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NON-PRICE DIFFERENTIATION OF A SALT MANUFACTURER THROUGH PRODUCT INNOVATION IN AN EXPORT-ORIENTED MARKET

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ABSTRACT

This study examines how a small manufacturer of refined salt from an emerging market builds export competitiveness on non-price foundations. The analysis draws on internal operational, financial, and trade documentation of an Egyptian producer for the period from 2020 to 2025 and follows a single-case design, triangulating across audited accounts, management data, bills of lading, quality certificates, and government correspondence. Between 2023 and 2025, the physical volume of sales declined by 28% while revenue grew by 105%, and average revenue per ton rose from EGP 1,028 to EGP 2,956. Export sales expanded from EGP 0.4 million to EGP 11.3 million, the number of destination countries increased from 2 to 9, and the export share of revenue reached 61%. The evidence links this value migration to 4 interacting mechanisms: product and format innovation, an accumulated certification portfolio that functions as a market-access asset, private-label manufacturing as a scaling channel, and disciplined business-to-business customer acquisition. The case documents a contract price of 109 USD per ton in a regulated European market, compared with an average national export price of 70 USD per ton. The findings offer a replicable template for commodity processors in developing economies.

KEYWORDS: non-price differentiation, product innovation, export performance, food certification, private label, emerging market SME.

1. INTRODUCTION

Producers of basic processed commodities in developing economies face a structural trap. Their products have low unit value; buyers treat them as interchangeable; and rivalry converges on price, leaving a small factory with thin margins and weak bargaining power. Refined salt illustrates this trap in a pure form. The mineral is abundant, the extraction technology is mature, and world trade statistics record an average export price of 70 USD per ton. A small enterprise that enters this arena with price as its main argument competes against producers whose cost base rests on decades of accumulated scale. The strategic question for such an enterprise concerns the sources of advantage that do not

depend on selling cheaper than everyone else.

Salt occupies a special position among basic commodities because a public health system runs through it. Iodine deficiency remains a leading preventable cause of cognitive impairment, and states respond with mandatory iodization of edible salt, monitored producer registries, and subsidized distribution of fortificants. For a producer, this architecture cuts both ways. It raises the entry bar into the edible segment through licensing, laboratory, and audit requirements, and it rewards the producers who clear the bar with regulatory standing that bulk suppliers cannot claim. The economics of differentiation in salt intertwine with those of a state fortification program, and the case examined here documents that intersection through official correspondence.

The national policy environment adds a second layer of context. Egypt concentrates manufacturing investment in planned industrial zones, of which Tenth of Ramadan City is among the largest, and pairs the zones with export promotion institutions that include sectoral export councils, preferential origin certification under trade agreements, and commercial representation abroad. A small factory within this environment can rent access to institutional resources that its own budget could never build, and the extent to which such a factory actually converts those resources into export contracts constitutes an empirical question of policy relevance far beyond the scope of a single firm.

Strategy research offers a canonical answer through the concept of differentiation, which links superior export outcomes to unique product attributes that rivals cannot copy at low cost [1]. Empirical work on small and medium-sized enterprises confirms that innovation capability translates into competitive advantage and measurable performance gains when firms convert new products, formats, and processes into positions that buyers value [2]. A parallel stream of literature on food trade demonstrates that certified compliance with safety and quality standards operates as a precondition for entry into regulated markets and as a lever of export performance in its own right [3]. A third stream documents the worldwide expansion of private-label manufacturing, which enables a factory without an established consumer brand to reach foreign shelves through the brands of its retail customers [4].

These streams rarely converge in a single empirical setting. Studies of differentiation and export performance rely on survey scales and perceptual measures, which capture managerial intent yet reveal little about the concrete documents, certificates, contracts, and shipments through which a non-price strategy materializes. Studies of standards work with country panels or large firm samples, where the internal mechanics of a single certification decision remain invisible. Research on private labels focuses on retailers in developed markets and on the contest between store brands and national brands, while manufacturers in developing countries that produce that store brands remain outside the frame.

The result is a gap between what theory prescribes and what a manager of a small commodity factory can observe, verify, and repeat.

Egypt provides a fitting context for closing part of this gap. National salt exports grew from 28.9 million USD in 2021 to 77 million USD in 2025. The country ranked 14th among world exporters in 2024, and its share of world trade in the product reached 2.1%. Growth of this kind creates room for new entrants, yet it also intensifies the price rivalry that defines the category. Whether a young Egyptian factory can escape that rivalry, and through which verifiable mechanisms, remains an open empirical question.

The structure of world demand explains why non-price niches exist inside a commodity category. The global salt market reached 28.9 billion USD in 2025 with a projected compound annual growth rate of 4.3% through 2032, and its end-use composition assigns about 55% of volume to chemical production, 15% to de-icing, 10% to food processing, 5% to water treatment, and 15% to other applications. The segments differ in the attribute's buyers are willing to pay for. Chemical and de-icing demand absorb bulk tonnage at the lowest prices; food processing requires certified purity, iodization, and controlled granulation; water treatment requires uniform tablets with predictable dissolution; and animal nutrition requires compressed blocks with stable mineral content. A producer that can move its capacity across these segments holds a portfolio option that a bulk supplier lacks, and the option's value grows with every certificate and format the factory adds.

The study pursues 3 questions. First, through which concrete and verifiable instruments do a small salt producer convert quality into market access across regulated destinations. Second, what happens to the unit economics of the firm when capacity migrates from bulk domestic segments to certified export segments. Third, how do the individual mechanisms of differentiation interact, and which of them would fail in isolation. Answers to these questions require evidence at the level of certificates, contracts, and shipments, and the case at hand supplies such evidence in unusual completeness.

This study addresses the question through a single case analysis of Egy Salt for Salts and Minerals S.A.E., a producer of refined salt founded in 2020 in Tenth of Ramadan City. Between 2023 and 2025, the company reduced its physical sales volume by 28% and, at the same time, more than doubled its revenue, raised average revenue per ton by 187%, expanded its export geography from 2 to 9 countries, and lifted the export share of revenue from 4% to 61%. The documentary record behind these figures includes audited financial statements, a management information memorandum, bills of lading, purchase orders, per-shipment health certificates, an international certification portfolio, and official correspondence with the Ministry of Health on subsidized iodine allocations.

The purpose of the study is to reconstruct, from primary documents, the mechanism through which a small commodity processor converts non-price assets into export revenue and a verified price premium. The analysis contributes a 4-part framework that connects product and format innovation, certification as a market-access asset, private-label manufacturing as a scaling channel, and exhibition-based customer acquisition into a single operating model. The framework rests on numbers traceable to specific documents, which distinguishes the study from survey-based accounts and gives practitioners in similar industries a template they can audit line by line.

The study's intended audience comprises 3 groups. For strategy scholars, the case supplies mechanism-level evidence that survey designs cannot reach and formulates testable propositions. For managers of small processors in developing economies, the study documents a sequence of investments with dates, costs, and returns that can be budgeted. For policymakers, the evidence identifies the public instruments, from national safety registries to subsidized fortification programs and export promotion, whose presence made the private strategy executable, and whose absence would raise the fixed cost of non-price competition beyond the reach of a firm with 60 employees.

2. LITERATURE REVIEW

2.1 Differentiation and competitive advantage in small firms

The resource-based tradition treats competitive advantage as the outcome of valuable, scarce, and hard-to-imitate resources, and its dynamic extension asks how firms build and reconfigure such resources over time. A systematic review of this literature in the context of small and medium-sized enterprises identifies dynamic capabilities as the central bridge between resource endowments and market outcomes and calls for evidence on how small firms in resource-poor environments assemble those capabilities in practice [5]. The call matters for the present study because a salt factory founded in 2020 starts with almost no strategic resources beyond its physical assets and must construct every element of advantage from scratch.

Evidence from emerging markets supports the link between differentiation and export outcomes. A structural model estimated on 250 Mozambican small and medium-sized enterprises shows that a differentiation strategy raises export performance, that positional advantage partially mediates the effect, and that intense rivalry weakens the payoff, implying that differentiation earns the highest return when the firm manages to step outside direct price comparison [1]. A related study of Nigerian firms finds that innovation capability improves performance through the mediation of competitive advantage and that the strength of the effect varies with competitive intensity [2]. Work on 365 Ghanaian enterprises adds that market competition itself pushes small firms toward better performance, while process innovation on its own does not guarantee the conversion of pressure into results, so the composition of the innovation portfolio matters more than its mere presence [6].

