

Sun, Sand, and Services: Tourism and Household Welfare in Jamaica

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Abstract

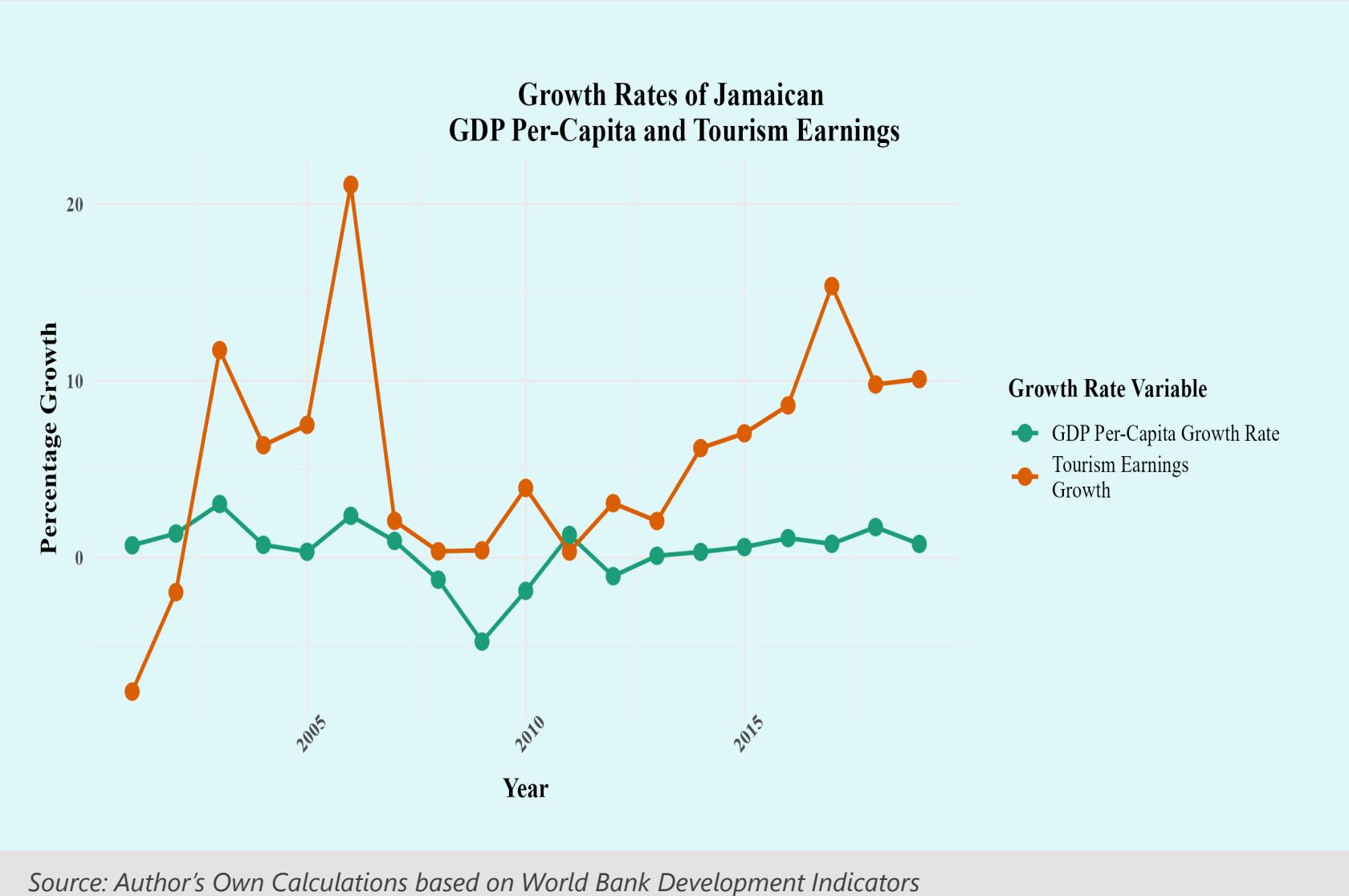
- Many developing countries have pursued specialization in services, such as tourism. However, there are questions about the scope of service sector industries to improve household welfare across the income distribution.
- I answer the question:
- “Are increases in the size of a nation’s tourism industry welfare improving for a nation’s citizens?”** in Jamaica.
- I find that the: **benefits of tourism accrue largely to urban households, working in mid-skilled occupations**, with little evidence for significant spatial spillovers.

