

## STF2017 INTERNATIONAL SYMPOSIUM ON TROPICAL FRUITS

# Improving supply chain market access for mango farmers in Fiji: A transaction costs perspective

23<sup>rd</sup> to 25<sup>th</sup> October, 2017 at Tanoa International Hotel, Nadi

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#### Overview:

- Mango Economic crop
- Mango is a seasonal product (October to February) in Fiji (Anon, 1985).
- Mango production is scattered in Fiji.
- Farmers are having difficulty in accessing high value chain markets due to high transaction costs.
- Transaction cost costs of economic exchange or in simple terms costs of participating in the market (Williamson, 1998).



#### High Transaction Costs

- Inability of farmers to deal with tourist markets and supermarkets (Veit, 2009; Young & Vinning, 2007).
- Has given rise to middleman's (Brown, 2008; Kumar & Palanivel, 2016; Veit, 2009).
- Farmers seen producing for exporters are getting better returns with vertical coordination along the supply chain. (Kumar & Palanivel, 2016).



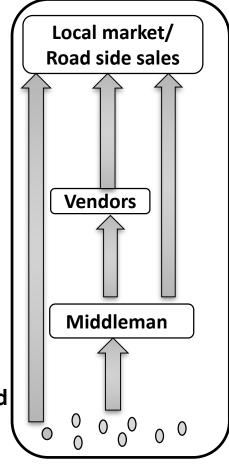
#### Knowledge Gap:

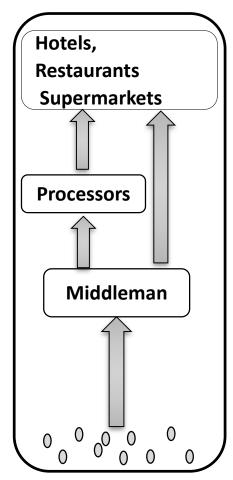
 What are the different supply chains in Fiji mango markets.

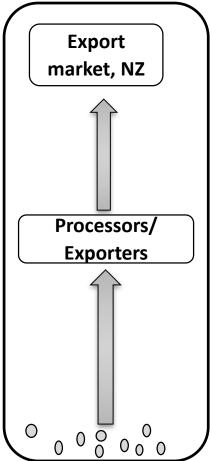
 How to improve access to better supply chains for mango producers in Fiji.

#### Results:

#### **Supply chain Models:**







Scattered farmers

**E**MyFreePPT

**Traditional** 

Modern

**Export** 



### Types of transaction costs in mango market:

Pingali et al. (2005), identified the following transaction costs associated with smaller farms.

- Search costs for markets
- Bargaining for price
- Information on improving quality
- Seeking contracts
- Monitoring contracts



#### Traditional supply chains



- Road side sellers/Market vendors
- Farmers prefer transacting in spot markets due to minimum transaction costs (Pingali et al., 2005).
- Rise of middlemen in situations where farmer is unable to meet the transaction costs
- Farmers get an average price of \$3 per kg in spot market where as middleman give \$0.33 per kg to farmers (Kumar, 2017).



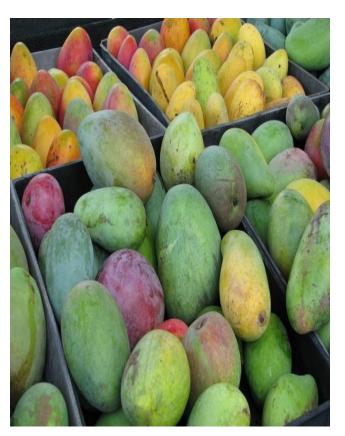
#### Modern supply chains



- Farmers do not have access to higher earned markets
- Middlemen plays an active role since farmers are unable to meet the transaction costs
- Major transaction costs is form of seeking market, quality and contractual arrangement.
- Farmers paid \$0.33 for kg of mango (Kumar & Palanivel, 2016).



#### Export supply chains



- Vertical coordination between producer and exporter.
- 12 major exporters and 39 registered growers
- High transaction costs is involved.
- Use of contracts and support from the MOA and Natures Way.
- Market security
- Vertical coordination enable to reduce farmer transaction costs
- Price \$1.33 \$2.00/ Kg.



#### Reducing transaction costs

- For Fiji Mango industry, horizontal and vertical coordination can work considerately together reduce transaction costs and improve farmers access to supply chain.
- Through coordination farmers define a better and shorter supply chain in directly dealing with the end markets.

Thus, receiving better prices.



#### Horizontal coordination

- Small scale farmers will be able to improve the consistency in supply as this has been an issue for hotel and supermarkets in Fiji (Young & Vinning, 2007).
- Collective bargaining can play a major role in the development of fair contracts.
- Through horizontal coordination, asset specificity to produce quality demanded by supermarkets and tourism market can be met.
- Though there is a risk of failure due to seeking alternative contractual arrangements and quality issues but the increase in scale through horizontal coordination reduces the transaction cost (Pingali et al., 2005).



#### Vertical Coordination

- Strategic alliances relatively informal agreements between two firms to cooperate in the vertical marketing chain by sharing information while maintaining their formal separate identities (Worley & McCluskey, 2000).
- Export supply chain has seen strategic alliance between exporters and farmers.
- Contracts have resulted in defined supply chain and farmers benefiting from better returns.
- This reduces inter transaction costs in terms of information exchange, searching for markets, bargaining for price.



#### Conclusion and Recommendations:

- Transaction costs plays a vital role in mango supply chains.
- To improve the market access horizontal and vertical coordination may be practiced.
- Government to play a pro-active role in organising mango producers and initiatives to encourage value addition of mango.
- Agency theory in this industry can be further researched to identify how productivity of the industry can be improved.



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