



Financial behavior of midstream actors in the rice and potato value chains

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Agri-food value chains and the “Hidden Middle”

- Farmers/producers and consumers have been studied from many perspectives for many years
- Yet, the activities and needs of “intermediary” firms remain understudied
 - “Hidden middle” (Reardon, 2015)
 - “... most theories of agricultural development, structural transformation, and economic development abstract away from the important roles of agri-food value chains.” (Barrett, Reardon, Swinnen, and Zilberman, 2022)



Why are intermediary actors “hidden”?

- Intermediary actors are often vilified in the press and by other means
 - “Businessmen said when the price of rice increases by Tk2 at the mill level, many people take the opportunity and increase it by Tk3-4.” (**Business Standard, 17 January 2024**)
- Lack of quality data to understand intermediary actors
 - Most existing data do not allow for studying what happens between farm and retail (Bellemare, Bloem, and Lim, 2022)
 - Ambler et al.(2023) find that large, publicly available data sets (i.e., LSMS-ISA and World Bank Enterprise Surveys) are poorly suited for studying value chains.
 - Where studies exist, samples are often small and typically focus on one or two nodes of value chains (Reardon, Liverpool-Tasie, and Minten, 2021)

Our study in Bangladesh



- We aim to document financial needs and constraints among firms engaged within the intermediary segments of two agri-food value chains in Bangladesh
- Bogra and Rangpur districts
- Rice and Potato value chains
 - Have been studied before, but in different way
- Companion Study in Uganda (arabica coffee and soy value chains)

Why paddy/rice and potato value chains?

- We conducted a rapid review of six value chains
 - Rice, Dairy, Mango, Potato, Shrimp, Tomato
- Wanted to select value chains with a potential to be transformed through digital finance (or more financial availability)
 - Selected rice as “important” crop; potato with interesting linkages



Data collection and sampling approach

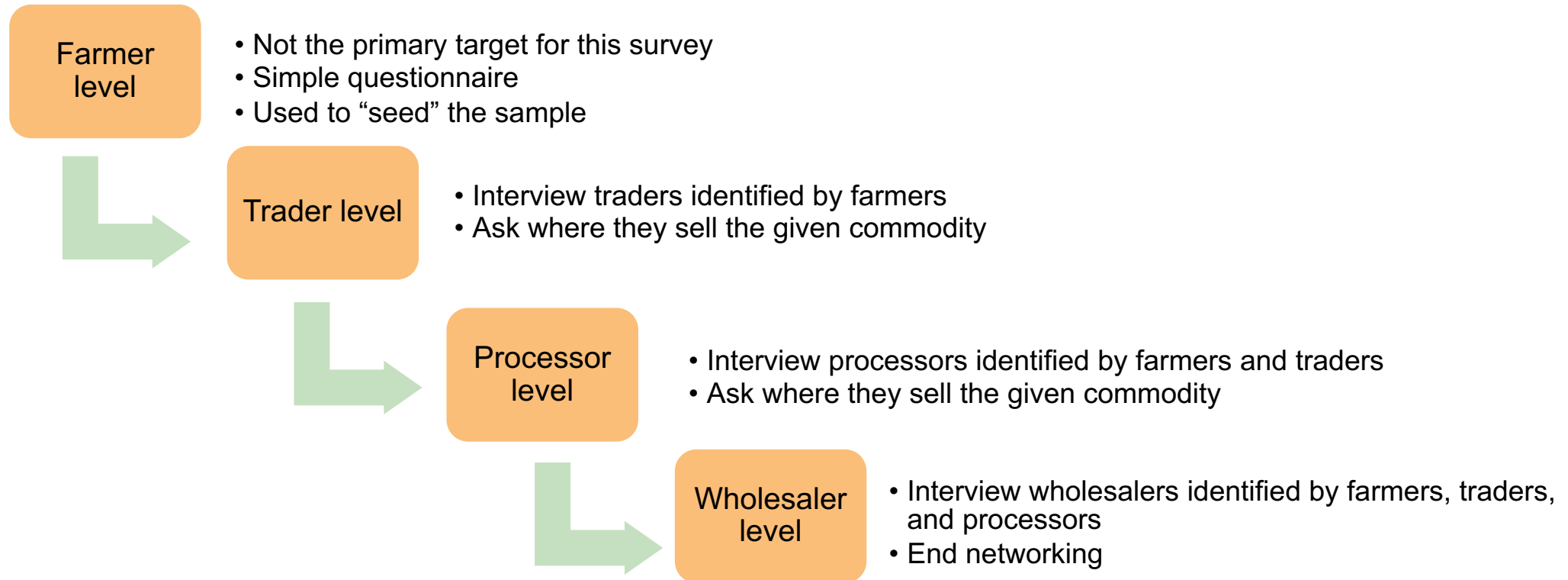
- **Goal:** To systematically survey “intermediary” actors across agri-food value chains
- **Challenge:** Agricultural value chains take the form of a network, with actors at various stages linked together through a series of transactions
 - Difficult to use traditional sampling
 - Actors tend to be informal and mobile
 - Limited knowledge of value chain structure to generate a sampling frame
- **Respondent-driven sampling:** We draw on methods developed by sociologists to survey network-based populations
 - Allows respondents to inform the path of the interview process.
 - Allows researchers to calculate sampling weights to estimate population parameters

Some definitions

- “Traders” – we are referring to *bepari*, *aratdar*, *faria* who purchase directly from farmers or from other “traders” before the paddy gets processed
 - For potatoes, before they are sold to *paiker* or wholesalers
- “Processors”- in rice value chain, they husk and mill rice
- “Wholesalers” are typically *aratdar* or others who purchase rice from processors to sell to retail level, or *paiker* in the potato value chain



Survey Logistics



Referral links

- Over **95 percent** of respondents provided referral links
- On average respondents provided between **3 and 3.5 referrals**
- The **majority** (95 percent) of these referrals **had phone numbers**
- **Over half** (between 50 and 75 percent) of referrals were **duplicates**



Sample composition and demographic statistics

The average intermediary actor is:

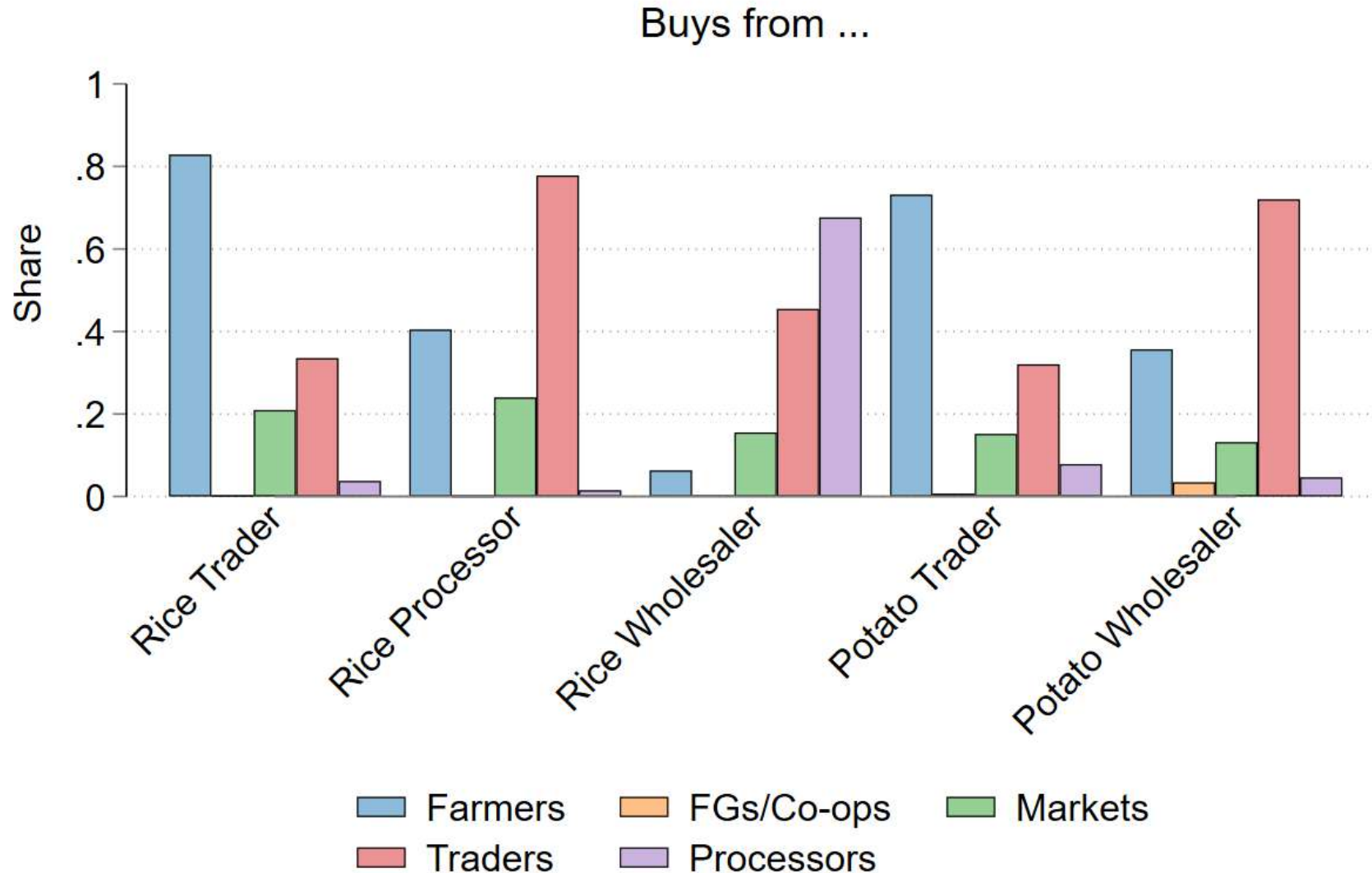
- Male (99 percent)
- 45 years old
- Achieved secondary education
- Owns a (feature) phone



