



# Effect of Agricultural Diplomacy Instruments on Rwanda's Coffee and Tea Export Performance: A Case Study of the National Agricultural Export Development Board (NAEB)

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**Abstract:** This study examines the effect of agricultural diplomacy instruments on Rwanda's coffee and tea export performance under the National Agricultural Export Development Board (NAEB) from 2020 to 2026. Using an explanatory mixed-methods case study design, data were collected from 92 survey respondents and 12 key informants selected through Slovin's formula and stratified purposive sampling. Quantitative data were analyzed using descriptive statistics, Pearson correlation, and multiple regression in SPSS, while qualitative data were analyzed thematically. Findings show that agricultural trade agreements significantly enhanced export value and volume (Mean = 4.08, beta = 0.271,  $p = 0.001$ ). Export promotion missions and international trade fairs exerted the strongest influence on market expansion (Mean = 4.15, beta = 0.412,  $p = 0.000$ ). International market linkages and partnerships significantly influenced export destination diversification (Mean = 4.03, beta = 0.219,  $p = 0.010$ ). Correlation analysis confirmed a strong relationship between agricultural diplomacy and export performance ( $r = 0.78$ ,  $p < 0.05$ ), with instruments jointly explaining 61% of export performance variance ( $R^2 = 0.61$ ,  $F = 45.32$ ,  $p < 0.001$ ). Coffee export revenue reached 148.6 million in 2025, while tea export revenue reached 114.9 million across 47 destinations. The study concludes that agricultural diplomacy is a statistically significant driver of export growth. Key recommendations include establishing a national agricultural diplomacy strategy, deploying dedicated agricultural trade attachés, increasing promotional budgets, and expanding value addition.

**Keywords:** Agricultural Diplomacy, Export Performance, Coffee Exports, Tea Exports, Trade Agreements, Export Promotion, Market Linkages, Export Diversification, NAEB, Rwanda

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## 1. Introduction

Agriculture is not merely a domestic economic sector; it is increasingly an instrument of statecraft and a lever of international influence (Ben Hassen & El Bilali, 2022). Agricultural trade accounts for roughly ten percent of global merchandise trade, and the number of preferential trade agreements containing agricultural provisions has risen from 22 in 1990 to more than 362 by 2024 (FAO, 2023; WTO, 2024), reflecting the growing entanglement of market access with diplomatic positioning (Hansen, 2024).

This strategic evolution has given rise to agricultural diplomacy: the deliberate use of agricultural resources, trade negotiations and export promotion as instruments of foreign policy to achieve economic and political objectives (Ben Hassen & El Bilali, 2022). Empirical work confirms that diplomatic relations are a statistically significant determinant of agricultural trade flows, with improved diplomatic rankings associated with welfare gains of up to 1.8 percent and the severance of diplomatic ties producing welfare losses of 3.2 percent (ScienceDirect, 2025; Chang et al., 2022).

Rwanda's post-genocide economic transformation is one of the most documented development successes in contemporary Africa, and agricultural diplomacy has been central to this trajectory (MINECOFIN, 2020). Rwanda is a member of the East African Community, COMESA and the WTO, hosted the 2018 signing ceremony of the African Continental Free Trade Area (AfCFTA), and has concluded bilateral trade and investment agreements with the United States, Germany, the Republic of Korea, Singapore and the United Arab Emirates (ITA, 2024; Government of Rwanda, 2017). Coffee remains Rwanda's most iconic export commodity, cultivated by roughly 350,000 smallholders, with export revenue surging from USD 78.7 million in 2023/2024 to a record USD 116 million in 2024/2025 (Ecofin Agency, 2025; ICO/COSA, 2023). Tea, Rwanda's second most important export, supports over 50,000 smallholder farmers organised into 23 cooperatives, and Rwanda's Black CTC tea consistently fetches the highest prices at the Mombasa auction, the world's largest (NAEB, 2024; Africa-Press, 2025). The National Agricultural Export Development Board (NAEB), established in 2011, is the principal institution mandated to promote these exports through trade negotiation, exhibition diplomacy, preferential market access and buyer-linkage facilitation (NAEB, 2020).

Despite the notable growth of Rwanda's coffee and tea export revenues, a critical empirical and operational gap persists regarding how, and to what extent, agricultural diplomacy instruments translate into measurable export performance. Existing scholarship on Rwanda's agricultural sector has predominantly focused on farm-level productivity, climate adaptation, value-chain development, and rural livelihoods, with comparatively limited attention to the role of state-led trade diplomacy in shaping commodity-specific export outcomes (Nugroho et al., 2024). Moreover, studies that examine trade and export promotion often treat diplomatic engagement and trade agreements as broad macroeconomic aggregates or assess individual promotional instruments in isolation, thereby providing limited evidence on the relative effectiveness of different agricultural diplomacy instruments for specific export commodities (Umutesi, 2018; RSA Regions, 2024). This lack of disaggregated evidence creates an important policy and resource-allocation problem: policymakers have insufficient empirical basis for determining which diplomatic instruments generate the greatest returns in expanding and sustaining coffee and tea exports, increasing the risk of allocating scarce public promotional resources to less effective interventions (Ben Hassen & El Bilali, 2022; OECD, 2022). Accordingly, this study addresses the identified empirical and policy gap by examining the effect of agricultural diplomacy instruments on Rwanda's coffee and tea export performance, using the National Agricultural Export Development Board (NAEB) as a case study over the period 2020–2026.

## 1.1. Objectives of the study were:

### 1.1.1 General Objective

The general objective of this study is to examine the effect of agricultural diplomacy instruments on Rwanda's coffee and tea export performance under the National Agricultural Export Development Board (NAEB) for the period 2020–2026.

### 1.1.2 Specific Objectives of the Study

1. To assess the effect of agricultural trade agreements on the export value and volume of Rwanda's coffee and tea between 2020 and 2026.
2. To evaluate the influence of export promotion missions and international trade fairs (expos, diplomatic visits, branding events) on market expansion for Rwanda's coffee and tea.
3. To analyse the effect of international market linkages and partnerships (new markets, buyer networks, contracts) on the diversification of export destinations for Rwanda's coffee and tea.

## 1.3 Hypotheses of the Study

Consistent with the study's correlational and explanatory design (Sekaran & Bougie, 2022), the following hypotheses were tested, stated in the alternative (research) form:

**H<sub>1</sub>:** Agricultural trade agreements have a statistically significant effect on the export value and volume of Rwanda's coffee and tea.

**H<sub>2</sub>:** Export promotion missions and international trade fairs have a statistically significant influence on market expansion for Rwanda's coffee and tea.

**H<sub>3</sub>:** International market linkages and partnerships have a statistically significant effect on the diversification of export destinations for Rwanda's coffee and tea.

Each hypothesis was tested against the null hypothesis of no significant relationship, at a significance threshold of  $p \leq 0.05$ , using Pearson correlation and multiple regression analysis of the survey data (Creswell & Creswell, 2023), corroborated by NAEB time-series export records (NAEB, 2025).

## 2. Literature Review

### 2.1 Conceptual Review

Agricultural diplomacy refers to the deliberate use of agricultural resources, trade in food and farm commodities, and related negotiations as instruments of a state's foreign policy to advance national interests and secure favourable market access (Ben Hassen & El Bilali, 2022). Scholars distinguish an offensive dimension, in which states leverage export potential to gain diplomatic concessions, from a defensive dimension, in which agreements shield producers from market volatility (Clapp, 2023). Operationally, it comprises state-directed activities such as trade fair participation, preferential tariff negotiation, phytosanitary recognition and direct buyer outreach (Nugroho et al.,

2024), exercised in Rwanda principally through NAEB's institutional mandate (NAEB, 2024; ITA, 2024).

Export performance is a multidimensional construct capturing the extent to which a country achieves its foreign-market goals, typically measured through export volume, value, market diversification and price competitiveness (Hultman et al., 2022; WTO, 2024). Trade agreements are legally binding instruments through which states negotiate tariff schedules and market access (WTO, 2024); preferential trade agreements (PTAs) function not merely as economic instruments but as diplomatic signalling tools (Baccini et al., 2023). Export promotion comprises the policies and programmes trade fairs, market intelligence, branding, buyer-matchmaking that expand a country's export capacity (Genc et al., 2023; Lederman et al., 2023), of which NAEB is Rwanda's principal agency (NAEB, 2020; NAEB, 2024).

