

## Bunge Global SA (BG)

Bunge, founded in 1818, mirrors Tata Group's profile as a large, mature conglomerate due to its global scale, diversified operations, and strong financial metrics. With more than 23,000 employees and US \$53 billion in revenues by 2024 (Macrotrends, 2025), Bunge spans agribusiness, edible oils, milling, and bioenergy across 40+ countries – matching Tata's presence in 100+ nations. Both corporations deploy related diversification (Kim et al., 1989) to buffer cyclical risks: Bunge's net income peaked at US \$2.24 billion in 2023 even after investing US \$550 million in a new soy protein facility (Bunge, 2024). Like Tata's vertical integration (e.g., steel into autos), Bunge's "farm-to-fork" approach captures synergies across its supply chain (Kenny, 2012). Maintaining a 0.7× debt-to-equity ratio also affirms its capacity for major expansions, consistent with Martin and Sayrak's (2001) finding that conglomerates create value when capital is effectively allocated. Bunge's multi-billion-dollar acquisitions (e.g., Loders Croklaan) and alliances (Chevron, Repsol) underscore this ability to scale sustainably. Such global reach, strong leverage, and diversified growth firmly establish Bunge as a top-tier conglomerate, similar to Tata, and fully capable of funding significant new investments.

## Investment Proposals

### Investment 1: Pea Protein Plant

The pea protein market is growing rapidly, with global valuations expected to rise from US \$2.42 billion in 2024 to US \$7.13 billion by 2033 (12.78% CAGR). In the U.S., forecasts predict growth from US \$273 million to US \$413 million by 2033 (4.7% CAGR), with some estimates as high as 19.9% CAGR through 2031. This project aligns with Bunge's strategy to diversify its protein portfolio, enhance its reputation for sustainable food solutions, and meet rising plant-based demand. Leveraging its recent US \$550 million investment in a soy protein facility, Bunge can apply lessons from past projects - such as scaling, supply risk management, and distribution optimization - to reduce execution risk and boost profitability in pea protein.

I estimate a total CapEx of approximately US \$350 million for a 20,000-ton pea protein facility (Table 1). From a valuation standpoint<sup>1</sup>, the project produces a positive NPV of about US \$132.8 million (Table 12), an IRR above the 8.38 percent hurdle rate, and a payback of

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<sup>1</sup> I first modeled FCFF and discounted it by the WACC. With a 50 percent debt-to-equity structure (Table 12) and a levered beta derived from industry peers, the cost of equity is 9.83 percent, after-tax cost of debt is 6.94 percent, and the overall WACC is 8.38 percent. I initially chose a 50% D/E ratio because it represents a balanced capital structure commonly used in the industry (See the Competitors Table in "Bunge Financials" sheet).

roughly six years. When modeled using FCFE, the NPV is about US \$24 million, indicating that equity holders capture a smaller portion of the value due to debt servicing obligations under the assumed 50% D/E structure.

Capacity Utilization	Selling Price Changes					
		-20%	-10%	0%	10%	20%
	-20%	-68	-19.3	29.3	78	126.6
-10%	-29.7	25.7	81.1	136.4	191.8	
0%	8.7	70.7	132.8	194.9	256.9	
10%	47	115.8	184.5	253.3	322.1	
20%	85.3	160.8	236.3	311.8	387.2	

  

Raw Material Cost Changes	Selling Price Changes					
		-20%	-10%	0%	10%	20%
	-20%	33.3	95.4	157.5	219.5	281.6
-10.00%	21	83.1	145.1	207.5	269.3	
0%	8.7	70.7	132.8	194.9	256.9	
10%	-3.7	58.4	120.5	182.5	244.6	
20%	-16	46.1	108.1	170.2	232.2	

  

WACC	Selling Price Changes					
		-20%	-10%	0%	10%	20%
	6%	56.1	126.3	196.5	266.8	337
8.38%	8.7	70.8	132.9	195	257.1	
10%	-19.1	38.2	95.4	152.7	210	
12%	-49.5	2.6	54.7	106.7	158.8	
14%	-75.9	-28.4	19.1	66.6	114.1	