The generic strategy menu narrows for a small entrant in a commodity industry. Cost leadership presupposes scale, and a factory that runs 1 line at 26% utilization cannot outproduce incumbents with decades of accumulated volume, so a price war would exhaust the entrant before it dented the market. Focus without differentiation reproduces the same trap inside a smaller arena. Differentiation remains the only strategy whose feasibility grows with intangible investment, because certificates, formats, and reputational assets accumulate at a pace the firm controls, while scale accumulates at a pace the market permits. The Mozambican evidence adds a nuance that matters for execution: positional advantage transmits only part of the differentiation effect to export performance, implying that a firm must convert its unique attributes into positions that specific buyers recognize before the attributes pay off [1].

Empirical work on innovation composition sharpens the prescription. The Nigerian study distinguishes innovation capability from strategic flexibility and finds that capability feeds performance through competitive advantage while flexibility matters most under intense rivalry [2], and the Ghanaian study shows that process innovation alone leaves the competition-performance link unchanged [6]. Read together, these results direct a small firm toward product-facing innovation that buyers can see, taste, and audit, since improvements confined to the shop floor fail to move willingness to pay. A portfolio of visible product attributes, packaging formats, and certified claims meets that test, and the case examined below invested in exactly this class of innovation.

Institutional context conditions these relationships. An analysis of breakthrough innovations across small exporters in developing countries demonstrates that the payoff from technology-based and market-based innovations depends on the specificity and enforceability of the institutional environment, which implies that the same innovation can succeed in one regulatory setting and fail in another [7]. For a food product, the institutional environment includes the standards regime of every destination market, and this observation connects the differentiation literature to the literature on certification.

Measurement practice in this literature explains the value of documentary cases. Export performance is entered into the models as multi-item perceptual scales, where managers rate satisfaction with export sales, growth, and profitability, and differentiation is measured as agreement with statements about uniqueness and quality. Scales of this kind support estimation across hundreds of firms and cannot distinguish a certificate from a claim about a certificate. A documentary case complements the scales with realized quantities, where differentiation is evidenced by a certificate issued by an issuing body and a validity date, and performance is expressed in tons, destinations, and contract prices. The 2 designs answer different questions, and the mechanism question of the present study belongs to the second.

2.2 Standards and certification as market access assets

Research on food safety standards has shifted from viewing compliance as a cost of doing business to an investment with measurable returns. A systematic review of 117 studies on the adoption of food safety standards concludes that certified compliance functions as a prerequisite for exporting to regulated markets, that non-compliance escalates the cost of every shipment, and that the export performance of adopters exceeds that of non-adopters across most designs and regions [3]. The review also documents the growth of private standards that retailers impose on suppliers beyond public regulation, making the certification portfolio of a manufacturer a layered asset rather than a single credential.

Destination heterogeneity shapes the returns to standards. Firm- and country-level results indicate that the export payoff of certification is larger when importing institutions are strict and when the exporter comes from an environment with weaker domestic enforcement, because the certificate then substitutes for the origin country's missing reputation. Standards imposed by importing states can also suppress trade when compliance costs exceed exporters' capacity, so the same regulatory architecture that rewards certified firms excludes uncertified ones, and the distribution of gains across firms becomes a function of who invests first [8]. For a young exporter from a developing economy, the implication is temporal, since early accumulation of certificates captures the access rents before rivals arrive.

Causal evidence at the firm level reinforces this conclusion. A staggered difference-in-differences analysis of Chinese listed agri-food companies shows that the adoption of ISO 9001 certification raises exports, that the effect runs through intensified innovation activity inside the certified firm, and that the gain is larger for food manufacturers than for non-food firms [8]. The finding matters for interpretation because it reframes certification as a trigger of internal change. The audit discipline, documentation, and process control that certification requires spill over into product development and give the firm something new to sell, which is the channel the present case allows to observe in documentary detail.

The architecture of food safety schemes forms a recognizable hierarchy that buyers read at a glance. Management system standards of the ISO family establish process discipline; ISO 22000 extends that discipline to food safety hazards; and schemes recognized by the Global Food Safety Initiative, of which FSSC 22000 is one, add the benchmarking that international retailers accept as a common currency. Above this base sit market-specific layers, which include religious certifications for Muslim and Jewish consumption, national producer registries that gate export documentation, and destination conformity programs that inspect individual consignments. A supplier that holds the full stack speaks

the documentary language of every buyer type at once, and the stack, once assembled, functions as a barrier against rivals who must spend years assembling their own.

The economics of certification for a small firm rests on the credence nature of food quality. A buyer cannot observe purity, microbiological safety, or iodization accuracy at the moment of purchase, so the market prices the signal, and third-party certificates function as the signal with the widest recognition. The signaling account explains 2 empirical regularities reported in the review literature [3]. Certified firms obtain contracts that uncertified rivals never see, because retail and institutional buyers screen suppliers on paper before any negotiation, and certified firms retain contracts longer, because the recurring audit substitutes for the buyer's own monitoring. Both regularities lower the effective cost of certification below its invoice cost, yet small firms in developing economies underinvest in certificates when they treat the invoice as the full cost and ignore the access value on the other side of the ledger.

Religious and destination-specific certifications extend the same logic to particular markets. A study of 40 Halal-certified Palestinian food companies finds that the depth of Halal standard implementation mediates the effect of certification on operational, marketing, and financial performance, so the certificate delivers value only when the underlying practices permeate the production system [9]. Conformity assessment schemes of importing countries, which require third-party inspection of each consignment, add another layer, and the ability of a small factory to pass such inspections repeatedly becomes a competitive asset that price cannot substitute for.

2.3 Private label manufacturing as a scaling channel

Private labels now account for a large and growing share of grocery sales worldwide, and a global convergence model estimated across more than 2,000 categories and country combinations projects continued expansion of their market share far beyond the mature markets of Western Europe [4]. For a manufacturer, this expansion transforms the structure of demand. Retailers and distributors search for factories able to produce to specification under the buyer's brand, which opens a channel for market entry that bypasses the long, costly process of building a consumer brand in every destination.

The channel imposes requirements that filter suppliers. A retailer that commissions a store brand transfers reputational risk to its own name, so it audits the factory, demands recognized food safety schemes, specifies formats and artwork, and expects flexible minimum order quantities across stock-keeping units. These requirements raise the entry bar and simultaneously protect the position of the supplier that clears the bar, because the audited relationship carries switching costs for the buyer. For a developing-economy factory, the private-label route therefore trades brand-building expenditure for compliance expenditure, and the latter is smaller, faster, and more predictable than the former.

The tiering of store brands raises the channel ceiling. Retailers now operate budget, standard, and premium private-label lines, and the premium tier competes on quality claims, provenance, and packaging design with national brands [10]. A supplier capable of premium execution sells into the highest-margin corner of the store brand economy, and the capabilities that qualify a factory for that corner, which include certified food safety schemes, laboratory documentation, and format flexibility, coincide with the capabilities that the certification literature rewards. The convergence of the 2 requirement sets means that a single investment program serves both the access and premium agendas of a small manufacturer.

A systematic review of the contest between private label brands and national brands documents a shift in retailer strategies from price imitation toward innovation, quality tiers, and premium store brands, thereby raising the technical requirements that private label suppliers must meet [10]. Game-theoretic work on the interaction between private-label retailers and brand manufacturers shows that the relationship combines competition and cooperation, and that manufacturers that serve private-label demand can stabilize capacity utilization while brand owners concentrate on marketing [11]. Both results imply that a certified, flexible factory in a low-cost location holds a structural value position within modern retail supply chains, and the present case tests this implication using shipment-level data.

2.4 Internal enablers of export performance in emerging market SMEs

Qualitative evidence from Qatar identifies a compact set of internal enablers behind the export success of manufacturing enterprises in the Gulf region, which includes networking capability, international market knowledge embedded in staff, product adaptation, and managerial commitment to exporting [12]. Quantitative evidence from Spanish manufacturing adds that digitalization raises the probability of exporting through direct effects and through productivity, with an increase of 1.5 percentage points in export participation per standard deviation of the digitalization index [13]. Together with the institutional findings on breakthrough innovation [7], these results portray export capability as a bundle of assets that management assembles deliberately.