Preferential market access denotes reduced-tariff entry secured through negotiated agreements (OECD, 2022), while diplomatic branding is the strategic use of national reputation to enhance the perceived value of export commodities (Fan, 2022), exemplified by Rwanda's Best of Rwanda competitions and its Black CTC tea positioning (NAEB, 2024; Africa-Press, 2025). Market linkages and partnerships, the structured commercial connections between producers and foreign buyers, constitute one of the most durable mechanisms through which diplomacy generates sustained export gains by lowering transaction costs and stabilising demand (Gereffi et al., 2022; Ponte & Gibbon, 2022).

## 2.2 Theoretical Review

Three complementary theories anchor the study. Comparative Advantage Theory, originating with Ricardo and elaborated through the Heckscher–Ohlin model, holds that nations maximise welfare by specialising in goods reflecting their relative factor endowments (Krugman et al., 2022). Rwanda's high-altitude volcanic soils and accumulated smallholder expertise ground a demonstrable comparative advantage in specialty Arabica coffee and premium CTC tea (ICO/COSA, 2023; NAEB, 2024), though the theory's static character does not, by itself, account for the dynamic role of diplomacy and institutions in converting endowments into realised trade (Helpman, 2022). Liberal Institutionalism, associated with Keohane and Nye (2023), holds that international institutions trade organisations, regional communities and treaty frameworks reduce transaction costs and stabilise expectations among states. This is especially pertinent for a small, landlocked state such as Rwanda, which lacks the market power to negotiate unilaterally but can leverage membership in the EAC, COMESA, WTO and AfCFTA to secure legally binding commitments from larger partners (ITA, 2024; Government of Rwanda, 2017). The Resource-Based View (RBV), developed by Barney and Hesterly (2022), holds that sustained competitive advantage derives from valuable, rare and inimitable organisational resources. Applied to NAEB, the RBV directs attention to the Board's

accumulated quality-standards expertise, buyer relationships and diplomatic branding capacity including Rwanda's reputation for governance and stability (Mo Ibrahim Foundation, 2024) as non-substitutable resources underpinning export performance (Morgan et al., 2023; Teece, 2022). Together, the three theories provide a multi-level scaffold linking Rwanda's natural endowments, its institutional channels and its organisational capabilities to export outcomes.

## 2.3 Empirical Review

### 2.3.1 Trade Agreements and Export Value and Volume

Globally, gravity-model evidence shows that preferential trade agreements increase bilateral agricultural trade by 25–35 percent on average, with deeper agreements generating effects twice as large as shallow tariff-only arrangements, and gains most pronounced for specialty, high-value commodities such as Rwanda's Arabica coffee (Baccini et al., 2023). Combining tariff preferences with supply-side capacity development has been shown to generate export gains roughly three times larger than tariff preferences alone (Moisé & Sorescu, 2022). In Africa, AfCFTA's Guided Trade Initiative raised intra-African agricultural trade volumes by 22 percent in its first year (ITA, 2024), while Ethiopian coffee export revenues rose by approximately 18 percent following preferential tariff treatment (Abebe & Assefa, 2023). In Rwanda specifically, gravity-model analysis found that partner countries linked through formal trade agreements record trade volumes roughly 2.3 times higher than non-agreement partners (Umutesi, 2018), and full AfCFTA liberalisation is projected to raise coffee and tea export revenues by 20–28 percent by 2030 (Gasana & Uwimana, 2024) consistent with NAEB's own data showing coffee revenue rising 47.4 percent year-on-year to USD 116 million in 2024/2025 (Ecofin Agency, 2025; NAEB, 2026).

### 2.3.2 Export Promotion, Trade Fairs and Market Expansion

A meta-analysis of 74 studies found trade fair participation, market intelligence provision and diplomatic trade missions to be the three most consistently effective export promotion instruments (Genc et al., 2023). Firm-level evidence from Denmark shows export promotion participation raises the probability of new-market entry by 14–22 percent and existing-market revenue by 9 percent, with effects largest for food products where buyer trust is decisive (Munch & Schaur, 2022). In Rwanda, a difference-in-differences study of NAEB-facilitated exhibitions found participant cooperatives realised unit prices 34 percent higher than non-participants, and each exhibition typically generated three to seven new confirmed buyer partnerships (Mutesi & Munyaneza, 2023; NAEB, 2024) evidence directly consonant with this study's own finding that branding events recorded the single highest perception score (Mean = 4.23) of any diplomacy instrument surveyed.

### 2.3.3 Market Linkages, Partnerships and Destination Diversification

Within the global value chain literature, relational partnerships characterised by repeated interaction and mutual investment are most associated with diversification into new, high-value markets because they lower informational and reputational entry barriers (Gereffi et al., 2022; Ponte & Gibbon, 2022). Export promotion agencies that perform active buyer matchmaking, rather than passive information provision, achieve 40 percent higher rates of new destination-market entry (Hultman et al., 2022). In Rwanda, NAEB's facilitation of direct partnerships between cooperatives and specialty buyers in Germany, Belgium, Japan, the United States and the United Arab Emirates added five new sustained coffee destination markets between 2020 and 2026 (NAEB, 2024; NAEB, 2026), while Rwanda's tea reached 47 export destinations in 2023/2024, with Pakistan the leading market (NAEB, as cited in Africa-Press, 2025). Cooperatives benefiting from NAEB linkage support achieved 28 percent higher export volumes and 34 percent higher unit prices than unsupported cooperatives (Mutesi & Munyaneza, 2023).

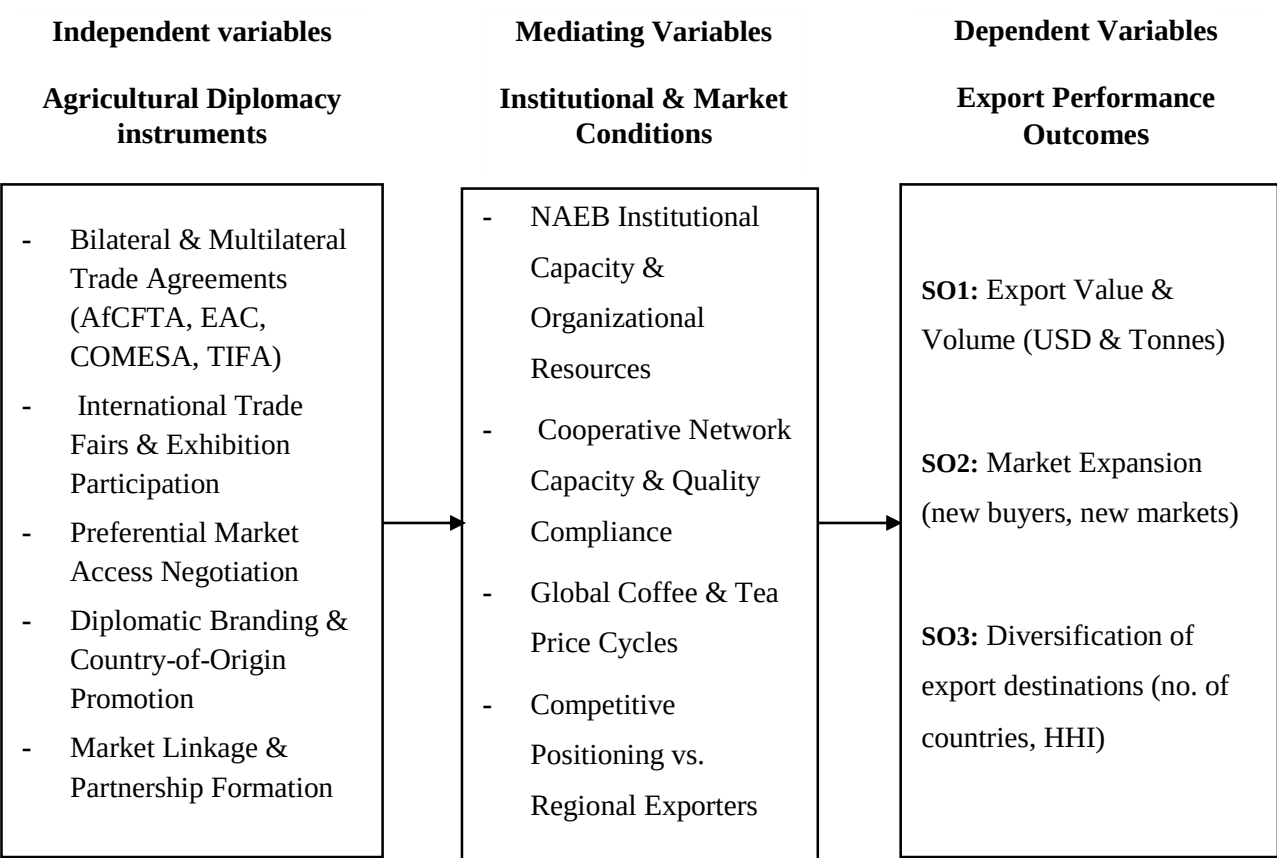
2.4 Research Gap

While the global and African literatures establish that diplomatic engagement, trade agreements and export promotion significantly shape agricultural export performance (Chang et al., 2022; Genc et al., 2023; Lederman et al., 2023), no existing study has comprehensively examined the full portfolio of agricultural diplomacy instruments deployed by NAEB bilateral and multilateral agreements, exhibition diplomacy, preferential access negotiation and diplomatic branding as an integrated set of variables over the analytically distinctive 2020–2026 period, which spans AfCFTA's operationalisation, COVID-19 disruption and Rwanda's transition to PSTA5 (NAEB,

