that Bulog ended up with vast quantities of poor-quality rice, forcing thousands of rice mills to scramble to secure unhusked grain by offering higher prices than Bulog. Sutarto Alimoeso, chief of the Association of Rice Millers and Rice Entrepreneurs, said farmers took the opportunity to lock in the 6,500 rupiah price by rushing to harvest the grain before it was ripe…(omitted)

The Indonesian Ombudsman, an independent body supervising public services, last month found that eight out of 35 Jakarta-area supermarkets surveyed had no rice at all and urged the government to immediately release reserves held by Bulog…(omitted)…To dampen prices, the government in July ordered Bulog to release 1.3 million metric tons by year-end, of which 210,791 tons were delivered to markets as of September 20, data showed. The National Food Agency said that after food prices rose in July and August, the government intensified intervention measures and the rice price has started to ease…

Answer the following questions:

1. (7%) Draw a supply and demand diagram to analyze the effect on equilibrium price and quantity when the government raises its purchase price for unhusked rice to 6,500 rupiah/kg from 6,000 rupiah and buys whatever was left?
2. (10%) Assume the government will hold on to whatever it buys until they perishes. What is the effect on consumer surplus, producer surplus, governmental revenue and total surplus? How does deadweight loss, if any, change after the price rise?
3. (5%) What if the government does not hold onto its purchases until it perishes? How do your answers to the above question change if the government gives the purchased rice to the people for free?
4. (7%) In the article, the price rose even higher than 6,500 rupiah after the 3 million metric tons governmental purchase. Why will the price rise beyond the governmental purchase price? Draw a supply and demand diagram to analyze the relation between quantity demanded, quantity supplied, and quantity the government purchased at 6,500 rupiah.
5. (5%) What is the effect on consumer surplus, producer surplus, governmental revenue and total surplus under this new price? How does deadweight loss change, if any, after the price rise? (Assume the government will hold on to whatever it buys until they perishes.)
6. (2%) What happens to prices when 210,791 tons of Bulog purchased rice were delivered to markets?
7. (4%) Are there better policies to protect farmers from low prices? Write two and state your reasons.

(Continued) (omitted)…Indonesia's statistics bureau expects rice output to rise more than 10% for the year to 33.52 million tons, exceeding forecast consumption of 31.2 million tons. To be sure, Indonesia has succeeded this year in not importing rice after shipping in 4.52 million tons last year. Global rice prices are lower this year, with Thai 5% broken rice down 21.5% through August. ($1 = 16,648.0000 rupiah)

8. (5%) Now consider the world market of rice. Draw a supply and demand diagram to analyze the effect of the annual change in global rice prices **had Indonesia not increase its own rice output by more than 10%**. Specifically, how does equilibrium prices, quantities, imports and exports change?
9. (3%) How would your above answers change when Indonesia increases its own rice output by more than 10% (as is what actually happened)?
10. (3%) What do your answers to the above two questions say about the amount of rice Indonesia imported last year? Was it less than 10% of its rice output, exactly 10%, or more than 10%? Explain.