Introduction

- Travel and Tourism is a major global tradable service sector representing 10.5% of global jobs in 2019 and 9.1% of global GDP in 2023, (UNWTO 2023)
- Jamaica welcomes over 4 million tourists a year, generating \$4.4-billion in earnings representing over 30% of GDP (World Bank 2022).



- However, growth in tourism has not translated into consistent growth in the Jamaican economy.



Data Sources

- I combine 2 unique and rich datasets spanning the period from 2001-2021.
- The tourism expenditure data comes from detailed exit surveys conducted monthly on samples of tourists departing Jamaica by the Ministry of Tourism.
- The household data comes from the Jamaica Survey of Living Conditions, a nationally representative survey conducted annually by the Statistical Institute of Jamaica (STATIN).
- In total, the tourism expenditure data is comprised of roughly 80,000 travel parties and 150,000 individuals.
- The household data represents approximately 30,000 households and 98,000 individuals.

References

- UNWTO. 2023. *145 key tourism statistics*.
- World Bank (2022) *Jamaica - Systematic Country Diagnostic: Boosting Recovery and Sustainable Economic Growth*. Washington, DC: The World Bank.
- Jamaican Ministry of Tourism. 2024. *Annual Travel Statistics 2024*.

Methodology

- I leverage temporal and spatial variation in the intensity of tourism in Jamaica, as well as variation in the share of tourism earnings from tourists coming from different sending regions.

2019 Accommodation Expenditure by Development Areas (Millions USD)



Source: Author's Own Calculations based on Jamaican Ministry of Tourism Exit Surveys

Econometric Model

- To account for the likely endogeneity of tourism in Jamaican municipalities I employ a **shift-share instrumental variable (SSIV) estimation strategy**.

- My baseline estimating equations are the following

- First Stage:**

$$Tourism_{dt} = \chi + \phi Bartik_{dt} + \iota X_{idt} + \omega D_t + \pi C_d + \eta_{idt} \quad (1)$$

- Second Stage:**

$$Y_{idt} = \alpha + \beta Tourism_{dt} + \psi X_{idt} + \rho D_t + \lambda C_d + \epsilon_{idt} \quad (2)$$

- Y_{idt} :log per-capita expenditure, or poverty status for household i , in development area d , in year t .

- $Tourism_{dt}$: total expenditure on accommodations

- $Bartik_{dt}$: shift-share instrumental variable

- is a vector of household level controls

- D_t :time dummy

- C_d :development area dummies

- ϵ_{idt} :is the error term.

- I cluster standard errors at the level of the development area.