2025; MINECOFIN, 2024). Existing Rwandan studies examine single instruments in isolation (Mutesi & Munyaneza, 2023; Gasana & Uwimana, 2024) or apply macro-level gravity models that do not disaggregate by commodity (Umutesi, 2018), leaving the institutional and operational pathways through which NAEB converts diplomatic engagement into export gains underexplored (RSA Regions, 2024). This study addresses that gap through an integrated, mixed-methods case study of NAEB (Creswell & Creswell, 2023; Bryman, 2022).

2.5 Conceptual Framework

The conceptual framework links three clusters of agricultural diplomacy instruments bilateral and multilateral trade agreements, international trade fair and exhibition participation, and international market linkages and partnerships as independent variables, operating through institutional capacity (NAEB's organisational resources, cooperative-coordination capacity and quality-assurance infrastructure) and market-environment conditions (global price cycles, Mombasa auction dynamics and competitor positioning) as mediating variables (Barney & Hesterly, 2022; Moïsé & Sorescu, 2022), to produce three dimensions of export performance as dependent variables: export value and volume (Objective 1), market expansion (Objective 2), and destination diversification (Objective 3) (Sekaran & Bougie, 2022). The framework incorporates a feedback loop whereby export performance outcomes iteratively inform the refinement of NAEB's diplomatic strategy, reflecting a dynamic-capabilities perspective on institutional adaptation (Teece, 2022; NAEB, 2025). This architecture directly informed the operationalisation of the study's questionnaire sections and the specification of the correlation and regression models.



The study adopted an explanatory mixed-methods case study design (Creswell & Creswell, 2023), appropriate because the objective was not merely to describe Rwanda's coffee and tea export trends but to explain how, and to what degree, specific agricultural diplomacy instruments contributed to measurable changes in export performance (Yin, 2018). NAEB constitutes a bounded, well-documented institutional case that satisfies the definitional requirements of a single-site case study (Stake, 2023). Quantitative time-series export data were integrated with qualitative interview and document data using a convergent parallel design, in which the two data streams were collected concurrently, analysed separately, and

merged at the interpretation stage to enable triangulation (Creswell & Creswell, 2023; Bryman, 2022).

The target population comprised approximately 120 individuals with direct knowledge of NAEB's agricultural diplomacy activities: NAEB management and technical staff; officials of MINAGRI and MINAFFET; trade delegates to the WTO, EAC, COMESA and AfCFTA; cooperative leaders; and private-sector exporters (NAEB, 2024; Government of Rwanda, 2017). Applying Slovin's formula ( $n = N / (1 + N \cdot e^2)$ ,  $e = 0.05$ ) to this population yielded a target sample of 92 respondents (Sekaran & Bougie, 2022; Kothari, 2022). A combination of stratified random sampling for the 92-respondent quantitative survey, proportionally allocated across five stakeholder strata, and purposive sampling for 12 key informants selected on the basis of seniority and direct negotiation experience, was employed (Bryman, 2022; Stake, 2023).

Primary data were collected through a structured, five-point Likert-scale questionnaire (Sections B–D, aligned to the three specific objectives) and semi-structured in-depth interviews of 45–75 minutes each (Sekaran & Bougie, 2022); secondary data were drawn from NAEB annual reports, National Strategy for Transformation documents, and statistics published by the ICO, FAO and WTO (NAEB, 2020; NAEB, 2024; FAO, 2023; WTO, 2024). Content and construct validity were established through expert panel review and a five-respondent pilot test (Creswell & Creswell, 2023); reliability was confirmed through

Cronbach's Alpha, which reached 0.81 for the trade-agreements subscale, 0.78 for the export-promotion subscale, 0.83 for the market-linkages subscale, and 0.84 overall, all exceeding the conventional 0.70 threshold (Nunnally, 1978).

Quantitative data were analysed in SPSS Version 29.0 using descriptive statistics (frequencies, percentages, means and standard deviations) and inferential statistics, specifically Pearson correlation and multiple regression, to test the three research hypotheses at a significance threshold of  $p \leq 0.05$  (Kothari, 2022; Sekaran & Bougie, 2022). Time-series export data were analysed through trend analysis in Microsoft Excel. Qualitative data from interviews and open-ended questionnaire items were analysed using Braun and Clarke's (2022) six-phase thematic analysis in Atlas.ti, applied both inductively and deductively against the conceptual framework. Ethical clearance was obtained from ULK and NAEB in accordance with American Psychological Association (2023) guidelines; informed consent, voluntary participation, confidentiality (anonymised respondent codes) and academic integrity were observed throughout (Bryman, 2022; Lincoln & Guba, 2022). The principal limitations were restricted access to commercially sensitive negotiation records, the single-institution case-study scope, potential social-desirability bias among senior respondents, mitigated through triangulation, and the confounding effect of COVID-19 disruption on 2020–2021 data, addressed through the use of multiple data points across the full study period.

## 4. Results and Discussion

### 4.1 Descriptive Statistics

Respondents' perceptions of the three agricultural diplomacy instrument clusters were measured on a five-point Likert scale (1.00–1.79 Strongly Disagree, 1.80–2.59 Disagree, 2.60–3.39 Neutral, 3.40–4.19 Agree, 4.20–5.00 Strongly Agree). All fifteen items fell in the Agree or Strongly Agree bands, and across all items the Agree and Strongly Agree categories jointly accounted for over 80 percent of responses, while combined Strongly Disagree and Disagree responses rarely exceeded 10 percent.

**Table 1: Respondents' Perceptions on Agricultural Trade Agreements**

| Statement                                | SD | D | N  | A  | SA | Mean | SD   | Interp. |
|------------------------------------------|----|---|----|----|----|------|------|---------|
| Increased Rwanda's coffee export value.  | 2  | 5 | 8  | 38 | 39 | 4.16 | 0.87 | Agree   |
| Increased Rwanda's tea export volume.    | 3  | 6 | 10 | 37 | 36 | 4.05 | 0.93 | Agree   |
| AfCFTA improved market access.           | 2  | 4 | 12 | 40 | 34 | 4.09 | 0.86 | Agree   |
| EAC/COMESA reduced export barriers.      | 4  | 7 | 11 | 39 | 31 | 3.94 | 0.97 | Agree   |
| Contributed to increased forex earnings. | 2  | 3 | 9  | 41 | 37 | 4.17 | 0.83 | Agree   |

Every item in this cluster falls in the Agree band, and the tight range of means (3.94–4.17) indicates a broadly shared view among the 92 respondents that trade agreements benefit export outcomes. Perceived forex earnings (4.17) and coffee export value (4.16) score highest, suggesting agreements are most strongly credited with revenue and currency effects rather than with volume growth per se. EAC/COMESA is the weakest-rated item (3.94) and also carries the largest standard deviation (0.97), meaning

opinion is more divided here than for any other statement a pattern consistent with the persistence of non-tariff barriers such as sanitary and phytosanitary compliance costs within these regional blocs, even where tariffs themselves have fallen. The data therefore suggest that continental and bilateral instruments (AfCFTA, bilateral deals) are perceived as more effective than the older regional frameworks.

