A COMPARISON OF INNOVATION IN THE FURNITURE MANUFACTURING INDUSTRIES OF CROATIA AND THE UNITED STATES

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INTRODUCTION

Why furniture industry?  Why Croatia & USA?  Why innovation?

... is value-added sector ...

... was a proud part of the industrial landscape ...
... is a significant and profitable segment of economy ...
... loss of market share ...
... decline of domestic consumption ...

... Is a metric for economic growth ...
... is necessary for firms to survive ...
... is an important source of competitiveness ...
The terms innovative and innovation are used to describe the flexibility of firms in meeting changes in the business environment (Tyson, 1997).

Innovation has a broad array of definitions going back to Schumpeter (1911), cited by Cao and Hansen (2006), who describe innovation as the engine of economic development.

According to Dewar and Dutton (1986) innovation is an idea, practice, or object that is perceived as new to an individual or another unit of adoption.

Adapting to changes in competitive markets through innovation is necessary for firms to survive (Bullard and West, 2002).
Objectives: 1) characterize & compare furniture manufacturing sectors; 2) identify innovation adoption in 3 areas: product, production processes, and business and; discern how innovation is related to company success and competitive position.

Data Collection:
- Mail-based survey following Dillman (2007)
- Furniture manufacturers randomly selected
- Quantitative data used; Likert scales for model variables
- Croatia: 77 useable responses-adjusted response rate of 24.2%
- US: 74 useable responses-adjusted response rate of 23.5%
THE MODEL

Product

Product Process

Business Process

Innovation

Competiveness

Internal & External Factors
RESULTS

Percent of 2008 company revenue that came from sales of new/improved product:

U.S. = 35.6%
CROATIA = 2.8%
RESULTS

Level of Company Flexibility
U.S. (n=74) and Croatia (n=77)

Significant difference at $\alpha=0.05$

- **Very inflexible**: US 11%, Croatia 0%
- **Somewhat inflexible**: US 11%, Croatia 1%
- **Somewhat flexible**: US 43%, Croatia 38%
- **Very flexible**: US 32%, Croatia 57%
- **I don't know**: US 0%, Croatia 4%

This indicates a significant difference between the two countries in terms of company flexibility levels.
Comparison of company innovation relative to other furniture industry companies in the U.S. and Croatia AND relative to other industries in the U.S. (n=74) and Croatia (n=77)

*Significant difference at $\alpha=0.05$
Comparison of encouraging and rewarding employees for improvements in the U.S. (n=69) and Croatia (n=77)

My company:

- Encourages employees to suggest organizational improvements
  - Mean Response: 3.7 (US) vs. 3.7 (Croatia)
- Rewards employees that suggest organizational improvements that are implemented
  - Mean Response: 3.1 (US) vs. 3.6 (Croatia)
- Encourages employees to suggest technology improvements
  - Mean Response: 3.9 (US) vs. 3.5 (Croatia)
- Rewards employees that suggest technology improvements that are implemented
  - Mean Response: 3.7 (US) vs. 3.7 (Croatia)

*Significant difference at $\alpha=0.05$
Level of company improvement over the last three years in the U.S. (n=72) and Croatia (n=77)

- Research and development have investments increased
- Production equipment has improved
- Production software has improved
- We have become more competitive
- Information technology has improved

Mean Response
1=strongly disagree; 5=strongly agree

*Significant difference at α=0.05
In 2008, U.S. furniture company respondents achieved a much higher level of revenue from sales of new/improved products compared to Croatian respondents...may be an indicator that U.S. furniture companies are more innovative.

A higher percent of Croatian respondents characterized their companies as ‘very flexible’ with regard to adopting new practices compared to U.S. respondents and no Croatian respondents characterized their company as ‘very inflexible’, while 11% of U.S. respondents believe this to be the case.

Becoming innovative and applying innovation are becoming more important to U.S. and Croatian furniture companies.
• 90% of both U.S. and Croatian respondents indicated that their companies are about at the same level of innovation, more innovative or much more innovative relative to other companies in their furniture industries.

• Respondents in both countries said their furniture industries are about at the same level of innovation or much more innovative relative to other industries.

• Respondents from both countries generally encourage employees for organizational and technology improvements while Croatian respondents are more prone to reward their employees for suggesting and implementing such improvements.

• Croatian respondents said that production equipment and production software were more improved in comparison to U.S. respondents.