- The SSIV is written

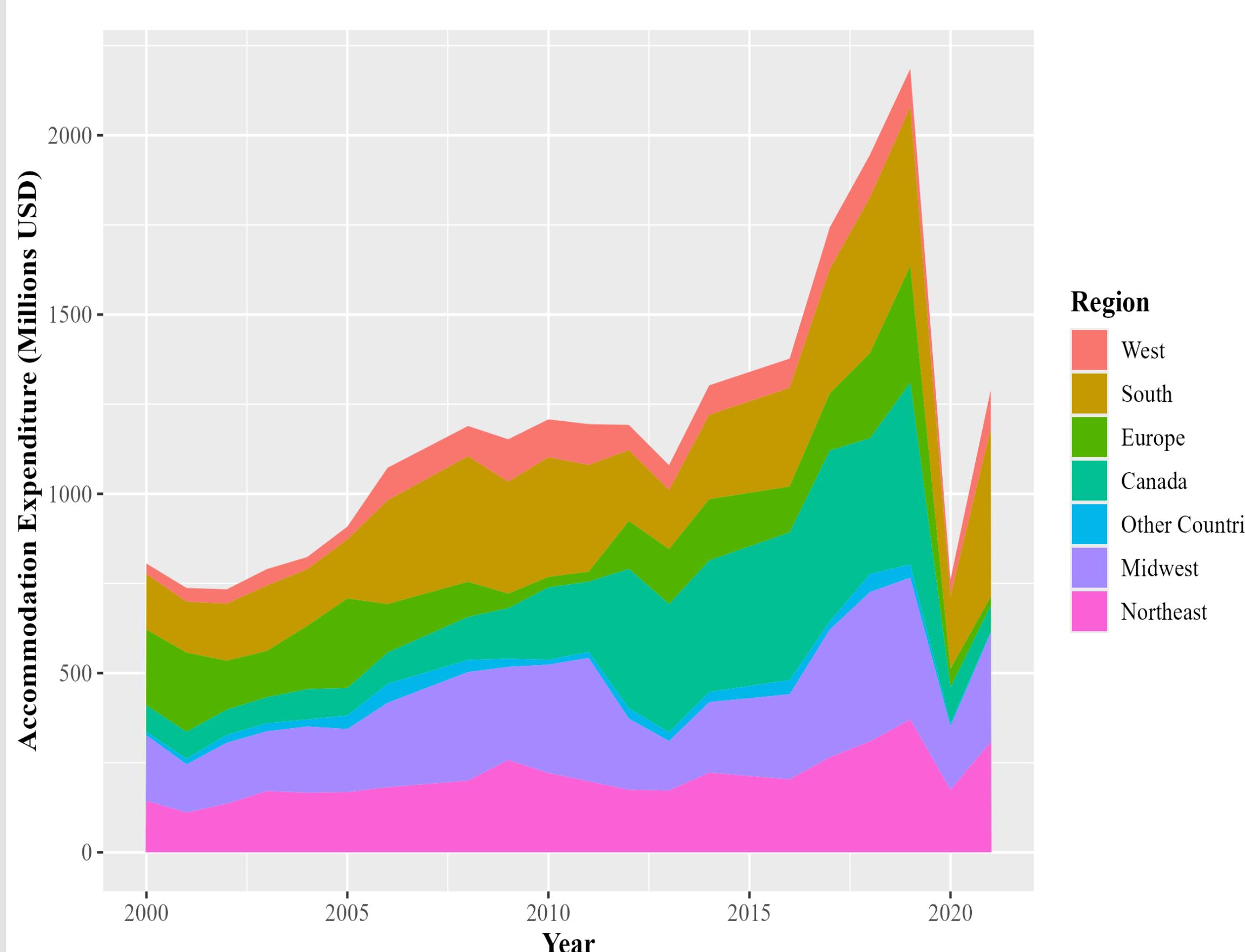
$$Bartik_{dt} = \sum_{r \in R} \frac{T_{dro}}{T_{do}} \left(\frac{T_{-drt} - T_{-dro}}{T_{-dro}} \right) \quad (3)$$

- T_{dro} : Total expenditure on accommodations in d by tourists from region r during the base period $t = 0$.

- T_{do} : Total spending on accommodations in d during the base period.

- Identifying Assumption:** Variation from year to year in spending on accommodations by tourists from different regions of origin, is uncorrelated with characteristics of Jamaican municipalities that influence household welfare.

Total Annual Accommodation Expenditures In Jamaica and Contribution of Tourists From Different Regions 2000-2021



Source: Author's Own Calculations based on Jamaican Ministry of Tourism Exit Surveys

Results

- I find that district-level tourism revenues generate **statistically and economically significant gains** in real consumption and welfare for **urban households**.
- An increase of **10 million US Dollars** in district-level annual tourist accommodation spending results in a **2.7% increase** in real per-capita expenditures for **urban households**.
- This represents an increase in real per-capita expenditures of **97 Dollars USD** for the average Jamaican household.