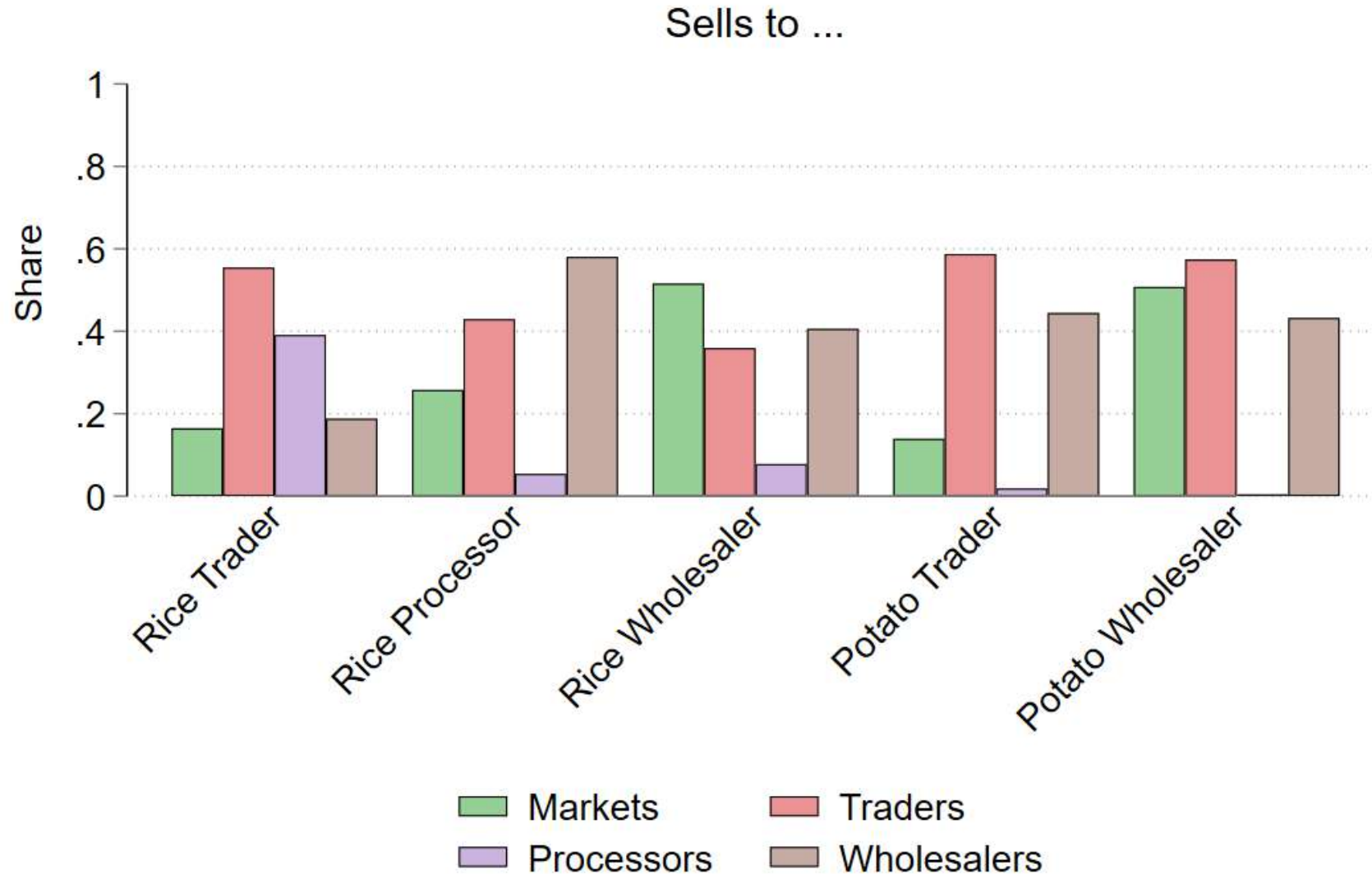
	Rice			Potato		
	Sample size	Monthly transactions		Sample size	Monthly transactions	
		Buying	Selling		Buying	Selling
Traders	1,066	69	11	1,117	13	19
Processors	456	24	11			
Wholesalers	220	49	42	235	19	58

Value chain structure and size

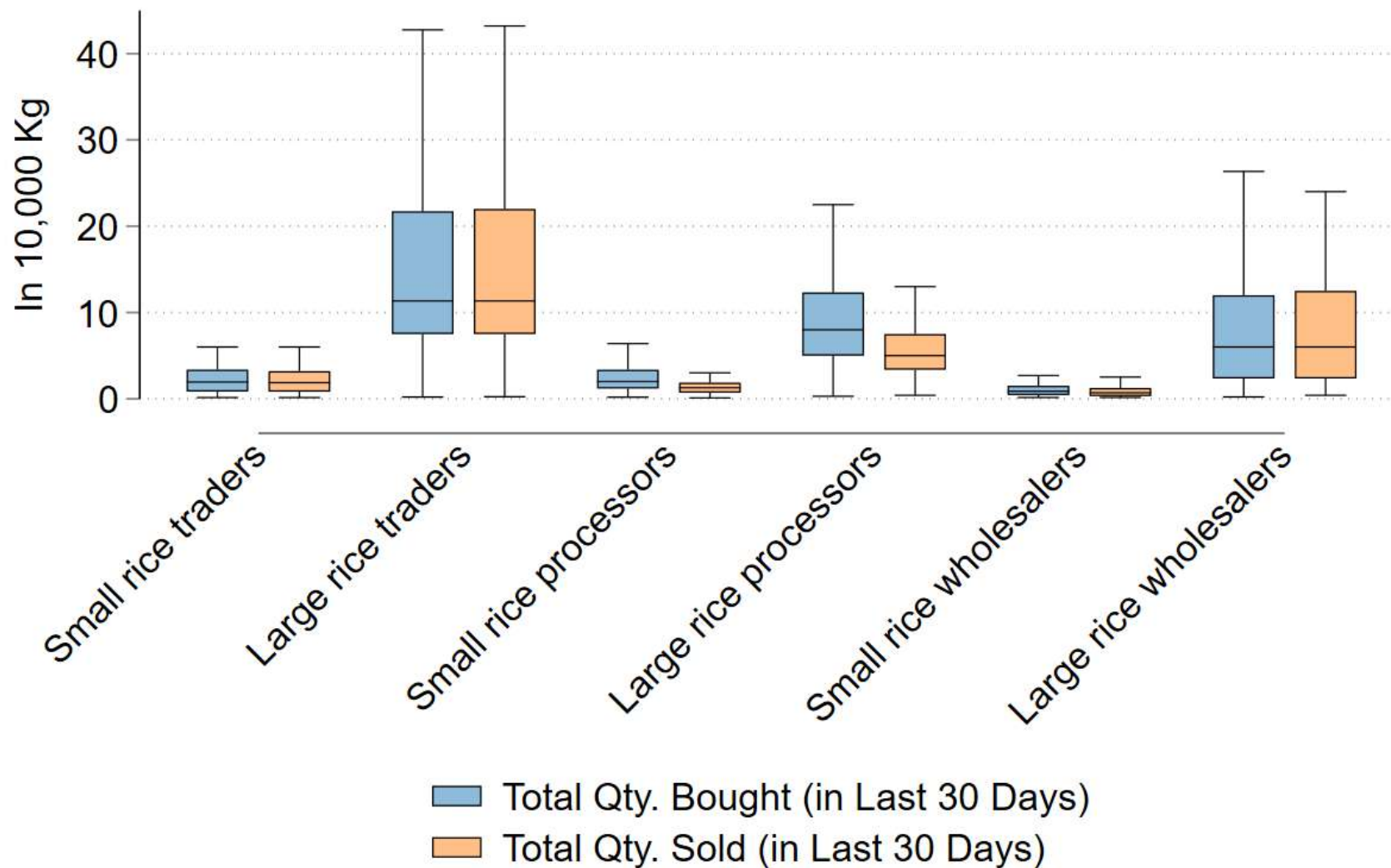
Rice and potato value chains are complex