The Qatari evidence warrants closer scrutiny because it's setting closely resembles the present case. The identified enablers include employees with networking skills and international experience, managerial commitment that survives early setbacks, product adaptation to destination requirements, financial discipline that funds market entry from operations, and relationships with support institutions [12]. Each enabler is organizational, none requires scale, and the list reads as a capability specification for a factory of 60 people. What the qualitative design cannot show is the documentary output of the enablers, which the present study supplies, since networking materializes as exhibition contracts,

adaptation materializes as destination-specific formats, and institutional relationships materialize as council endorsements and subsidized stands.

Institutional export promotion complements the internal enablers. Endorsement by sectoral export councils, subsidized participation in flagship fairs, and diplomatic commercial offices reduce the search and credibility costs that separate an unknown factory from a foreign buyer, and these instruments matter most for the smallest exporters, whose marketing budgets cannot fund independent market entry. The literature treats such support as an external resource that amplifies the return on internal capabilities, so the productive question concerns the interaction between the 2 layers, not the choice between them, and the case below documents that interaction in the exhibition history of one firm.

2.5 Synthesis and analytical framework

The reviewed streams converge on a proposition that the present study operationalizes. A small commodity processor escapes price competition when 4 elements reinforce one another: product and format innovation create objects of differentiation, certification converts those objects into admissible market offers, private-label manufacturing scales the offers through the brands of buyers, and systematic customer acquisition connects the factory to those buyers. The empirical sections trace each element in the documents of one Egyptian firm and measure the joint outcome in tons, currency, and destinations.

Each construct of the framework receives a documentary operationalization. Product and format innovation appear in the sales register as the count and revenue structures for product groups and packaging formats. Certification appears as a portfolio of valid certificates issued by their respective issuing bodies, with scopes and dates, together with the per-shipment documents they enable. The private label channel appears as the tonnage manufactured under buyer brands, as well as the identity of those brands on shipping documents. Customer acquisition appears as the exhibition calendar, the recorded cost per acquired account, and the order history of accounts gained at fairs. The outcome constructs, including value migration, export transformation, and price premium, appear as revenue per ton, the 4-export series, and the documented contract price relative to the national average. This operationalization keeps every construct auditable, and the same definitions transfer without change to replication studies in other firms and industries.

3. METHODOLOGY

3.1 Research design

The study employs a single-case design with an analytical orientation. The choice reflects the nature of the research question, which concerns the mechanism of a strategy; the average effect of a variable

would answer a different question; and the nature of the available evidence, which consists of internal documents that no survey instrument can reproduce. A single case supports analytic generalization, in which the findings extend to theory through the mechanism's logic, but it does not support statistical generalization to a population of firms. The design treats the company as the unit of analysis and the period from 2020 to 2025 as the window of observation, with 2023 to 2025 as the focal interval during which the strategic shift occurred.

The observation window aligns with the strategy's lifecycle. The years 2020 through 2022 cover incorporation, construction, and licensing; 2023 covers the first full commercial cycle with initial exports; 2024 covers certification and channel building; and 2025 covers the deliberate reallocation of capacity toward export demand. A shorter window would truncate either the investment or payoff phase and misstate the return on the non-price assets, whereas a longer window is unavailable because the firm is 5 years old. Event dating throughout the analysis follows the documents, and recollection plays no role, with certificate issue dates, purchase order dates, and bill of lading dates anchoring the sequence.

The case qualifies as revelatory. Access covered the full internal documentation of the company, including materials prepared for an institutional transaction and audited by external parties, a depth of access that studies of small private firms in developing economies obtain only in rare circumstances. The combination of financial, commercial, logistical, and regulatory records for one firm permits triangulation at the level of individual shipments and certificates, and this granularity constitutes the methodological contribution of the study alongside its substantive findings.

Case study quality criteria guided the design. Construct validity rests on multiple sources of evidence for each construct: value migration draws on audited statements and management registers; market access draws on certificates and shipment papers; and acquisition economics draws on cost records and exhibition documentation. A chain of evidence connects each analytical claim to a named document with a date and, where applicable, a counterparty signature. Internal validity is addressed through explicit rival explanations in the discussion, and external validity takes the analytic form, in which the mechanism generalizes to theory and the magnitudes remain case-specific.

3.2 Data sources and triangulation

The documentary corpus contains 6 groups of sources. The first group includes audited financial statements for the fiscal years 2020 through 2025 prepared under Egyptian Financial Reporting Standards, with the 2024 statement recording activity revenues of EGP 18,704,055, compared with EGP 10,161,139 in the restated prior year, and a net profit of EGP 1,769,150. The second group consists of the management information memorandum of December 2025, the product mix registers,



the capacity, the customer portfolio and channel economics and the evolution of the volume. The third group consists of 37 documents relating to the commercial and shipping operations including bills of lading, purchase orders, commercial invoices and a customs export statement of the General Organization for Export and Import Control, from July 2024 until June 2025. The fourth group of 20 per shipment certificates includes health certificates issued by the NFSA, certificates of origin, and EUR.1 movement certificates. The fifth group assembles the facility's quality certification portfolio. The sixth group holds official letters of the Ministry of Health and Population on subsidized iodine allocations for 2023 and 2024.

The exhibition record forms a distinct evidence class. Participation certificates, stand photographs with dated signage, organizer correspondence, and support letters from the Egyptian Food Export Council document the acquisition channel with the same verifiability as the shipping papers document the sales, and the visit of trade officials to the company stand at Gulfood 2025 is documented in dated photographic material. Evidence of this class matters for the framework because customer-acquisition claims in small-firm research usually rest on managerial recall, whereas the present corpus supports the exhibition calendar, institutional endorsements, and client-origin stories with artifacts.

Triangulation proceeded at the shipment level. As one example, the management data attribute 140 tons of 2025 exports to the Ivorian market, and the corresponding bills of lading record 5 containers of 28,000 kilograms of refined iodized fine salt in 25-kilogram bags bound for Abidjan, thereby reconciling the two sources exactly. As a second illustration, a purchase order of a British importer dated 27 December 2023 fixes the contract price at 109 USD per ton, and the associated sea waybill of 17 February 2024 documents the physical shipment of 24,950 kilograms net of table salt from Damietta to London Gateway. Wherever the analysis cites a number, the number traces to an audited statement, a government document, or a commercial document signed by a counterparty, and management estimates appear only with an explicit designation.

Two accounting bases coexist in the corpus and require a reconciliation note. The audited statements follow the fiscal year and the full legal scope of the entity, while the management registers follow calendar years and the commercial scope of salt operations, so the audited revenue of EGP 18.7 million for fiscal 2024 and the management revenue of EGP 18.7 million for calendar 2025 describe adjacent windows of the same growth trajectory. The analysis uses the management series for mix, volume, and destination structure, because only that series carries product-level detail, and uses the audited series for profitability and balance sheet claims. The customs export statement of the General Organization for Export and Import Control, which lists consignments to Malta, Iraq, Sri Lanka, Togo, Benin, Sao Tome and Principe, and Cote d'Ivoire with certificate numbers and dates for the period from July 2024 to June 2025, provides the state-issued cross-check of the export register.

3.3 Analytical procedure

The quantitative part of the analysis applies descriptive dynamics and decomposition. Revenue change decomposes into a volume component, computed as the change in tons valued at the base-year average price, and a price-and-mix component, computed as the final-year tonnage valued at the change in average revenue per ton. The decomposition attributes the revenue movement between the physical and value channels without requiring product-level price indices, and the ratio of revenue to physical tons serves as a summary indicator of value migration. The export transformation is presented through 4 series: export tons, export revenue, destination count, and export share of total revenue. Currency figures remain in Egyptian pounds, where the source documents use pounds, and in United States dollars, where contracts denominate prices in dollars, and the text reports both without conversion to avoid the distortions of a volatile exchange rate.

The premium benchmark requires a construction note. The national average export price derives from customs statistics as the ratio of export value to export tonnage for the product category, which blends bulk industrial consignments with retail formats and therefore understates the price of any premium shipment while overstating the price of any bulk shipment. The 109 USD per ton of the British contract compares against this blended average of about 70 USD per ton, so the computed premium of 56% mixes a true quality premium with a format composition effect. The analysis reports the comparison with this caveat attached and treats the contract as evidence of the feasibility of above-average pricing in a regulated market, and never as an estimate of a uniform markup.

