Who participates Odisha's vegetable value chains, and on what terms?

Ben Belton[1,2], Sudha Narayanan[1], Thomas Reardon[2,1], Saweda Liverpool-Tasie[2]

[1]International Food Policy Research Institute; [2]Michigan State University, USA

European Association of Agricultural Economists Congress

August 28, 2025

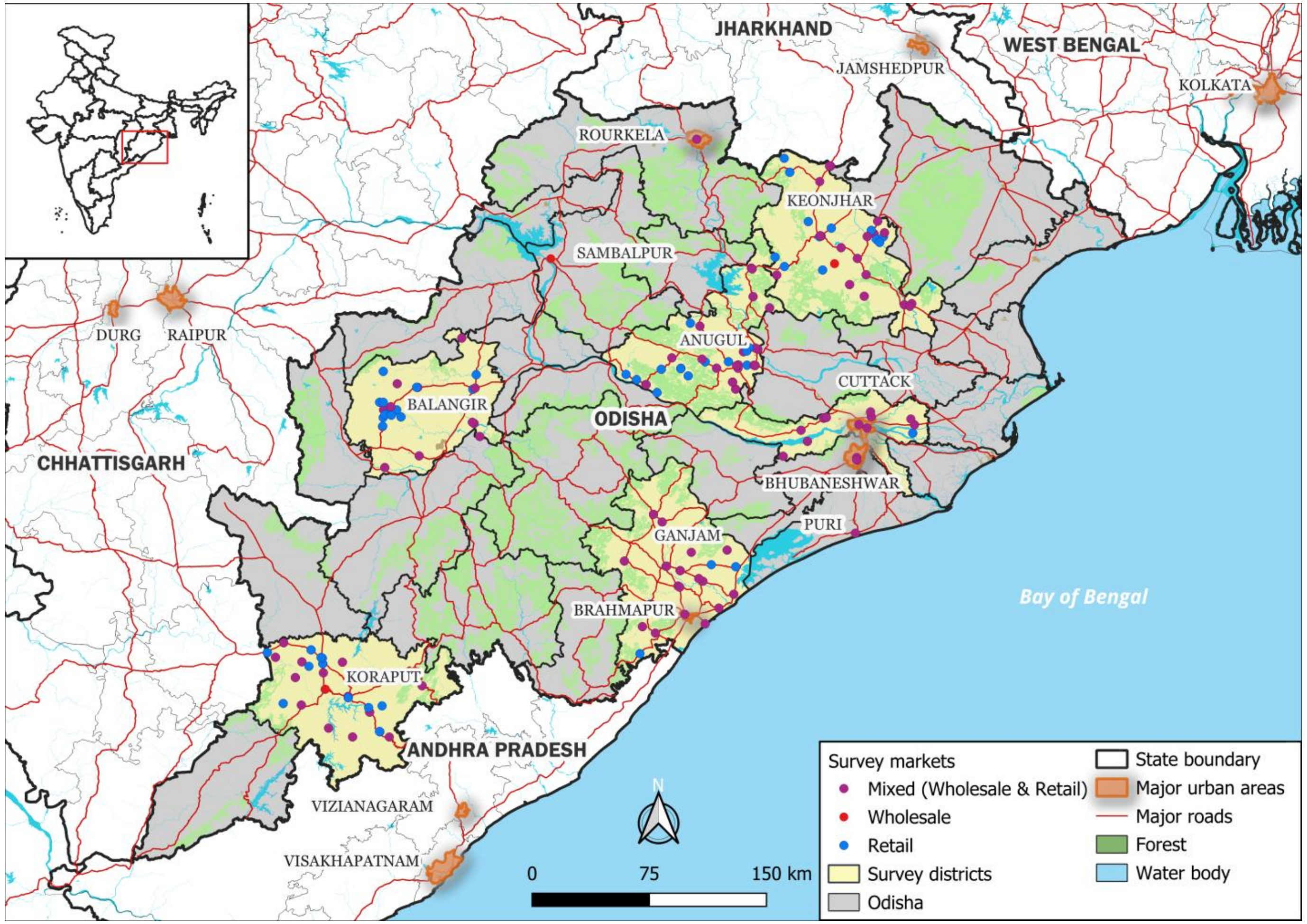
This work is funded by the Gates Foundation, and is a contribution to the CGIAR Policy Innovations program