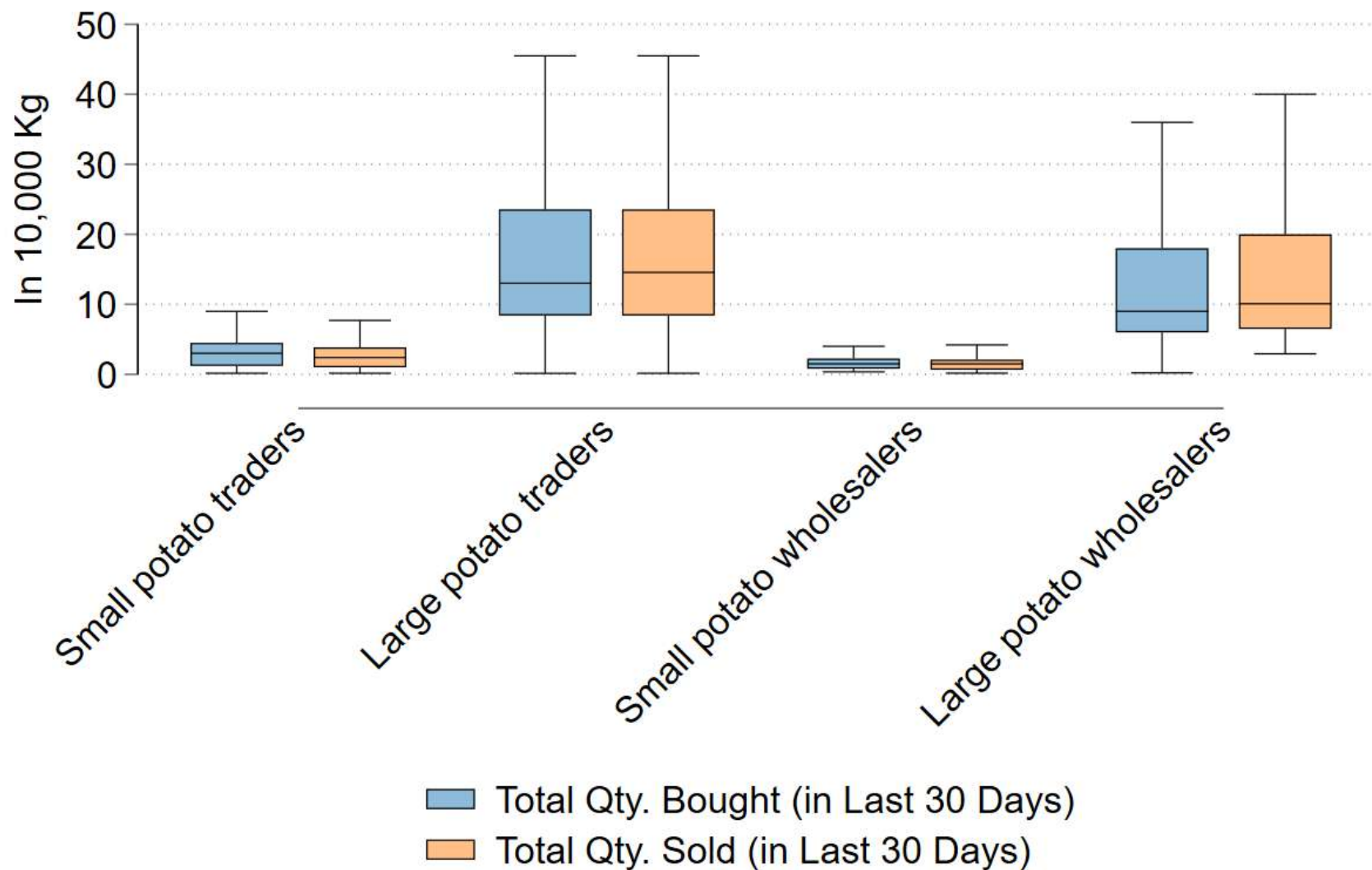
Rice and potato value chains are complex



