

2018.07.18 IIFET @ Seattle  
Seafood Markets and Trade (2)

Consumer's consciousness to seafood  
produced in affected area of the 2011  
earthquake and its chronological change

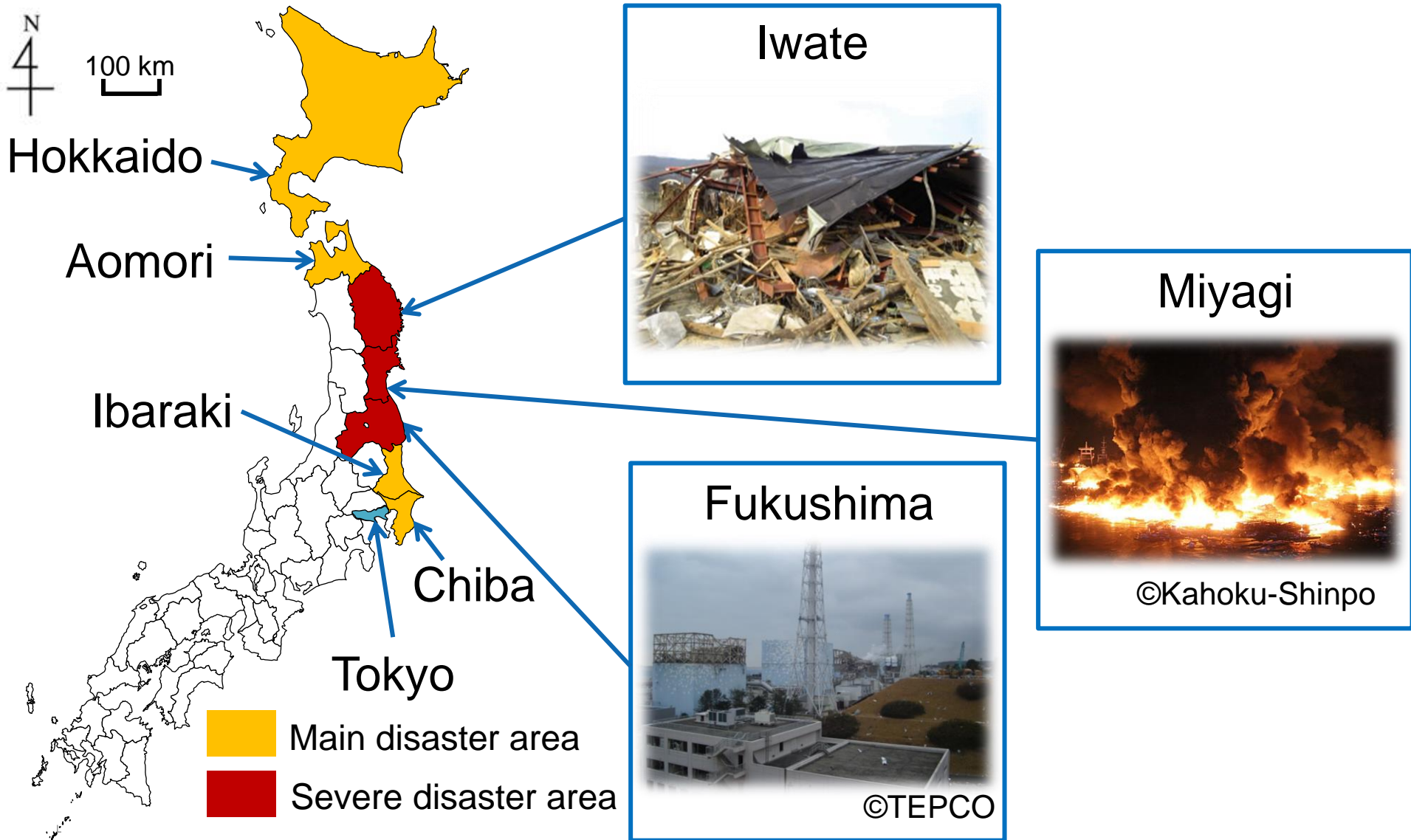


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# The Great East Japan Earthquake (2011) <sup>2</sup>



Natural / technology based disaster occurred

# Consumer's reaction after the 2011 disaster<sup>3</sup>

## Avoidance



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- Some seafood were contaminated by radioactive substances.
- Consumer concerned safety of seafood produced in affected area.
- “Avoid to purchase seafood”.