**Figure 1:** Operational Sensitivity Analysis (Using FCFE & WACC). The tables measure NPV in \$M (FCFE). The analysis highlights that the project's financial viability is highly contingent on maintaining strong capacity utilization and stable selling prices. If both utilization and prices fall by 20%, the project's NPV becomes significantly negative at around - US \$68 million, indicating that underperformance on both fronts could be detrimental. On the flip side, achieving 100% capacity utilization with a 20% price increase results in a substantial NPV of approximately US \$322 million. This pattern suggests that even modest improvements in capacity or pricing can have a pronounced positive impact on the project's value. Similarly, raw material costs are a critical factor: a 20% decrease in raw material costs can elevate NPV to about US \$281.6 million, while a 20% increase reduces it to US \$232.2 million. This demonstrates that controlling input costs through strategic procurement is essential to profitability. Additionally, WACC variations play a crucial role - if WACC rises from 8.38% to 14%, the NPV drops drastically from US \$132.9 million to US \$114.1 million, even if selling prices remain stable. In contrast,

reducing WACC to 6% significantly boosts NPV to about US \$196.5 million. Hence, to optimize returns, Bunge must focus on ramping up capacity efficiently, managing input costs, and securing competitive financing rates.

Debt / Equity	Measure: ROI	Cost of Debt				
		2%	4.00%	6.94%	8%	10%
	0%	45.01%	45.01%	45.01%	45.01%	45.01%
20%	49.60%	46.51%	42.12%	40.59%	37.76%	
40%	54.40%	48.03%	39.32%	36.36%	31.01%	
60%	59.42%	49.57%	36.59%	32.31%	24.72%	
80%	64.67%	51.14%	33.93%	28.42%	18.86%	

Debt / Equity	Measure: ROE	Cost of Debt				
		2%	4.00%	6.94%	8%	10%
	0%	45.01%	45.01%	45.01%	45.01%	45.01%
20%	47.36%	44.01%	39.08%	37.30%	33.95%	
40%	47.43%	38.88%	26.32%	21.79%	13.21%	
60%	34.95%	17.31%	-8.62%	-17.97%	-35.61%	
80%	-76.29%	-113.45%	-168.08%	-187.78%	-224.94%	

Debt / Equity		Cost of Debt				
		5%	6.94%	9.00%	11%	13%
	0%	157.5	157.5	157.5	157.5	157.5
20%	118.5	109.4	99.7	90.4	81	
40%	72.7	55.3	36.8	18.8	0.9	
60%	11.9	-12.1	-37.5	-62.2	-86.9	
80%	-92.4	-117.7	-144.4	-170.5	-196.5	

**Figure 2:** Financing Sensitivity Analysis (Using FCFE & Cost of Equity). The tables measure NPV in \$M (FCFE). The analysis shows that the most favorable debt/equity ratios range between 40% and 60%, where ROI and ROE are most attractive when debt costs are around 6.94% to 8%. For example, at 40% D/E with a 7% interest rate, ROI is approximately 39%, and ROE exceeds 20%. However, pushing leverage to 80% D/E at a 10% interest rate causes returns to collapse, with ROI turning negative and ROE dropping below -76.29%. To enhance the project's NPV and mitigate financial risks, Bunge should adopt a financing structure that combines moderate leverage (around 50% D/E) with strategic partnerships and offtake agreements.<sup>2</sup> Similar to Bunge's investment in Merit Functional Foods to accelerate pea and canola protein production,

<sup>2</sup> Bunge's BBB+ credit rating (as noted in the Bunge's Financial sheet under the Dividends & Splits (2024) table) indicates it is considered investment grade by major rating agencies. Maintaining around a 50% debt-to-equity ratio will not jeopardize this standing, since it keeps borrowing costs moderate while still providing enough leverage to fund expansions and preserve flexibility for additional strategic investments.