Introduction

- INCATA Project – Gates Foundation funded (2024/25); Odisha, Kenya
- Seeks to understand whether smallholder commercialization contributes to inclusive agricultural transformation, and the role of MSMEs in enabling commercialization
- Generate evidence through representative ‘stacked surveys’ of vegetable markets (meso data) and vegetable farmers, wholesalers, retailers, input suppliers (micro data)
- Presenting preliminary results from market and wholesaler and retailer surveys addressing:
- Who participates in Odisha’s veg markets, on what terms, and how do institutions (market and social) shape inclusion and terms of incorporation?

Methodology

- Purposively selected 6 veg growing districts with varied conditions
- Selected 4 blocks per district with H, M & L densities of veg cultivation
- Listed all veg markets in selected blocks, all municipal veg markets in selected districts, 4 large ‘terminal markets’
- Census of all veg traders in listed markets (total >11,000)
- Surveyed all wholesalers + 15 retailers per market
- Total sample: 134 markets; 387 wholesalers; 1257 retailers



Vegetable trader gender and caste composition

	% of Odisha population who are...*	% of traders who are...	% of wholesalers who are...	% of retailers who are...
Wholesalers	-	6	-	-
Retailers	-	93	-	-
Female	49	21	1	28
Scheduled tribe (**ST**)	23	8	1	10
Scheduled caste (**SC**)	17	12	4	15
Other caste	60	80	96	75

- Retailers far more numerous than wholesalers
- Vegetable wholesaling dominated by non-SC/ST men
- Retailing more accessible but women, ST, underrepresented

* Data from 2011 Census

Human capital and asset profiles

	Wholesalers	Retailers	Male retailers	Female retailers	SC retailers	ST retailers
No formal education (%)	4	27	13	65	54	53
Secondary education (%)	30	9	13	1	7	2
Agricultural land (%)	28	61	63	56	41	77
Previous occupation was agriculture (%)	14	38	38	38	28	53
Startup capital (INR)	289,000	7,800	8,400	6,300	6,800	5,600
Asset value (INR)	550,000	33,800	39,000	19,100	22,900	25,800
N	384	1239	898	345	186	125

- Women retailers least educated, followed SC/ST retailers
- Retailing as an agricultural diversification strategy (especially for ST)
- Much lower startup capital and asset values for retailing vs wholesaling
- Women & SC/ST retailers have lowest startup and assets (low entry, low accumulation)

Access to institutions and ICT

	Wholesalers	Retailers	Male retailers	Female retailers	SC retailers	ST retailers
Member of trader association (%)	41	9	13	1	7	0
Has any trading license (%)	41	8	10	4	4	3
Has mobile phone (%)	72	51	61	21	41	27
Most recent purchase by UPI* (%)	28	6	7	2	4	3
N	384	1239	898	345	186	125