**Table 2: Respondents' Perceptions on Export Promotion Missions and Trade Fairs**

| Statement                                         | SD | D | N  | A  | SA | Mean | SD   | Interp.    |
|---------------------------------------------------|----|---|----|----|----|------|------|------------|
| Trade fairs expanded coffee market opportunities. | 1  | 4 | 7  | 43 | 37 | 4.21 | 0.79 | Agree      |
| Diplomatic visits strengthened tea relationships. | 2  | 5 | 10 | 41 | 34 | 4.09 | 0.87 | Agree      |
| Branding events improved international image.     | 1  | 3 | 8  | 42 | 38 | 4.23 | 0.78 | Str. Agree |
| Expos increased number of international buyers.   | 2  | 6 | 11 | 39 | 34 | 4.06 | 0.90 | Agree      |
| Promotion missions enhanced competitiveness.      | 1  | 4 | 9  | 44 | 34 | 4.15 | 0.80 | Agree      |

**Source: Field survey data, 2026. Overall objective mean = 4.15 (Agree).**

This cluster records the highest overall objective mean (4.15) of the three instrument groups, and branding events (4.23) is the only single statement in the entire survey to cross into the Strongly Agree band. Combined with the lowest standard deviations in the survey (0.78–0.90), this indicates unusually strong and unusually consistent agreement that visibility-focused diplomacy trade fairs, exhibitions and brand positioning delivers tangible results.

The relatively lower score for expos increasing buyer numbers (4.06) suggests that, while these events are valued for image and relationship-building, respondents see somewhat less direct evidence of new-buyer acquisition specifically. This pattern anticipates the later regression finding that export promotion is the single strongest statistical predictor of export performance.

**Table 3: Respondents' Perceptions on International Market Linkages and Partnerships**

| Statement                                      | SD | D | N  | A  | SA | Mean | SD   | Interp. |
|------------------------------------------------|----|---|----|----|----|------|------|---------|
| Increased Rwanda's coffee export destinations. | 2  | 5 | 9  | 42 | 34 | 4.10 | 0.85 | Agree   |
| Buyer networks improved long-term contracts.   | 1  | 4 | 12 | 44 | 31 | 4.09 | 0.81 | Agree   |
| NAEB linkages contributed to diversification.  | 3  | 6 | 11 | 40 | 32 | 4.00 | 0.93 | Agree   |
| Partnerships improved market sustainability.   | 2  | 5 | 10 | 43 | 32 | 4.07 | 0.86 | Agree   |
| Reduced dependence on few export destinations. | 4  | 8 | 13 | 37 | 30 | 3.88 | 1.01 | Agree   |

**Source: Field survey data, 2026. Overall objective mean = 4.03 (Agree).**

Market linkages and partnerships produce the lowest overall objective mean (4.03) of the three clusters, and the item on reduced dependence on a narrow set of destinations is the single lowest-scoring statement in the entire survey (3.88) with the survey's only standard deviation above 1.00 (1.01). Read together, these two facts point to the same conclusion: stakeholders credit NAEB's partnership work with opening new markets and contracts, but they are considerably less

convinced that this activity has meaningfully reduced Rwanda's reliance on a small cluster of traditional buyers. This is the most 'contested' finding among the perception data and foreshadows the concentration evidence in the Herfindahl-Hirschman Index table later in this document, where diversification gains, while real, still leave both commodities only moderately deconcentrated.

**Table 4: Rwanda Coffee Export Performance, 2020–2026**

| Year  | Export Quantity (MT) | Export Million) | Revenue (USD Approx. Billion) | Revenue (RWF |
|-------|----------------------|-----------------|-------------------------------|--------------|
| 2020  | 20,087               | 62.0            | 61.4                          |              |
| 2021  | 19,631               | 69.8            | 69.1                          |              |
| 2022  | 21,578               | 94.6            | 97.4                          |              |
| 2023  | 20,375               | 101.0           | 130.3                         |              |
| 2024  | 17,142               | 89.8            | 125.7                         |              |
| 2025  | 23,860               | 148.6           | 216.0                         |              |
| 2026* | n/a                  | n/a             | n/a                           |              |

**Source:** *NAEB Annual Reports FY2020/21–FY2024/25; MINAGRI export performance reports.*

Coffee export revenue rose from USD 62.0 million to a record USD 148.6 million over the period shown, a gain exceeding 139 percent, but the growth path is not smooth: volume actually fell in 2024 (17,142 MT, below even the 2020 level) while revenue that year still exceeded USD 89.8 million, and 2021 shows both volume and revenue essentially flat versus 2020, consistent with COVID-era disruption. The clear implication is that Rwanda's coffee revenue growth over 2020–2025 has been driven substantially more by rising unit prices i.e., successful

premiumisation and branding than by expanding physical export volumes, since 2025's record revenue (148.6M) was achieved on a volume (23,860 MT) only about 19 percent above 2020's. Note also that this table's calendar-year figures differ from the fiscal-year figures cited elsewhere in the source report (e.g., USD 78.7 million in 2023/24 rising to USD 116 million in 2024/25); the two series use different reporting periods (calendar vs. NAEB fiscal year) and should not be compared directly without reconciling the base years.

**Table 5: Major Coffee Export Destination Countries**

| Region        | Major Importing Countries                                                  |
|---------------|----------------------------------------------------------------------------|
| Europe        | Germany, Belgium, Switzerland, the United Kingdom, France, the Netherlands |
| North America | United States, Canada                                                      |
| Asia          | Japan, China, South Korea                                                  |
| Middle East   | United Arab Emirates, Saudi Arabia                                         |
| Africa        | Ghana and emerging AfCFTA markets                                          |

**Source:** *NAEB Annual Reports FY2020/21–FY2024/25; MINAGRI export performance reports.*

Coffee's destination footprint spans five regions, but the list is still weighted toward long-established, high-income markets in Europe and North America. The Middle East and Africa entries (UAE, Saudi Arabia, and Ghana) represent the newer, diplomacy-driven additions referenced elsewhere in the study, and their presence alongside the

traditional markets is consistent with the later HHI evidence showing coffee's export concentration falling but not disappearing. The absence of any Sub-Saharan African destination beyond Ghana also suggests that AfCFTA-enabled intra-African coffee trade remains an early-stage rather than mature channel for Rwanda.

**Table 6: Rwanda Tea Export Performance, 2020–2026**

| Year  | Export Quantity (MT) | Export Million) | Revenue (USD Approx. Billion) | Revenue (RWF |
|-------|----------------------|-----------------|-------------------------------|--------------|
| 2020  | 32,384               | 90.1            | 89.2                          |              |
| 2021  | 33,790               | 93.4            | 92.5                          |              |
| 2022  | 35,274               | 103.7           | 106.8                         |              |
| 2023  | 38,468               | 114.9           | 160.9                         |              |
| 2024  | 37,749               | 111.0           | 155.4                         |              |
| 2025* | n/a                  | n/a             | n/a                           |              |
| 2026* | n/a                  | n/a             | n/a                           |              |

**Source: NAEB Annual Reports FY2020/21–FY2024/25; MINAGRI export performance reports. \*Figures not yet officially published.**

Tea shows a steadier growth profile than coffee: both volume and revenue rise in every year from 2020 to 2023, with revenue increasing by roughly 27 percent over that four-year span (USD 90.1 million to USD 114.9 million). 2024 breaks that pattern with a small volume decline (37,749 MT versus 38,468 MT) accompanied by a larger revenue decline (down about 3.4 percent), implying a

modest softening in average unit price that year rather than a demand problem. The absence of 2025 and 2026 data is a genuine gap in the record: it means the most recent two years of tea performance exactly the period in which the study's newest diplomacy instruments would be expected to show results cannot yet be evaluated quantitatively.

**Table 7: Major Tea Export Destination Countries**

| Region      | Major Importing Countries                        |
|-------------|--------------------------------------------------|
| Asia        | Pakistan, China, Kazakhstan                      |
| Middle East | United Arab Emirates, Saudi Arabia               |
| Europe      | Germany, Belgium, the United Kingdom, and Russia |
| Africa      | Egypt, Sudan, Morocco                            |

**Source: NAEB Annual Reports FY2020/21–FY2024/25; MINAGRI export performance reports.**

Tea's destination list is shorter than coffee's and is anchored by Pakistan, which the source study identifies elsewhere as the single leading market for Rwandan tea. That single-market dependence, even amid a footprint spanning four regions, is the practical expression of the elevated tea HHI reported later in this document, and it is the most direct

evidence behind the survey finding that respondents were least confident diplomacy had reduced reliance on a narrow set of buyers. The inclusion of Russia as a European-region destination is notable given the geopolitical context of the study period and may warrant separate monitoring given sanctions-related trade risk.

