



Dynamic Models of the Creative Industries' Entities in the Globalized Environment

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Introduction

- focusing to the economic and financial globalized environment
- Dynamic models are essential for understanding the system dynamics in open-loop or for closed-loop control.
- These models are either derived from data or from more fundamental relationships that rely on knowledge of the process or the environment.
- The system dynamics model studies the interactions between three main dimensions: the Slovak economy, the economic value of the Creative Industries and utility welfare.



Research Aim

- to propose two dynamic models describing the behaviour represented by growth and innovation of the Creative Industries in Slovakia
- Research question no. 1: How could be growth of the economy driven by the creative industries in Slovakia?
- Research question no. 2: What is the dynamic relation between the creative industries' innovation and the rest of the Slovak economy?



Methods

The model 1 is defined by these two formulas:

$$(dY/dCI) > 0 \quad (1)$$

$$(dU/dCI) \geq 0 \quad (2)$$

- If the model 1 is true, then there is a clear economic case for redirecting resources, not just for the benefit of the creative industries per se, but for the benefit of all.
- Model 2 proposes the creative industries as growth drivers not because of operational expenditure multipliers, but due to their role in the adoption, retention and absorption of new ideas and technologies.

The model 2 is described by the formula 3 and 4:

$$(dY/dCI) \text{ undefined} \quad (3)$$

$$(dU/dCI) \text{ open} \quad (4)$$



Results

- The model 1 is not valid in Slovakia because the condition ($dU/dCI \geq 0$) was not fulfilled
- Based on the results of our research, we can conclude that according to the premises model 2 is valid in the Slovak economic environment
- With improved and continual cultural statistics, also a more developed analysis would be possible

Year	Y	U	CI	dY/dCI	dU/dCI
2010	68 093,0	418,3	9 777	0,0005127	0,031982942
2011	70 043,4	433,3	10 246	0,0007531	-0,119220056
2012	71 371,3	476,1	9 887	uncountable	uncountable
2013	71 850,1	469,2	unavailable	uncountable	uncountable
2014	73 827,8	457,4	unavailable	uncountable	uncountable
2015	77 387,7	452,6	11 690	0,0006086	-0,013011152
2016	79 030,9	438,6	12 766	0,0004154	0,072202591
2017	81 438,4	499,9	13 615	0,0003151	uncountable
2018	84 611,9	unavailable	13 789	0,0004928	uncountable
2019	86 641,3	unavailable	14 115	0,023303	uncountable



Conclusion

- We cannot predict with confidence whether the coming year will bring a higher or a lower level of globalization
- Model 1 based on the growth was not confirmed and it is not valid for the Slovak globalized environment
- Model 2 linked to the innovation of the creative industries and the rest of the economy is predicting the dynamic behaviour of the creative industries' entities
- Policy should properly treat the creative industries as a 'special sector'. This is not because it is economically significant, but because it powers the innovation of other sectors.





Thank you for your attention.

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