or its partnership with CoverCress Inc. for next-generation oilseeds, securing pre-arranged offtake agreements for 30-40% of the facility’s capacity would effectively lock in revenue streams and shield against market volatility. Additionally, collaborating with large-scale buyers, such as Beyond Meat or Impossible Foods, could provide consistent demand and justify favorable lending terms, keeping ROE above 25% even under moderate cost-of-equity fluctuations. This approach aligns with Bunge’s broader strategy, exemplified by its partnership with Repsol for low-carbon feedstocks, where strategic alliances are used to stabilize revenue, enhance NPV, and protect against worst-case debt-servicing scenarios.

Bunge’s planned pea protein facility will generate revenue across multiple currencies, given the company’s global footprint: North America (35%), South America (25%), Europe (20%), Asia (15%), and Oceania (5%). Because these sales can be invoiced partly in BRL, EUR, CNY, and AUD, we examined historical exchange rates over the last decade<sup>3</sup>.

**Table 5. USD/X Foreign Exchange (2015 - 2025)**

Currency	BRL	EUR	Yuan	AUD
Current Rate	5.73	0.92	7.25	1.59
2015	3.2	0.91	6.2	1.28
Lowest Point	2.92	0.8	6.13	1.23
Highest Point	6.29	1.04	7.34	1.74
Average Rate	4.6	0.9	6.7	1.5
Worst Single-Year Swing	20%	10%	8%	15%
Net 10-Year Change	79.42% <sup>▲</sup>	1.31% <sup>▲</sup>	16.65% <sup>▲</sup>	24.82% <sup>▲</sup>
Base Case Change YoY	0%	0%	0%	0%
Good Case Change YoY	-1% <sup>▲</sup>	-2%	-1.00% <sup>▲</sup>	-0.50% <sup>▲</sup>
Worst Case Change YoY	6.00% <sup>▲</sup>	2%	1.58%	2.19%

**Figure 3:** The analysis is grounded in real historical movements, with currencies like BRL appreciating by 79.42% against the USD over the past decade and EUR showing only a 1.31% increase. This substantial volatility demonstrates the inherent FX risk when converting foreign revenues to USD. To model potential impacts, we established three scenarios grounded in historical exchange rate data: Base Case (minimal year-over-year fluctuations), Good Case (USD depreciating annually based on historical lows), and Worst Case (USD appreciating annually based on historical highs). Under the Good Case, total revenue increases from US \$85.7 million in Year 1 to US \$195.1 million in Year 10 – about 4–5% higher than the Base Case projections. In the Worst Case, revenue drops to US \$83.6 million in Year 1 and US \$149.7 million in Year 10 – about 4-5% lower than the Base Case (Table 7).

<sup>3</sup> See google sheet; I have 4 graphs for each currency against USD, data sourced from xe.com.

Capacity Utilization	FX		
	Worst Case	Base Case	Good Case
	-20%	-22.7	29.3
-10%	22.9	81.1	111.1
0%	68.5	132.8	166.3
10%	114.1	184.5	221.5
20%	159.7	236.3	276.7

**Figure 4:** The FX sensitivity analysis combines these scenarios with capacity utilization changes, providing deeper insight into potential outcomes. When capacity utilization rises by 20% from baseline and the dollar remains weak, NPV reaches approximately US \$277 million. Conversely, if capacity utilization drops by 20% and the dollar strengthens, the NPV plummets to approximately –US \$23 million. This analysis highlights how critical it is for Bunge to manage both operational efficiency and currency exposure simultaneously, as high capacity utilization can significantly offset adverse FX movements, while low utilization exacerbates the impact of a strong dollar.

To mitigate these risks, we modeled a hedging strategy (Bodnar, 1980) (Table 8)<sup>4</sup>, which in the Base Case, enhances revenue by roughly US \$9.6 million over the project timeline, while in the Worst Case it provides upward of US \$8.5 million to US \$36 million in cumulative protection (Table 8).

