

9_Australia

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1 How has the balance between Australia's merchandise imports from high-income economies and from low- and middle-income economies in East Asia & Pacific evolved between 1960 and 2020?

1.1 Abstract

Using World Bank World Development Indicators (WDI), this study examines the evolution of Australia's merchandise import composition from 1960 to 2020. At the beginning of the period, imports from high-income economies accounted for almost 100% of total merchandise imports, while imports from low- and middle-income economies in East Asia & Pacific were effectively 0%. Over six decades, these shares converged to roughly 50–50, reflecting the rise of regional industrial economies, diversification of trade partners, and structural shifts in global supply chains. Both indicators exhibited year-to-year fluctuations and temporary reversals, demonstrating that the transition was dynamic rather than smooth. These findings highlight the multidimensional and nonlinear nature of trade evolution, emphasizing that Australia's shift from high-income-dominated imports to a more balanced sourcing profile was gradual, uneven, and influenced by both long-term economic transformations and short-term shocks.

1.2 1. Question

How has the balance between Australia's merchandise imports from high-income economies and from low- and middle-income economies in East Asia & Pacific evolved between 1960 and 2020?

- **High-income imports:** Merchandise imports from high-income economies (% of total merchandise imports)
- **Low- and middle-income imports:** Merchandise imports from low- and middle-income economies in East Asia & Pacific (% of total merchandise imports)

1.3 2. Data

- **Source:** World Bank World Development Indicators (WDI)
- **Indicators:**
 - Merchandise imports from high-income economies (% of total merchandise imports)
 - Merchandise imports from low- and middle-income economies in East Asia & Pacific (% of total merchandise imports)
- **Coverage:** Australia, 1960–2020
- **Notes:** National-level data only

1.4 3. Method

1. Filtered dataset for Australia.
2. **Selected relevant columns:** Year, Indicator Name, Value.
3. Pivoted indicators into separate columns and sorted by year.
4. Produced a line graph comparing high-income imports and low- & middle-income imports over time.

(Analysis is descriptive; no causal inference applied.)

1.5 4. Results

- **High-income imports (% of total):** Declined steadily from nearly 100% in 1960 to roughly 50% by 2020.
- **Low- and middle-income imports (% of total):** Increased from near 0% in 1960 to roughly 50% by 2020.
- **Comparison:** The two indicators show a clear inverse relationship, with significant year-to-year fluctuations and temporary reversals within the overall convergence trend.

(Figure 1. Merchandise Imports from High-Income vs Low- & Middle-Income Economies in Australia, 1960–2020)

(Table 1. Pivoted dataset)

1.6 5. Interpretation

- Australia’s import profile transitioned from near-total reliance on high-income economies to a balanced structure incorporating low- and middle-income economies in East Asia & Pacific.
- The long-term convergence reflects structural economic changes, including the rise of regional manufacturing hubs, shifts in global comparative advantage, and diversification of trade partners.
- Short-term fluctuations indicate the influence of economic cycles, commodity price shocks, and trade policy adjustments.
- Overall, these trends demonstrate that international trade evolution is nonlinear and multi-dimensional, requiring careful consideration of both structural and temporal factors.

1.7 6. Limitations

- Only two indicators analyzed; other trade dimensions (e.g., services, FDI, intra-firm trade) not captured.
- National-level data may mask regional or sectoral variations in import composition.
- Descriptive analysis only; no causal mechanisms were formally tested.

1.8 7. Next Steps / Extensions

- Examine sector-specific import trends to determine which industries drove the convergence.
- Incorporate additional regions and income groups to contextualize Australia’s trade evolution globally.
- Apply econometric methods to test whether shifts in high-income vs low- & middle-income imports were systematically associated with global economic or policy shocks.

- Compare Australia's import evolution with other OECD or Asia-Pacific countries to identify broader patterns of trade diversification and globalization.

```
[1]: # How has the balance between Australia's merchandise imports from high-income
      ↪economies and from low- and middle-income economies in East Asia & Pacific
      ↪evolved between 1960 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 = "private-sector_aus_filtered.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["Merchandise imports from high-income
      ↪economies (% of total merchandise imports)"],
      marker='o', linestyle='-', label="Merchandise imports from high-income
      ↪economies (% of total merchandise imports)")
```

```

plt.plot(df_plot["Year"], df_plot["Merchandise imports from low- and
↳middle-income economies in East Asia & Pacific (% of total merchandise
↳imports)"],
        marker='o', linestyle='-', label="Merchandise imports from low- and
↳middle-income economies in East Asia & Pacific (% of total merchandise
↳imports)")

plt.title("Australia: Merchandise Imports from High-Income Economies vs
↳Merchandise Imports from Low- & Middle-Income Economies within the Region
↳(1960-2020)")
plt.xlabel("Year")
plt.ylabel("Percentage")
plt.legend()
plt.grid(True)
plt.tight_layout()
plt.savefig(os.path.join(figures_folder,
↳"australia_high_income_economies_vs_low_and_middle_economies.png"))
plt.show()

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

```

Pivoted Argentina dataset:

Indicator Name	Year	\
0	1960	
1	1961	
2	1962	
3	1963	
4	1964	
..	...	
56	2016	
57	2017	
58	2018	
59	2019	
60	2020	

Indicator Name	Merchandise imports from high-income economies (% of total ↳merchandise imports)	\
0	88.376276	
1	86.493793	
2	87.935260	
3	88.211876	
4	89.103623	
..	...	
56	55.272218	
57	54.867860	

58	54.132735
59	54.490171
60	53.307217

Indicator Name Merchandise imports from low- and middle-income economies in East Asia & Pacific (% of total merchandise imports)

0	4.213319
1	4.430316
2	4.300578
3	4.530026
4	4.213078
..	...
56	38.860881
57	39.073782
58	39.720729
59	39.643867
60	40.665376

[61 rows x 3 columns]

Australia: Merchandise Imports from High-Income Economies vs Merchandise Imports from Low- & Middle-Income Economies within the Region (1960-2020)

