

7__Argentina

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1 Does the percentage of the Argentine population using the Internet coincide with the share of international tourism receipts in total exports between 1995 and 2020?

1.1 Abstract

Using World Bank World Development Indicators (WDI), this study investigates the relationship between Internet usage and international tourism receipts in Argentina from 1995 to 2020. Descriptive evidence shows that Internet adoption (% of the population) increased sharply over the 25-year period, reflecting rapid technological diffusion and digital connectivity. In contrast, international tourism receipts (% of total exports) declined by roughly one-third, demonstrating a clear divergence between technological adoption and traditional service exports. These trends highlight that improvements in digital infrastructure and connectivity do not automatically drive gains in tourism-related economic activity, emphasizing the multidimensional and sector-specific nature of economic development. The findings underline the importance of targeted policy interventions to align technological progress with broader economic outcomes.

1.2 1. Question

Does the percentage of the Argentine population using the Internet coincide with the share of international tourism receipts in total exports between 1995 and 2020?

- **Proxy for digital adoption:** Individuals using the Internet (% of population)
- **Measure of tourism contribution:** International tourism receipts (% of total exports)

1.3 2. Data

- **Source:** World Bank World Development Indicators (WDI)
- **Indicators:**
 - Individuals using the Internet (% of population)
 - International tourism receipts (% of total exports)
- **Coverage:** Argentina, 1995–2020
- **Notes:** National-level data only

1.4 3. Method

1. Filtered dataset for Argentina.
2. **Selected relevant columns:** Year, Indicator Name, Value.
3. Pivoted indicators into separate columns and sorted by year.

4. Produced a line graph comparing Internet usage and tourism receipts over time.

(Analysis is descriptive; no causal inference applied.)

1.5 4. Results

- **Internet usage (% of population):** Increased dramatically from near zero in the mid-1990s to high penetration levels by 2020.
- **International tourism receipts (% of total exports):** Declined by roughly one-third over the period, showing decreasing reliance on tourism in total exports.
- **Comparison:** The two indicators moved in opposite directions, highlighting that rapid digital adoption did not coincide with increases in tourism receipts.

(Figure 1. Internet Usage vs International Tourism Receipts in Argentina, 1995–2020)

(Table 1. Pivoted dataset)

1.6 5. Interpretation

- Argentina experienced a digital revolution, with the population rapidly adopting Internet technologies over the 25-year period.
- Simultaneously, the share of tourism receipts in total exports declined, indicating that tourism's relative contribution to the economy decreased even as connectivity increased.
- The divergence suggests that digital adoption alone is insufficient to stimulate traditional service sectors like tourism, emphasizing the need for sector-specific policies and complementary investments.

1.7 6. Limitations

- Only two indicators analyzed; other factors influencing tourism or digital adoption are not captured.
- National-level data may obscure regional variation in Internet access or tourism performance.
- No causal relationships tested; results are descriptive.

1.8 7. Next Steps / Extensions

- Investigate the role of complementary infrastructure (transport, hotels, e-commerce) in linking Internet adoption to tourism.
- Incorporate subnational data to study urban vs rural trends in connectivity and tourism impacts.
- Explore econometric approaches to test causal relationships between digital adoption and service-sector growth.
- Compare Argentina's trends to other Latin American countries to identify regional patterns.

```
[1]: # Does the percentage of the Argentine population using the internet coincide
      ↪with the share of international tourism receipts in total exports between
      ↪1995 and 2020?
```

```
import pandas as pd
import matplotlib.pyplot as plt
```

```

import os

# Folders
data_raw_folder = "data_raw/"
data_clean_folder = "data_clean/"
figures_folder = "figures/"

# Load CSV
filename = "argentina_combined.csv" # Filtered dataset with only relevant rows
df = pd.read_csv(os.path.join(data_raw_folder, filename))

# Keep only needed columns
df = df[["Year", "Indicator Name", "Value"]]

# Convert Year and Value to numeric, drop invalid rows
df["Year"] = pd.to_numeric(df["Year"], errors="coerce")
df["Value"] = pd.to_numeric(df["Value"], errors="coerce")
df = df.dropna(subset=["Year", "Value"])

# Pivot indicators into separate columns
df_pivot = df.pivot(index="Year", columns="Indicator Name", values="Value").
    ↪reset_index()
df_pivot = df_pivot.sort_values("Year")

print("Pivoted Argentina dataset:")
display(df_pivot)

# Interpolate missing values for smooth plotting (optional)
df_plot = df_pivot.interpolate(method='linear')

# Plot the two indicators
plt.figure(figsize=(10,6))
plt.plot(df_plot["Year"], df_plot["International tourism, receipts (% of total_
    ↪exports)"],
        marker='o', linestyle='-', label="International tourism, receipts (%_
    ↪of total exports)")
plt.plot(df_plot["Year"], df_plot["Individuals using the Internet (% of_
    ↪population)"],
        marker='o', linestyle='-', label="Individuals using the Internet (% of_
    ↪population)")

plt.title("Argentina: International Tourism vs Individuals Using the Internet_
    ↪(1995-2020)")
plt.xlabel("Year")
plt.ylabel("Percentage")
plt.legend()

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plt.grid(True)
plt.tight_layout()
plt.savefig(os.path.join(figures_folder,
    ↪"argentina_international_tourism_vs_individuals_using_internet.png"))
plt.show()

# Save cleaned CSV
df_pivot.to_csv(os.path.join(data_clean_folder,
    ↪"argentina_international_tourism_vs_individuals_using_internet"),
    ↪index=False)

```

Pivoted Argentina dataset:

Indicator Name	Year	Individuals using the Internet (% of population)	\
0	1995	0.0863	
1	1996	0.1420	
2	1997	0.2800	
3	1998	0.8310	
4	1999	3.2800	
5	2000	7.0400	
6	2001	9.7800	
7	2002	10.9000	
8	2003	11.9000	
9	2004	16.0000	
10	2005	17.7000	
11	2006	20.9000	
12	2007	25.9000	
13	2008	28.1000	
14	2009	34.0000	
15	2010	45.0000	
16	2011	51.0000	
17	2012	55.8000	
18	2013	59.9000	
19	2014	64.7000	
20	2015	68.0000	
21	2016	71.0000	
22	2017	74.3000	
23	2018	77.7000	
24	2019	79.9000	
25	2020	85.5000	

Indicator Name	International tourism, receipts (% of total exports)
0	10.217807
1	10.466229
2	10.169730
3	10.727551
4	11.340372
5	10.228281

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6.690604
6.843354
7.199903
7.607116
6.463307
6.715850
6.909260
6.205906
6.005464
5.801930
6.897874
7.770352
7.657109
7.860525
7.776450
7.070639
2.641329