## Supporting



- North-east Japan was widely affected by huge Tsunami.
- Consumer purchase products to contribute for restoration.
- “Support through consumption”.

Purchase intent may be affected by two antithetical aspects

## Self-categorization theory

(Turner 1987)

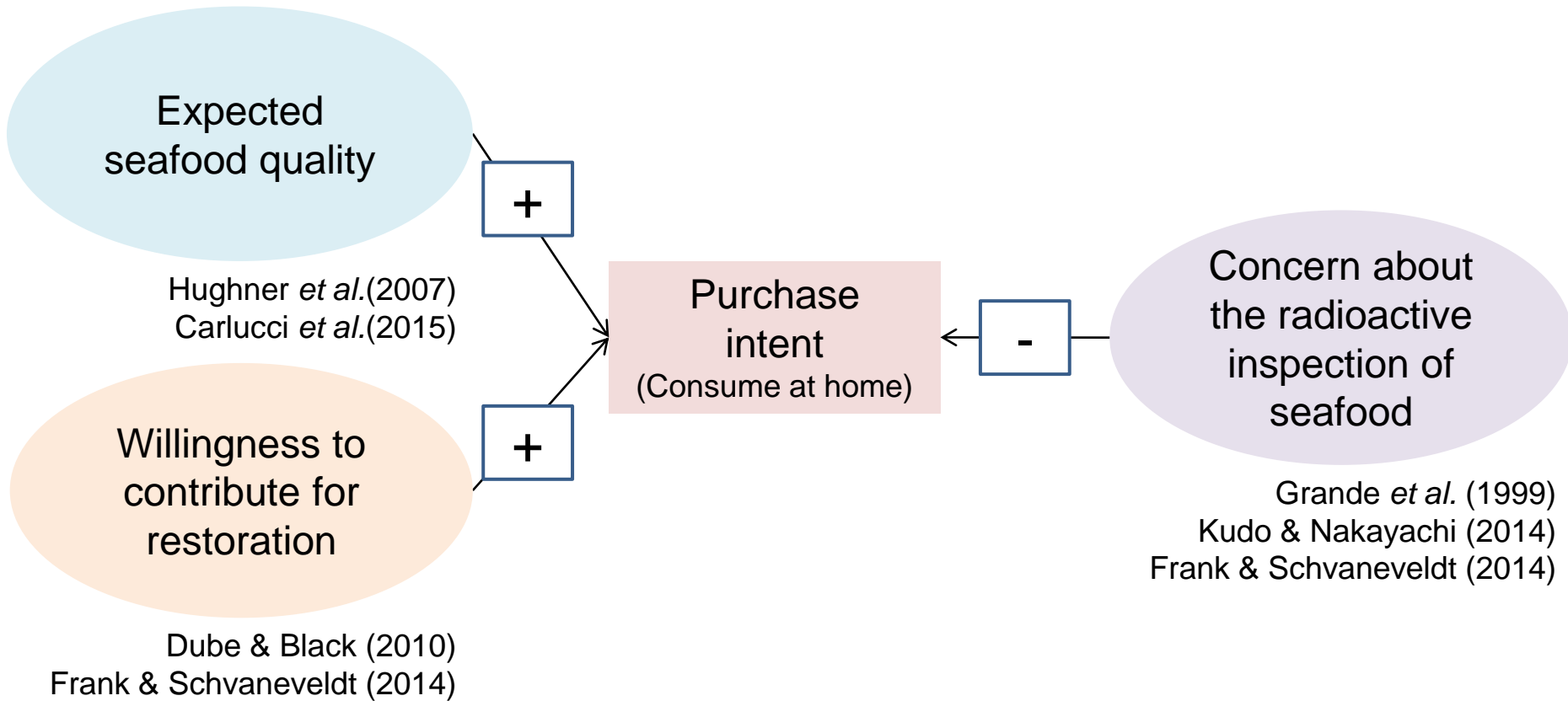
- Feeling and acting with others as part of a group operates through cognitive self-categorizations.
- Having both personal category and collective category.
- Personal category's salience causes self-preservation motives (Frank & Schvaneveldt 2014) .

