

**Activity summary of CIAS research fellow in Budapest**

Grant category:  junior  senior  non-resident senior



**Name:** Devesh Singh

**Home institute** (name, position, country): Kirori Mal College, University of Delhi, Principal Investigator, India

**Academic Year / Semester:** 2023

**Duration:** 5 months; 1 March 2023- July 2023

**Project title:** Social fairness and prosperity in Industry 5.0: the case of manufacturing sectors

**Project description\*:** Human centricity is the main component in achieving social fairness and prosperity in Industry 5.0. Nevertheless, there is a lack of research that considers human centricity at its core in the evolution of the manufacturing industry towards Industry 5.0. This study aims to quantify the concept of Industry 5.0, with a focus on human centricity in the manufacturing sector. The panel nonlinear autoregressive distributed lag method is applied to the food, textile, chemical, high-tech, and transport manufacturing sectors to assess asymmetry and vulnerability. In this study, the social fairness variable based on the European Union policy framework is employed as the control variable for Industry 5.0. The robustness of the results is tested using a panel Granger non-causality test and panel vector autoregressive models. The results show that the chemical and high-tech industries do not respond to positive and negative shocks. This implies that these sectors are better able to bear shock impulses and are more resilient. Research on Industry 5.0, especially on the importance of social fairness in manufacturing, is still in its infancy. This study is a pioneering effort to present literature on social fairness and prosperity in Industry 5.0.

**Achieved result(s)\*:** Our results reveal significant asymmetries in the manufacturing sectors. The results suggest that positive and negative changes in social variables of human centrality to manufacturing sector affect differently in long and short run.

**Connected publications\***

1.

**Title:** Social fairness and prosperity in Industry 5.0: the case of manufacturing sectors

**Date of submission/acceptance/publication:** 10/07/2023

**Journal:** Journal of Industrial Information Integration

**Journal category** (if applicable):  Q1  Q2  Q3

**Status:**  accepted/published  in progress  planned

2.

**Title:** Role of digital education, research and development, renewable energy, economic development and household to make energy efficient economy

**Date of submission/acceptance/publication:**

**Journal:**

**Journal category** (if applicable):  Q1  Q2  Q3

**Status:**  accepted/published  in progress  planned

**Professional collaborations, partnerships\***

1.

Name: Viktorija Cohen

Institution: Vilnius University, Vilnius, Lithuania

Field of research: Economic Policy, Sustainability

Future plans for joined research: International Trade and Foreign Direct Investment in Eastern European Countries

2.

Name: Gergely Toth

Institution: toth.gergely@uni-mate.hu

Field of research: Sustainability

3.

Name: Hartvig Áron Dénes

Institution: Corvinus University of Budapest

Field of research: Sustainability

4.

Name: Molnár Endre Mihály

Institution: Corvinus University of Budapest

Field of research: Investment

Future plans for joined research: Foreign Direct Investment



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**Additional activities\*** (public lectures, presentations, professional meetings, media connections etc.):

1. CIAS workshop presentation
- 2.
- 3.

**Future plans, planned return** (if any):

- I plan to return to Hungary later
- I plan to maintain my professional contacts via e-mail
- Any other comment:

\*Please give us a properly detailed summary.

Date: 10/07/2023

Signature: *Devesh Singh*