The qualitative part codes the documentary evidence into the 4 mechanisms derived from the literature. Every certificate, contract, and program document received a code for the mechanism it serves, the market it unlocks, and the date it entered into force, which produced the structured portfolio presented in Section 4.4. The discussion section then confronts the coded evidence with the reviewed literature and with rival explanations of the observed dynamics, including the mechanical effect of currency devaluation on pound-denominated revenue.

Data handling followed consent and confidentiality rules. The company authorized the use of the figures contained in its transactional documentation; personal data of counterparty employees were excluded from the analysis; and client names appear only where public shipping documents already disclose them. The corpus remains with the company, and the verification trail in the text names each document type, date, and issuing body with enough precision for an authorized reviewer to retrieve the original.

3.4 Limitations

Four limitations bound the claims. First, a single case cannot establish the frequency of the documented pattern among comparable firms. Second, part of the operational data originates from management sources, and although audited statements and third-party documents anchor the key series, some granular figures lack external verification. Third, the price premium rests on one documented contract, which demonstrates feasibility without establishing an average. Fourth, the observation window ends in 2025, so the durability of the transformation remains outside the evidence. The conclusions respect these bounds and present the framework as a mechanism template open to replication studies.

4. RESULT AND DISCUSSION

4.1 Case profile

Egy Salt for Salts and Minerals S.A.E. operates a 6,465 square meter facility in the industrial zone of Tenth of Ramadan City with a built-up area of 2,000 square meters, a production line rated at 10 to 12 tons per hour, an annual single-shift capacity of nearly 25,000 tons, a storage capacity of 5,000 tons, and 3 silos of 30 to 35 tons each. Raw salt arrives from Siwa and Sinai at an average input cost of 450 EGP per ton plus 280 EGP per ton of transportation, passes through washing, crushing, centrifugation, thermal drying, iodization, classification, tableting, block pressing, and packaging, and leaves the line at a purity level above 99%. The workforce numbers about 60 employees. A supply agreement from September 2022 with a Sinai extraction company secures 50,000 tons of raw salt per year, anchoring the input side of the model.

Dual sourcing of raw salt ensures quality and continuity. Siwa and Sinai materials differ in trace composition and crystal structure, are documented separately, and undergo segregation from the weighbridge onward, so the blending decision remains within the laboratory. The supply agreement with the Sinai extractor fixes annual availability at 50,000 tons, and the Siwa channel diversifies geological and logistical risk, since the 2 sources sit on opposite sides of the country with independent transport corridors. Input cost stability follows from the structure, because the 450 EGP per ton material cost and the 280 EGP transport cost remain pound-denominated and contracted, insulating the cost base from import-price shocks that burden competitors dependent on foreign inputs or additives.

The production process runs through 8 integrated stages. Raw salt enters over a 150 ton weighbridge with sampling for quality testing, undergoes segregation by origin between Sinai and Siwa material, passes 2 washing cycles in saturated saline that remove impurities without dissolving the product, and moves through 3 crushing stages integrated with washing. Two centrifuge stations, each at 6 tons per hour, provide 12 tons per hour of combined separation with built-in redundancy. Thermal drying

operates on a diesel-fired oil system with oil temperatures of 220 to 240 degrees Celsius and process temperatures of 100 to 120 degrees Celsius, thereby avoiding the capital expenditure of a gas conversion. Potassium iodate is added after drying at 1 kilogram per 25 tons for edible grades. Classification separates fine, coarse, powder, and oversized fractions through sieving, and packaging lines fill 25-kilogram sacks at line speed alongside locally produced 700-gram jars. An in-house maintenance team replaces crushers and stainless-steel cutting knives on a 1- to 2-year schedule, so upkeep proceeds without production stops.

Management depth supports the technical system. The plant manager brings more than 30 years of experience in food processing with prior factory leadership at an established salt refiner, the quality and research manager holds a chemistry degree with more than 13 years in quality control across salt and chemical production, and dedicated managers cover human resources, administration, sales, and logistics for the workforce of about 60. A quality assurance laboratory inside the facility tests iodine content, purity, moisture, and granulation on every batch, which underpins both the certification portfolio and the per-shipment health certificates that Section 4.4 examines.

Commercial architecture includes 2 registered proprietary brands, Oddo for edible salt and Hosty for industrial salt. The remainder is private label for international customers. The products are sold in 25-kilogram sacks, 700-gram jars, and 250 to 500-gram sachets. Payment discipline is good, with days' sales outstanding of 11 and a cash conversion cycle of 77 days. Utilization of the line in 2025 reached a maximum of 26% in an 8 hour shift. There is therefore considerable spare capacity, and all new orders contribute to the absorption of fixed costs. The client base spans food processors, water treatment operators, pharmaceutical producers, an airline caterer, and soap and chemicals manufacturers inside Egypt, alongside importers and distributors abroad.

Capacity arithmetic frames the growth headroom. The rated line speed of 10 to 12 tons per hour yields about 25,000 tons per year on a single shift, a second shift doubles the ceiling to 50,000 tons without new machinery, and the supply agreement for 50,000 tons of raw salt per year already covers the doubled requirement. Sales of 6,327 tons in 2025 place utilization near 26% of the single-shift ceiling and near 13% of the 2-shift ceiling, so the physical platform can absorb an 8-fold volume expansion before capital expenditure is included in the plan. The growth of the export book depends on demand generation and market access, which is precisely where the non-price assets outlined in the following sections operate.

The 2-brand architecture serves a segmentation purpose. Oddo addresses edible demand, where consumer trust, iodization compliance, and retail presentation drive choice, while Hosty addresses industrial demand, where technical specification sheets and delivery reliability drive choice. Registered

ownership of both brands keeps a branded growth option open for the future, while the private label channel carries the export volume today, and the separation prevents the industrial identity of the factory from diluting the food positioning of the consumer brand. Domestic accounts split along the same line, with pharmaceutical, food industry, and catering clients buying against the edible specification and water treatment, soap, and chemicals clients buying against the industrial one, and the payment discipline of 11 days sales outstanding holds across both groups.

4.2 Value migration from volume to revenue

The central empirical fact of the case concerns the divergence of physical volume and monetary revenue. Total sales volume moved from 8,848 tons in 2023 to 10,623 tons in 2024 and then contracted to 6,327 tons in 2025, while total revenue rose from EGP 9.1 million to EGP 17.2 million and then to EGP 18.7 million over the same years. Average revenue per ton consequently climbed from EGP 1,028 in 2023 to EGP 1,619 in 2024 and EGP 2,956 in 2025, an increase of 187% across the window. Indexed to the 2023 level, volume ended the period at 72, revenue at 205, and revenue per ton at 288, as presented in Fig. 1.



Figure 1: Value migration of the case company in 2023 to 2025: indexed dynamics with the 2023 level equal to 100 and the underlying absolute values of volume, revenue, and revenue per ton

Three features of Fig. 1 deserve attention. First, the 2024 pattern shows growth in both volume and revenue, which corresponds to the expansion phase, in which the factory reached capacity with available demand. Second, the 2025 pattern shows a deliberate contraction of tonnage by 40% compared with the prior year, alongside a revenue gain of 9%, which no external shock can explain, because capacity, workforce, and raw material supply remained intact. Third, the per-ton series combines both movements into a single trajectory that grew 2.9-fold, which constitutes the quantitative definition of value migration in this case. The company stopped selling weight and began selling specification, packaging, compliance, and reliability, all of which command a premium above the commodity baseline.

The cost structure moved in the same direction. Raw materials accounted for 57% of revenue in 2023, 43% in 2024, and 30% in 2025, so each pound of sales in 2025 carried less mineral content and more processing, format, and certification content than 2 years before. The audited statements confirm the profitability turn, with the 2024 fiscal year closing at a net profit of EGP 1,769,150 after the loss-making construction years. Balance sheet data show fixed assets of EGP 195.8 million after the 2025 revaluation, against total current liabilities of EGP 5.3 million, indicating that the transformation proceeded without leverage.

The year 2024 functions as the transition within the series. Volume and revenue both grew, average revenue per ton rose by 57%, and export share reached 15%. The firm ran the old bulk model and the new certified model side by side as the certification portfolio matured. The ISO certificates arrived in May 2024, the first health certificates followed within the same cycle, and the export order book of late 2024 booked the capacity that the 2025 registers then show as shipped. The overlap year carried the cash flow of the bulk business while the access assets came online, which resolved the financing problem that stops many small firms midway through a repositioning, and no external equity or debt entered the balance sheet during the switch.