Volume bought and sold: Rice

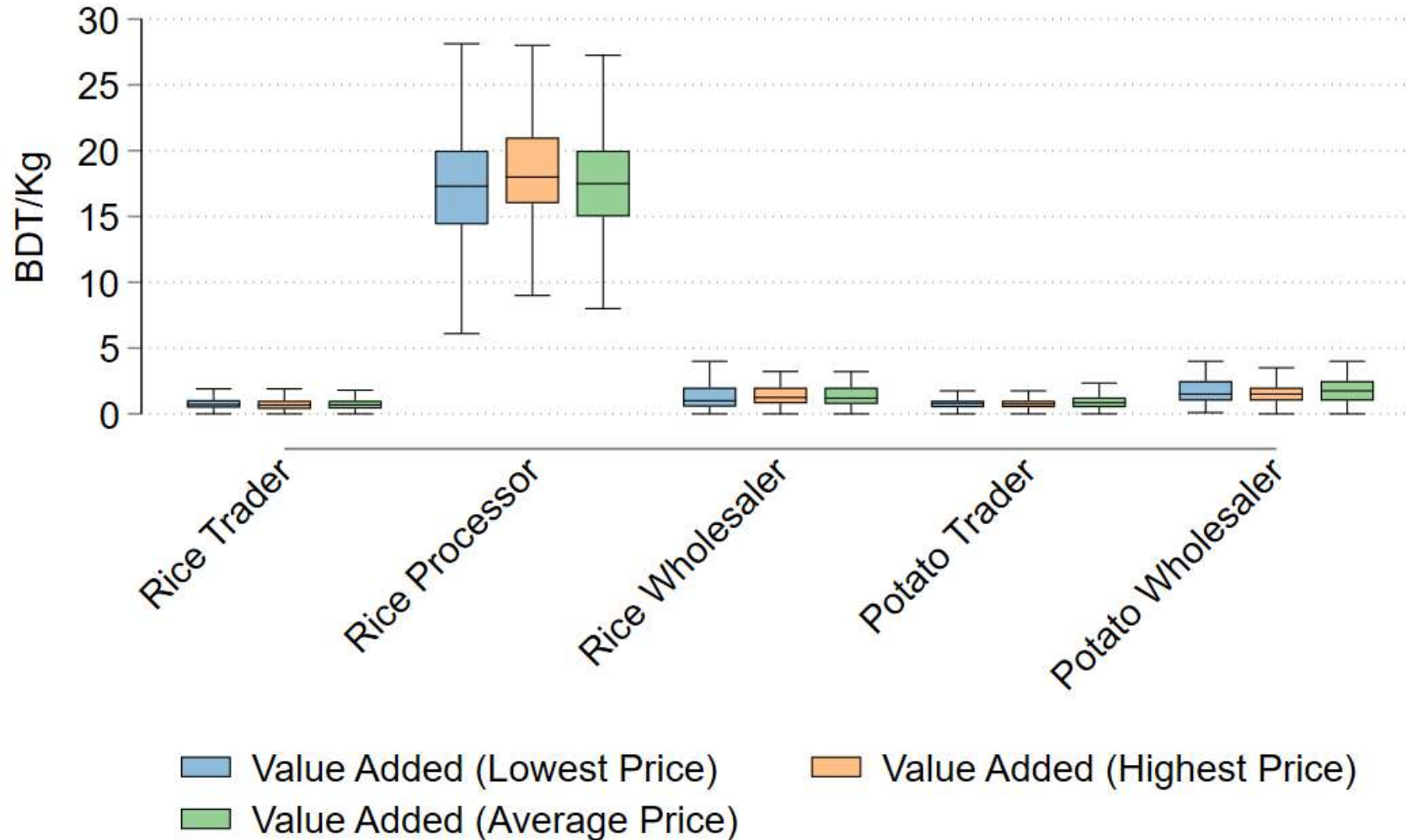


Volume bought and sold: Potato



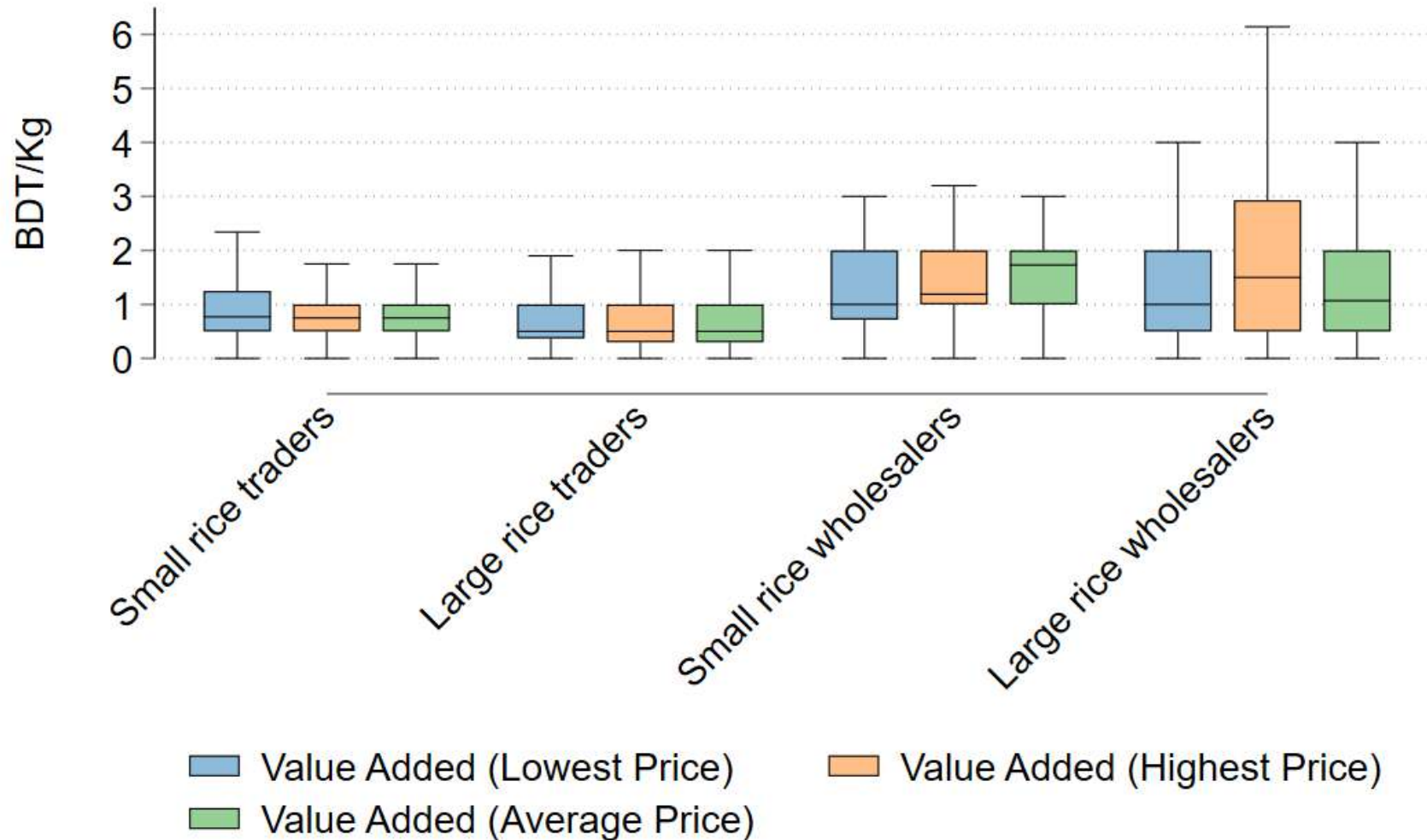
Understanding value added within the value chain

Value added by segment and commodity



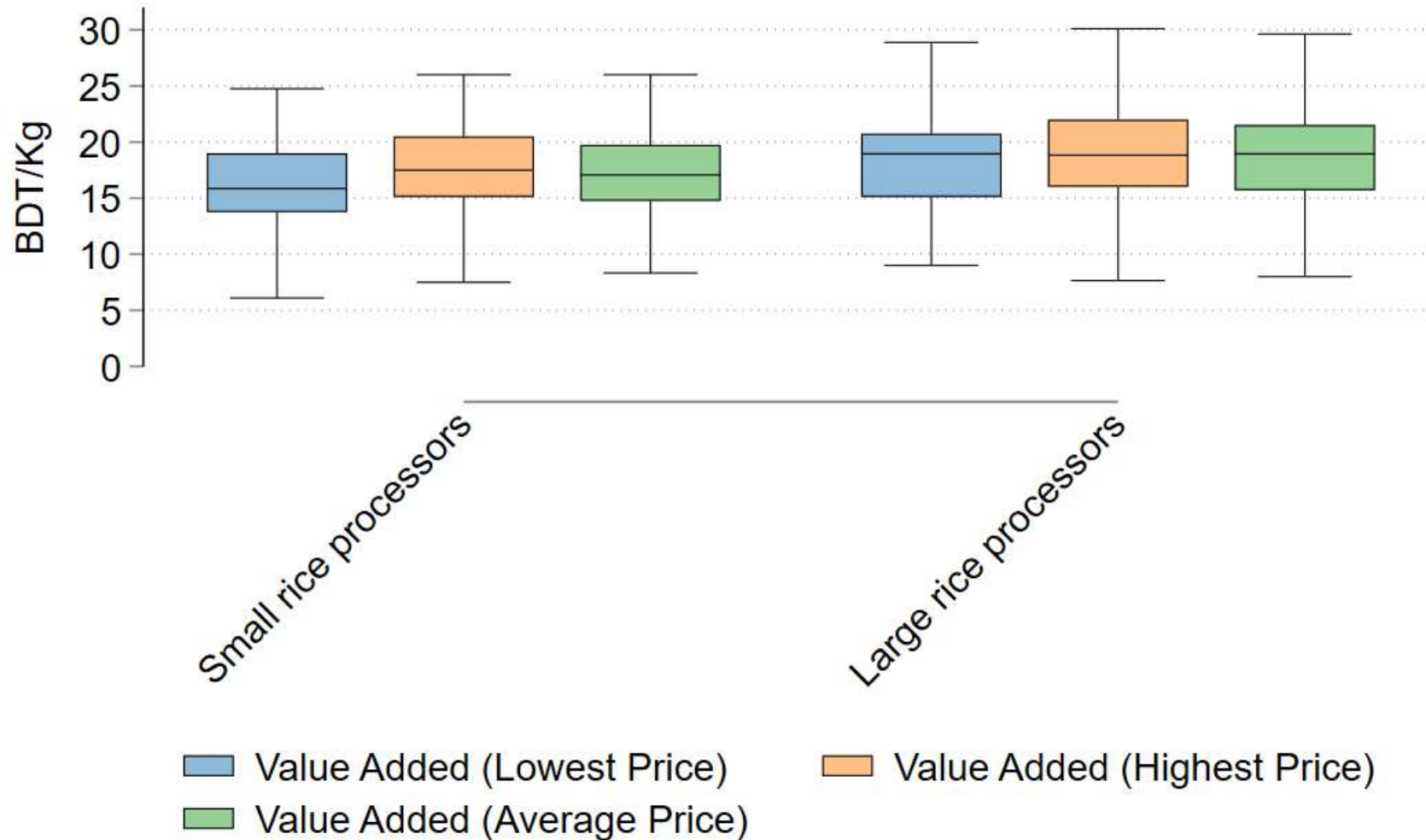
Note: Excludes negative and outside values.

Value added by actor size: Rice traders and wholesalers



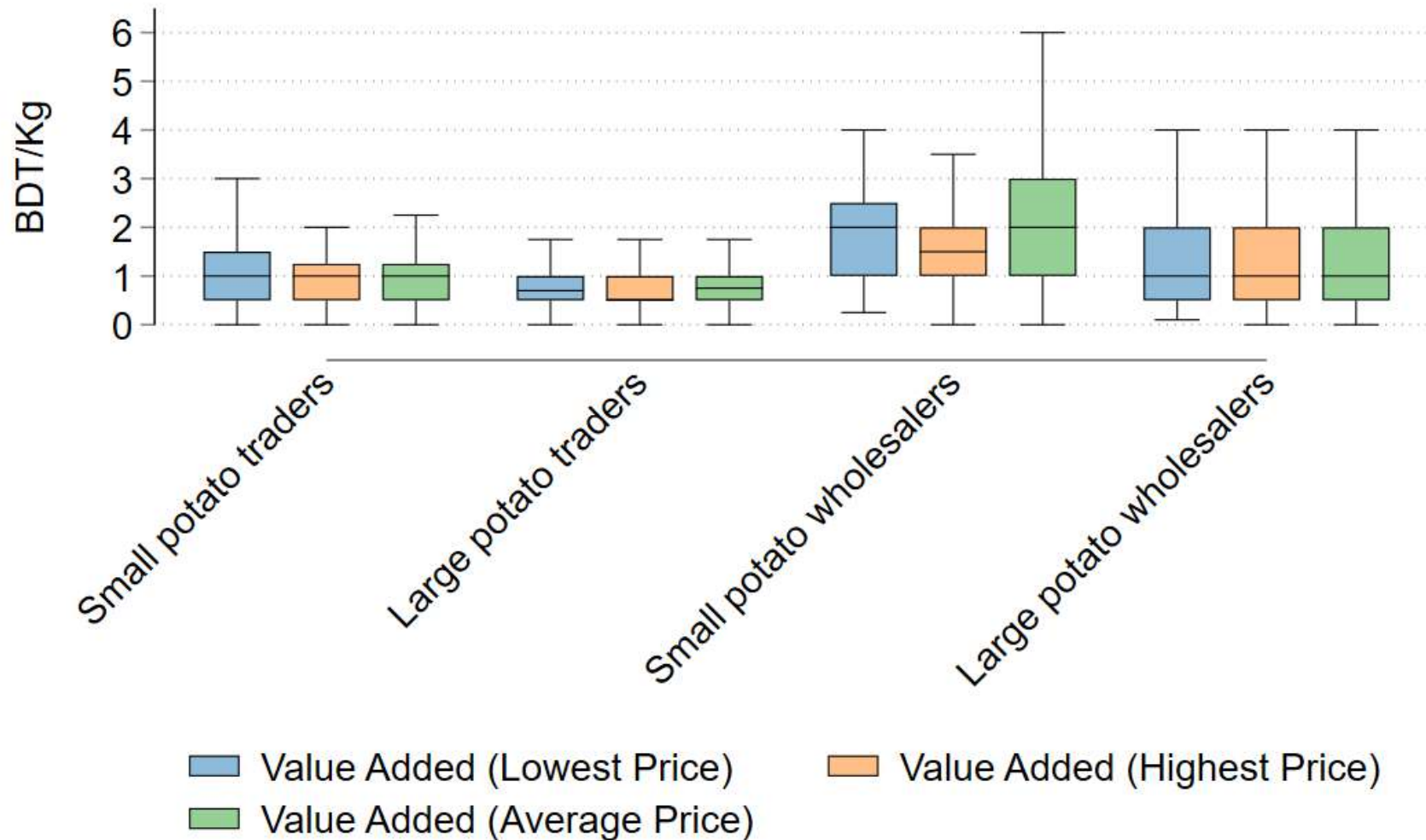
Note: Excludes negative and outside values.

