

REPUBLIC OF RWANDA



# TRAVEL EXPENDITURE SURVEY REPORT: Compilation methodology and results

2022

June 2023



Rwanda Directorate General  
Of Immigration and Emigration



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## LIST OF ABBREVIATIONS

<b>BOP</b>	: Balance of Payments
<b>BPM6</b>	: Balance of Payments and International Investment Position Manual 6 <sup>th</sup> Edition
<b>DGIE</b>	: Directorate General of Immigration and Emigration
<b>DRC</b>	: Democratic Republic of Congo
<b>EAC</b>	: East African Community
<b>EU</b>	: European Union
<b>FRW</b>	: Franc Rwandais
<b>GDP</b>	: Gross Domestic Product
<b>ID</b>	: Identity card
<b>ITRS</b>	: International Transactions Reporting System
<b>KIA</b>	: Kigali International Airport
<b>MCS</b>	: Movement Control System
<b>MSITS 2010</b>	: Manual of Statistics of International Trade in Services 2010
<b>NBR</b>	: National Bank of Rwanda
<b>NISR</b>	: National Institute of Statistics of Rwanda
<b>RDB</b>	: Rwanda Development Board
<b>TES</b>	: Travel Expenditure Survey
<b>USD</b>	: United States Dollar
<b>VFR</b>	: Visiting Friends and Relatives



## **EXECUTIVE SUMMARY**

Every travelling person that leaves or enters the country is recorded by immigration officials (DGIE in case of Rwanda). The information declared is very crucial for the two categories of economy: the visited and visiting economies. These two economies are statistically linked by two recognized international systems: the Balance of Payments Statistics and National Accounts Statistics.

Travel covers expenditure on goods and services acquired by non-residents during visits to an economy other than their country of residence. Two flows are therefore considered for the compilation of exports and imports of travel services for the Balance of Payments:

1. Non-resident visitors to Rwanda (exports / travel credit)
2. Rwandan residents travelling abroad (imports / travel debit)

This publication presents the results of the travel expenditure survey for the year 2022, the methodology and the results. Travel services comprise of expenditure of non-residents in Rwanda (Credit) and expenditure of Rwandan residents abroad (Debit).

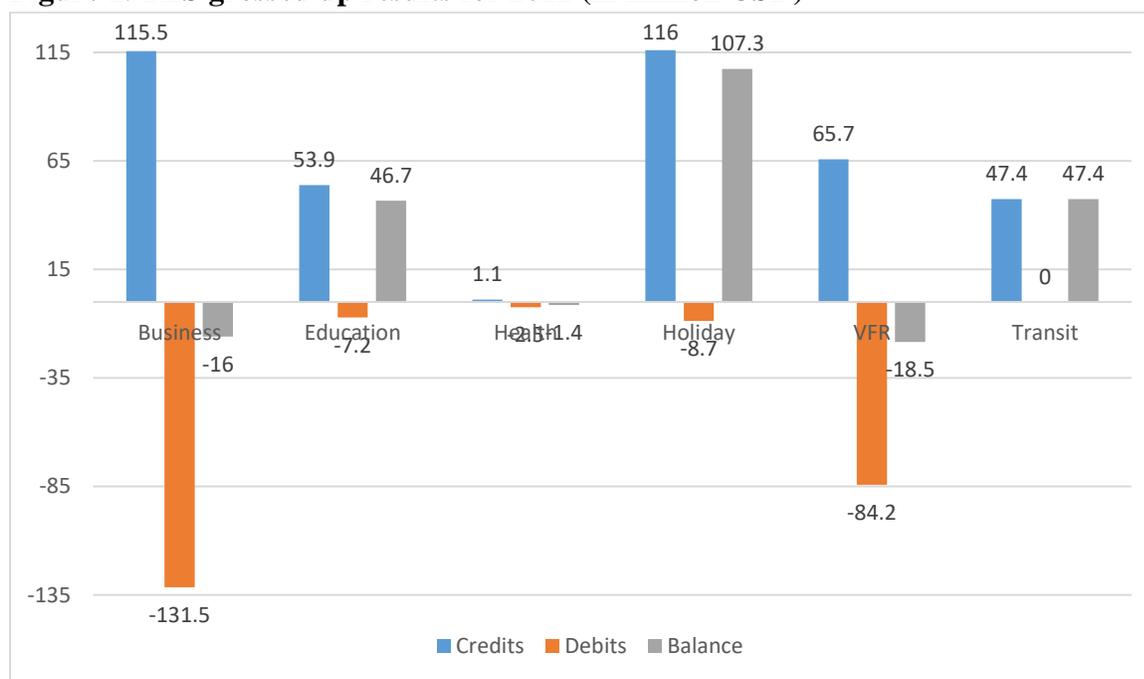
This report is made of four chapters. Chapter 1 presents the methodology for estimating travel using a new survey-based approach. Chapter 2 shows survey results for 2022. Chapter 3 presents official figures of travellers entering and exiting Rwanda, which are used as inputs for estimating total travel expenditure (debit and credit) in Chapter 4. These figures are collected by the Directorate General of Immigration and Emigration (DGIE). Chapter 4 presents grossed up results of total travel expenditure (credits and debits) disaggregated by modes of travel, travel purposes and country groupings.