The trajectory before 2023 sets the stage for the shift. The company spent 2020 through 2022 on construction, licensing, and line installation, executed its first export of 4 containers in 2023, and reached 14 containers across Europe, Africa, the Middle East, and South Asia in 2024 while collecting ISO 9001, ISO 22000, and White List credentials. The audited record mirrors this sequence, with losses through the construction years, a first material net profit of EGP 1,769,150 in fiscal 2024 against EGP 818,435 a year earlier, and a fixed asset base that the 2025 revaluation restated to EGP 195.8 million. The strategic contraction of tonnage in 2025 therefore came from a firm that had just achieved profitability, which underlines the deliberateness of the choice, since a distressed producer sells more tons at any price and a strategic producer sells fewer tons at better prices.

Geography reinforces the unit economics. The facility sits 4 kilometers from the Ismailia Desert Road with 30-to-55-minute access to the Suez corridor and the container ports of the eastern Mediterranean, and sea freight from Egypt to Europe and West Africa undercuts shipments from Asian competitors by a wide margin on both cost and transit time. A standard 20-foot container carries 25 to 28 tons of bagged salt, so the 2025 export volume of 2,158.5 tons corresponds to about 85 container movements, and the proximity of loading ports at Damietta and Alexandria keeps inland haulage short. Freight advantage of this kind does not create differentiation by itself, yet it protects the premium that differentiation earns, because the landed cost gap versus Asian supply gives the certified Egyptian product room to price above bulk without losing competitiveness at the buyer's dock.

The decomposition of Section 3.3 quantifies the channels. Revenue grew by EGP 9.6 million between 2023 and 2025. The volume channel contributed a negative EGP 2.6 million, computed as the contraction of 2,521 tons valued at the 2023 average of EGP 1,028 per ton. The price and mix channel contributed a positive EGP 12.2 million, computed as the 2025 tonnage of 6,327 tons valued at the per-ton gain of EGP 1,928. Value migration accounts for 127% of the net revenue growth, with the volume contraction absorbing the excess. Numbers of this shape identify a strategy, since random demand fluctuation moves volume and price channels in the same direction, and only a deliberate reallocation of capacity toward higher-value demand produces a large positive price and mix effect on top of a chosen volume decline.

Margin dynamics complete the picture of value migration. The contribution margin of the management accounts rose from 43% of revenue in 2023 to 57% in 2024 and 70% in 2025, which tracks the declining share of raw materials and the rising weight of certified formats in the mix. A contribution margin of this level on a fixed-cost base sized for 4 times the current volume defines the model's operating leverage, because each additional certified ton adds about 0.7 pounds of contribution per pound of revenue while fixed costs remain flat until the second shift. The leverage explains why management accepted a smaller tonnage in 2025, since the contribution of 6,327 tons at the 2025 mix exceeded the contribution of 10,623 tons at the 2024 mix by a wide margin.

A rival explanation attributes the revenue growth to the devaluation of the Egyptian pound, which mechanically inflates the pound value of dollar-denominated export sales. The data reject devaluation as a sufficient cause. Volume shifted toward product groups with a higher price per ton in the same currency; the edible segments generated EGP 4,388 per ton in 2025, compared with EGP 1,716 for fine industrial salt, and the mix moved toward the former. Devaluation increased the value of export receipts, yet the decision of what to produce, certify, and ship was part of the strategy, and the per-ton series within each currency records that decision.

4.3 Export-led transformation and the documented price premium

Export activity grew from 4 containers in 2023 to 14 in 2024 and to about 90 in 2025. In tons, exports moved from 100 to 397 and then to 2,158.5, and in money from EGP 0.4 million to EGP 2.5 million and then to EGP 11.3 million. Destination markets expanded from 2 countries in 2023 to 3 in 2024 and 9 in 2025, and the export share of revenue advanced from 4% to 15% and then to 61%. The 2025 destination register covers the United Kingdom, Malta, Iraq, Sri Lanka, South Africa, Cote d'Ivoire, Togo, Sao Tome and Principe, and Benin, with per-country volumes from 21 to 868 tons. Local revenue peaked at EGP 14.7 million in 2024 and fell to EGP 7.4 million in 2025 as the factory reallocated capacity to foreign orders, as shown in Fig. 2.

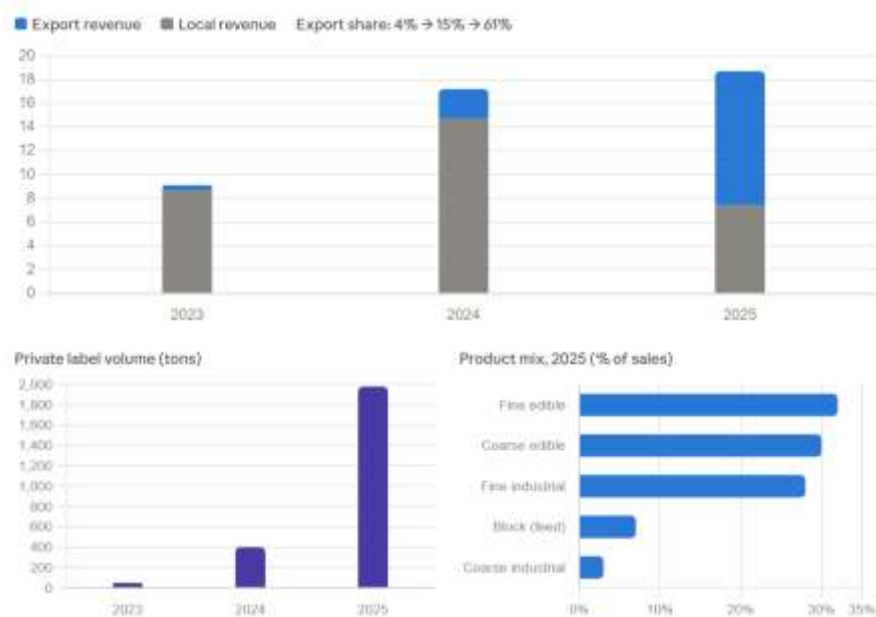


Figure 2: Commercial transformation of the case company in 2023 to 2025: revenue mix by market, private label volume, and the 2025 product mix

The export turn created a natural currency hedge. Contracts with foreign buyers denominate prices in United States dollars, while raw salt, labor, packaging, and energy remain pound-denominated, so the operating margin widens whenever the local currency weakens. With 61% of 2025 revenue in hard currency against a cost base that is pound-denominated in all material lines except one imported lid mold, a 10% depreciation of the pound raises pound revenue by about 6% at constant volumes while costs stay near flat, and the asymmetry compounds the contribution margin expansion documented in Section 4.2. The structure converts a macroeconomic risk that damages import-dependent producers

into a tailwind for the case company, and it arose as a by-product of the market access strategy without any separate treasury decision.

Product composition varies by destination in an instructive pattern. The British consignments carry non-iodized table sea salt in 1,000-sack lots of 25 kilograms for repacking under established consumer brands, the Maltese orders alternate between iodized retail formats and food industry grades for a manufacturer client active since 2022, the Iraqi volume moves in bulk table salt, and the West African consignments concentrate on iodized fine and coarse retail salt in 25-kilogram bags under buyer labels. Each destination therefore buys a different point of the portfolio, and the same production platform serves all of them within one shipping season, which is the operational meaning of format flexibility. The customs export statement records the corresponding certificate chain per consignment, so the variety of the offer never came at the cost of documentary discipline.

Documented pricing provides the sharpest test of the non-price thesis. The purchase order from Wanis Ltd, a British importer, dated 27 December 2023, fixes the price of table salt at 109 USD per ton, while the average Egyptian export price of salt in the same period stood at around 70 USD per ton. The premium of about 56% over the national average was observed in the most regulated destination in the register, which contradicts a cost-leadership account and supports a differentiation account, because a buyer in a market with strict standards paid more for a certified Egyptian product than the average world buyer paid for Egyptian salt in bulk. Repeat orders reinforce the interpretation. Maltese clients that started purchasing in 2022 continued through 2024 and 2025 across multiple bills of lading, and repeat business at premium prices signals durable perceived quality.

A national benchmark scales the achievement. Egyptian salt exports grew by a factor of 2.7 in dollar terms between 2021 and 2025, while the export tonnage of the case company grew by a factor of 21.6 between 2023 and 2025 alone, so the firm outpaced its national category by an order of magnitude from a standing start. The comparison also controls for the macroeconomic tailwinds that lifted all Egyptian exporters, including the exchange rate and the freight advantage, because those tailwinds applied to the whole category, and the differential growth of the case company requires a firm-specific explanation of the kind that the framework provides.