**Table 8: Coffee Export Performance and Agricultural Diplomacy Outcomes**

| Year | SO1: Value & Volume                    | SO2: Market Expansion                                  | SO3: Destination Diversification                                           |
|------|----------------------------------------|--------------------------------------------------------|----------------------------------------------------------------------------|
| 2020 | 16,881 MT; USD 61.5M revenue.          | COVID-19 disruptions constrained promotion activities. | Traditional Europe/N. America/Asia markets dominant.                       |
| 2021 | Revenue ≈ USD 75.6M; volume 15,185 MT. | Recovery of trade activity; rising coffee prices.      | Destinations diversified across Europe, N. America, Asia, and Middle East. |
| 2022 | 20,065 MT; USD 115.9M (+32.1% volume). | Intensified trade-fair participation; revenue +23%.    | New linkages expanded access to premium markets.                           |
| 2023 | Revenue > USD 115M.                    | Specialty expos drove new buyer acquisition.           | Expanded partnerships in Germany, Belgium, Japan, US, UAE.                 |
| 2024 | Revenue ≈ USD 89.8M.                   | Branding/promotion sustained growth.                   | Tea reached ≈47 destinations (cross-commodity).                            |
| 2025 | 23,860 MT; record USD 148.6M.          | Expansion into premium specialty markets.              | Sustained destinations across all major regions.                           |
| 2026 | Statistics not yet published.          | Diplomacy initiatives continue under NAEB plans.       | Full diversification indicators not yet released.                          |

**Source: NAEB Annual Reports FY2020/21–FY2024/25; MINAGRI export performance reports.**

Mapped year by year, coffee's story is one of a COVID-era trough (2020–2021), a strong recovery phase driven by intensified trade-fair participation (2022, +32.1% volume and +23% revenue), and a subsequent period in which value and diversification continue climbing even when volume figures are more modest (2023–2025). The qualitative descriptions in the Market Expansion and Diversification columns track closely with the quantitative revenue figures in Table 4, which strengthens confidence that the narrative

attribution to specific diplomacy activities (trade fairs in 2022, specialty expos in 2023, branding in 2024) is not coincidental. The 2024 entry for destination diversification appears to reference tea rather than coffee ("Tea reached ≈47 destinations"), which is likely a copy-paste artifact in the source table rather than an actual coffee-specific figure, and should be corrected or re-verified against NAEB's raw 2024 coffee destination count before this row is cited independently.



**Table 9: Tea Export Performance and Agricultural Diplomacy Outcomes**

| Year | SO1: Value & Volume                       | SO2: Market Expansion                             | SO3: Destination Diversification                                      |
|------|-------------------------------------------|---------------------------------------------------|-----------------------------------------------------------------------|
| 2020 | 32,634 MT; USD 93.65M revenue.            | COVID-19 constrained missions; buyers retained.   | Pakistan, Egypt, UK, Middle East dominant.                            |
| 2021 | 34,735 MT; USD 103.5M (+10.5%).           | Recovery of trade/logistics systems.              | Diversified across Asia, Europe, Africa, Middle East.                 |
| 2022 | 39,008 MT; USD 107.77M.                   | Intensified promotion; revenue +≈15%.             | Strengthened access to premium Europe/Asia markets.                   |
| 2023 | ≈40,000 MT; revenue > USD 107M.           | Buyer-matching initiatives expanded reach.        | New partnerships: Pakistan, China, Kazakhstan, Germany, Belgium, UAE. |
| 2024 | 40,003 MT; record USD 114.88M.            | Branding/exhibitions sustained buyer acquisition. | Exported to ≈47 countries; strong diversification.                    |
| 2025 | Statistics not comprehensively published. | Continued premium/specialty market expansion.     | Pakistan remains leading market.                                      |
| 2026 | Statistics not yet published.             | Diplomacy initiatives continue under NAEB plans.  | Full HHI/diversification data not yet released.                       |

**Source: NAEB Annual Reports FY2020/21–FY2024/25; MINAGRI export performance reports.**

Tea's diplomacy-outcome narrative is more continuous than coffee's: volume rises in every year shown through 2024, and the revenue figures here (e.g., USD 114.88 million in 2024) sit close to, but not identical with, the USD 111.0 million reported in Table 6 for the same year a small inconsistency likely reflecting rounding or slightly different reporting windows (calendar vs. marketing year) that should be reconciled in the underlying NAEB source before the

figures are used together. The Destination Diversification column tells a two-sided story: new markets are genuinely added each year (Kazakhstan, China and others by 2023), yet the 2025 entry explicitly notes that "Pakistan remains leading market," confirming that diplomacy has broadened tea's market base without displacing its core dependency the same tension already visible in the perception survey (Table 3) and destination list (Table 7).

**Table 10: Agricultural Diplomacy Instruments Deployed by NAEB & Operational Objectives**

| Instrument / Mechanism                                | Diplomatic Vehicle                                                  | Primary Operational Objective                                         | Target Commodity                 |
|-------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------|
| Bilateral Trade Agreements & Protocols                | AfCFTA, EAC Common Market, China Zero-Tariff Protocol               | Eliminate tariff barriers and streamline customs/SPS clearance.       | Coffee & Tea                     |
| Global Trade Expos & Fair Participation               | Specialty Coffee Expo (US), SCAE (Europe), World Tea Expo           | Direct B2B buyer matching and brand exposure.                         | Premium Coffee & Specialty Tea   |
| National Branding & Promotion                         | "Taste the Origin", "Rwanda Coffee", Africa Coffee & Tea Expo (ACT) | Command premium pricing above commodity market benchmarks.            | Specialty Arabica & Orthodox Tea |
| Quality Competitions                                  | Cup of Excellence (CoE), Best of Rwanda Coffee Competition          | Connect top-scoring smallholder washing stations to premium auctions. | Coffee                           |
| International Quality & Sustainability Certifications | Rainforest Alliance, Fairtrade, Organic, EUDR Compliance            | Ensure access to high-value, highly regulated Western markets.        | Coffee & Tea                     |

**Source: NAEB strategic and promotional documentation, as compiled in the source study.**

This table is best read as a map of NAEB's instrument portfolio against the study's three objectives: agreements and certifications primarily serve market access (getting

products legally and competitively into a market), while expos, branding and quality competitions primarily serve market value and visibility (getting a premium once inside

that market). The fact that only one instrument (quality competitions) targets coffee exclusively, while the rest apply to both commodities, indicates that NAEB's diplomatic infrastructure is largely shared rather than commodity-specific which helps explain why coffee and tea show broadly parallel, though not identical, response

patterns across the other tables in this document. The certifications row is also the clearest link to compliance costs: EUDR and similar requirements are almost certainly the "non-tariff barriers" respondents cited as a top constraint in the qualitative findings.

**Table 11: Price Realization Premium Driven by NAEB Branding and Specialty Diplomacy (2020–2025)**

| Year | Global Avg. Coffee Price (ICO Composite, USD/kg) | Rwanda Specialty Coffee Export Price (USD/kg) | Price Premium / Margin (%) | Mombasa Auction Avg. Tea Price (USD/kg) | Rwanda Premium Tea Auction Price (USD/kg) |
|------|--------------------------------------------------|-----------------------------------------------|----------------------------|-----------------------------------------|-------------------------------------------|
| 2020 | 2.36                                             | 3.09                                          | +30.9%                     | 1.92                                    | 2.78                                      |
| 2021 | 3.32                                             | 3.55                                          | +6.9%                      | 1.98                                    | 2.76                                      |
| 2022 | 3.90                                             | 4.38                                          | +12.3%                     | 2.25                                    | 2.94                                      |
| 2023 | 3.75                                             | 4.96                                          | +32.3%                     | 2.20                                    | 2.99                                      |
| 2024 | 4.20                                             | 5.24                                          | +24.8%                     | 2.15                                    | 2.94                                      |
| 2025 | 4.85                                             | 6.23                                          | +28.5%                     | 2.30                                    | 3.12                                      |

**Source: Compiled from ICO monthly market reports, EATTA Mombasa Auction statistics, and NAEB annual trade reviews.**

Rwanda commands a price premium over the relevant benchmark in every single year for both commodities, which is strong direct evidence for the branding and quality-competition instruments in Table 10. The coffee premium is volatile, ranging from a low of 6.9 percent (2021, when global prices spiked sharply and temporarily narrowed the gap) to a high of 32.3 percent (2023), whereas the tea premium is much steadier in absolute USD/kg terms

(roughly USD 0.5–0.9 above the Mombasa average throughout). This suggests coffee's premium is more exposed to global commodity-price cycles, while tea's premium behaves more like a stable quality/reputation floor consistent with tea being sold through the structured Mombasa auction system versus coffee's more heterogeneous specialty-buyer channels.