## Collective resilience theory

(Drury *et al.* 2009)

- Derived from Self-categorization theory.
- Disasters will make collective category more salient.
- Enhancing the willingness to engage in supportive behavior.

1. Are these theories applicable for seafood consumption?



2. Is there any regional difference to the level of the effects?

3. Is there any chronological change to the level of the effects?

## Goal

Consumer-based resumption strategy of seafood distribution





## Reasons

- Important product of Miyagi, severely damaged area.
- Salmons are popular in Japan.

### Web questionnaire (2012)

- Scale: 5 points scale
- Sample size :  $n=568$
- Area : Tokyo and Osaka

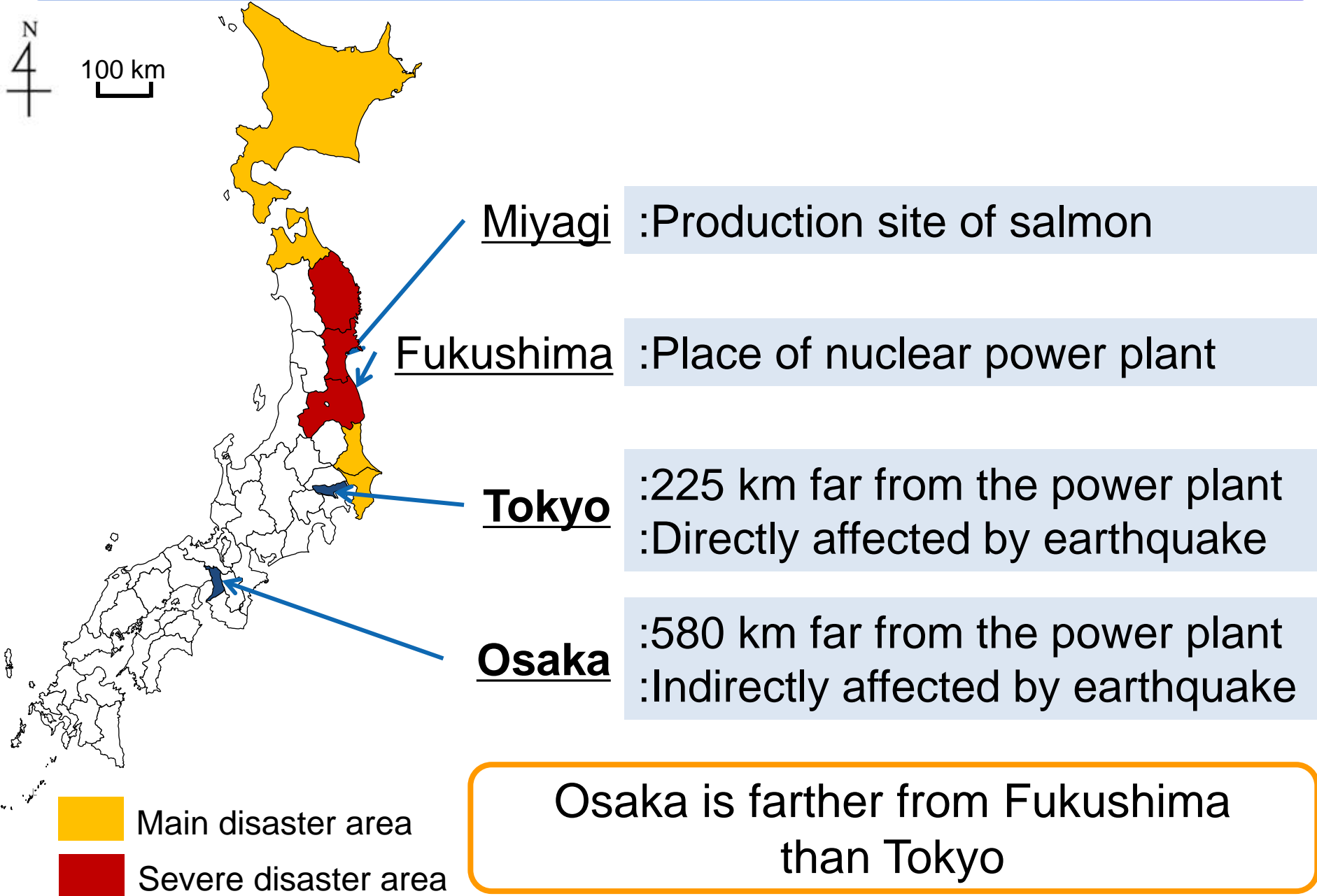
### Web questionnaire (2015)