The destination portfolio balances mature and frontier demand. Regulated European destinations, which include the United Kingdom and Malta, anchor the premium end with strict documentation and repeat contracts, Middle Eastern volume runs to Iraq through established distributors, and West African markets, which include Cote d'Ivoire, Togo, Benin, and Sao Tome and Principe, absorb iodized retail formats under conformity schemes. Per-destination tonnage in 2025 ranged from 21 to 868 tons, and no single market accounted for more than 41% of export volume, so the register spreads

demand risk across regulatory regimes and income levels. The composition mirrors the structure of national exports, where a small number of large, stable destinations coexist with a diversified frontier tail, and it protects the company against market-specific shocks, such as a tariff change or a licensing pause, in any one country.

Order cadence converts single contracts into a durable book. The British account was reordered after the February 2024 trial shipment; the Maltese manufacturer client has purchased every year since 2022; the Maltese retail importer added iodized formats in 2024; and West African buyers repeated consignments within 2025 under fresh conformity certificates. Negotiations recorded at the close of the window extend the pipeline to Saudi Arabia and Yemen on the Halal credential and to additional African destinations on the conformity track. A register in which existing clients reorder while new destinations enter shows the 2 growth drivers of the model running in parallel, and the retention of premium accounts costs a fraction of their acquisition, so the economics of the book improve with every year of survival.

The Sri Lankan shipment offers a boundary illustration. Sri Lanka produces salt domestically, yet a health certificate issued by the National Food Safety Authority in June 2025 documents the export of 54 tons of iodized fine salt to Colombo under the Pearl Salt private label. A sale of salt into a salt-producing country cannot rest on price, because domestic supply always undercuts imported bulk. The transaction rests on specification, iodization quality, packaging format, and certified compliance, which is the non-price bundle in its purest observable form.

4.4 Certification portfolio as a market access asset

The facility's certification history shows deliberate accumulation. The company obtained ISO 9001:2015 and ISO 22000:2018 certificates from an accredited European body with validity through May 2027, added FSSC 22000 version 6.0 in June 2025 with validity through June 2028, secured a GMP certificate in November 2025 with a scope that covers pharmaceutical, vacuum tablet, block, and feed animal salts, and maintains Halal certification under GSO 2055-2:2021 and a Kosher certificate. Registration on the White List of the National Food Safety Authority makes the factory eligible for per-shipment health certificates, and the Proudly Made in Egypt mark E-4466-F-12-24 of the Industrial Modernization Center adds a national quality credential valid through December 2026. Destination-specific conformity closes the portfolio, and the Certificate of Conformity C-CI/2025/03254/001 for Cote d'Ivoire, issued in July 2025 following an SGS inspection, documents the ability to pass the third-party verification schemes of importing countries. Table 1 structures the portfolio by instrument, framework, validity, and the access function each element performs.

Table 1: Certification portfolio of the case company as a market access asset

<i>Certification or status</i>	<i>Issuing framework</i>	<i>Validity</i>	<i>Market access function</i>
ISO 9001:2015	Accredited certification body, TUV Austria	to 12.05.2027	Baseline quality management credibility for business buyers
ISO 22000:2018	Accredited certification body, TUV Austria	to 12.05.2027	Food safety management for edible salt exports
FSSC 22000 v6.0	GFSI-recognized scheme	25.06.2025 to 24.06.2028	Access to retail and private label buyers in regulated markets
GMP	Third-party audit	04.11.2025 to 03.11.2028	Pharmaceutical, tablet, block, and feed-grade segments
Halal, GSO 2055-2:2021	Accredited Halal certification body	28.12.2025 to 27.12.2026	Gulf and wider Muslim-majority food markets
Kosher	Certification agency	current	Specialized export segments with religious requirements
White List registration	National Food Safety Authority, Egypt	current	Eligibility for per-shipment health certificates and export clearance
Proudly Made in Egypt, mark E-4466-F-12-24	Industrial Modernization Center	17.12.2024 to 16.12.2026	National quality mark and institutional credibility
Certificate of Conformity C-CI/2025/03254/001 with SGS inspection	Verification of conformity scheme of Cote d'Ivoire	per shipment, 2025	Entry into West African markets with mandatory conformity programs

The functional reading of Table 1 differs from a compliance reading. Each instrument in the portfolio opens a concrete door. The White List registration converts into per-shipment health certificates, and the documentary record contains such certificates for Malta, Togo, Abidjan, Sao Tome, and Colombo. EUR.1 movement certificates activate preferential tariff treatment for consignments to Malta and the United Kingdom, thereby improving the landed price of the product without affecting the factory gate price. The Ivorian certificate of conformity, backed by an SGS inspection invoice tied to the same reference, demonstrates repeatable capability to satisfy destination verification schemes and excludes uncertified rivals from the same tenders. The pattern matches the evidence that certification raises exports through internal quality and innovation channels [8] and that implementation depth, and never the paper alone, generates the performance effect [9].

The audit cadence produces organizational learning beyond compliance. Biannual White List inspections, annual surveillance audits of management system certificates, per-scheme recertification cycles, and destination inspections of individual consignments expose the factory to external examination many times per year, and each cycle leaves behind corrective actions, updated procedures, and trained staff. The learning shows in the speed of subsequent certifications: FSSC 22000 arrived within 13 months of the ISO pair, and the GMP scope extension followed within 5 months of FSSC. It also shows in the zero-rejection record of the shipment file, where no consignment in the corpus returned for documentary or quality failure. Repetition of external verification, in this reading, functions as a subsidized training program that the certification fees purchase alongside the certificates themselves.

Preferential origin documentation adds a tariff dimension to the portfolio. EUR.1 movement certificates in the corpus accompany consignments to Malta and the United Kingdom and activate reduced or zero import duties under the trade agreements between Egypt and the respective partners. The instrument affects the landed cost of the product at the buyer's border without affecting the factory price, thereby widening the corridor within which the exporter can hold a premium, while the buyer still saves against alternative origins. Issuance requires proof of Egyptian origin through the production records of the certified management system, which illustrates once more how the layers of the portfolio feed one another, since the same batch documentation serves the quality audit, the health certificate, and the origin certificate.

The per-shipment layer converts standing credentials into transaction documents. Each health certificate issued by the National Food Safety Authority, which names the consignee, the product, the batch, the tonnage, and the port, is valid for 2 months and applies only to the consignment mentioned, so every export to a market that requires such a certificate restarts the verification cycle. The Sri Lankan certificate of June 2025 covers 54 tons of iodized fine salt in 25-kilogram bags for Colombo, the Sao Tome certificate of February 2025 covers 275 tons of iodized coarse salt under a buyer brand, and parallel documents exist for Malta, Togo, and Abidjan. A factory outside the White List cannot obtain these documents at all, which turns the registration into a binary gate between the domestic bulk market and the certified export market.

The accumulation followed a sequence that other firms can copy. Management system certificates arrived first, with ISO 9001 and ISO 22000 issued in May 2024 on a 3 year validity, White List registration and national conformity followed within the same cycle, the GFSI-recognized FSSC 22000 arrived in June 2025 once the management systems had matured, the GMP certificate extended the scope to pharmaceutical, tablet, block, and feed grades in November 2025, and destination conformity for West Africa ran per shipment through 2025. Each step reused the documentation and

audit discipline of the previous one, so the marginal cost of each subsequent certificate declined, while the marginal access it opened remained material. None of the steps required new production equipment, which makes the sequence a working capital investment, and never a capital expenditure program. The 26% utilization figure confirms that access, and never capacity, constrained growth.

The iodization program adds a regulatory dimension with measurable economics. Egyptian regulations mandate iodization of edible salt at 1 kilogram of potassium iodate per 25 tons, and the Ministry of Health subsidizes iodate for qualified producers. The official letter of 2023 allocates 2 barrels with 50 kilograms in total at a subsidized price of 241.84 EGP per kilogram against a market price near 3,000 EGP per kilogram, which corresponds to a subsidy of 92%. The 2024 letter raises the allocation to 37 barrels, an increase of 18.5x within one year. Access to the program requires licensed facilities, laboratory capability, iodine injection systems, biannual audits, and monthly production reporting, so the allocation certifies regulatory standing while lowering input costs. Universal salt iodization operates worldwide as a monitored public health system with formal surveillance of producers [14], and long-run evaluations document its persistence and health impact [15], which situates the Egyptian program inside a stable international institution and makes standing within it a durable asset.