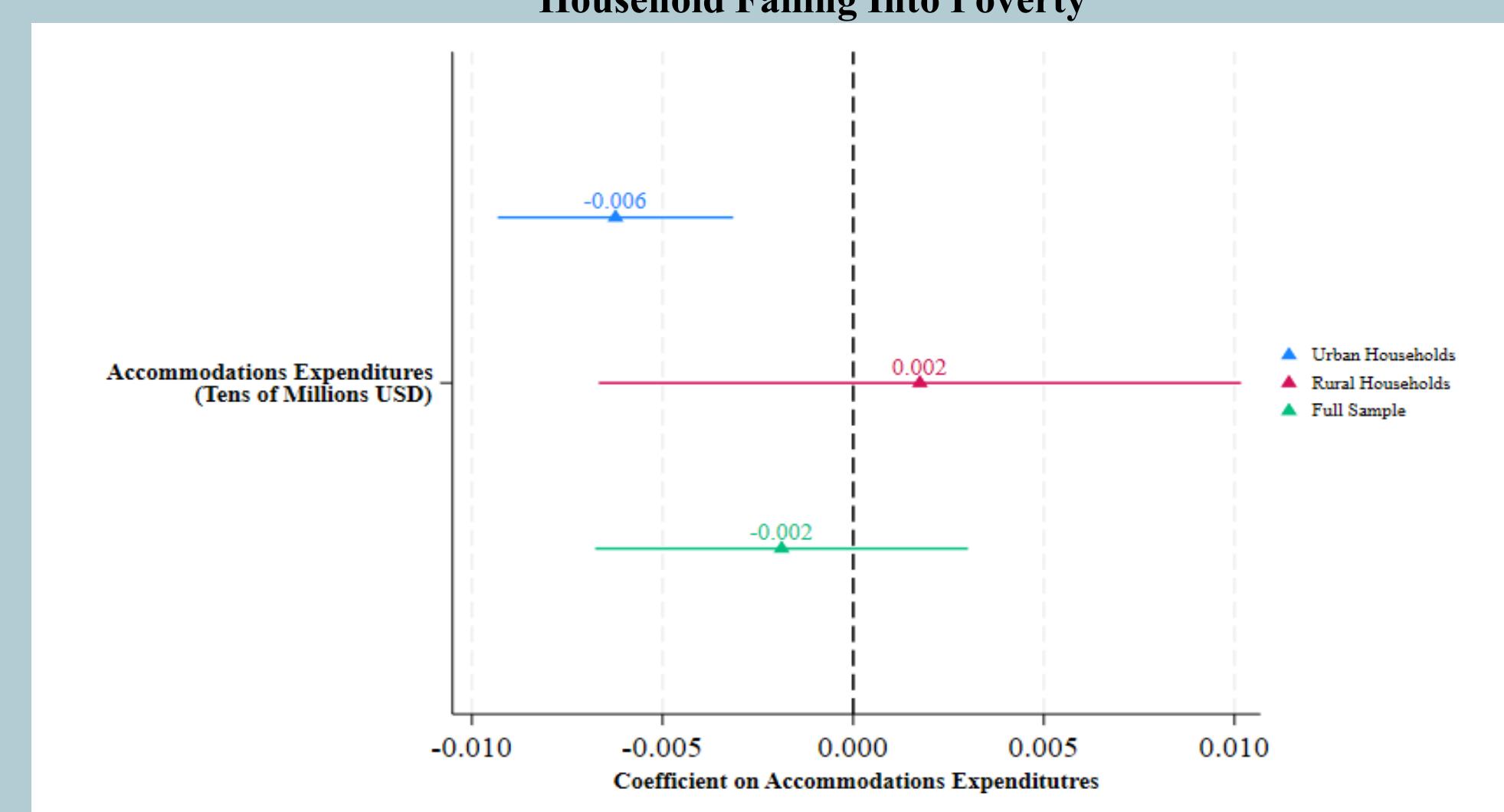
Effect Of Tourism Revenues on Log Per-Capita Expenditure

	Annual Log Per-Capita Expenditure		
	Urban Areas (1)	Rural Areas (2)	Rural and Urban (3)
Panel A: Second Stage			
Tourism Expenditure (Tens of Millions USD)	0.027*** (0.005) [.01429, .03908]	-0.003 (0.010) [-.024, .017]	0.011 (0.007) [-.003, .026]
Observations	11447	19163	30610
Number of Clusters	34	57	59
Bootstrapped Hypothesis Test	Yes	No	No
Panel B: First Stage			
Shift-Share Instrument	11.889*** (1.418) [9.109, 14.608]	11.882*** (2.544) [6.896, 16.868]	11.920*** (1.633) [8.719, 15.122]
First-Stage F-Statistic	70	22	53
Observations	11447	19163	30610

Notes: Each result above includes the coefficient estimate, followed by the standard error in parentheses, and finally the 95% confidence interval corrected with a wild bootstrap if the number of clusters is under 40. All regressions include a vector of household controls, development area dummies and year dummies.

- An increase of 10 million US Dollars in annual district accommodation revenues results in a **.6 % decline** in the likelihood of households within a district being **below the poverty line**.