Value added by actor size: Rice processors



Note: Excludes negative and outside values.

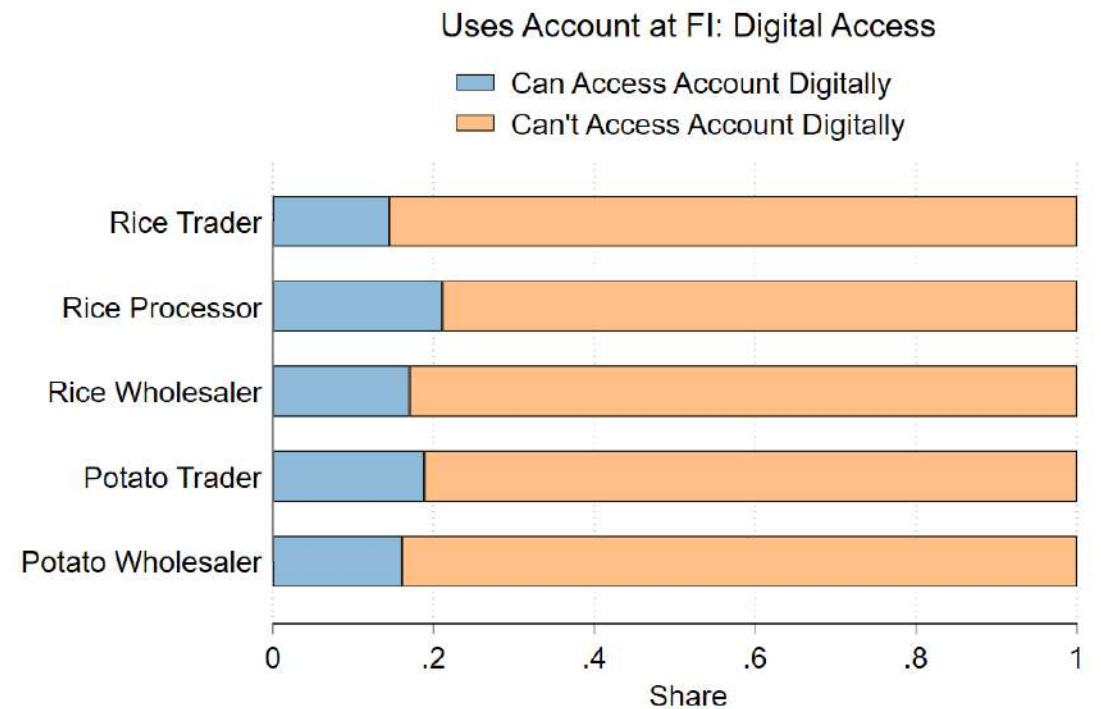
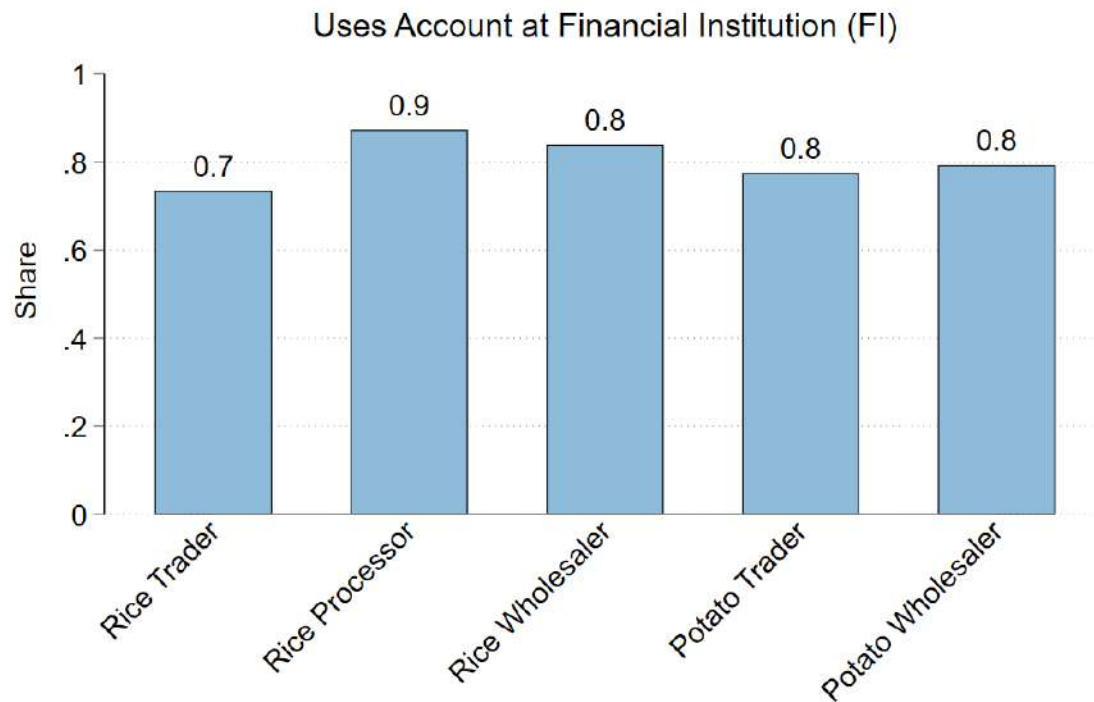
Value added by actor size: Potato traders and wholesalers



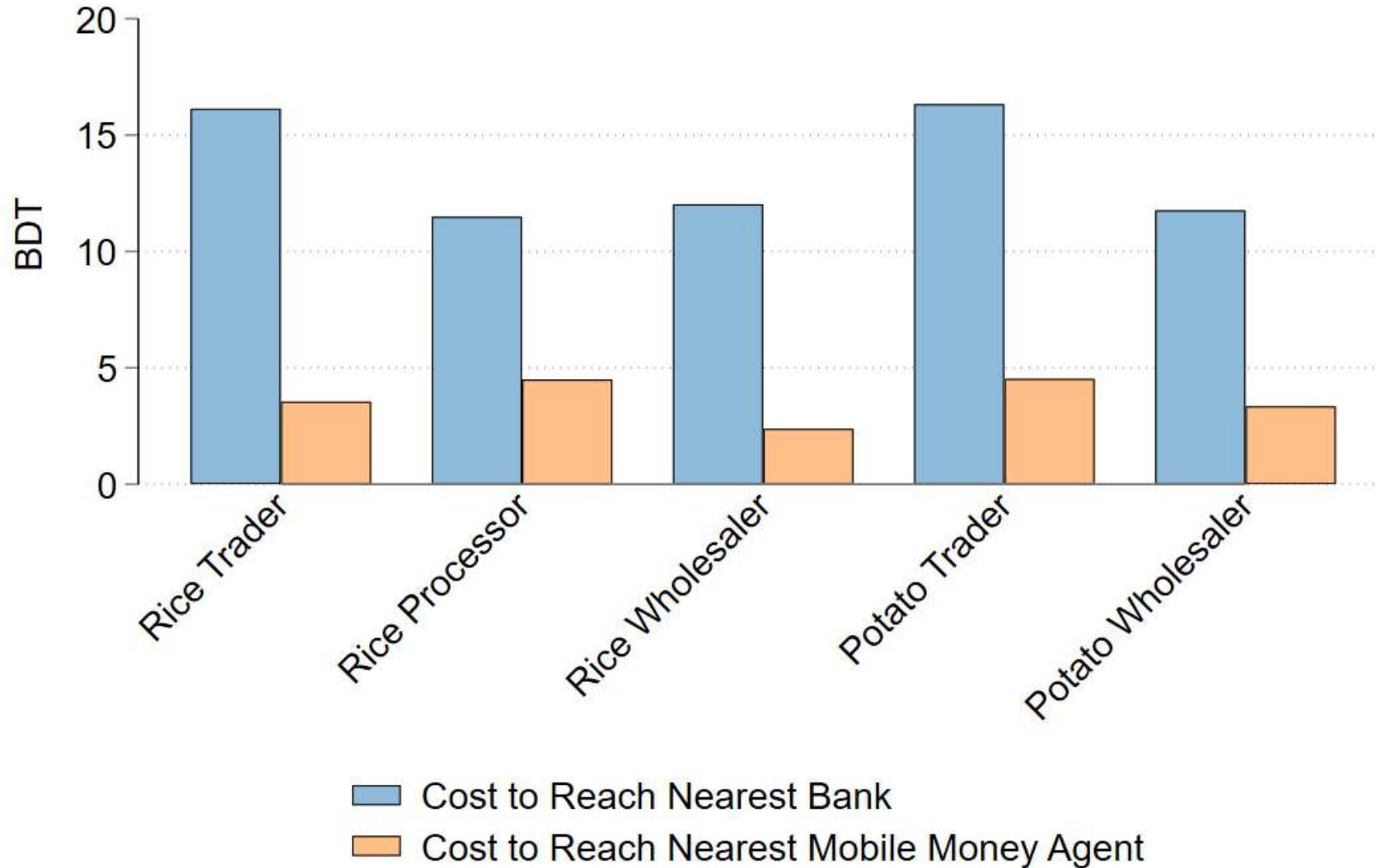
Note: Excludes negative and outside values.