<sup>4</sup> I locked in average exchange rates near their historical midpoints: BRL at 4.6, EUR at 0.9, CNY at 6.7, and AUD at 1.5. Using historical midpoints as the hedging benchmark is justified because it reflects long-term equilibrium rates that smooth out short-term volatility and provide a realistic basis for forecasting future exchange rates. By doing so, we can stabilize revenue flows and reduce the downside of a strengthening dollar. This hedging approach creates an “Adjusted Revenue” line in the annual cash flows (Table 10), which is notably less volatile than the unhedged scenario. Note that I hedge for all the scenarios (base, good, worst) and combine them to create a total hedging impact (because hedging only for the worst case is conservative and unrealistic).

Capacity Utilization	FX (Fully Hedged)		
	Worst Case	Base Case	Good Case
-20%	99.6	78	72.7
-10%	145.3	136.8	131.8
0%	205.9	195.5	190.1
10%	265.5	254.2	248.2
20%	325.3	312.9	306.4

**Figure 5:** This table highlights how eliminating most foreign-exchange risk can preserve significant value when capacity utilization is high. Even in a “Worst Case” FX environment, with a –20% utilization drop, NPV remains positive at about US \$99.6 million. Conversely, under a “Good Case” FX scenario and strong capacity, the project’s NPV can exceed US \$300 million. Overall, the analysis shows that balancing forward sales contracts, currency hedges, and flexible price arrangements is crucial to maximizing Bunge’s risk-adjusted returns in this globally dispersed revenue environment (Garret, 2018).

The projected cash flows for this 20,000-ton pea protein facility are substantial and resilient, supported by strong global demand, Bunge’s operational efficiencies, and effective financing. Even under adverse scenarios – such as a 20% drop in capacity utilization and a strengthening dollar – the project achieves a positive NPV of approximately US \$99.6 million with hedging. A balanced 50% D/E structure at 7% interest, coupled with offtake agreements securing 30-40% of capacity, keeps ROE above 25%. Additionally, FX hedging safeguards cumulative revenue by US \$8.5 million to US \$36 million under worst-case conditions. This investment not only delivers strong financial returns but also diversifies Bunge’s protein portfolio, bolstering its position in the rapidly growing plant-based market.

## Investment 2: Digital Agribusiness Platform for Bunge

Bunge’s next major growth opportunity lies in harnessing the expanding digital agriculture market, which stands at an estimated \$22–23 billion in 2023 and could exceed \$35–40 billion by 2030. By developing an integrated, blockchain-enabled supply chain platform, Bunge can address rising demand for transparent, deforestation-free commodities, meet its 2025 sustainability targets, and potentially cut procurement costs by 20 percent while reducing broader supply chain inefficiencies by up to 50 percent. More importantly, the initiative secures strategic benefits, such as deeper farmer loyalty and a strong ESG reputation, that are not fully captured in

a DCF model. As a recognized technology leader, Bunge would bolster resilience, attract top data talent, and build a proprietary “data moat,” strengthening its competitive edge over time.

From a purely financial perspective, the platform’s 10-year CapEx is estimated at US \$540 million, driven by core software development, cloud services, and selective technology acquisitions. Three principal revenue streams underpin its value proposition: direct licensing fees to external users, ongoing top-line uplifts for Bunge’s own business (assumed at 0.5 percent in the base case), and recurring cost savings derived from digitized workflows. In the base-case scenario, the net present value (NPV) using free cash flow to the firm (FCFF) is approximately US \$205.9 million, with an internal rate of return (IRR) near 38 percent. Although debt-servicing obligations lower the free cash flow to equity (FCFE) NPV to around US \$84.5 million, the project still delivers a swift three-year payback and sustains an ROE above 30 percent, illustrating robust potential to enhance both financial and strategic outcomes.

#### Operational Sensitivity Analysis (Using FCFF & WACC)

These sensitivity tables will only focus on operational aspects. Therefore, the NPV is calculated using FCFF and discounted by WACC. The tables measure NPV in \$M (FCFF).