The portfolio's arithmetic confirms its investment character. The documented premium of the British contract amounts to 39 USD per ton over the national average export price, yielding about 975 USD in extra revenue on a single 25-ton container. A recurring account that ships containers year-round recovers the annual cost of a management system audit many times over, and the comparison ignores the volume that certification unlocked in destinations where uncertified product cannot enter at any price. Framed this way, the certification budget in the case behaves like a customer-acquisition budget with a compliance form, and the 2 budgets converge in Section 4.6, where certified status shortens the audit stage of every sales funnel.

The religious certification pair prepares the next stage of the geography. Halal certification under GSO 2055-2:2021 addresses the Gulf Cooperation Council market with its unified standard, the Kosher certificate covers specialized demand in Europe and the Americas, and negotiations recorded in the corpus extend to Saudi Arabian and Yemeni buyers alongside inquiries from additional African destinations. Regulatory standing at home supports the pipeline, since White List membership carries biannual government audits and monthly reporting, and continuous compliance of this cadence keeps the factory permanently export-ready, so a new destination requires only the destination-specific layer on top of an intact documentation base.

4.5 Product portfolio, formats, and the private label channel

Product innovation in the case takes the form of portfolio and format engineering on one mineral base. The 2025 sales mix assigns 32% of revenue to fine edible salt with 1,344 tons and EGP 6.0 million, 30% to coarse edible salt with 1,274 tons and EGP 5.5 million, 28% to fine industrial salt with 3,089 tons and EGP 5.3 million, 3% to coarse industrial salt with 335 tons, and 7% to compressed block salt for animal feed with 282 tons, while refined tablet salt for water treatment entered the register with initial volumes. The edible segments deliver EGP 4,388 per ton, compared with EGP 1,716 per ton in fine industrial salt, so every ton of capacity moved from the industrial to the edible group multiplies its revenue yield by 2.6. Packaging formats follow the same logic, with a range that spans 25-kilogram sacks for bulk buyers, 700-gram jars for retail, and 250- to 500-gram sachets, with 25-gram sachets available for institutional catering.

The private label channel scaled this portfolio abroad. Private-label volumes grew from 50 tons in 2023 to 400 tons in 2024 and 1,979 tons in 2025, a 40-fold expansion that parallels the export series, as foreign buyers purchase under their own brands. The British importer distributes the product under established consumer brands; the Sri Lankan consignment carried the Pearl Salt label, and the Maltese orders specify buyer formats. The pattern confirms, at the level of a single supplier, the global expansion of private label demand [4] and the rising technical requirements that retail tiering imposes on suppliers [10]. The coopetition perspective [11] also finds support, as the company sells under its own Oddo and Hosty brands domestically while manufacturing for external brands abroad, thereby stabilizing utilization across seasons and markets.

The asymmetry between the tonnage and revenue mixes measures the pricing power of the edible portfolio. Fine industrial salt supplied 49% of 2025 tonnage and 28% of revenue, while the 2 edible groups supplied 41% of tonnage and 62% of revenue, so the edible side of the factory earns a revenue share half again as large as its volume share, and the industrial side earns a revenue share below its volume share by the mirror amount. The asymmetry defines the direction of every future capacity decision, because each percentage point of tonnage moved from the industrial to the edible group raises total revenue at constant volume, and the constraint on the movement is market access, since production capability already covers every group, which returns the analysis to the certification and channel mechanisms.

Two product lines carry the portfolio's forward option value. Refined salt tablets serve water softening and purification systems, where buyers pay for uniform dissolution and certified purity, and world demand for water treatment inputs grows with urbanization and desalination investment. Compressed block salt serves animal nutrition with stable mineral delivery, survives long-distance transport without degradation, and generated 7% of 2025 revenue with 282 tons. Both lines command per-ton

prices above bulk industrial salt, both exit the same production platform, and both address end markets whose growth drivers differ from food processing, so the portfolio diversifies demand exposure without diversifying assets. The GMP certificate for November 2025, whose scope includes tablets, blocks, and pharmaceutical salts, was prepared on the compliance side of this expansion before the volumes arrived.

Format engineering completes the innovation account. A ton in 25-kilogram sacks, a ton in 700-gram jars, and a ton in 250-gram sachets carry the same mineral but differ in labor, packaging materials, and certification requirements, and they sell into different price bands. The jar and sachet formats target retail shelves through private-label programs; the sack format serves industrial and wholesale demand; and the ability to run all formats on one site lets the company quote any structure a buyer requests. Local sourcing of packaging, with the single exception of an imported lid mold, keeps the format economics inside the pound cost base and preserves the currency hedge described in Section 4.3.

The channel's margin behavior warrants a separate observation. A 40-fold expansion of private-label tonnage coincided with a rise in the contribution margin from 43% to 70%, contradicting the common expectation that store-brand manufacturing dilutes profitability. The resolution lies in what the buyer pays for. A private-label client purchases certified compliance, format execution, and delivery reliability, all of which the case company has already capitalized on in its portfolio, and it does not pay for consumer marketing, which the company never spends on. Relative to the domestic bulk alternative, every private-label ton carried a higher price and the same production cost, so the channel raised margins while increasing volume, and the coexistence of both movements in the registers is among the strongest pieces of evidence for the framework.

Domestic business demand corroborates the quality reputation that the export record has built. Purchase orders in the corpus include 8,000 kilograms of tablet salt for a pharmaceutical producer at 3.5 EGP per kilogram, recurring supply orders of soap and chemicals manufacturers, food industry clients, and an airline caterer. Buyers of this type audit suppliers and switch at low cost, so their persistence in the order book serves as continuous confirmation of consistency, and their price points sit above the bulk industrial baseline.

A product development loop connects the laboratory to the market. Specifications are derived from destination requirements and client requests; the quality laboratory adjusts purity, grain size, moisture, and tablet or block geometry; trial batches pass client evaluation; and successful formulations enter the standing portfolio, with their documentation absorbed into the certified management system. Ongoing development work covers specialty animal licking blocks and efficiency technologies that

reduce production waste, so the pipeline extends beyond the current registers. The loop runs on the same staff and equipment that serve production, which keeps the marginal cost of experimentation low and the speed of response to buyer requests high, and this speed belongs to the non-price bundle as surely as the certificates do.

4.6 Customer acquisition economics

The acquisition model relies on international trade exhibitions as the primary channel of export demand. The company exhibited or negotiated at Anuga in Cologne in 2023 and 2025, Food Africa in Cairo in 2023 and 2024, Food and Beverage West Africa in Lagos in 2024, World Food Moscow in 2024, Gulfood in Dubai in 2025, and WieTec in Shanghai in 2025, with participation in the Russian and German events supported by the Egyptian Food Export Council and the commercial offices of the Ministry of Trade and Industry. Export customer acquisition costs range from 2,000 to 2,300 USD per customer, compared with about 400 USD for a domestic customer through direct sales visits. The 5-fold gap is offset by order size, repeat purchasing, and the premium pricing documented in Section 4.3, and the arithmetic of the British account alone covers years of exhibition budgets.

The exhibition map mirrors the destination strategy. Anuga in Cologne addresses European retail and import demand, which produced the British and Maltese anchor accounts, Food Africa in Cairo, and the Lagos fair covers the West African belt that later filled the conformity-scheme destinations, Gulfood in Dubai opens the Gulf pipeline behind the Halal credential, World Food Moscow probes the Eurasian direction, and WieTec in Shanghai targets water treatment demand for the tablet line. Each fair corresponds to a segment of the portfolio and a block of the destination register, and the correspondence indicates planned coverage of demand rather than opportunistic attendance.

The funnel behind the cost figures follows a repeatable path. An exhibition contact becomes a qualified lead; the lead receives samples and specifications; the buyer conducts a documentary audit against the certification portfolio; a trial container tests logistics and quality at commercial scale; and repeat orders convert the account into a standing client. The British account illustrates the full path, from a first meeting through a purchase order in December 2023 with agreed dollar pricing to a February 2024 shipment and subsequent reorders, and the Maltese accounts compress the same path across 2022 to 2025. Institutional support lowered the cost of the top of the funnel, since the Egyptian Food Export Council and the commercial offices of the Ministry of Trade and Industry endorsed participation in World Food Moscow and supported representation at Anuga and Gulfood, and official visits of trade officials to the company stand at Gulfood 2025 added credibility that a young firm cannot buy.