## KEY FINDINGS

Total credits are spending of non-residents visitors to Rwanda and total debit are spending of Rwandan residents while abroad. Under the new survey-based approach to measuring travel services introduced in this report, total travels credit and debit are estimated using inputs from survey data multiplied by the number of Rwandan resident travellers abroad and non-resident visitors to Rwanda, provided by Directorate General of Immigration and Emigration (DGIE). The following are keys results:

- The total travel credit equalled 399.6 million USD in 2022.
- The total travel debit amounted to 234.1 million USD in 2022.
- As result, the travel service surplus reached 165.5 million USD in 2022.
- Figure 1 highlights the summary results.

**Figure 1. TES grossed up results for 2022 (in million USD)**



Source: TES 2022- NISR

## **CHAPTER 1. METHODOLOGY FOR ESTIMATING TRAVEL EXPENDITURE**

### **1.1. Introduction**

In the framework of improving sources and methods for the compilation of the Balance of Payment (BOP) and the National Accounts (NA), the National Institute of Statistics of Rwanda (NISR) in partnership with the Directorate General of Immigration and Emigration (DGIE), the National Bank of Rwanda (NBR) and the Rwanda Development Board (RDB) conduct the bi-annual Travel Expenditure Survey (TES).

This survey is conducted twice a year from October to January and from May to July. The survey captures expenditures of non-residents visiting Rwanda (inbound) and expenditures of Rwandan residents abroad (outbound). This survey is conducted following concepts and recommendations of Manual on Statistics of International Trade in Services 2010 (MSITS 2010) and Balance of Payments and International Investment Position Manual 6<sup>th</sup> Edition (BPM6). The methodology is replacing the settlements data collected in the International Transactions Reporting System (ITRS) formerly known as foreign exchange record systems.

Travel is a key component of trade in services within the BOP and the NA. The aim of this chapter is to present the methodology used to collect data of the travel expenditure survey in Rwanda.

### **1.2. Methodology for TES**

Travel covers expenditures on goods and services acquired by travellers during their visits to an economy other than their country of residence. Expenses of non-resident visitors to Rwanda are recorded as exports of travel services, while expenditures abroad by Rwandan resident travellers are recorded as imports of travel services.

The survey-based approach for measuring travel expenditures is based on the following standard model depicted in Figure 2.

The approach requires two main sources of information:

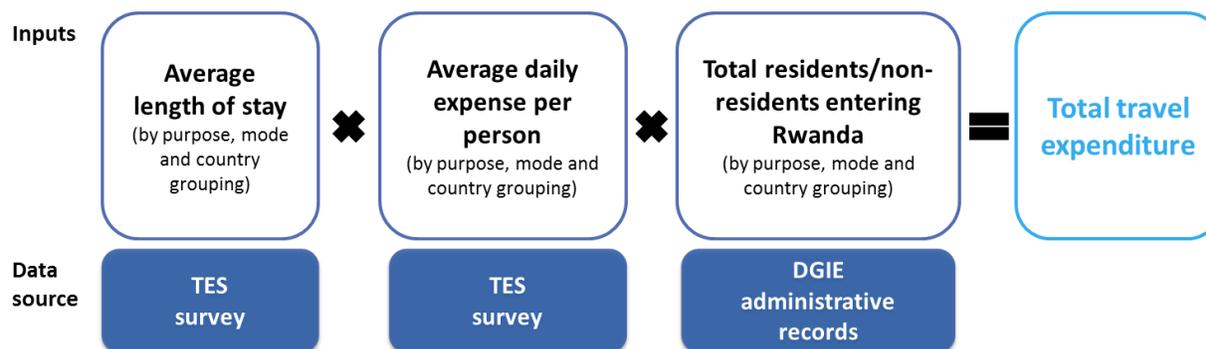
- (1) The TES to produce the average daily expenditure per person and the average length of stay for both non-resident and resident travellers.
- (2) DGIE records of total travellers for land and air borders, by nationality.

The counts of total arrivals (entry data) to Rwanda are used as a grossing factor to estimate total travel expenditure. These data are provided with a breakdown by country grouping based on nationality and purpose of travel, while for estimating travel, the residence and visited regions are required to apply proportions of residence and visited regions for each purpose of travel from the survey.

The following additional treatment are also made:

- i. Combined Business, Conference and Official Mission purposes into a single group under the name of Business,
- ii. Combined Holiday and Relaxation categories into a single Holiday category.

**Figure 2. Estimation of travel expenditure**



Input data is broken down by purpose of visit, mode of travel and country grouping.

- **Purpose of visit** is the main reason that motivated the travel, for example, whether business or holiday though the traveller may have also visited friends or relatives, or vice versa.
- **Mode of travel** refers to border point type (airport or land border).
- **Country grouping** refers to country of residence for the non-resident traveller and main country visited for the resident traveller. There are five regions groupings, namely Asia, East African Community/EAC, Europe, Rest of Africa, North America and Rest of the world. In DGIE data, country of residence and country visited by resident travellers were not available. Therefore, to estimate travel expenditures by geographical breakdown, we used the proportions of the TES country groupings. *The total travel expenditure is obtained by multiplying the average length of stay with average daily expenditure per person broken down by purpose, mode and country grouping with DGIE data.* Appendix provides additional definitions for key terms and concepts used in this report.