Indirect Cost Savings	Enhance Existing Revenue					
		0.3%	0.50%	0.7%	0.8%	1.0%
	0.3%	-682.2	-220	240.3	470	921.1
0.5%	-255.3	205.9	667.1	897.8	1359	
0.7%	171.6	632.8	1094	1324.6	1785.8	
0.8%	385	952.5	1356	1561.2	1999.3	
1.0%	553.5	1209.2	1697.7	1964.9	2426.2	

  

R&D & Continuous Improvement	Direct Costs (Software & Cloud Services Handling/Upgrades)					
		10.0%	15.00%	20.0%	25.0%	30.0%
	10.0%	568.3	441.8	290.3	109.7	-104.7
15.0%	483.9	357.4	205.9	25.3	-189	
20.0%	382.9	256.4	104.9	-75.7	-290	
25.0%	262.5	136	-15.5	-196.1	-410.4	
30.0%	119.7	-6.9	-158.4	-339	-553.3	

**Figure 6:** Operational Sensitivity Analysis (Using FCFF & WACC). The tables measure NPV in \$M (FCFF). The analysis shows that the project's financial performance is heavily influenced by its ability to enhance existing revenue streams and achieve cost savings. If the platform boosts Bunge’s existing revenue by only 0.3% and reduces indirect costs by 0.3%, the NPV becomes significantly negative at around –US \$682.2 million. Conversely, achieving 1.0% improvement in both revenue and cost savings elevates NPV to approximately US \$2.43 billion. This highlights the importance of achieving at least the base case targets of a 0.5% revenue lift and

0.5% cost reduction, which produces a positive NPV of around US \$205.9 million. Similarly, the R&D and continuous improvement costs play a crucial role. The NPV remains positive when such costs are kept below 20% of software and cloud services expenses, generating an NPV of around US \$382.9 million. However, if costs rise to 30%, the NPV turns negative at –US \$553.3 million. This underscores the need for efficient R&D spending and maintaining a revenue enhancement of at least 0.5% to keep the project financially viable. To optimize returns, Bunge must focus on scaling revenue enhancements, securing strategic partnerships, and closely managing R&D expenditure.<sup>5</sup>

Debt / Equity	Measure: ROI	Cost of Debt				
		2%	4.00%	6.94%	8%	10%
0%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
20%	38.35%	37.64%	36.60%	36.23%	35.53%	
40%	41.18%	39.73%	37.62%	36.87%	35.47%	
60%	44.07%	41.85%	38.65%	37.52%	35.41%	
80%	46.99%	44.00%	39.69%	38.17%	35.53%	

  

Debt / Equity	Measure: ROE	Cost of Debt				
		2%	4.00%	6.94%	8%	10%
0%	35.59%	35.59%	35.59%	35.59%	35.59%	35.59%
20%	41.62%	38.75%	34.52%	33.00%	30.13%	
40%	51.66%	44.00%	32.74%	28.68%	21.02%	
60%	71.75%	54.51%	29.17%	20.04%	2.80%	
80%	132.00%	86.04%	18.47%	-5.89%	-51.86%	

  

Debt / Equity		Cost of Debt				
		2%	4.00%	6.94%	8%	10%
0%	192.2	192.2	192.2	192.2	192.2	192.2
20%	179.8	167.4	149.1	142.6	130.2	
40%	167.4	142.6	106.1	99.29	68.1	
60%	155	117.1	63	43.4	6	
80%	142.6	92.9	19.19	-6.4	-56	

**Figure 7:** Financing Sensitivity Analysis Using FCFE & Cost of Equity. The analysis show that higher leverage can boost both ROI and ROE, but only if borrowing costs remain moderate. At around 60 percent debt-to-equity and a 7 percent interest rate, ROI surpasses 38 percent and ROE approaches 30 percent. However, as debt costs rise toward 10 percent or leverage spikes above 80 percent, the FCFE NPV declines sharply, highlighting the pitfalls of aggressive

<sup>5</sup> Unlike the pea protein investment, this digital platform does not require hedging since its revenue model is predominantly based on subscription and licensing fees charged in USD globally. As a digital product, it avoids foreign exchange risk tied to commodity sales, making the cash flows more stable and predictable.

financing. In short, a balanced structure, 40-60 percent debt, maximizes equity value while maintaining flexibility.

