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

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# Do preferences for wood-framed houses'attributes change over time?



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### Background of the paper

- Current lifestyle trends return to a more natural, more personalized housing that is provided by family houses
- Preferences are changing traditional and long-established construction materials introduce modern, innovative and viable construction alternatives (including wood-based houses)
- The market of wood framed houses in Slovakia is influenced by consumer preferences, national legislative, state support, and influence of stakeholders
- Wood as a construction material is not used in Slovakia to such an extent as in the other European Union countries (reflecting its availability)

### The objective

- To present preferred attributes of wooden constructions by Slovak consumers
- To search for possible changes in consumers' preferences over time (after 10 years).

### Methods

- Time comparison of findings coming out of the surveys conducted among the Slovak respondents aimed at their preferences for the selected attributes of wood framed houses.
- The studies for comparison had been carried out in 2008 (Kaputa and Parobek, 2009) – referred as "S-2008", and 2018 (Olšiaková et al., 2018) – referred as "S-2018"
- The S-2008 used methodology based on non-probability sampling (purposive sampling) to acquire responses via questionnaire survey
  - The analysed sample consisted of 180 respondents
  - Answers have a form of five-point Likert-type scale
  - Frequency analysis and contingency tables were used to analyse relationships between the demographic factors and the answers.

### Methods

- The S-2018 also utilized a questionnaire
  - The analysed sample consisted of 154 respondents.
  - > The assessment of preferences was done by consumer satisfaction index (CSI).
  - The survey sample was comprised of respondents aged 18-60 with a particular interest in the economic active respondents.

The comparison was based on attitudes towards selected attributes of wood-framed houses.

While the study S-2008 dealt with the assessment how the respondents perceived certain factor of wood framed house (either positively or negatively), the study S-2018 assessed the importance of factors in choosing wood-framed house (either high or no importance).

Because the stylisation (and meaning) of questions of each study is not the same, we have discussed the findings which lead us to supplementary ideas on that issue.

### Results and discussion

Table 1. Assessment of attributes of wood framed houses in the S-2008 study (n = 180)

	Answers		
Attribute	Very positively, positively	Indifferent attitude	Negatively, very negatively
Enjoyable living	84.3%	12.3%	3.4%
Aesthetics	74.7%	19.7%	5.6%
Thermo-insulating attributes	70.8%	21.9%	7.3%
Acoustic attributes	57.9%	28.1%	14.0%
Environmental factors	51.7%	35.4%	12.9%
Durability	45.0%	37.6%	17.4%
Construction costs	37.6%	36.5%	25.9%
Risk of fire	22.5%	21.3%	56.2%

Source: Kaputa and Parobek, 2009

### Results and discussion

Table 2. Assessment of the requirements for wood-framed house in the S-2018 study (n = 154)

Requirements for wood-framed houses	Degree of importance	Order
Fire safety	9.05	9
Lifespan	9.01	8
Energy efficiency	8.93	7
Heat-insulation properties	8.66	6
Ratio of price and quality	8.53	5
Maintenance	8.18	4
Environmental friendliness	7.94	3
Acoustic properties	7.22	2
Speed of construction	6.93	1
Source: Olšiaková et al., 2018		

### Results and discussion

- Consumers put the highest importance in their buying decision on fire safety and lifespan and, at the same time, those attributes (together with construction costs) have the highest share of negative assessments.
- Environmental friendliness is of little public interest awareness about environmental appropriateness of wooden buildings is rather lower among consumers while still frequently discussed and much more appreciated among professionals

### Conclusion

- Technological changes, the rise of social media, evolving demographics, and increasing purchasing power of women are just a few factors that wood products manufacturers and retailers must consider in their marketing efforts
- Challenge for constructors:
   to ensure consumers about long-lasting durability and lifespan, constructors
   must accomplish adequate technological procedures of each individual
   project and instruct customers about a proper maintenance
- What significantly changed over the period of 10 years in Slovakia are not preferences, but rather legislative (wood constructions up to 5 storeys)
- After changes in legislation, no shift in a state support and the persistent pressure of silicate materials just proper marketing communication seems to be a right tool to change consumers' preferences and to attract investors for wooden constructions

## THANK YOU