**Table 12: Impact of Trade Expos & Agricultural Missions on Direct Export Contracts**

| Financial Year | International Trade Fairs Attended | Commercial B2B Deals Signed | Direct Export Contracts Revenue Share (Coffee) | Direct Export Contracts Revenue Share (Tea) |
|----------------|------------------------------------|-----------------------------|------------------------------------------------|---------------------------------------------|
| FY2020/21      | 3 (Virtual/Hybrid)                 | 14                          | 18.2%                                          | 12.0%                                       |
| FY2021/22      | 8                                  | 32                          | 24.5%                                          | 15.4%                                       |
| FY2022/23      | 12                                 | 47                          | 31.0%                                          | 19.8%                                       |
| FY2023/24      | 15                                 | 61                          | 38.4%                                          | 22.1%                                       |
| FY2024/25      | 18                                 | 74                          | 43.2%                                          | (not reported)                              |

**Source: Derived from NAEB Strategic Action Plans and Trade Mission Performance Contract Evaluations.**

This is the most linear relationship of any table in the source study: fairs attended climb sixfold (3 to 18) over five fiscal years, B2B deals climb more than fivefold (14 to 74), and coffee's direct-contract revenue share climbs steadily from 18.2 percent to 43.2 percent a near-monotonic, order-of-magnitude relationship that offers strong descriptive support for the regression finding that export promotion is the strongest statistical predictor of performance (Table 17).

Coffee's revenue share consistently outpaces tea's at every point (roughly double by FY2023/24), indicating trade-fair diplomacy converts more efficiently into direct coffee contracts than tea contracts, plausibly because tea's dominant sales channel remains the Mombasa auction rather than direct B2B deals. The missing FY2024/25 tea figure is a genuine data gap and should not be read as zero; it should

be sourced from NAEB before this row is used in further analysis.

**Table 13: Market Penetration & Concentration (Herfindahl-Hirschman Index) Trends**

| Commodity | Base Year (2020)<br>HHI     | Target (2025) HHI | Achieved 2025<br>HHI | Major New Markets Entered Post-2020          |
|-----------|-----------------------------|-------------------|----------------------|----------------------------------------------|
| Coffee    | 0.2410 (Moderate)           | < 0.1800          | 0.1685               | UAE, South Korea, China, Saudi Arabia, Ghana |
| Tea       | 0.3820 (High concentration) | < 0.2800          | 0.2450               | Kazakhstan, China, Morocco, Nigeria, Russia  |

**Note:** A lower HHI indicates greater destination diversification resulting from trade diplomacy.

Both commodities not only met but beat their 2025 diversification targets: coffee fell from a moderately concentrated 0.2410 to 0.1685 (target was under 0.1800), and tea fell from a highly concentrated 0.3820 to 0.2450 (target was under 0.2800). In relative terms tea made the larger improvement a 36 percent reduction in HHI versus coffee's 30 percent which is a meaningfully result given how concentrated tea started. In absolute terms, however, tea's achieved HHI (0.2450) remains higher than coffee's (0.1685), meaning tea exports are still more concentrated in a small number of destinations than coffee exports are,

which squares with Pakistan's continued dominance noted in Table 9 and the muted survey confidence in Table 3 about reduced dependence on a few markets. This table is the single clearest piece of quantitative evidence in the source study for Specific Objective 3 (destination diversification), and it shows genuine progress alongside a residual concentration risk that is larger for tea than coffee.

## 4.2 Inferential analysis

**Table 14: Pearson Correlation Matrix of Study Variables**

| Variable              | X1:<br>Agreements | TradeX2:<br>Promotion | ExportX3:<br>Linkages | Market Y:<br>Performance | Export |
|-----------------------|-------------------|-----------------------|-----------------------|--------------------------|--------|
| X1: Trade Agreements  | 1.00              | 0.49**                | 0.44**                | 0.62**                   |        |
| X2: Export Promotion  | 0.49**            | 1.00                  | 0.52**                | 0.71**                   |        |
| X3: Market Linkages   | 0.44**            | 0.52**                | 1.00                  | 0.58**                   |        |
| Y: Export Performance | 0.62**            | 0.71**                | 0.58**                | 1.00                     |        |

**Source:** SPSS output, field survey data, 2026. \*\*Correlation is significant at the 0.01 level (2-tailed),  $n = 92$ .

All three diplomacy-instrument clusters correlate positively and significantly with export performance, with export promotion showing the strongest bivariate relationship ( $r = 0.71$ ), followed by trade agreements ( $r = 0.62$ ) and market linkages ( $r = 0.58$ ) the same ranking that later shows up in the regression coefficients (Table 17). Equally important is what sits off the diagonal among the three predictors themselves: their inter-correlations (0.44–0.52) are

moderate but noticeably weaker than their correlations with the outcome variable, which is the signature of predictors that are related but not redundant, meaning the subsequent regression model is unlikely to suffer from serious multicollinearity. In practical terms, this table indicates the three instrument types are complementary levers rather than three measures of the same underlying thing.

**Table 15: Regression Model Summary**

| Statistic                  | Value |
|----------------------------|-------|
| R                          | 0.78  |
| R Square ( $R^2$ )         | 0.61  |
| Adjusted R Square          | 0.59  |
| Std. Error of the Estimate | 0.312 |

**Source:** SPSS output, field survey data, 2026. Predictors: Trade Agreements, Export Promotion, Market Linkages.

An  $R^2$  of 0.61 means the three diplomacy-instrument clusters jointly account for 61 percent of the variance in respondents' export-performance ratings, which is a strong result by the standards of survey-based social science research, where  $R^2$  values above 0.50 are generally considered substantial. The small gap between  $R^2$  (0.61) and Adjusted  $R^2$  (0.59) indicates the model is not overfitted

relative to its three predictors and 92-responder sample. The remaining 39 percent of unexplained variance is the quantitative counterpart to the qualitative constraints the study identifies limited financing, non-tariff barriers and thin diplomatic representation which sit outside the three measured instrument clusters but plausibly still shape perceived export performance.

**Table 16: ANOVA for the Regression Model**

| Source     | df | Sum of Squares | Mean Square | F     | Sig.  |
|------------|----|----------------|-------------|-------|-------|
| Regression | 3  | 13.28          | 4.43        | 45.32 | 0.000 |
| Residual   | 88 | 8.60           | 0.098       |       |       |
| Total      | 91 | 21.88          |             |       |       |

**Source: SPSS output, field survey data, 2026. Dependent variable: Export Performance.**

The F-statistic of 45.32 on 3 and 88 degrees of freedom, significant at  $p < 0.001$ , confirms that the regression model as a whole predicts export performance far better than would be expected by chance. The regression sum of squares (13.28) versus the residual sum of squares (8.60) shows the model explains more variation than it leaves

unexplained, consistent with the  $R^2$  of 0.61 reported in Table 15. Because this F-test is a joint test of all three predictors together, it validates proceeding to interpret the individual coefficients in Table 17 with confidence that the overall model is not spurious.

**Table 17: Multiple Regression Coefficients**

| Predictor                      | B     | SE    | Beta  | t     | Sig.  |
|--------------------------------|-------|-------|-------|-------|-------|
| (Constant)                     | 0.842 | 0.215 | —     | 3.916 | 0.000 |
| Trade Agreements               | 0.246 | 0.071 | 0.271 | 3.465 | 0.001 |
| Export Promotion / Trade Fairs | 0.381 | 0.068 | 0.412 | 5.603 | 0.000 |
| Market Linkages / Partnerships | 0.198 | 0.075 | 0.219 | 2.640 | 0.010 |

**Source: SPSS output, field survey data, 2026. Dependent variable: Export Performance (composite index).**

All three predictors are statistically significant ( $p \leq 0.010$ ), confirming each contributes independently to explaining export performance rather than acting only through overlap with the others. Export promotion and trade fairs has the largest standardised effect ( $\beta = 0.412$ ) and the largest t-statistic (5.603), meaning a one-standard-deviation increase in this predictor is associated with the largest corresponding increase in export performance among the three; trade

agreements is second ( $\beta = 0.271$ ) and market linkages/partnerships is third ( $\beta = 0.219$ ). This ordering promotion > agreements > linkages is consistent across the correlation matrix, the descriptive means, and this coefficient table, which is a useful robustness check: three different analytical lenses on the same underlying data all point to export promotion as the diplomacy instrument with the greatest measured influence on export outcomes.