To capitalize on these findings, I recommend a Build-and-Partner strategy as it aligns directly with Bunge's broader mission and the need for value-focused investment structuring. The core platform and mission-critical analytics should be developed in-house to secure intellectual property advantages, while US \$100 million within the total CapEx is set aside for carefully targeted M&A<sup>6</sup>, such as acquiring a Farmers Edge-type platform for immediate user bases or a niche blockchain firm for specialized IP. Forming partnerships with established cloud and IoT providers can further accelerate deployment, reduce technology risk, and foster faster adoption among farmers and trading partners. This balanced structure both safeguards Bunge's leadership in digital agribusiness and unlocks a powerful synergy of financial, operational, and strategic benefits that position the company for sustainable growth well into the next decade.

## Executive Summary

- **Pea Protein Facility.** The pea protein market is projected to grow from US \$2.42 billion in 2024 to US \$7.13 billion by 2033 (12.78% CAGR). Investing US \$350 million yields an NPV of US \$132.8 million with a six-year payback, while hedging can protect up to US \$36 million if exchange rates deteriorate.
- **Digital Agribusiness Platform.** The digital agriculture market, valued at US \$22–23 billion in 2023, could surpass US \$35-40 billion by 2030. A US \$540 million outlay delivers an NPV of US \$205.9 million at a 38% IRR and a three-year payback, with US \$100 million reserved for M&A to secure new tech or user bases.
- **Optimal Financing Structures.** Moderate leverage – 50% debt-to-equity for pea protein and 40–60% debt for the digital platform – mitigates interest risk while maximizing returns. Hedging is vital to manage the pea facility's multi-currency sales; by contrast, digital revenue is billed globally in USD, minimizing FX exposure.
- **Strategic & Non-Monetary Benefits.** The pea facility broadens Bunge's protein offerings and bolsters its reputation in sustainable foods. The digital platform deepens farmer loyalty through data services, strengthens ESG compliance, and creates a unique “data moat” that competitors find hard to replicate.
- **Recommendation.** If capital must favor one project, the digital platform's quicker payback and higher IRR suggest a more immediate return. However, the pea facility

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<sup>6</sup> Table 13, Investment 2

addresses surging plant-based demand with strong medium-term upside. Implementing both would diversify Bunge's portfolio and enhance long-term leadership in agribusiness.

**Word count:** 1099 words (except titles, in-text citations, and figure descriptions)

AI statement: AI was mainly used to shorten the sentences.

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## Appendices

### Appendix A: HCs and LOs applications

#b165-global: I explicitly considered foreign exchange (FX) risks in the Pea Protein Plant investment. Since the project's revenue is generated across multiple currencies—North America (35%), South America (25%), Europe (20%), Asia (15%), and Oceania (5%)—I modeled three FX scenarios: Base Case, Good Case (USD depreciating), and Worst Case (USD appreciating). To mitigate currency exposure, I proposed a hedging strategy that increases revenue by approximately US \$9.6 million in the Base Case and provides protection ranging from US \$8.5 million to US \$36 million under adverse conditions. In contrast, the Digital Agribusiness Platform was structured as a global revenue model billed entirely in USD, eliminating FX concerns and simplifying cash flow projections.

#b165-inveStructure: I calculated both FCFF and FCFE NPVs for each investment to compare returns to the company versus equity holders under different financing structures. For the Pea Protein Plant, I identified a 50% debt-to-equity (D/E) ratio as optimal, yielding an FCFF NPV of US \$132.8 million and an FCFE NPV of US \$24 million, highlighting how debt servicing impacts equity value. For the Digital Agribusiness Platform, sensitivity analysis indicated that a 40–60% D/E structure maximizes equity value, with an FCFF NPV of US \$205.9 million, IRR of 38%, and an ROE exceeding 30%. I recommended a Build-and-Partner approach for the digital platform, allocating US \$100 million of CapEx to targeted M&A for scalability, thus enhancing overall value creation.