The mechanism aligns with the enabler literature. Networking capability and international market knowledge, which interviews with Gulf exporters identify as decisive internal assets [12], materialize

in the case as a calendar of exhibitions, a pipeline of business-to-business leads, and institutional relationships with export promotion bodies. Digital infrastructure supports the funnel through customer relationship management of leads, which aligns with the finding that digitalization increases export participation among small manufacturers [13]. The company acquired its first British, Maltese, and Iraqi accounts through this funnel, and the destination register of 2025 grew around anchor clients gained at fairs between 2022 and 2024.

The domestic funnel runs on a different cost curve and completes the demand system. A dedicated field sales team acquires local business accounts through direct outreach, site visits, and product demonstrations at a cost of about 400 USD per customer. Customer relationship management software tracks leads across both funnels, and repeat ordering by pharmaceutical, catering, and industrial clients amortizes the acquisition cost over years. The 2 funnels share the production platform and the certification portfolio while addressing demand with different documentation depth, and their coexistence smooths the order book across the export shipping calendar.

4.7 Discussion

The 4 mechanisms interact as a system, and a list reading would miss their dependence. Product and format innovation without certification produces offers that regulated buyers cannot legally accept. Certification without the private label channel leaves a small factory with admissible products and no shelf. The private-label channel, without exhibition-based acquisition, never reaches the buyers who commission store brands. Acquisition without the first 3 elements generates leads that convert at commodity prices. The case documents the joint operation of all 4, and the outcome variables move together, with per-ton revenue up 187%, export share up 57 percentage points, destinations up from 2 to 9, and a documented contract at 56% above the national average export price.

The findings extend the differentiation literature with documentary mechanics. Survey-based studies establish that differentiation raises export performance in emerging markets [1] and that innovation capability feeds competitive advantage [2], while the present evidence shows the paper trail of that abstraction, from a certificate with a validity date to a purchase order with a premium price to a waybill with a net weight. The certification results give firm-level texture to the systematic conclusion that standards adoption improves export performance [3] and to the causal finding that ISO 9001 works through innovation [8], because the case company translated audit discipline into new formats, tablets, and blocks within 2 years of certification. The institutional moderation argument [7] appears in the contrast between destinations, where the same product earned a premium in the United Kingdom and entered West African markets only through conformity schemes, so the payoff of each innovation depended on the regulatory architecture of the destination.

The results also qualify the competition findings from Ghana [6]. Market competition pressed the case company toward performance, yet the response took the form of exiting the domestic bulk segment and redeploying capacity to foreign premium segments, suggesting that a productive response to competitive pressure can run through geography and mix in addition to process improvement. For the private-label debate [10, 11], the case provides the manufacturer's perspective from a developing economy, where store-brand demand in developed and frontier markets serves as an export elevator for certified small factories.

Alternative explanations of the observed dynamics fail to account for the documentary record. A one-off large order could inflate a single year, yet the 2025 register spreads 2,158.5 tons across 9 countries with no destination above 41% of volume, and repeat orders from 2022-vintage clients continue through the window. A utilization story in which growth reflects mechanical filling of idle capacity contradicts the 40% tonnage contraction in 2025, because a utilization-driven firm never cuts volume. The devaluation account, addressed in Section 4.2, explains part of the pound-denominated revenue level and none of the mix shift, the destination expansion, or the documented dollar premium. What remains after these eliminations is the strategic account, where management reallocated a fixed capacity toward certified, formatted, premium-priced demand that its accumulated non-price assets had unlocked.

The policy reading of the fortification evidence extends beyond the case country. Universal salt iodization operates as a monitored system with producer registries, inspection cadences, and fortificant logistics in dozens of states [14], and long-horizon evaluations document sustained coverage and health outcomes where the system is in place [15]. Systems of this type, as a side effect, create a certified stratum of small producers whose regulatory standing is export-ready, so a health intervention doubles as industrial policy for food-processing SMEs. Governments that recognize the dual function can widen the stratum at low cost, for example, through subsidized laboratory upgrades for registry members, and the case company illustrates the export payoff that awaits at the end of that pipeline.

The model's transferability depends on identifiable conditions. The strategy requires a product whose quality is credence-based and certifiable, a regulatory infrastructure that issues recognized documents, a private label demand pool in destination markets, and a freight position that keeps the certified product competitive at the buyer's dock. Basic food commodities such as sugar, grain products, spices, and edible oils meet these conditions in many developing economies, whereas products with high freight shares or without certification regimes do so poorly. The public health dimension adds a further condition specific to fortified staples, because participation in monitored fortification systems of the universal salt iodization type [14, 15] supplies both a regulatory credential and a subsidized input, and analogous programs exist for flour and oil fortification in numerous countries.

The evidence supports 4 propositions for future testing. The first proposition states that, in commodity processing, certification portfolios increase the probability of securing export contracts in regulated markets more than equivalent expenditure on price reduction. The second states that the revenue-per-ton effect of a mix shift toward certified segments exceeds the effect of volume growth within uncertified segments for capacity-constrained small firms. The third states that private label demand mediates the relationship between certification and export volume for manufacturers without established foreign consumer brands. The fourth states that exhibition-based acquisition dominates alternative channels in cost per premium account where institutional export promotion subsidizes participation. Each proposition is falsifiable with small-sample tests, and the case provides the magnitudes that power calculations for such studies require.

The theoretical contribution concerns the nature of the resources behind the advantage. Classical resource-based reasoning privileges resources that markets cannot trade, yet every element of the documented portfolio is purchasable in principle, since certification bodies sell audits, fair organizers sell stands, and packaging suppliers sell formats. The advantage of the case company arises from the configuration and sequencing of tradable elements, where no single untradable asset carries the effect, and the configuration itself, which includes the order of certificate acquisition, the pairing of certificates with destinations, and the reuse of documentation across layers, behaves as the dynamic capability that the review literature seeks to observe [5]. The enabler bundle from the Gulf evidence [12] and the digital participation channel [13] appear in this configuration as components, suggesting that future enabler research should model configurations of assets rather than plain inventories.

Managerial implications follow the framework's sequence. A commodity processor should treat certification budgets as market-access investments with identifiable revenue streams, engineer the product portfolio toward segments with the highest revenue per ton of capacity, court private-label buyers as scaling partners, and fund exhibition participation as a customer-acquisition channel with measurable cost per account. Policy implications concern the infrastructure that made the strategy possible, because the White List regime, the subsidized iodization program, the EUR.1 preferences, and the export council support formed the public rails on which the private strategy ran. Emerging-market governments that maintain such rails lower the fixed costs of non-price competition for every small exporter.

5. CONCLUSION

The study set out to identify the mechanism by which a small salt manufacturer in an emerging market escapes price competition, and the documentary evidence from the Egyptian case yields a consistent answer. Between 2023 and 2025, the company reduced physical sales volume by 28%, more than

doubled revenue, raised average revenue per ton by 187%, expanded exports from 100 to 2,158.5 tons across 9 countries, lifted the export share of revenue from 4% to 61%, and closed a documented contract at a price 56% above the national average export price of the product. The transformation proceeded without leverage on a facility that continued to operate near 26% of single-shift capacity, indicating headroom for replicating the same model at a larger scale.

Four mechanisms jointly produced the outcome. Product and format innovation converted one mineral into a portfolio with a 2.6-fold spread in revenue per ton between segments. A certification stack from ISO and FSSC to Halal, Kosher, national White List registration, and destination conformity schemes turned quality into admissibility across regulated markets. Private label manufacturing scaled certified products for foreign buyers, achieving a 40-fold volume expansion in 2 years. Exhibition-based acquisition connected the factory to those buyers at a cost of 2,000 to 2,300 USD per account. State infrastructure, including a subsidized iodization program, preferential origin certificates, and export promotion, lowered the cost of each mechanism.

The contribution is a verifiable template. Every element of the framework corresponds to documents that a practitioner can produce and an auditor can check, from certificates with validity dates to purchase orders with unit prices. Future research should test the frequency of the pattern on samples of commodity processors, measure the average premium that certification portfolios earn across destinations, and follow the present case beyond 2025 to establish the durability of value migration under changing currency and demand conditions.

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