### 1.3. Sample selection

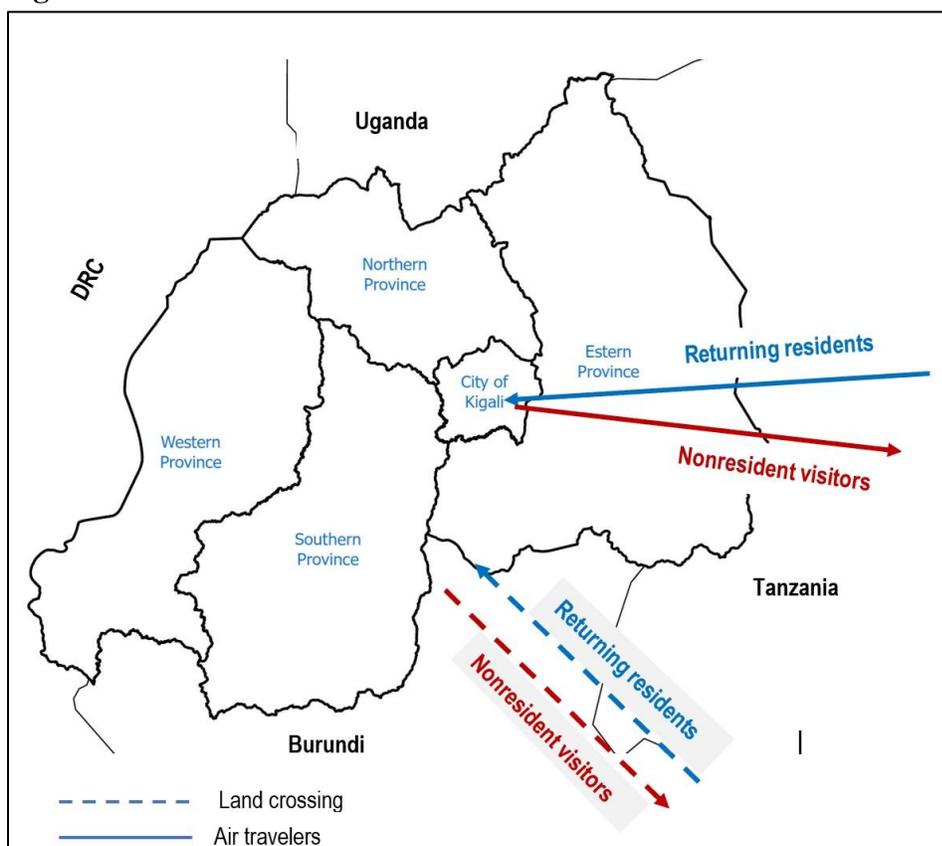
The methodology for selecting travellers followed a two-stage process. In the first stage, the selection of borders was purposive, chosen based on DGIE border flows data<sup>1</sup>. In total, 11 borders were selected namely Kigali International Airport, Rusumo, Kagitumba, Gatuna, Cyanika, Rusizi I, Rusizi II, Akanyaru Haut, Nemba, Corniche and Poids Lourds. In the second stage, travellers at each border were screened based on their residence.

### 1.4. Sampling procedure

The screening of passengers was done to ensure only targeted travellers were interviewed: non-resident visitors to Rwanda exiting the country (travel credit) and Rwandan residents who travelled abroad entering Rwanda (travel debit).

Data collection takes place at the end of the trip, when travellers have a complete picture of what has been spent on goods and services acquired on their visit. For *non-residents*, data collection takes place at the exit point when they are leaving Rwanda. For *residents*, this is at the entry point when residents are returning from their trip abroad.

**Figure 3. Flows and when data are collected**



Source: NISR, 2022

<sup>1</sup> The selection of borders was done based on DGIE data by selecting those borders with high volume of travellers.

TES enumerators conducted as many interviews as possible to eligible travellers. The interviews were administered face-to-face on a voluntary basis using CAPI.

## 1.5. Number of respondents

Table 2 summarises the total number of respondents of the survey<sup>2</sup>, broken down by mode of travel (air or land) and whether a resident (R) or non-resident (NR) survey was conducted. In addition, the table provides information on months of data collection and border posts selected for data collection.

**Table 1. TES 2022 respondents by mode of travel and residence**

		Mode of travel	Nov 2022-Jan 2023
<ul style="list-style-type: none"> <li>- Kigali International Airport (KIA)</li> <li>- With Burundi: <ul style="list-style-type: none"> <li>▪ Akanyaru Haut and Nemba</li> </ul> </li> <li>- With DRC: <ul style="list-style-type: none"> <li>▪ Poids Lourds<sup>3</sup>, Corniche<sup>4</sup>, Rusizi I and Rusizi II</li> </ul> </li> </ul>	<b>Residents</b>	Air	3,178
		Land	11,190
		<b>Total</b>	<b>14,368</b>
<ul style="list-style-type: none"> <li>- With Tanzania: <ul style="list-style-type: none"> <li>▪ Rusumo</li> </ul> </li> <li>- With Uganda: <ul style="list-style-type: none"> <li>▪ Cyanika, Gatuna and Kagitumba</li> </ul> </li> </ul>	<b>Non-Residents</b>	Air	2,262
		Land	10,579
		<b>Total</b>	<b>12,841</b>

- *Source: TES 2022- NISR*

## 1.6. Survey instruments

For all surveys, four separate survey instruments were used to collect information: non-resident visitors via air, non-resident visitors via land, and returning Rwandan residents via air and land to accommodate questions specific to air and land transport.

