

BUSINESS INNOVATION IN CROATIAN WOOD PRODUCTS INDUSTRY COMPANIES

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Introduction

The purpose of the business innovation process **is to create value for the organization**



Introduction

- ▶ This study presents investigation that attempt to explore **how some selected business innovation** (like, e.g quality and environmental activities, e-commerce) have an **impact on business success** of wood industry companies in Croatia

Methodology

STUDY INCLUDED:

- ▶ active furniture manufacturing and wood processing companies, with > **5 employees**
- ▶ with the best performance indicator
- **credit rating mark “A”** (the best 10 % of each group)

Regional
credit rating
service
Boniteti.hr

PERFORMANCE INDICATORS / FINANCIAL INDICATORS:

- ▶ EBIT (Earnings Before Interest and Tax),
- ▶ ETQ (Efficiency of Total Equity),
- ▶ ROA (Return on Assets),
- ▶ ROS (Return on Sales) and
- ▶ ROE (Return on Equity).

Methodology

1. E-BUSINESS INNOVATIVENESS INDICATORS (EBII):

- having website;
- using e-mails;
- having Web sales;
- network profiles: Facebook; Twitter; Instagram; LinkedIn and YouTube

Conducted on
websites



Methodology

2. CERTIFICATION INNOVATIVENESS INDICATORS :

- FSC CoC
- PEFC CoC
- ISO 9001
- ISO 14001

Official database

Kvaliteta.net, 2018



Methodology

3. CROATIAN QUALITY MARKS INNOVATIVENESS INDICATORS (CQMII):

- Croatian Quality mark
- Croatian Creation mark

} Croatian Chamber of Economy



4. EU FUNDING INNOVATIVENESS INDICATORS (EUFI):

- beneficiaries of EU funds - Yes/No

} <https://strukturnifondovi.hr/>

Results

- ▶ totally **47** companies - **32** furniture manufacturing sector (**C 31**) and **15** from wood processing sector (**C 16**)

Number of employees	Furniture Production (N=32)	Wood processing (N=15)
	(%)	(%)
from 5 to 10	3.1	/
from 11 to 50	50.00	20.00
from 50 to 250	43.8	60.00
more than 250	3.1	20.00

Results

► Performance Indicators of the Companies (average values)

Indicator	Furniture Production N = 32	Wood processing N = 15
EBIT	4 775 839 HRK	7 836 260 HRK
ETQ	1.11	1.10
ROA	11,49 %	8.83 %
ROS	7.72 %	8.02 %
ROE	22.26 %	14.74 %

Results

➤ 1. E - business innovativeness indicators (EBII)

Innovativeness Indicator	Production of furniture N=32	Wood processing N=15
Website	93.75 %	100.00 %
Online Sales	15.63 %	13,33 %
E-mail	96.88 %	100.00 %
Facebook	84.38 %	66.67 %
Twitter	21.88 %	6.67 %
Instagram	21.88 %	20.00 %
LinkedIn	28.13 %	13.33 %
YouTube	25.00 %	33.33 %

Results

➤ 2. Certification innovativeness indicators (CII)

Innovativeness Indicator	Furniture Production N=32	Wood processing N=15
FSC CoC	25.00 %	86.67 %
PEFC CoC	/	6.67 %
ISO 9001	28.13 %	40.00 %
ISO 14001	9.38 %	26.67 %

Results

▶ 3. Croatian Quality Marks Innovativeness Indicators (CQMII)

Innovativeness Indicator	Furniture Production N=32	Wood processing N=15
Croatian Quality mark	3.31 %	6.67 %
Croatian Creation	0.00 %	0.00 %

▶ 4. EU funding innovativeness indicators (EUFI)

- ▶ totally 14 (43.75 %) companies from C 31 sector were beneficiaries of EU funds and 5 (33.33 %) from C 16.
- ▶ average funding for companies that belong to sector C 31 was 5 423 149 HRK and for C 61 companies was 15 497 203 HRK.

Results

IN TOTAL:

- ▶ Mann-Whitney U test showed that companies from both sectors who have website achieved better performance profitability ratios ROS and ROE (U = 2.00; n1 = 2; n1 = 45; p = 0.007; p = 0.17 two-tailed)
- ▶ Companies who have implemented FSC CoC certification have better profitability indicator EBIT, instead of those who don't have FSC CoC (U = 127 000; n1 = 26; n1 = 21; p = 0.002).

SEPARATELY:

- ▶ For **C 31**, results showed that implementation of ISO 14001, ISO 9001 and FSC CoC has a small and positive and effect on performance profitability ratios ROS and EBIT (r = 0.238; r = 0.290; r = 0.211; p<0.05).
- ▶ For **C 31**, E- bussies innovation activities (like having a WEB site, Instagram profile) have small but positive effect on company profitability (r= 0,295 ; p<0,05).
- ▶ For **C 31**, positive and small effect on profitability ratios ROS and using EU funds (r = 0.212; p<0.05).

Results

SEPARATELY:

- ▶ For **C 16**, Moderate significant effect have implementation of FSC CoC and PEFC CoC on company's profitability indicator EBIT
- ▶ For **C 16**, Croatian quality mark has small but positive effect on company's profitability ($r = 0.247$; $p < 0.05$)
- ▶ For **C 16**, positive and small effect on profitability ratios ROS and using EU funds ($r = 0.212$; $p < 0.05$).
- ▶ For **C 16**, Correlation matrix showed moderate effect on performance profitability ratios ROA and EBIT within wood processing companies that have LinkedIn, Facebook and Twitter profile ($r = 0.545$; $r = 0.433$; $r = 0.433$; $p < 0.05$).
- ▶ For **C 16**, small effect was found between profitability ratios ROS, profitability indicator ETQ and EU founding's ($r = 0.212$; $r = 0.630$; $p < 0.05$).

Conclusion

- The study shows that researched companies mainly have implemented different kinds of innovative segments in their production processes and in business activities.
- The results have shown that majority of researched companies have implemented e-business activities, with the slightly better results in furniture manufacturing than in wood processing companies,
- Regarding certification innovativeness indicators, FSC CoC certification found to be mostly implemented in wood processing, and ISO 9001 certification in furniture manufacturing companies.
- This research has confirmed that E-business innovativeness indicators like: having a website, Facebook, LinkedIn and Twitter company profile have positive impact on business success of wood industry companies in Croatia.
- Further, that implementation of ISO 9001, ISO 14001, FSC CoC certification and Croatian quality marks in Croatian wood industry companies have a positive effect on companies' business success.