**Table 18: Hypothesis Testing Summary**

| Hypothesis                                          | Standardised Beta | Significance (p) | Decision          |
|-----------------------------------------------------|-------------------|------------------|-------------------|
| H1: Trade agreements → export value/volume          | 0.271             | 0.001            | Supported         |
| H2: Export promotion/trade fairs → market expansion | 0.412             | 0.000            | Supported         |
| H3: Market linkages → destination diversification   | 0.219             | 0.010            | Supported         |
| Composite model ( $R^2 = 0.61$ , $F = 45.32$ )      | —                 | 0.000            | Model significant |

**Source: Author's computation from SPSS regression output, field survey data, 2026.**

This table is the study's summary verdict: with every p-value at or below 0.05, the null hypothesis of no relationship is rejected for all three research hypotheses, and the composite model itself is significant. The magnitude

ordering carried over from Table 17 ( $H2 > H1 > H3$ ) provides a practical prioritisation for policy: if resources for agricultural diplomacy are constrained, this table's evidence base points toward export promotion and trade-fair activity

as the instrument with the largest measured payoff per unit of standardised effect, followed by trade agreements, with market-linkage and partnership work while still statistically significant showing the smallest of the three measured effects on destination diversification specifically.

### 4.3 Discussion of Results

The empirical findings demonstrate that agricultural diplomacy instruments deployed by the National Agricultural Export Development Board (NAEB) are statistically significant and substantively important determinants of Rwanda's coffee and tea export performance. The multiple regression results indicate that agricultural diplomacy instruments jointly explain 61 percent of the variation in export performance, with the overall regression model being statistically significant at the 0.001 level. The correlation analysis further shows a strong relationship between agricultural diplomacy and export performance. Among the three instruments examined, export promotion missions and international trade fairs recorded the strongest relationship and the largest regression coefficient, followed by agricultural trade agreements and international market linkages and partnerships. These findings are consistent with the broader argument of Ben Hassen and El Bilali (2022) that agricultural resources, trade negotiations and export promotion have increasingly become instruments through which states pursue economic and strategic interests in international markets. They also support Nugroho et al. (2024), who emphasise that agricultural diplomacy can strengthen export competitiveness by connecting diplomatic engagement with market access, institutional support and international commercial relationships.

#### 4.3.1 Effect of Agricultural Trade Agreements on Export Value and Volume

The findings confirm that agricultural trade agreements have a statistically significant effect on the export value and volume of Rwanda's coffee and tea. The trade-agreements cluster recorded an overall mean of 4.08, indicating that respondents generally agreed that trade agreements contribute to improved export performance.

The regression results further show a standardized coefficient of 0.271 with a significance level of 0.001, leading to the support of the first hypothesis. Respondents particularly associated trade agreements with increased foreign exchange earnings and higher coffee export value, which recorded mean scores of 4.17 and 4.16 respectively. These results suggest that negotiated market-access arrangements provide Rwanda with an institutional mechanism for improving the commercial conditions under which coffee and tea enter foreign markets. The finding is strongly consistent with Baccini et al. (2023), whose study demonstrates that preferential trade agreements increase bilateral agricultural trade, particularly where agreements provide deeper forms of market integration. Their argument

is relevant to Rwanda because the country's participation in regional and continental arrangements creates opportunities for reducing tariff-related barriers and improving access to external markets. The present finding also agrees with Moïsé and Sorescu (2022), who argue that preferential market access produces stronger export outcomes when it is accompanied by supply-side capacity development. This is particularly important for Rwanda because access to international markets alone may not automatically translate into increased exports unless producers and exporters have the capacity to meet quality, certification, phytosanitary and other market requirements.

The finding is also consistent with the Rwandan evidence presented by Umutesi (2018), who found that Rwanda's trading partners connected through formal trade agreements recorded substantially higher trade volumes than partners without such agreements. Similarly, Gasana and Uwimana (2024) found that bilateral trade agreements contribute to coffee export market diversification in Rwanda and projected further export gains under broader implementation of continental trade arrangements. The present study therefore reinforces the argument that agricultural trade agreements constitute an important component of Rwanda's agricultural diplomacy because they establish the institutional conditions through which coffee and tea exporters can access foreign markets. This interpretation is also consistent with Liberal Institutionalism, as discussed by Keohane and Nye (2023), which emphasises that international institutions and agreements reduce transaction costs, create predictable rules and facilitate cooperation among states. The findings further suggest, however, that the effect of trade agreements should not be interpreted as automatic or uniform across all markets. Although the overall mean was high, the EAC and COMESA item recorded the lowest mean of 3.94 and the highest standard deviation of 0.97 within this cluster. This indicates that respondents were somewhat less convinced about the effectiveness of these regional arrangements than about broader continental and bilateral instruments. The finding is consistent with the study's observation that non-tariff barriers, including sanitary and phytosanitary requirements and compliance costs, can continue to constrain agricultural trade even when tariffs have been reduced. Thus, the contribution of trade agreements to export performance depends not only on formal market-access provisions but also on the institutional and productive capacity required to utilise those provisions effectively.

#### 4.3.2 Influence of Export Promotion Missions and International Trade Fairs on Market Expansion

Export promotion missions and international trade fairs emerged as the most influential agricultural diplomacy instrument examined in the study. The cluster recorded the highest overall mean of 4.15, while diplomatic branding events achieved the highest individual mean of 4.23. The regression analysis provides further evidence of the importance of this instrument, showing a standardized

coefficient of 0.412, a t-value of 5.603 and a significance level below 0.001. The second hypothesis was therefore supported. The findings indicate that export promotion activities, including trade fairs, exhibitions, diplomatic visits and branding events, play an important role in expanding market opportunities for Rwanda's coffee and tea.

The result is consistent with Genc et al. (2023), whose meta-analysis identified trade fair participation, market intelligence and diplomatic trade missions among the most consistently effective export promotion instruments. The present study extends this argument to Rwanda by demonstrating that respondents perceive these activities not merely as promotional events but as mechanisms that contribute to actual export performance. The finding also corresponds with Munch and Schaur (2022), who found that participation in export promotion programmes increases the probability of entering new international markets and improves export performance, particularly in sectors where buyer confidence and relationships are important. Coffee and tea are particularly relevant in this regard because their international competitiveness depends not only on price but also on perceptions of quality, origin, reliability and sustainability. The findings are further supported by Mutesi and Munyaneza (2023), whose Rwandan study found that cooperatives participating in NAEB-supported exhibitions achieved higher unit prices than non-participating cooperatives. The evidence presented in the current study provides additional support for this relationship. Branding events recorded the highest perception score in the survey, while Rwanda's specialty coffee achieved price premiums over the international benchmark in several years. The study reports that the coffee price premium reached 32.3 percent in 2023, while the number of international trade fairs attended increased from three in 2020/21 to eighteen in 2024/25 and commercial business-to-business deals increased from fourteen to seventy-four over the same period. These patterns provide descriptive evidence that promotional diplomacy can facilitate relationships between Rwandan exporters and international buyers while simultaneously strengthening the country's product image.

The strength of export promotion in the regression model is also theoretically meaningful. Fan (2022) explains the importance of branding and country image in international diplomacy, while Morgan et al. (2023) emphasise the contribution of marketing capabilities to international market performance. In the Rwandan context, NAEB's branding activities, quality competitions and participation in international exhibitions create opportunities to communicate the distinctive characteristics of Rwandan coffee and tea to foreign buyers. This suggests that agricultural diplomacy operates not only through formal negotiations but also through reputation-building, commercial networking and direct engagement with international markets. The strong coefficient obtained for export promotion therefore indicates that face-to-face commercial diplomacy and country-of-origin promotion constitute important mechanisms through which Rwanda

converts its agricultural products into internationally recognised and commercially competitive exports.

The finding that export promotion is the strongest predictor should nevertheless be interpreted carefully. The regression coefficient indicates that export promotion has the strongest measured association with the composite export-performance index among the three predictors; it does not establish that trade fairs alone caused the observed increase in exports. Export performance is also influenced by international prices, production capacity, quality standards, logistics and broader market conditions.