* UPI = App-based digital payment

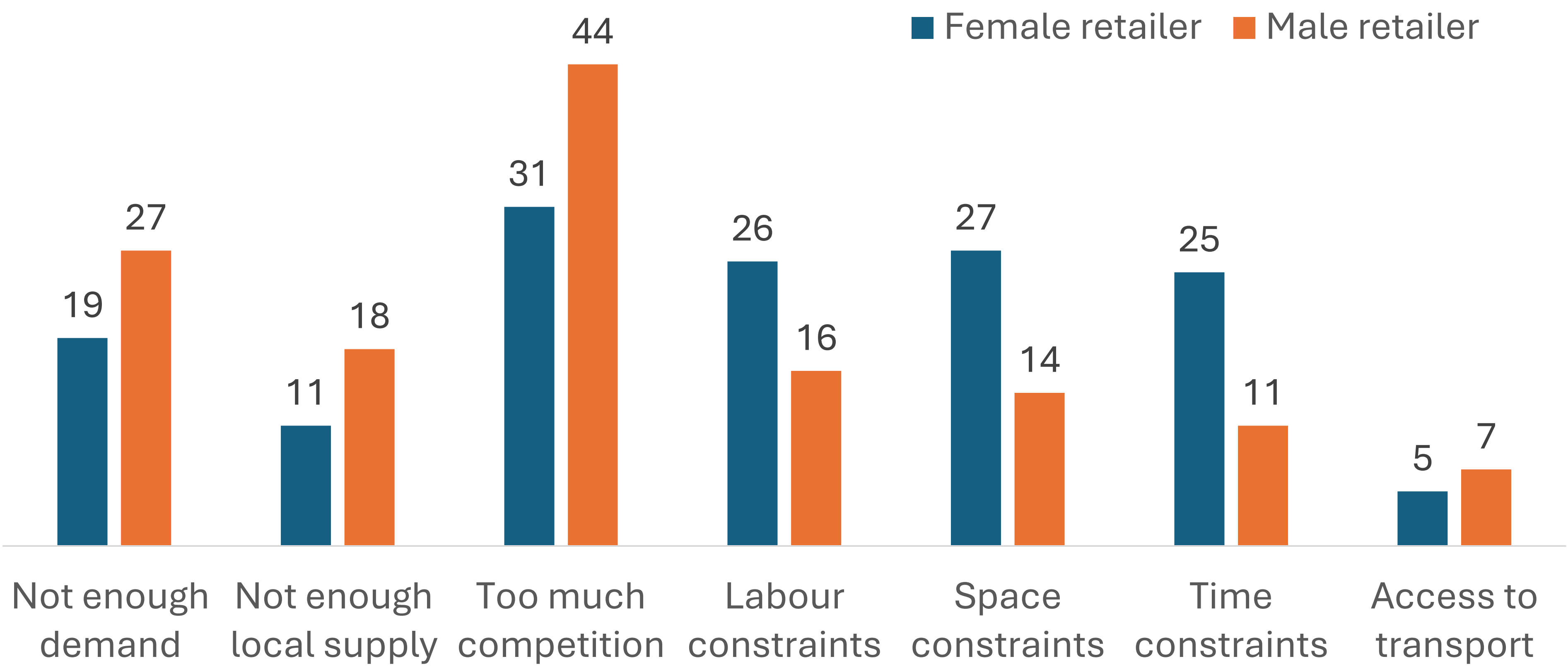
- Women & ST retailers have least access to associations, licenses
- Digital divide, especially acute for women

Credit, price setting, customers served, aspirations

	Wholesalers	Retailers	Male retailers	Female retailers	SC retailers	ST retailers
Borrowed in 2024 (%)	16	10	11	9	8	3
Price of most recent purchase set by respondent (%)	45	50	53	43	29	43
Most recent buyer was ♀ (%)	8	18	12	35	29	30
Aspires to expand business (%)	72	78	74	87	93	87
N	384	1239	898	345	186	125

- Women and ST/SC retailers have lowest credit utilization, least ability to set prices
- Women & SC/ST retailers disproportionately serve female customers
- Women & SC/ST retailers have greatest aspirations to expand business

Women retailers perceive greater business opportunities but face greater constraints than men



Perceived challenges to business expansion (% of respondents reporting)

Conclusions

- Retailing is the main way for women and marginalized groups in Odisha to derive benefits from non-farm segments of vegetable value chains
- Low barriers to entry provide opportunities for off-farm livelihood diversification
- Women and ST/SC retailers face multiple intersecting disadvantages in operating their trading enterprises
- Yet women and ST/SC interact most with women customers, aspire most to expand their businesses, and perceive greater opportunities
- These findings suggest opportunities to design programs that 'level the playing field' to improve the terms on which women and ST/SC people participate vegetable retailing
    - (e.g., Dedicated associations, Access to ICT, Financial services, Space)


Thank you