(Digital) Financial access and behavior

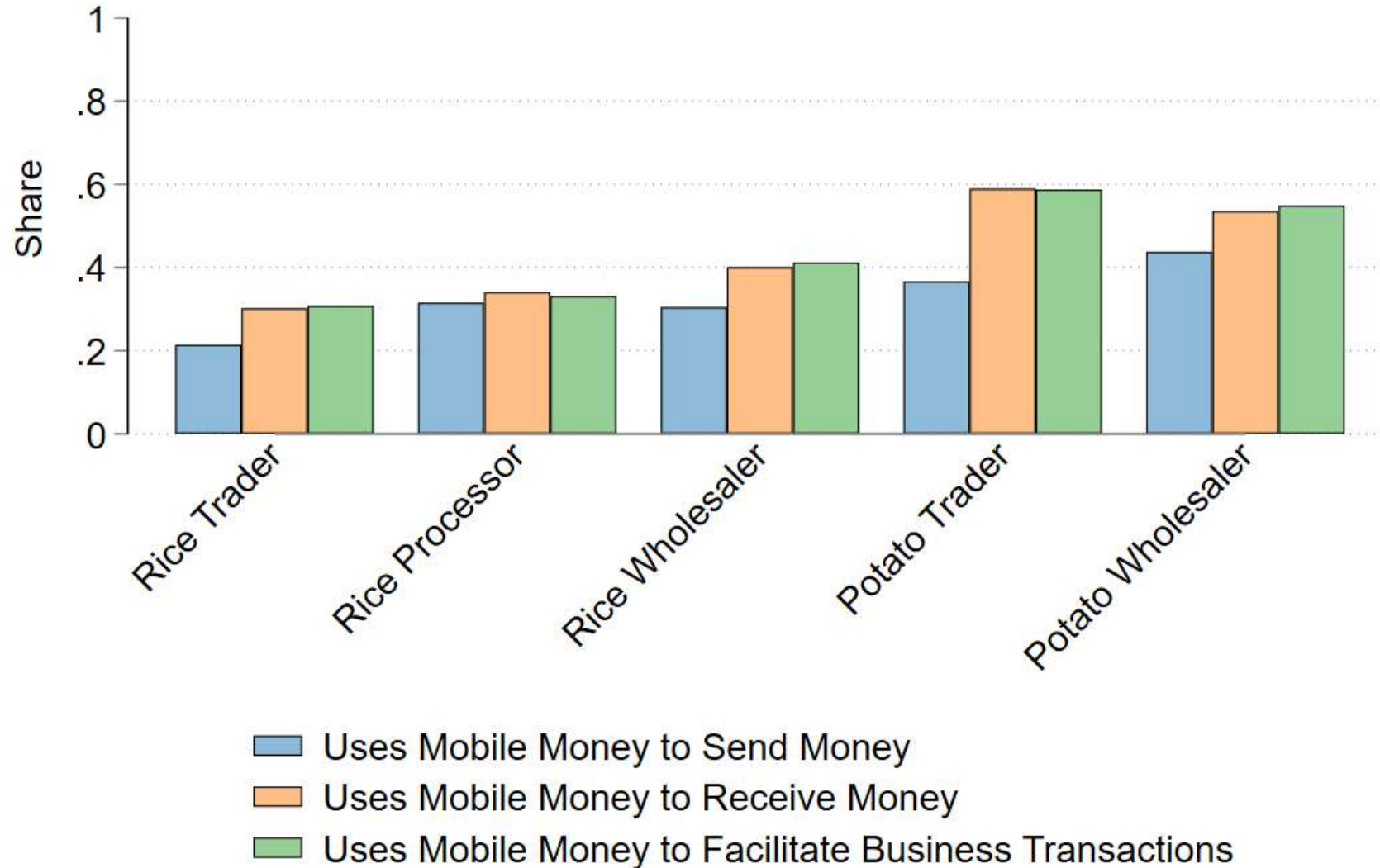
Many intermediary actors have limited access to (digital) financial accounts



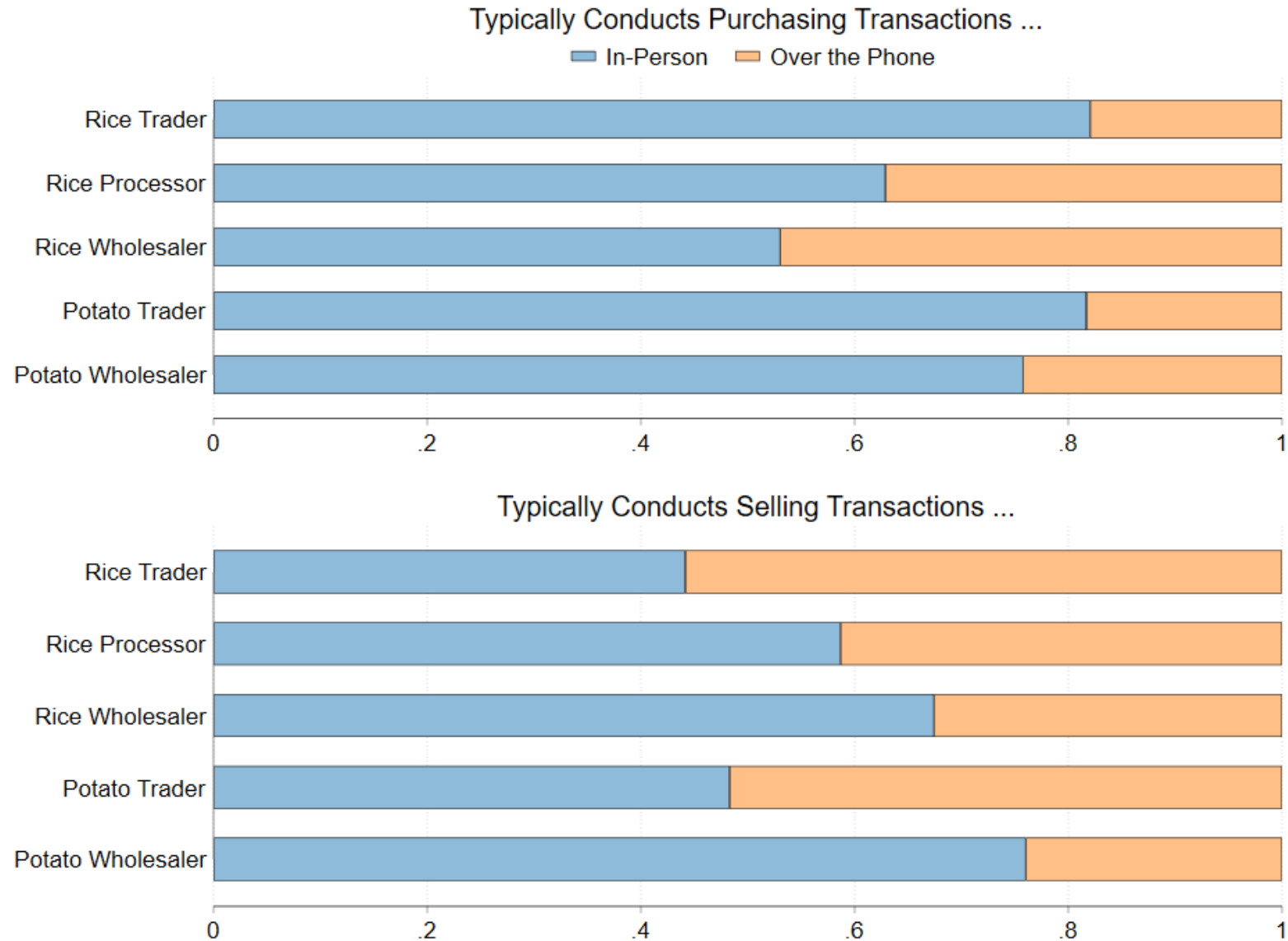
Mobile money is easier to access than banks