- Scale: 5 points scale
- Sample size :  $n=1194$
- Area : Tokyo and Osaka

Factor analysis & Calculation of Cronbach's  $\alpha$

Structural Equation Modeling to clarify each factor's effect on purchase intent

# Location of target region and affected areas<sup>7</sup>



# Result :Factor analysis and Cronbach's $\alpha$

Expected  
seafood quality  
( $\alpha = 0.842$ )



- Taste
- Seasonality
- Price
- Nutrition
- Freshness

Willingness to  
contribute for  
restoration  
( $\alpha = 0.933$ )



- Contribute for the restoration
- Create employment
- Protect rural fishery culture

Concern about the  
radioactive inspection  
of seafood  
( $\alpha = 0.942$ )



- Inspective institution
- Inspective method

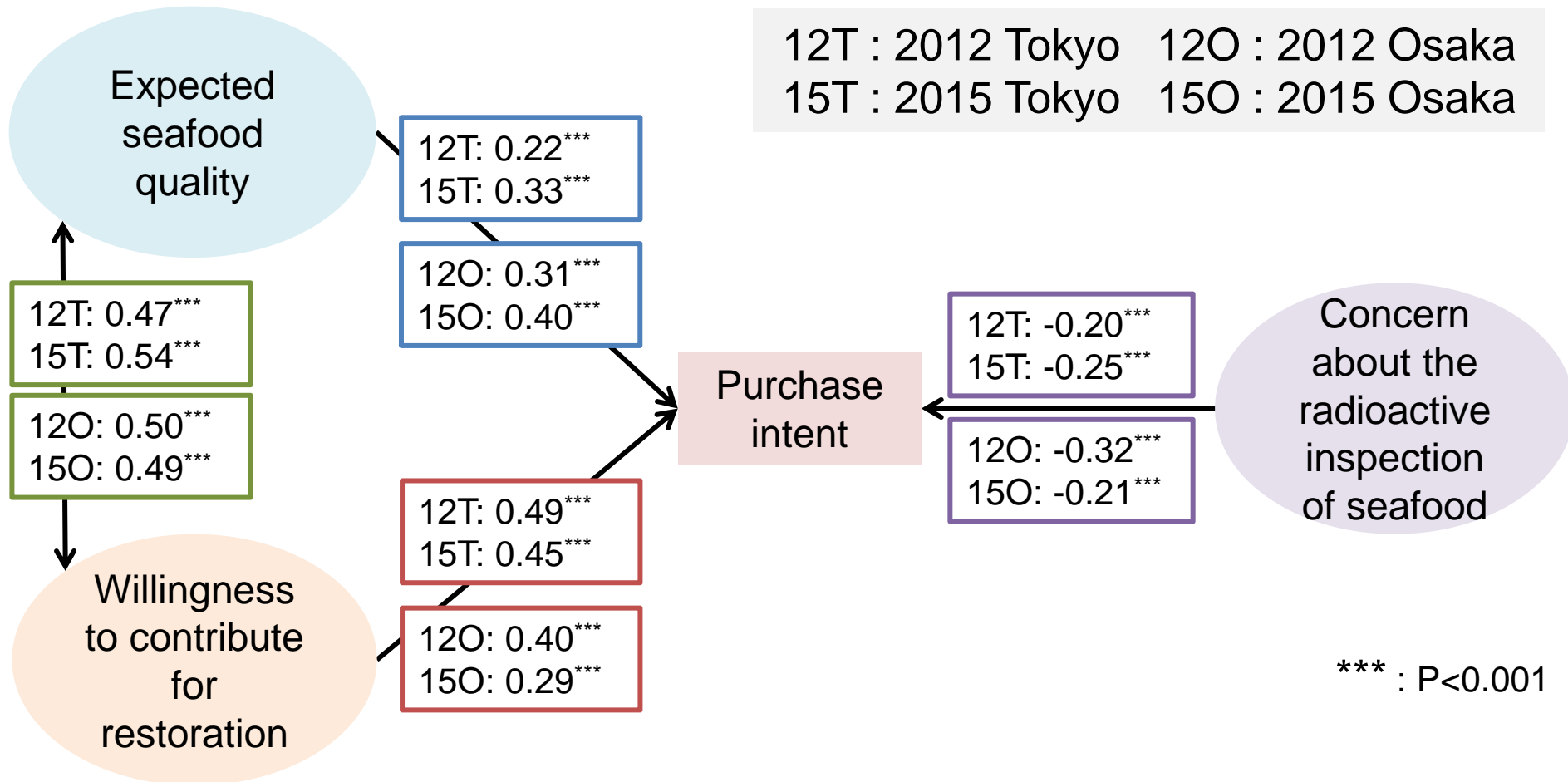
## Factor Correlation

	Quality	Contribution	Concern
Quality	1.000		
Contribution	0.498	1.000	
Concern	0.052	0.000	1.000

(Principal Axis Factoring, Promax rotation with Kaiser Normalization)