The resulting survey forms cover the following groups of travellers:

- 1) **Non-resident visitors** – via Kigali International Airport (KIA)
- 2) **Non-resident visitors** – via land border crossings
- 3) **Rwandan Residents** – via KIA
- 4) **Rwandan Residents** – via land border crossings

The basic structure of all survey instruments is the same. All travel expenditure survey forms collected specific information from travellers following the MSITS 2010 international recommendations, namely their nationality, country of residence, main purpose of travel, length of stay, and patterns of expenditure including number of persons included in the expenditure reported and type (accommodation, food and beverage, sightseeing, etc.).

<sup>2</sup> Sample sizes shown are sample sizes used for analysis, following data cleaning and exclusions of questionnaires not complying with the objectives of the survey. More information on this issue is detailed on Appendix B.

<sup>3</sup> Poids Lourds is commonly referred to as ‘Petite Barrière’ although volume of travellers in this border is greater than at La Corniche.

<sup>4</sup> La Corniche border post is commonly referred to as ‘Grande Barrière’

In addition to these questions, the questionnaires administered to returning residents collected data on the country visited where they spent most time in. Similarly, the questionnaires administered to non-residents visitors to Rwanda collected information about the country of residence of visitors and information for tourism statistics purposes about activities done in Rwanda, places of stay during their visit to Rwanda and basic demographic data.

## CHAPTER 2. RESULTS FROM THE TRAVEL EXPENDITURE SURVEY

The objective of this Chapter is to present the main results for the year. The results under consideration are mainly *average daily expenditure per person* and *average length of stay*, both inputs used in the methodology for estimating travel credit and debit (See Chapter 1).

### 2.1. Export of travel services

This section highlights the average length of stay and average daily expenditure per person of non-resident visitors to Rwanda.

#### 2.1.1. Average length of stay

##### - *Air travellers*

Table 2 displays the average length of stay of non-resident travellers to Rwanda by air broken down by country groupings and travel purposes.

**Table 2. Average length of stay of non-resident visitors to Rwanda, Air**

Country grouping	Business	Education	Health	Holiday	VFR	Transit
Asia	17	59	7	15	18	6
EAC	4	43	5	9	8	19
Europe	9	59	9	13	19	58
North America	7	35	11	9	15	32
Rest of Africa	9	79	4	13	12	51
Rest of the World	5	7	4	16	9	13
<b>Overall average</b>	<b>8</b>	<b>47</b>	<b>7</b>	<b>13</b>	<b>13</b>	<b>30</b>

Source: TES 2022- NISR

##### - *Land travellers*

Table 3 displays the average length of stay of non-resident travellers to Rwanda by land broken down by country groupings and travel purposes.

**Table 3. Average length of stay of non-resident visitors to Rwanda, Land**

Country grouping	Business	Education	Health	Holiday	VFR*	Transit
Asia	2	42	5	11	18	-
EAC	5	71	18	3	7	1
Europe	36	180	5	5	7	1
North America	33	19	26	4	5	1
Rest of Africa	4	518	26	4	17	1
Rest of the World	15	143	26	6	10	1
<b>Overall average</b>	<b>6</b>	<b>94</b>	<b>17</b>	<b>1</b>	<b>8</b>	<b>1</b>

Source: TES 2022- NISR

\* VFR stands for Visiting Friends and Relatives

### 2.1.2. Average daily expenditure per person

#### - Air travellers

In Table 4, the daily average expenditure of non-resident travellers abroad by air broken down by country groupings and travel purposes are presented.

**Table 4. Average daily expenditure per person of non-resident visitors, by air (value in USD)**

Country grouping	Business	Education	Health	Holiday	VFR	Transit
Asia	141	41	6	209	89	92
DRC	68	26	96	246	54	49
EAC	170	41	41	202	40	45
Europe	225	14	14	302	41	143
North America	84	183	205	141	37	42
Rest of Africa	165	143	116	230	88	117
Rest of the World	142	75	80	222	58	81
<b>Overall average</b>	<b>141</b>	<b>41</b>	<b>6</b>	<b>209</b>	<b>89</b>	<b>92</b>

Source: TES 2022- NISR

#### - Land travellers

Table 5 shows daily average expenditure of non-resident travellers abroad by land broken down by country groupings and travel purposes.

**Table 5. Average daily expenditure per person of non-resident visitors, by land (value in USD)**

Country grouping	Business	Education	Health	Holiday	VFR	Transit
Asia	79	37	20	89	45	
EAC	14	26	18	30	7	19
Europe	61	76	20	192	71	54
North America	60	55	59	80	17	58
Rest of Africa	35	12	19	113	56	5
Rest of the world	21	41	19	95	11	30
<b>Overall average</b>	<b>45</b>	<b>41</b>	<b>26</b>	<b>100</b>	<b>34</b>	<b>33</b>

Source: TES 2022- NISR

## 2.2. Import of travel services

This section highlights the average length of stay and average daily expenditure per person of Rwandan residents who have travelled abroad.

### 2.2.1. Average length of stay

#### - *Air travellers*

Table 6 displays the average length of stay of resident travellers abroad by air broken down by country groupings and travel purposes.

