

**DIGITALISATION AND CIRCULAR ECONOMY:  
forestry and forestry based industry implications**

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▶  
**PERCEPTION OF WOOD-  
BASED PACKAGING  
INNOVATION APPLYING  
SMART SOLUTIONS**



Ján Parobek

Erika Loučanová

Martina Nosáľová

Anna Dovčíková



# Methodology

The perception of innovative approaches to packaging from wood based materials focused on smart and features in Slovakia.

- smart packaging suitability and aesthetics,
- increasing awareness for purchasing decisions,
- innovation and ability to distinguish product,
- improving information about product,
- increasing good will and ethical values of brand as fair trade, CSR, etc.,
- enhancement of product packaging through smart packaging,
- acceptance of product price increase with a smart package up to 10%.

COST Action FP1405



# Methodology

## Survey

- Likert scale in the range of 1 to 7 (1-insignificant and 7 - very significant (important))
- survey sample -100 respondents

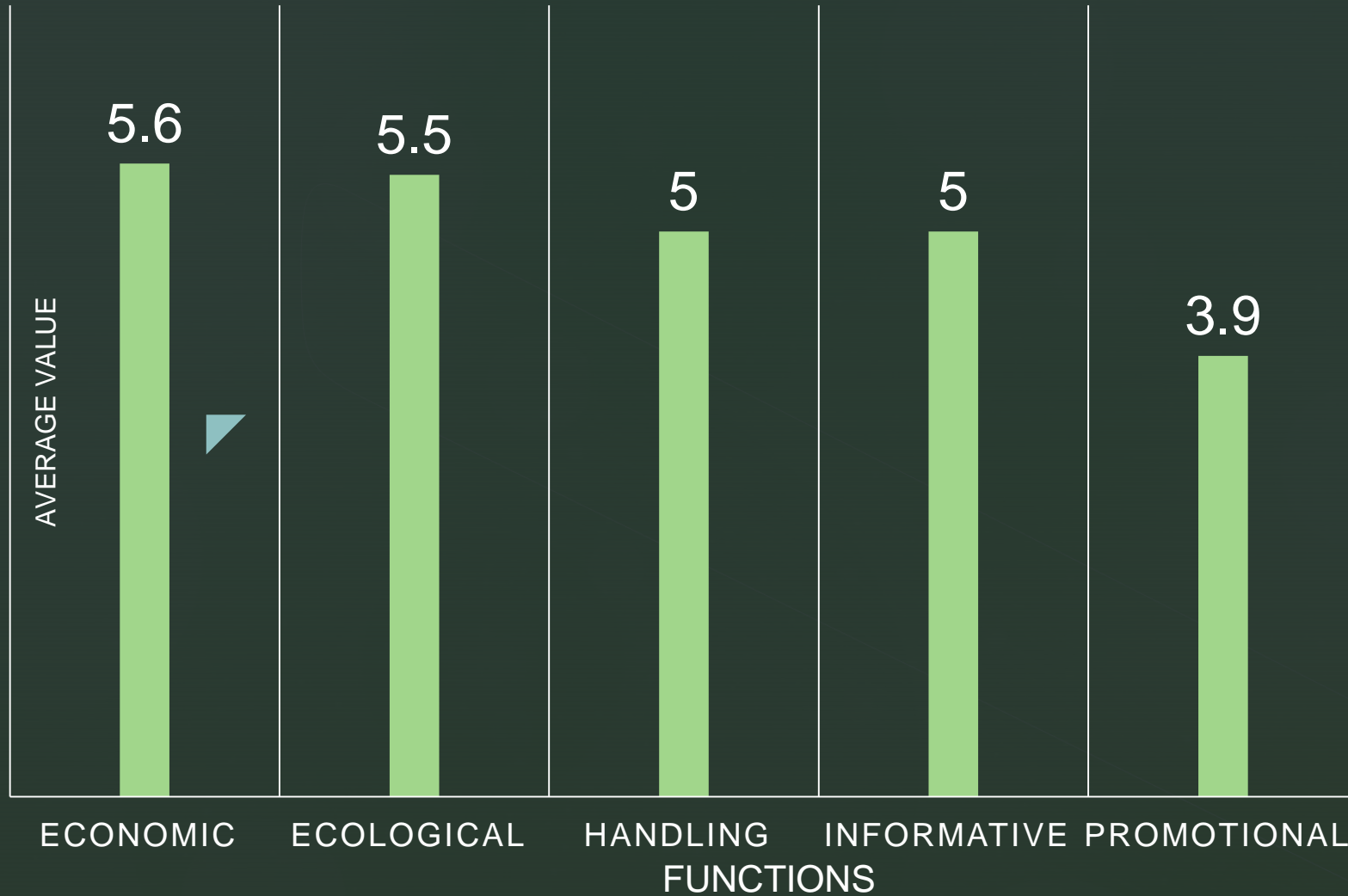
## Statistical Analyses

- Chi square test - the interdependencies between variables (age, income and education) and attitudes
- the probability of 95%

## Results

- focus on the individual functions of the wood based packaging
- to identify main advantages of innovative packaging functions for the decision-making processes

# Results







# Results

- The results confirmed similar attitudes of consumers to the economical and ecological function as previous study.
- All age categories respondents required ecological innovation packaging.
- The older generation requires mainly innovation of the handling function of packaging and a low innovation status.

- The ecological function for Slovak customers is on the second place, the attitudes are similar for different income groups as well as for different groups by education.
- The customers do not consider the improvement of wood base packaging from the material point of view because they perceived wood as one of the best environmentally friendly packaging material.
- The main target group for the new packaging innovations are consumers of age categories from 41 to 60 years, because they had the highest requirements for packaging innovation.

Research area	p value	
	education	income
Smart packaging suitability and aesthetics	0.015	0.047
Improve information for buying decision	0.013	>0.05
Innovation and ability to distinguish product	0.016	>0.05
Improve information about product	0.043	>0.05
Increases good will and ethical values of brand, CSR, etc.	0.037	>0.05
Customer prefer traditional wood base packaging	0.039	>0.05
Customer preferences for smart wood packaging with absorbent component	0.037	>0.05
Customer preferences for smart wood packaging with antioxidant properties or antimicrobial agents	>0.05	0.009
Acceptance of product price increase with a smart package up to 10%	0.048	>0.05
Acceptance of product price increase with a smart package from 10% up to 50%	0.032	>0.05



# Conclusion

- the active and intelligent packaging consider issue as new and unknown
- there is the low interest of using individual smart packaging innovation among them
- the lack of experience and information of using innovative wood base packaging reflects the unwillingness to accept the higher price increase





# Conclusion

- packaging has a significant potential to contribute to sustainable development through the functions
- the data confirm that the most important packaging functions are protective, ecological, information and economic
- for consumers the least important function was the promotion (advertising) function



► Thank you for your attention!

Associate Professor Ján Parobek, PhD.  
e-mail: [parobek@vsld.tuzvo.sk](mailto:parobek@vsld.tuzvo.sk)  
Department of Marketing, Trade and World Forestry  
Technical University in Zvolen  
Masarykova 24, 960 53 Zvolen, Slovakia



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