#b165-financialMetrics: I applied this LO by using detailed spreadsheets (e.g., “Bunge Financials”) to compare Bunge's maturity and capacity with that of Tata, emphasizing metrics like debt-to-equity (~0.7×), profit margin (6–8%), and ROE (10–20%). These figures showed Bunge's stable cash flows, solid balance sheet, and investment-grade profile – enabling significant expansions like the US \$550 million soy protein project. I also benchmarked Bunge's spending patterns against competitors, citing examples of ADM's digital platform or Merit Functional Foods to substantiate the feasibility of my proposed investments. By connecting historical and peer data, I demonstrated how Bunge's mature financial metrics support its ability to fund new ventures without compromising overall stability.

#levelsofanalysis. I examined Bunge's proposed investments across multiple interconnected layers – operational, financial, and macroeconomic – and integrating them into a unified view. At the operational level, I ran sensitivity analyses (capacity utilization, raw material costs, pricing) to see how small shifts could ripple through project NPVs. At the financial level, I varied debt-to-equity ratios and interest rates, assessing the impact on equity returns and leverage. Finally, at the macroeconomic level, I built scenarios in my Google Sheets (base, good, and

worst cases) reflecting different currency exchange trajectories and hedging outcomes. By linking these distinct dimensions, e.g., FX volatility affecting revenue, which in turn influences repayment capacity, I showed how interactions among micro and macro factors shape the success of each investment.

#estimation: I grounded each project's financial and operational assumptions in real-world data, then using approximation techniques to fill in gaps where exact figures were unavailable. For example, I established a US \$350 million CapEx for the pea protein facility by referencing analogous plants (e.g., Merit Functional Foods' ~\$147 million investment for a smaller-scale site) and scaling up based on Bunge's own US \$550 million soy protein facility. I similarly approximated raw materials, capacity utilization ramps, and selling prices (e.g., US \$1,300/ton for peas, US \$8,570/ton blended protein) through a mix of industry benchmarks and historical data. In the Digital Agribusiness Platform, I used historical currency charts to estimate moderate, best-case, and worst-case exchange rate scenarios. These estimates, validated against competitor investments and publicly available market reports, ensured plausible financial modeling without relying on mere guesswork.

#strategize: I diagnosed Bunge's core challenges, such as rising sustainability demands, volatile commodity markets, and the need to expand profitably, and then crafting tailored approaches to leverage the firm's strengths. For the pea protein venture, I emphasized Bunge's existing soy protein experience (e.g., prior US \$550 million investment) and global logistics network, turning those into competitive edges for scaling new plant-based proteins. In the digital platform initiative, I recommended a "Build-and-Partner" model to exploit Bunge's data capabilities while collaborating with specialized tech firms. These strategies address both operational risks (capacity or supply chain issues) and financial considerations (hedging FX, moderate leverage). By aligning each project with Bunge's sustainability commitments, global footprint, and track record of partnership success, I ensured the recommended plans fully capitalize on the company's inherent advantages.

## **Appendix B:** Connection to Argentina (my current location)

Bunge's story in Argentina goes way back to the late 1800s, when the original Bunge & Born partnership opened shop in Buenos Aires and quickly became one of the country's biggest grain and flour exporters. They set up mills and export terminals along the Paraná River, effectively linking Argentina's vast wheat fields to world markets, and that early success paved the way for Bunge's later expansion into a global agribusiness giant.

Even though Bunge is now headquartered in St. Louis and operates worldwide, it still has a big presence in Argentina. The company runs crushing plants, export terminals, and other supply chain operations across the region, employing thousands of locals and relying on Argentina's huge soybean and grain output. In many ways, Bunge's modern success wouldn't exist without its strong Argentine roots.