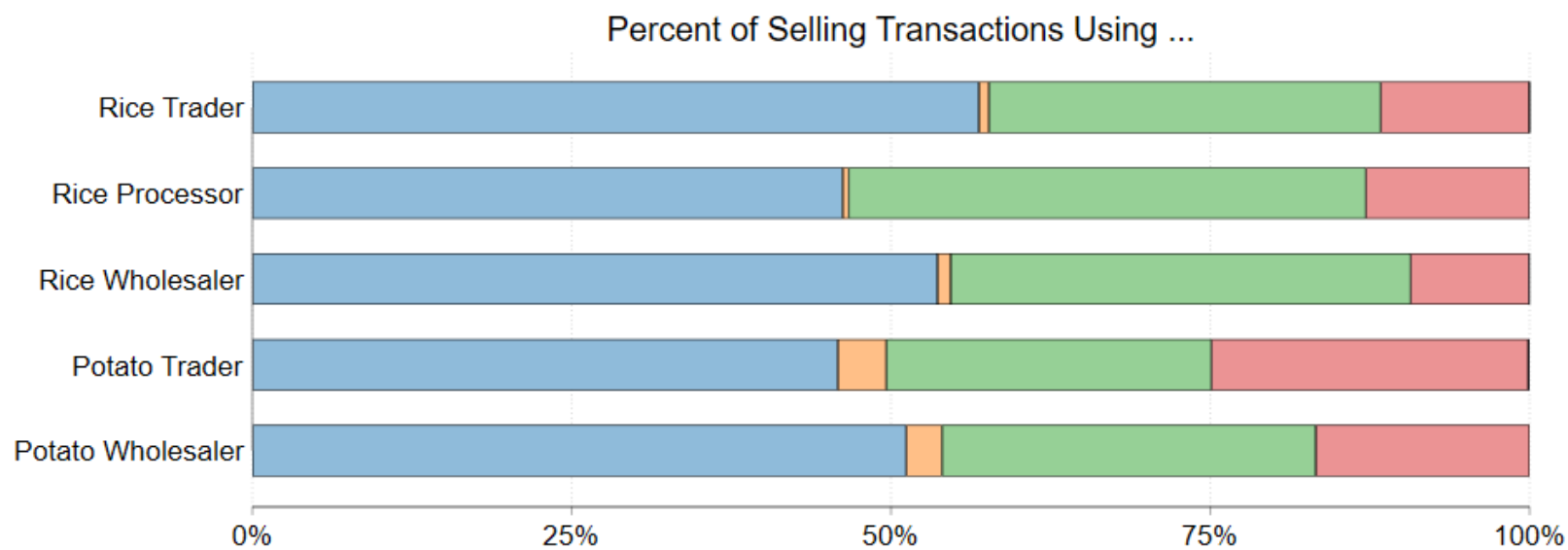
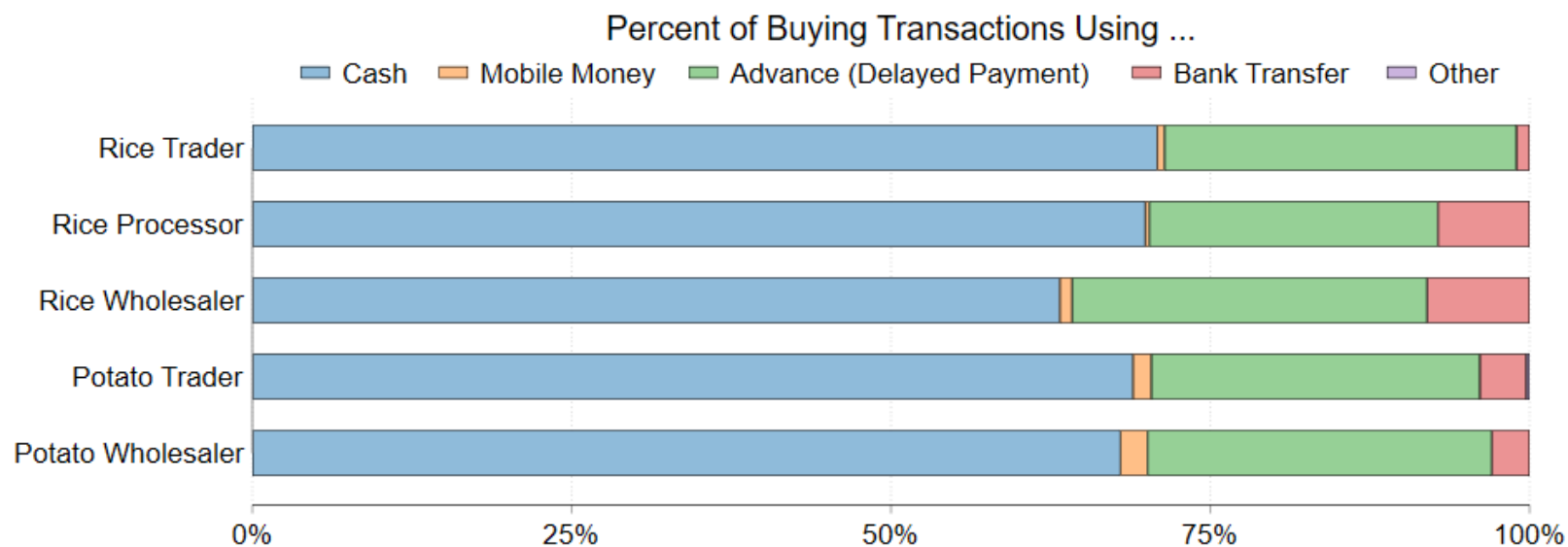
Mobile money use: Personal vs. enterprise