# Result : Structural Equation Modeling (SEM)<sup>9</sup>

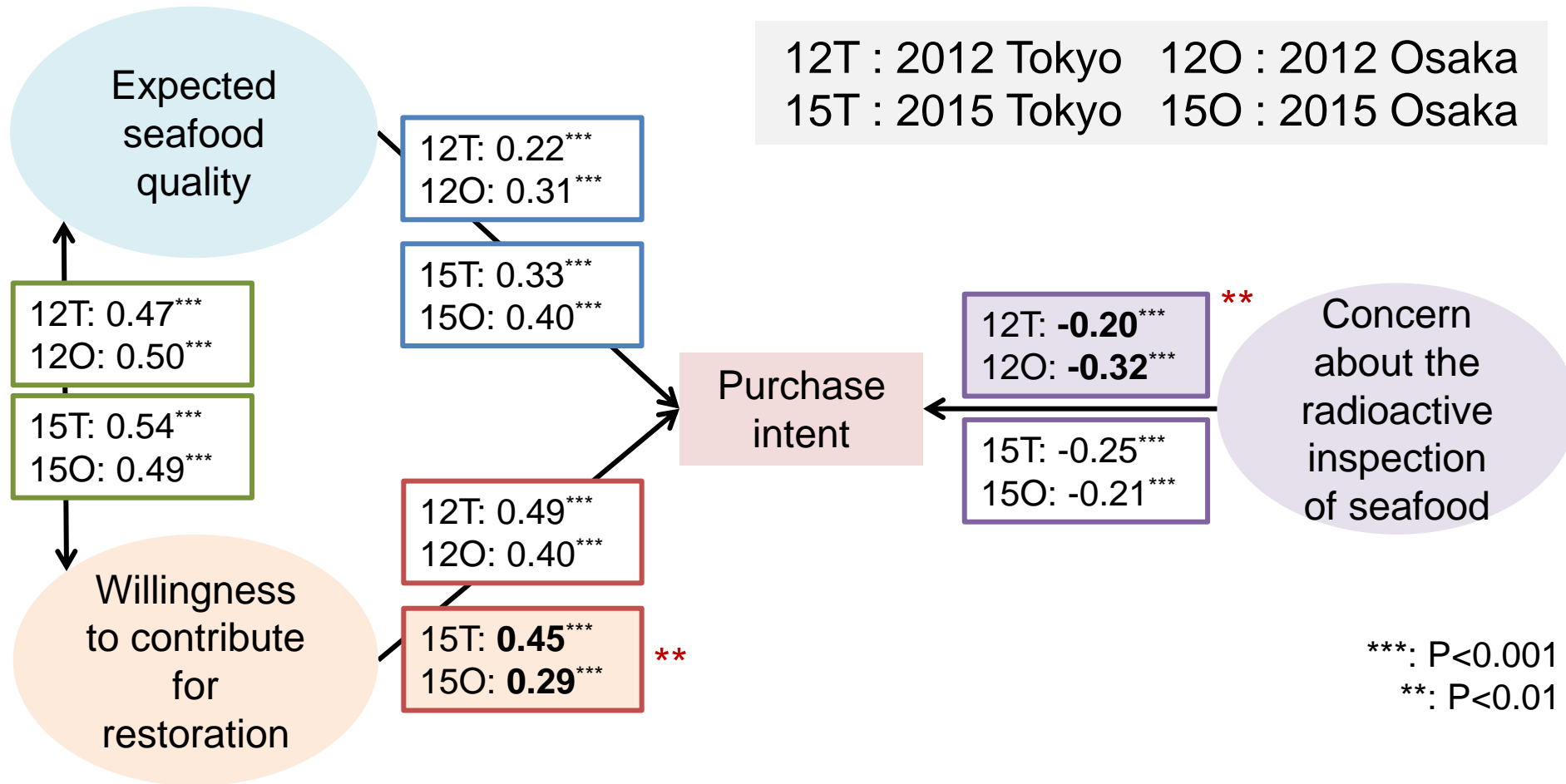


GFI = 0.965 ( $\cong$ 1.0), AGFI = 0.944 ( $\cong$ 1.0), RMSEA = 0.026 (<0.05)