**Table 6. Average length of stay of residents on their trip abroad, by air**

<b>Country grouping</b>	<b>Business</b>	<b>Education</b>	<b>Health</b>	<b>Holiday</b>	<b>VFR</b>
Asia	32	54	288	11	31
EAC	15	11	114	12	17
Europe	22	87	291	18	26
North America	32	14	361	16	29
Rest of Africa	36	22	294	12	21
Rest of the world	91	13	401	4	22
<b>Overall average</b>	<b>38</b>	<b>33</b>	<b>291</b>	<b>12</b>	<b>24</b>

Source: TES 2022- NISR

#### - *Land travellers*

Table 7 displays the average length of stay of resident travellers abroad by land broken down by country groupings and travel purposes.

**Table 7. Average length of stay of residents on their trip abroad, by land**

<b>Country Grouping</b>	<b>Business</b>	<b>Education</b>	<b>Health</b>	<b>Holiday</b>	<b>VFR</b>
EAC	19	5	20	7	11
Rest of Africa	3	15	7	4	6
<b>Overall average</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>4</b>	<b>7</b>

Source: TES 2022- NISR

### 2.2.2. Average daily expenditure per person

#### - *Air travellers*

Table 8 displays daily average expenditure of resident travellers abroad by air broken down by country groupings and travel purposes.

**Table 8. Average daily expenditure per person of residents on their trip abroad, by air (value in USD)**

<b>Country grouping</b>	<b>Business</b>	<b>Education</b>	<b>Health</b>	<b>Holiday</b>	<b>VFR</b>
Asia	22	57	29	10	40
EAC	72	72	17	120	24
Europe	202	97	60	148	163
North America	225	113	302	138	91
Rest of Africa	26	32	218	17	47
Rest of the world	43	3	122	0	27
<b>Overall average</b>	<b>98</b>	<b>62</b>	<b>125</b>	<b>72</b>	<b>65</b>

Source: TES 2022- NISR

- *Land travellers*

Table 9 displays daily average expenditure of resident travellers abroad by air disaggregated by country groupings and travel purposes.

**Table 9. Average daily expenditure per person of residents on their trip abroad, by land (value in USD)**

<b>Country grouping</b>	<b>Business</b>	<b>Education</b>	<b>Health</b>	<b>Holiday</b>	<b>VFR</b>
EAC	9	9	13	7	9
Rest of Africa	8	7	12	12	9
<b>Overall average</b>	<b>9</b>	<b>8</b>	<b>13</b>	<b>9</b>	<b>9</b>

Source: TES 2022- NISR

## CHAPTER 3. ARRIVAL AND DEPARTURE MIGRATION FLOWS

### 3.1. Introduction

The Directorate General of Immigration and Emigration (DGIE), under its mandate of managing borders, records all movements of travellers entering or leaving Rwanda. These data are processed, analysed and used for grossing up survey results.

### 3.2. Data used for estimating travel debit and credit

This sub-section presents the derived data and tables to be used for estimating total travel credits and debits in Chapter 4.

#### 3.2.1. Non-resident visitors to Rwanda

The total number of travellers to Rwanda is based on total arrivals and is shown in Table 11 (Air) and Table 12 (Land). These tables present data which are disaggregated by purpose of travel and residents' country grouping.

##### 3.2.1.1. Air travellers

The total number of non-resident travellers to Rwanda by air during the year 2022 is 221,051 (Table 10).

**Table 10. Non-residents visitors to Rwanda by Air<sup>5</sup>**

Country grouping	Business	Education	Health	Holiday	VFR	Transit	Total
Asia	7,626	55	15	2,108	4,426	1,699	<b>15,929</b>
EAC	17,830	817	180	3,907	27,549	5,132	<b>55,415</b>
Europe	14,122	349	58	13,193	18,566	5,191	<b>51,479</b>
North America	5,650	212	56	13,702	11,396	1,606	<b>32,622</b>
Rest of Africa	26,552	2,733	76	9,724	9,542	8,678	<b>57,305</b>
Rest of the world	1,536	16	-	1,659	4,671	419	<b>8,301</b>
<b>Total</b>	<b>73,316</b>	<b>4,182</b>	<b>385</b>	<b>44,293</b>	<b>76,150</b>	<b>22,725</b>	<b>221,051</b>

Source: TES 2022- NISR

- Land travellers

Table 11 illustrates the total number of non-resident travellers to Rwanda by land. In 2022, the total number of arrivals of non-resident visitors by land is 884,592.

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<sup>5</sup> Air transits capture travellers in transit who have left the airport. Therefore, we assume all travellers on transit spend some money in Rwanda (e.g. taxi, food, souvenirs, etc.). Note that a different treatment is given to land transits.

**Table 11. Non-residents visitors to Rwanda by Land<sup>6</sup>**

Country grouping	Business	Education	Health	Holiday	VFR	Transit	Total
Asia	2,316	8	18	309	2,057	1,357	<b>6,065</b>
EAC	489,382	5,787	2,827	9,639	260,160	86,414	<b>854,209</b>
Europe	2,908	86	11	559	4,744	2,572	<b>10,880</b>
North America	929	9	7	204	2,573	1,125	<b>4,847</b>
Rest of Africa	2,535	114	19	198	1,956	1,553	<b>6,375</b>
Rest of the world	639	-	8	128	885	556	<b>2,216</b>
<b>Total</b>	<b>498,709</b>	<b>6,004</b>	<b>2,890</b>	<b>11,037</b>	<b>272,375</b>	<b>93,577</b>	<b>884,592</b>

Source: TES 2022- NISR

### 3.2.2. Rwandan Residents

#### - Air travellers

Table 12 shows the total number of returning Rwandan residents from abroad via air. During the year 2022, the total number of Rwandan residents travelling by air is 93,490.