The study itself identifies global price cycles, supply-chain readiness and institutional capacity as relevant contextual conditions. Consequently, the strongest regression coefficient for export promotion should be understood as evidence of its relative importance within the agricultural diplomacy framework rather than as proof that promotional activities operate independently of other economic and institutional factors.

#### **4.3.3 Effect of International Market Linkages and Partnerships on Export Destination Diversification**

International market linkages and partnerships also demonstrated a statistically significant effect on export performance. The cluster recorded an overall mean of 4.03, while the regression coefficient was 0.219 with a significance level of 0.010. The third hypothesis was therefore supported. Respondents agreed that market linkages increased coffee export destinations, strengthened long-term buyer contracts, contributed to market diversification and improved the sustainability of export markets. However, the statement concerning reduced dependence on a small number of export destinations recorded the lowest mean within the entire survey, at 3.88, and the highest standard deviation of 1.01. This indicates that stakeholders recognise the contribution of NAEB's partnerships to market expansion but remain less confident that these initiatives have completely overcome Rwanda's historical dependence on a limited number of markets. The finding is consistent with Gereffi et al. (2022) and Ponte and Gibbon (2022), who emphasise the importance of relational relationships within global value chains. Their work suggests that sustained relationships between producers, exporters and foreign buyers can reduce informational and reputational barriers and facilitate entry into higher-value international markets. The finding also agrees with Hultman et al. (2022), who emphasise the importance of active buyer matchmaking rather than relying exclusively on passive market information. In Rwanda's case, NAEB's facilitation of relationships between cooperatives and international buyers therefore represents an important mechanism through which diplomatic engagement can be transformed into sustained commercial relationships. The quantitative evidence on destination concentration provides further support for this finding. The Herfindahl-Hirschman Index for coffee declined from 0.2410 in 2020 to 0.1685 in 2025, while the index for tea declined from 0.3820 to 0.2450 over

the same period. The reduction in the concentration index indicates greater diversification of export destinations. The improvement was particularly notable for tea, which experienced a larger proportional reduction in concentration, although its final concentration level remained higher than that of coffee.

These findings are consistent with the study's evidence that Rwanda's coffee exports have expanded across Europe, North America, Asia, the Middle East and Africa, while tea has reached approximately 47 destination countries. Despite this progress, the findings reveal an important qualification concerning the depth of diversification. Rwanda's tea exports remain strongly associated with Pakistan, which continues to be identified as the leading tea market. The achieved tea concentration index of 0.2450 is also higher than the coffee index of 0.1685. This explains why respondents gave the lowest rating to the statement that market linkages had reduced dependence on a few export destinations. The finding therefore does not contradict the regression result. Rather, it demonstrates that market linkages have contributed to diversification while the process remains incomplete. In this respect, the findings are consistent with the global value-chain perspective of Gereffi et al. (2022) and Ponte and Gibbon (2022), because the establishment of new relationships does not necessarily eliminate dependence on established buyers. Diversification is therefore better understood as a gradual process of expanding the network of markets and buyers rather than immediately replacing traditional destinations.

The findings demonstrate that the three agricultural diplomacy instruments make complementary contributions to Rwanda's coffee and tea export performance. Trade agreements provide the institutional and regulatory foundation for market access, export promotion missions and international trade fairs strengthen visibility, branding and buyer engagement, while market linkages and partnerships create longer-term commercial relationships and contribute to destination diversification. The correlation results reinforce this interpretation, with export promotion showing the strongest relationship with export performance, followed by trade agreements and market linkages. The three predictors are also positively related to one another without being excessively correlated, suggesting that they function as complementary rather than redundant instruments.

The overall regression results provide further evidence of the combined importance of these instruments. The three agricultural diplomacy variables explain 61 percent of the variance in export performance, while the F-statistic of 45.32 is statistically significant at  $p$  less than 0.001. All three individual predictors are statistically significant, with export promotion recording the largest standardized coefficient, followed by trade agreements and market linkages. These findings support the study's argument that Rwanda's export performance cannot be adequately explained by market access alone. Rather, export outcomes emerge from the interaction of institutional agreements,

promotional diplomacy, branding, buyer relationships and organisational capabilities. This interpretation is consistent with the Resource-Based View advanced by Barney and Hesterly (2022), which emphasises the importance of valuable organisational resources and capabilities, and with Teece (2022), who highlights the role of dynamic capabilities in adapting organisational resources to changing market conditions. Taken together, the findings provide empirical support for the argument that agricultural diplomacy has become an important component of Rwanda's export-development strategy.

The results are particularly significant because they demonstrate that diplomacy is not limited to the negotiation of formal trade agreements. It also encompasses trade promotion, international exhibitions, diplomatic branding, buyer matchmaking, quality positioning and the development of long-term international partnerships. The findings therefore reinforce the integrated perspective advanced in the study, whereby Rwanda's comparative advantages in coffee and tea are converted into export performance through institutional arrangements and organisational capabilities. At the same time, the remaining concentration of tea exports, non-tariff barriers, limited diplomatic representation and constraints in value addition indicate that agricultural diplomacy has not yet eliminated the structural challenges facing Rwanda's export sector. The evidence consequently supports a balanced conclusion: agricultural diplomacy has made a statistically significant and substantively important contribution to export performance, but its full potential depends on continued institutional strengthening, market diversification, value addition and coordinated support for exporters and producers.

## 5. Conclusion and Recommendations

### 5.1 Conclusion

This study set out to examine the effect of agricultural diplomacy instruments on Rwanda's coffee and tea export performance under NAEB for the period 2020–2026. The evidence supports all three research hypotheses. Agricultural trade agreements spanning preferential arrangements, AfCFTA, EAC and COMESA frameworks are perceived and empirically associated with significant gains in export value, volume and foreign exchange earnings ( $\beta = 0.271$ ,  $p = 0.001$ ) (Baccini et al., 2023; Gasana & Uwimana, 2024). Export promotion missions and international trade fairs constitute the most highly rated and the strongest statistical predictor among the diplomacy instrument clusters ( $\beta = 0.412$ ,  $p < 0.001$ ), with branding events the single most impactful mechanism, confirming that face-to-face commercial diplomacy remains an indispensable complement to formal trade architecture (Genc et al., 2023; Mutesi & Munyaneza, 2023). International market linkages and partnerships are positively and significantly associated with destination diversification ( $\beta = 0.219$ ,  $p = 0.010$ ), although the

reduction of Rwanda's historical dependence on a narrow set of European markets remains incomplete, representing the study's most contested finding (Gereffi et al., 2022). The strong composite correlation ( $r = 0.78$ ) and substantial explanatory power ( $R^2 = 0.61$ ,  $F = 45.32$ ,  $p < 0.001$ ) confirm that agricultural diplomacy is a statistically significant and substantively important driver of export performance, while the qualitative findings reveal that budgetary limitations, thin diplomatic representation, non-tariff barriers and limited value addition remain the principal constraints moderating its full potential (RSA Regions, 2024).

## 5.2 Recommendations

Based on the findings of this study, the following recommendations were proposed:

1. The Ministry of Foreign Affairs and International Cooperation, in collaboration with the Ministry of Agriculture and Animal Resources, should develop a comprehensive National Agricultural Diplomacy Strategy with measurable five-year targets for market diversification, agreement negotiation, export growth and international branding.
2. NAEB should establish dedicated Agricultural Trade Attaché positions in priority markets including Japan, China, the United Arab Emirates, Germany and the United States to provide sustained market intelligence and buyer-relationship management.
3. The Ministry of Finance and Economic Planning, with MINAGRI and NAEB, should increase budgetary allocations for export promotion and trade diplomacy by at least 30 percent over the next three fiscal years to match competitor countries' promotional scale.
4. NAEB should establish an Agricultural Diplomacy Coordination Task Force bringing together MINAGRI, MINAFFET, the Rwanda Development Board and the Private Sector Federation to harmonise institutional priorities and share market intelligence.
5. MINAGRI, the Rwanda Development Board and private investors should prioritise sustained investment in value addition and agri-processing infrastructure including coffee washing stations, tea processing facilities and certification systems to shift Rwanda from price-taking to price-setting positioning in international markets.
6. Universities and policy research institutions should undertake longitudinal and econometric follow-up studies to isolate the differential impact of specific categories of trade-promotion expenditure on long-term export competitiveness.

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