1. Are the theories applicable for seafood consumption?

➤ Concern and willingness to contribute have significant effect

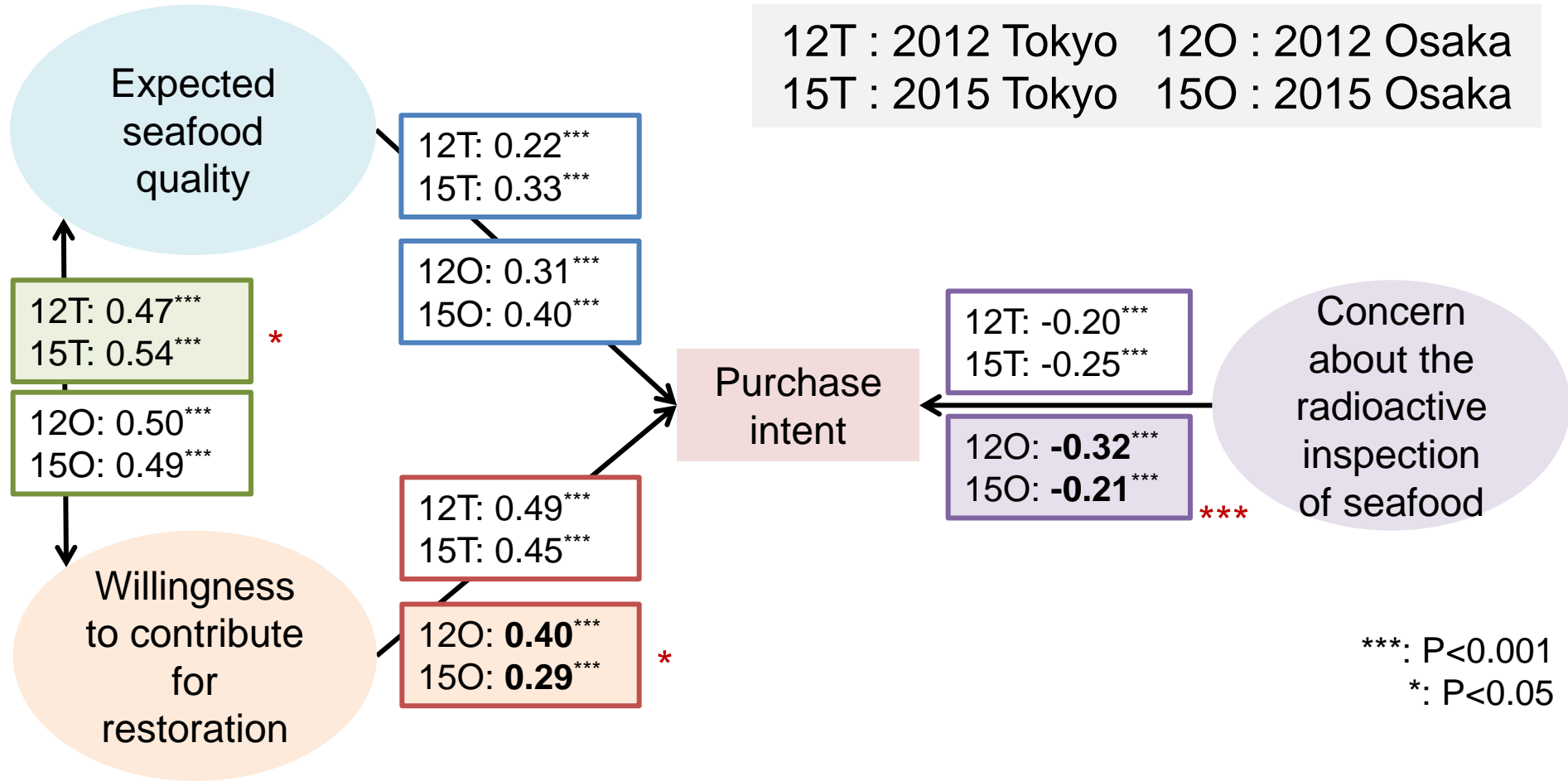
## 2. Is there any regional difference to the level of the effects?



➤ Consumer's concern in Osaka was stronger than Tokyo (2012)

➤ Willingness to contribute in Tokyo was stronger than Osaka (2015)

### 3. Is there any chronological change to the level of the effects?



- Consumer's concern in Osaka in 2015 was weakened than 2012
- Willingness to contribute in Osaka in 2015 was weakened than 2012
- Expected quality positively relates with willingness to contribute

- Concern is stronger in distant region immediate after disaster
  - Concern had decreased by the same level with neighboring region of disaster affected area with time passage.
- Willingness to contribute commonly motivate purchase intent
  - Degree of effect had decreased in distant region with time passage.
- Positive factors were not affected by consumer's concern
  - Although encouragement of positive factors reinforce purchase intent, they doesn't reduce consumer's concern.

## Conclusion

Distribution of seafood with stimulating willingness to contribute should be resumed in neighboring region.





Thank you for your listening!