**Table 12: Rwandan Resident travellers by Air**

Country grouping	Business	Education	Health	Holiday	VRF	Total
Asia	895	176	-	411	3,581	<b>5,064</b>
EAC	22,353	6,159	905	4,713	37,528	<b>71,658</b>
Europe	590	185	3	508	5,626	<b>6,912</b>
North America	158	51	2	154	3,204	<b>3,569</b>
Rest of Africa	344	120	4	225	5,239	<b>5,932</b>
Rest of the world	20	7	-	19	308	<b>355</b>
<b>Total</b>	<b>24,360</b>	<b>6,699</b>	<b>914</b>	<b>6,031</b>	<b>55,486</b>	<b>93,490</b>

Source: TES 2022- NISR

#### - Land Travellers

Table 13 displays the total number of resident travellers returning from abroad by land. From January to December 2022, the total number of returning Rwandan residents by land was 872,242.

**Table 13: Rwandan Resident travellers by land**

Country grouping	Business	Education	Health	Holiday	Visit	Total
EAC	598,177	6,253	968	7,192	257,802	870,392
Rest of Africa	1,328	18	3	69	432	1,850
<b>Total</b>	<b>599,505</b>	<b>6,271</b>	<b>971</b>	<b>7,261</b>	<b>258,233</b>	<b>872,242</b>

Source: TES 2022- NISR

<sup>6</sup> For estimating total land credit in Chapter 4, land transits are considered in full from all country groupings except Rest of Africa, which mainly groups Congolese who transit between borders without spending any money in Rwanda. Therefore, we consider that only 20 per cent of Congolese transiting spend money in Rwanda.

## CHAPTER 4. TRAVEL CREDITS AND DEBITS

This Chapter presents the estimates of total travel expenditure for the period that runs from January to December 2022.

### 4.1. Travel credit, debit and balance

Table 14 presents estimates of total travel expenditure for the year 2022.

**Table 14. Total Credit, Total Debit and Balance (value in million USD)**

	<b>Business</b>	<b>Education</b>	<b>Health</b>	<b>Holiday</b>	<b>VFR</b>	<b>Transit</b>	<b>Total</b>
Credits	115.5	53.9	1.1	116.0	65.7	47.4	<b>399.6</b>
Debits	131.5	7.2	2.5	8.7	84.2	-	<b>234.1</b>
<b>Balance</b>	<b>-16.0</b>	<b>46.6</b>	<b>-1.4</b>	<b>107.3</b>	<b>-18.5</b>	<b>47.4</b>	<b>165.5</b>

*Source: TES 2022- NISR*

### 4.2. Credit

Tables 15 and 16 show air and land credit or the total amount spent by non-resident travellers to Rwanda for the year 2022.

#### - *Credit by air*

From January to December 2022, the total credit amount is 323,058 thousand USD.

**Table 15. Total Credit by air in 2022 (value in thousand USD)**

<b>Country grouping</b>	<b>Business</b>	<b>Education</b>	<b>Health</b>	<b>Holiday</b>	<b>VFR</b>	<b>Transit</b>	<b>Total</b>
Asia	18,633	131	1	6,513	6,991	938	<b>33,206</b>
EAC	4,345	916	79	8,599	11,523	4,849	<b>30,311</b>
Europe	20,450	829	22	35,964	13,903	13,655	<b>84,822</b>
North America	8,394	105	9	39,109	6,819	7,367	<b>61,803</b>
Rest of Africa	20,974	39,293	57	17,769	4,063	18,669	<b>100,826</b>
Rest of the world	1,384	16	-	6,199	3,856	637	<b>12,091</b>
<b>Total</b>	<b>74,179</b>	<b>41,290</b>	<b>168</b>	<b>114,152</b>	<b>47,155</b>	<b>46,114</b>	<b>323,058</b>

*Source: TES 2022- NISR*

#### - *Credit by land*

In the period of January to December 2022, the total credit amount was estimated at 76,521 thousand USD. More details are presented in Table 16.

**Table 16. Total credit by land in 2022 (value in million USD)**

Country grouping	Business	Education	Health	Holiday	Visit	Transit	Total
Asia	365	12	2	299	1,666	-	<b>2,344</b>
EAC	32,222	10,628	919	774	12,398	1,054	<b>57,995</b>
Europe	6,386	1,176	1	562	2,264	126	<b>10,516</b>
North America	1,812	9	11	60	233	65	<b>2,189</b>
Rest of Africa	373	735	9	89	1,887	5	<b>3,098</b>
Rest of the world	192	-	4	69	93	21	<b>378</b>
<b>Total</b>	<b>41,349</b>	<b>12,561</b>	<b>946</b>	<b>1,853</b>	<b>18,540</b>	<b>1,271</b>	<b>76,521</b>

Source: TES 2022- NISR

### 4.3. Debit

Tables 17 and 18 illustrate the total amount spent abroad by returned Rwandan resident for both air and land travel modes.