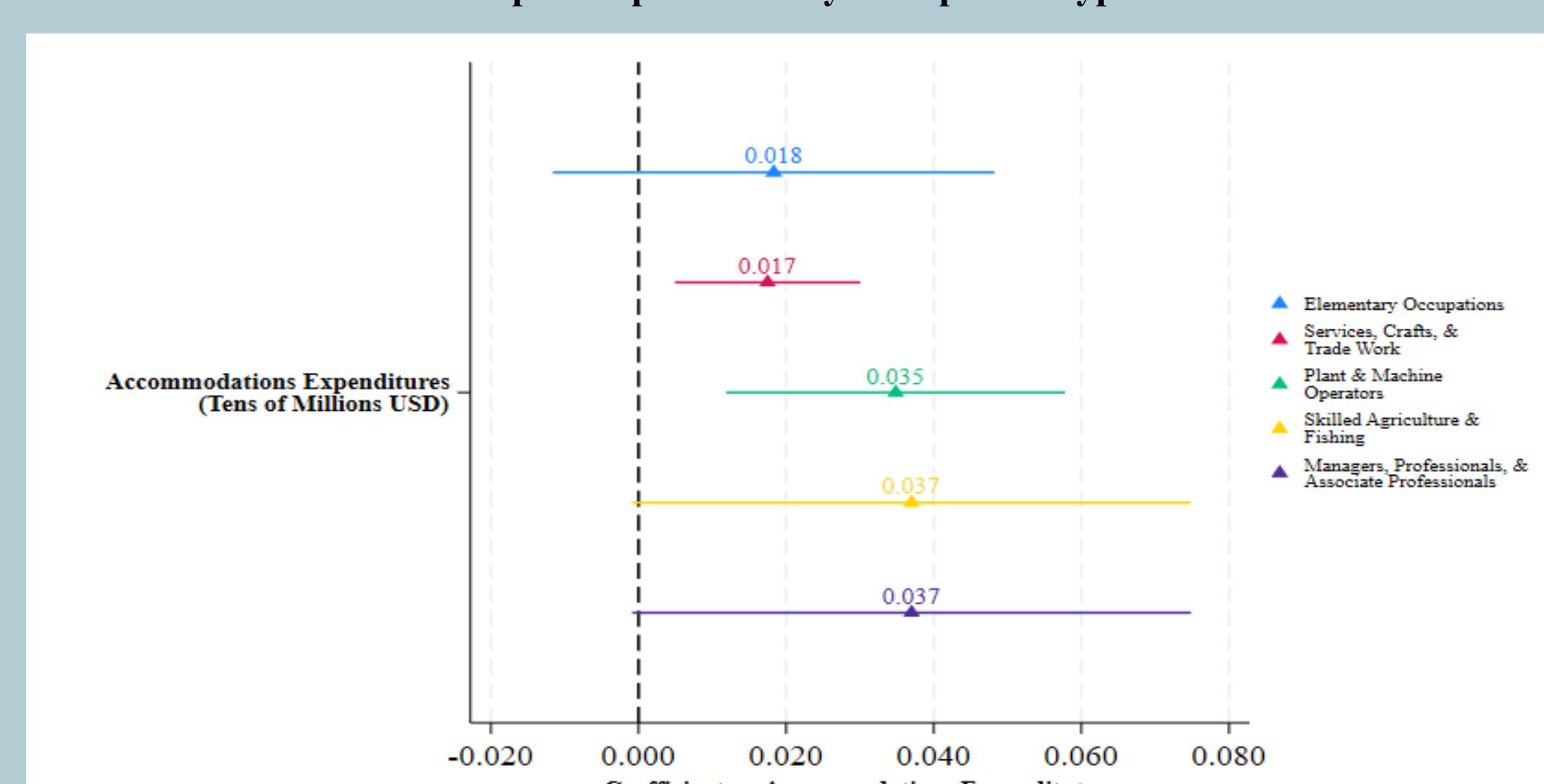
Effect of District-Level Accommodation Revenues on the Likelihood of a Household Falling Into Poverty



- The consumption benefits of tourism accrue to **urban workers** in the **mid-skilled occupations groups of “Services, Crafts, & Trade Work” and “Plant and Machine Operators.”**

- There are no observed increases in real consumption for workers in **low-skilled occupation (Elementary Occupations)** or **high-skilled occupations (Managers, Professionals, & Associate Professionals)**.

Urban Households: Effect of District Tourism Revenues on Real Per-Capita Expenditure by Occupation Type



Discussion and Conclusion

- These results demonstrate that specialization in tourism services can yield statistically and economically meaningful improvements in real consumption and welfare for some segments of a local population in a developing country.
- The decreases in the likelihood of households falling into poverty, the increases in real consumption for mid-skilled workers suggests potential for tourism services to generate broad economic development.
- The lack of significant effects on low-skilled workers or rural households, however, shows potential limitations in tourism's inclusiveness across skill-levels, and its ability to generate positive spillovers across space.
- Additional research considering the influence of the structure of competition in the sector (concentrated vs competitive), the type of tourism specialized in (residential vs enclave), and migration would be excellent extensions of this work.

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