Enterprise transactions are conducted both by in person and by phone

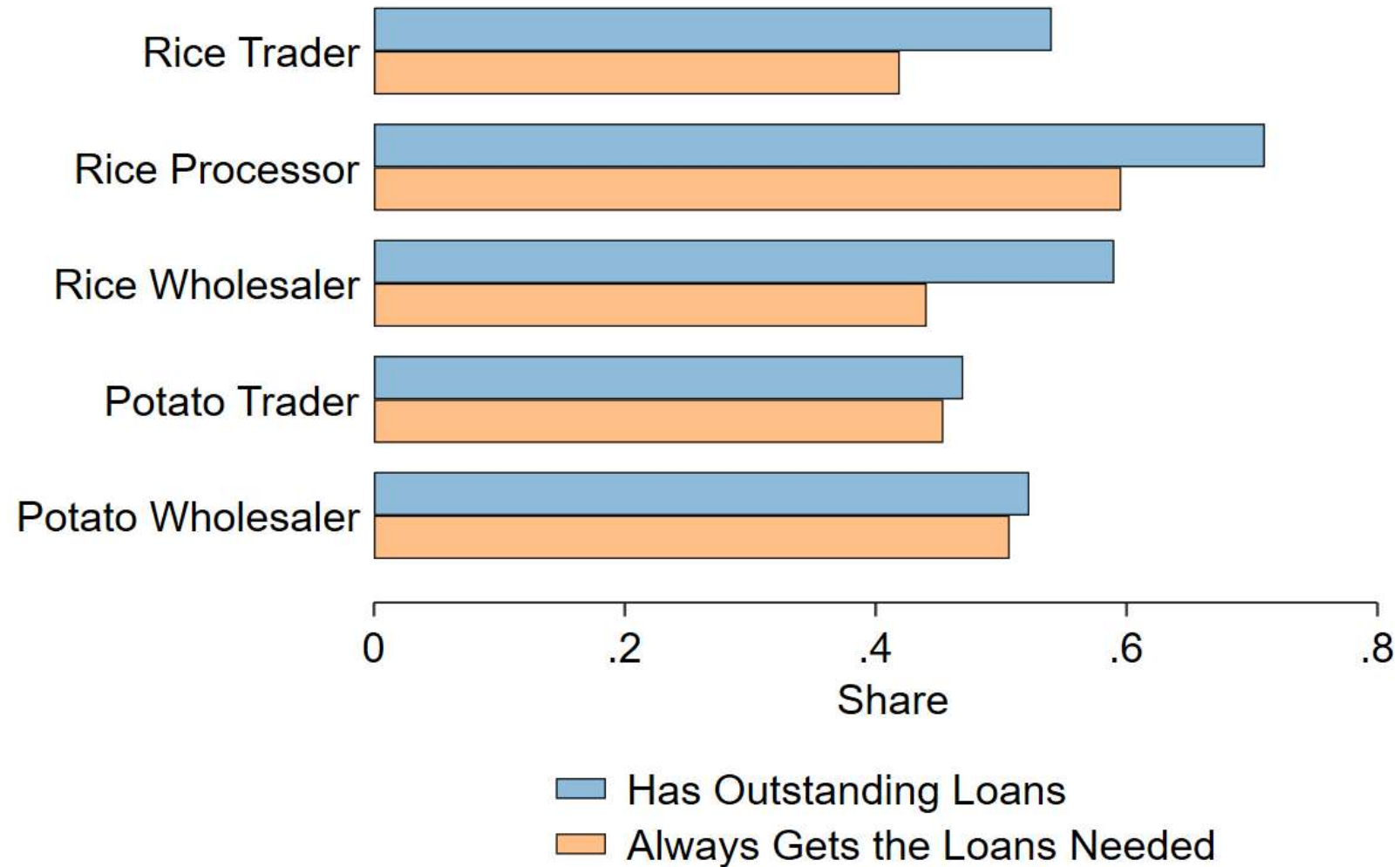


But...enterprise transactions overwhelmingly done in cash

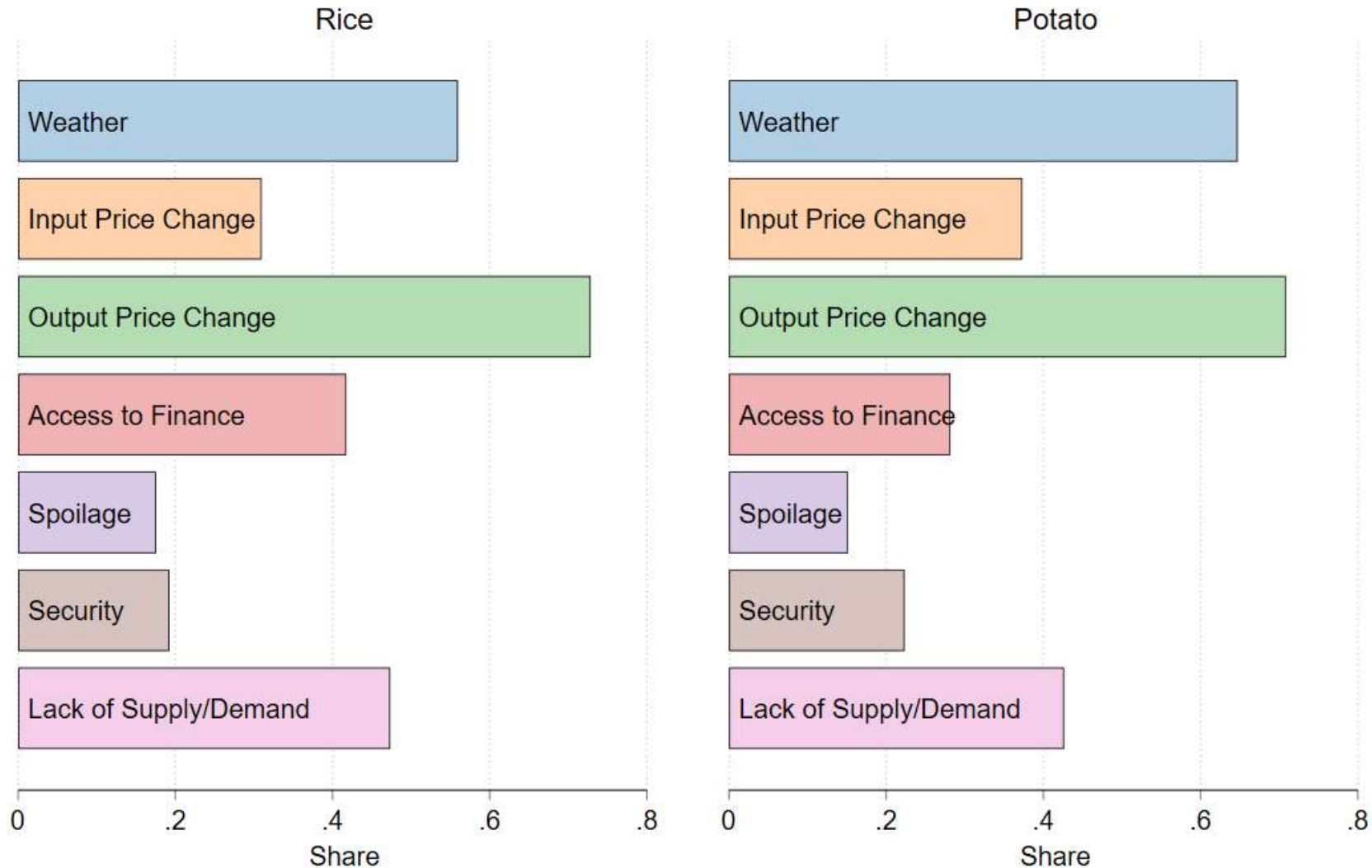


Credit access and risk management

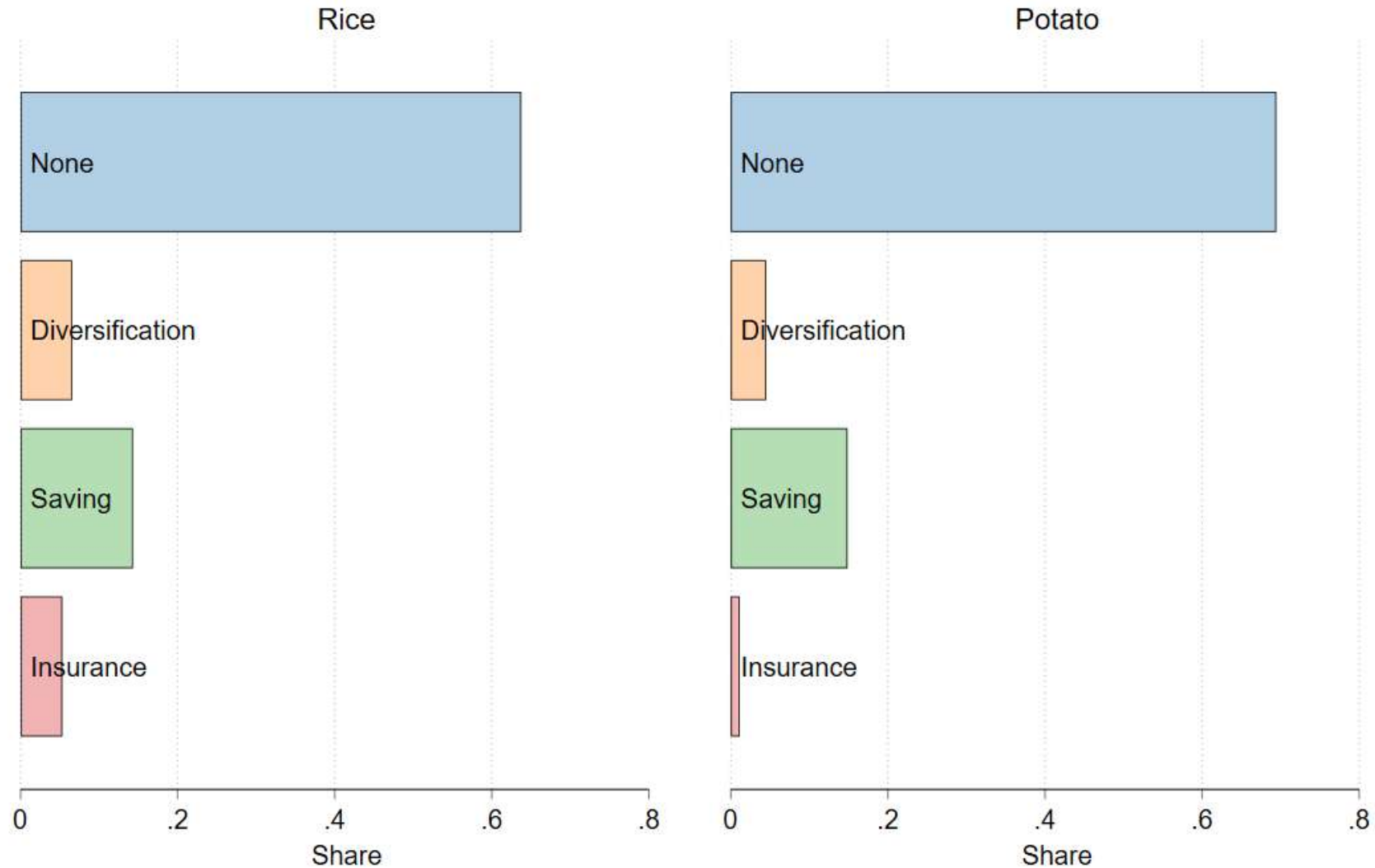
Credit access is not complete



Output price changes is most commonly mentioned risk



Most intermediary actors do not manage risk



Summary of findings

- Agri-food value chains are complex
- Value-added varies considerably within and across value chains
- Many intermediary actors have limited access to (digital) financial accounts
- Enterprise transactions are overwhelmingly conducted with cash
- Credit needs not fully met
- Despite the presence of risk, intermediary actors do little to manage risk



Findings: Policy thoughts

- In both chains, there are concerns in newspapers that certain value chain actors are taking high margins, especially in the context of rising prices
- Rice/Paddy Value Chain
 - Policy interventions tend to be:
 - Government procurement when prices are low (Ahmed and Bakhtiar, 2019)
 - Import or threaten to import when prices are high (e.g. news in 2024)
 - Concern is about processors
- Potato Value Chain
 - Concern that some cold storage operators charge high prices (Financial Express, 2023)

Findings: Policy thoughts

- Digital technologies can enhance *traceability*
 - Help us understand exact margins required by processors/cold storage operators (or other middlemen) to make a profit
 - Well crafted regulations can foster digital traceability
- Digital technologies can also potentially make transactions along the value chain more efficient
 - Unlock financial access
 - Increase profit margins