#### - Debit by air

From January to December 2022, the total amount of debit is estimated at 104,387 thousand USD.

**Table 17. Total debit by air in 2022 (value in thousand USD)**

Country grouping	Business	Education	Health	Holiday	VFR	Total
Asia	648	536	-	43	4,481	<b>5,708</b>
EAC	24,141	4,680	1,735	6,494	15,988	<b>53,038</b>
Europe	2,574	1,548	52	1,378	23,535	<b>29,088</b>
North America	1,125	81	227	346	8,556	<b>10,335</b>
Rest of Africa	330	83	279	47	5,220	<b>5,958</b>
Rest of the world	77	0	-	-	182	<b>260</b>
<b>Total</b>	<b>28,895</b>	<b>6,928</b>	<b>2,293</b>	<b>8,308</b>	<b>57,962</b>	<b>104,387</b>

Source: TES 2022- NISR

#### - Debit by land

During the period of January to December 2022, the total amount of debit is estimated at 129,705 thousand USD.

**Table 18. Total debit by land in 2022 (value in thousand USD)**

Country grouping	Business	Education	Health	Holiday	VFR	Total
EAC	102,587	281	253	350	26,173	129,645
Rest of Africa	32	2	0	3	23	61
<b>Total</b>	<b>102,619</b>	<b>283</b>	<b>253</b>	<b>353</b>	<b>26,197</b>	<b>129,705</b>

Source: TES 2022- NISR

## APPENDIXES

### APPENDIX A. Key concepts and definitions in TES

- 1. Number of visits and flow:** The **number of visits** relate to the number of **completed visits** (i.e., the data collected relate to the number of visits, not the number of visitors), counted upon arrival as Rwandan residents return from their stay abroad and upon exit as non-residents leave Rwanda. This is to ensure interviews take place at the end of the traveller's visit when information on expenditure and duration is available. Consequently, the travel expenditure survey does not include Rwandan residents departing from Rwanda neither non-residents visitors arriving in Rwanda.
- 2. Length of stay:** In the case of Rwandan residents, length of stay covers the time spent outside Rwanda; this is the number of nights Rwandan residents spent abroad. For non-residents, length of stay covers the time spent in Rwanda; it refers to the number of nights spent within Rwanda.
- 3. Non-residents visitors:** A **non-resident visitor** is a person who is a permanent resident in another country other than Rwanda. Includes foreigners who live abroad and Rwandan passport holders (or nationals) who have been living and/or working abroad (diaspora).<sup>7</sup> Country of residence is therefore **used to derive country grouping in the non-resident samples** (for more information see bullet point 9).
- 4. Rwandan residents:** Rwandan resident is a person who is a permanent resident<sup>8</sup> of Rwanda. Includes Rwandan citizens and foreign passport holders who live in Rwanda. Rwandan nationals abroad travelling for special purposes such as education, health, diplomatic mission, military operations/ missions are considered Rwandan residents.
- 5. Country visited:** A country visited by a traveller that is different from his resident country. When a resident of Rwanda has visited more than one country, the entire visit, expenditure and stay is allocated to the country **where the resident spent most time of his/her travel**. Although information is collected at the country level, estimates in this report are shown aggregated at the regional level. **Country visited is used to derive country grouping categories in the resident samples** (for more information see bullet point 9).
- 6. Purpose of travel:** Purpose of travel is the main reason why a person is travelling. The main purposes of travel are Business (including mission and conference), Holiday, Visiting friends and relatives, Education, Health. Transits are also considered as a purpose of travel exclusively for non-residents transiting through Rwanda. **Miscellaneous/other purposes** such as attending sporting or religious events are allocated to one of the five main categories mentioned above.
- 7. Daily average expenditure per person:** It is defined as the sum of all expenses divided by

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<sup>7</sup> With the exception of students and patients who are considered as residing in their home country.

<sup>8</sup> To be considered as permanent resident of a country, any of the following conditions should be met: (1) the person has lived in a country for more than 12 months; or intends to stay in a country for more than 12 months, even if the person has not lived there for that full length; or intends to have permanent home in a country.

number of nights and number of travellers included in the calculation of the expenses. This is calculated for a specific country grouping and with a specific purpose of travel. Expenditure figures reported on foreign currencies are converted to dollars **using the average foreign exchange rate** of the data collection period. Data in this report is shown in U.S. dollars.

a. **Rwandan resident’s expenditure data:** For Rwandan residents, the survey collected **travel expenditure** of Rwandan residents travelling abroad for six broad categories: accommodation; food and beverages; entertainment; sightseeing excursions, souvenirs and gifts; transportation within the countries travelled to; and other expenses (excluding international transportation costs for air travellers). These include amounts paid for the trip by other Rwandan residents (such as an employer) and any amount spent for the trip prior to the departure, excluding the cost of international flights.

b. **Non-resident expenditure data:** For non-resident visitors, the survey collected **travel expenditure** of non-residents visitors in Rwanda for six broad categories: accommodation; food and beverages; entertainment; sightseeing excursions, souvenirs and gifts; transportation within the countries travelled to; and other expenses (excluding international transportation costs for air travellers). These include amounts paid for the trip by other non-residents (such as an employer), excluding the cost of international flights. In addition, travel expenditure paid before arriving (e.g. such as part of a package or independently arranged) is also collected and combined with additional the expenditures made while being in Rwanda to have the total expenditure.

8. **Average length of stay:** It is defined as the average number of nights spent by a traveller from a specific country grouping and with a specific purpose of travel.

9. **Country groupings (geographical areas):**

- **Asia:** All countries in Asia plus the Middle East countries and Pacific Rim countries
- **EAC<sup>9</sup>:** Rwanda, Kenya, United Republic of Tanzania, Uganda and Burundi.
- **Rest of Africa:** All non-EAC countries, including the Democratic Republic of Congo.
- **Europe:** All countries listed within the European Union (EU) plus eastern European countries such as Turkey, Russia, Ukraine, Belarus, etc.
- **North America:** Includes United States and Canada.
- **Rest of World:** Central and South America, Australia and New Zealand, and other Oceania countries and Pacific Islands.

10. **Current-dollar estimates** are valued in the prices of the period when the transactions occurred—that is, at “market value.” Also referred to as “nominal estimates” or as “current-price estimates.”

11. **Exclusions**

- a. Expenditure on goods for sale since are declared in customs and accounted in

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<sup>9</sup> South Sudan is only included in DGIE official annual figures of 2016.

- merchandise goods.
- b. Expenditure on international transportation, included in international passenger services survey.
  - c. Travellers interviewed reporting no expenses.
  - d. Travellers interviewed who report stays of more than 90 days (apart from education and health purposes) were excluded from the analysis on this report.
  - e. Day-visits (that is trips that do not involve overnight stay) are included in the survey, but were recoded as 1 night during fieldwork.
  - f. Border community travellers are not included in the survey.

## **APPENDIX B. Data cleaning procedure**

The data cleaning followed comparable approaches in each of the survey rounds. Data cleaning was done in Stata.

1. For checking duplicates, the record ID is used to check for duplicates and identified duplicates records or ID were cleaned accordingly.
2. The CAPI used in data collection contributed to response consistency.
3. Outliers were checked and cleaned accordingly. The following checks is done on:
  - Number of nights
  - International exits via land borders
  - Number of travellers
  - Expenditure per traveller per night, by type of expenditure
4. Once data entry errors were corrected, all expenditure on local transportation for air travellers was reviewed. In the case where observations clearly included cost of international transportation, these results were adjusted to a plausible amount by subtracting the cheapest cost of air fares available over the same period or adjusting the fares based on a cut-off of 2000 USD per person.
5. Interviews that selected ‘other purpose of travel’ were reviewed. Those with a purpose of travel specified were re-assigned to either of the following categories: Holiday, VFR, Business, Health, and Education. The following decision was made:
  - Business included: Assignment, digging, labour force, conference (church mission, evangelism, preach, research, training, visit church/pray), and official missions
  - VFR included: Burial, wedding
  - Holiday included: Sport, leisure, tourism & festival

### *Exclusions from analysis*

6. Cases reporting no expenses in either of the different types of expenditure categories were excluded from analysis.
7. Questionnaires without record of ‘purpose of travel’ were reviewed against hard copies. Where no data was found, it was removed as there was no purpose of travel.
8. Stays of more than 90 days (apart from education and health purposes) were also removed from analysis, as these travellers were considered to be resident of the country being visited.

### *Winsorization/outlier treatment*

9. Winsorization is a technique that replaces extreme data values with less extreme values. We use this technique to further deal with outliers in the data. The procedure we have followed is the following:
  - 9.1. By travel mode (air and land) and for each type of expenditure category (accommodation, food and beverages, entertainment, sightseeing, transportation within country, and other expenses) and by major regions, we create a new variable which transform the original variables into their log.<sup>10</sup>
  - 9.2. For each transformed variable (and by air and land separately), we trim values above 3 standard deviations on each tail of the distribution.
  - 9.3. Then for each of these variables, we estimate the value on the second standard deviation (critical value of 1.96 for a 95% confidence interval, 2.5% in each tail) and replace more extreme values with the value estimated at the threshold. We not only do this by air and land but also by the following regions of destination/residence. For land travellers we consider EAC and non-EAC. For air travellers, we consider EAC, Rest of Africa, Europe/America, and Rest of the world.

Once this is done, we take the exponential of each of the variables (to bring the data back to normal) and include the original zeros that were excluded from this technique, which are considered genuine.

As a robustness check, we repeat step 8 for the following thresholds:

- No threshold= no winsorization after trimming
- Critical value of 2.33 for a 99% confidence interval, 1% each tail
- Critical value of 1.645 for a 90% confidence interval, 5% each tail

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<sup>10</sup> The distributions of expenses were positively skewed with a couple of outliers at the top and bunching of zero expenses at the bottom. We do this to have a more normal distribution which do not takes into account the zeros at the bottom.

## **APPENDIX C. Travel disclaimer**

1. Annual figures shown in this publication are final estimates but subject to revision in light of additional passenger data obtained. DGIE estimates are revised in line with the DGIE revisions policy.
2. Planned revisions usually arise from either the receipt of revised passenger traffic data or the correction of errors to existing data identified later in the annual processing cycle. Those of significant magnitude will be highlighted and explained.
3. Revisions to published DGIE estimates can be expected in the report of the annual Travel Expenditure Survey.

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