Valerio Dionisi

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⌨ *GitHub*   ☎ Rome (It), 04/07/1997

Current Positions

» Doctoral student in Economics and Statistics, *University of Milano-Bicocca*   *Milan, Italy*

Research Interests

Macroeconomics, Production Networks, Structural Macro-Labour, Fiscal and Monetary Policy

Education

2024 – 2025 · *Visiting Ph.D. Student*   University of Oxford

  Activities: Production networks, macro-labour, fiscal policy
  Advisor: Prof. **Francesco Zanetti**

2023 – 2024 · *Visiting Ph.D. Student*   Universitat Pompeu Fabra

  Activities: Numerical techniques for quantitative macroeconomics, production networks
  Advisor: Prof. **Davide Debortoli**

2021 – present · **Ph.D.** in Economics, Statistics and Data Science   University of Milano-Bicocca

  Topics: Macroeconomics, production networks, macro-labour
  Thesis: "Macroeconomic Perspectives on Sectoral Composition: Networks and Inequality"
  Supervisor: Prof. **Andrea Colciago**

2019 – 2021 · **Ms.C.** in European Economy and Business Law (summa cum laude)   Tor Vergata University

  Thesis: "Evidence of Debt Consolidation Dynamics for Europe and Italy"
  Supervisor: Prof. **Barbara Annicchiarico**, *Co-supervisor*: Prof. **Leonardo Becchetti**

2016 – 2019 · **B.A.** in Political Sciences   Roma Tre University

  Thesis: "Assegnazione degli Strumenti e Coordinamento delle Politiche Economiche"
  Supervisor: Prof. **Gian Cesare Romagnoli**

Further Education

2022   *Advanced Computational Macroeconomics*   London School of Economics

Research Papers

Job Market Paper · **The Horizontal Geometry of Production Networks**   GO TO THE PAPER

This paper makes two novel contributions to the understanding of production networks and their role on comovement. First, it introduces a theoretical framework that distinguishes between demand- and supply-driven network distances, measuring economic distance between sectors based on shared upstream sellers or downstream buyers. These horizontal complementarities determine how sector-specific shocks transmit horizontally across the network, paralleling and rebalancing the standard vertical mechanism of sectoral supply chains. Comovement thus hinges on the geometry of network distances: nearby sectors tend to move in opposite directions due to common trade relations, whereas distant sectors comove as vertical propagation prevails. Second, using sector-level U.S. employment data, the paper provides empirical evidence that positive employment shocks in closely demand- or supply-related sectors are counteracted, while greater network distances generate employment comovement. Together, these two contributions reveal that the horizontal geometry of a production network plays a critical role in understanding how sectoral interactions propagate micro-originated shocks in an Input-Output economy.

Working Papers	***Industry Contribution to U.S. Wage Inequality***	GO TO THE PAPER

Industry dimension is increasingly dominant to investigate the upward trend of inequality. This paper examines the key drivers of U.S. wage inequality through a general equilibrium model, emphasising the role of heterogeneous capital-labour substitution elasticities across industries in shaping wage dispersion. Key is the distinction of a *quantity effect* (changes in the composition of capital and labour inputs) and a *structural effect* (reflecting technological transformations in inputs substitutability) from Skill-Biased Technological Change (SBTC). Findings suggest that industry-level transformations on the labour side − differentials in job tasks substitutability and workforce composition − constitute the principal drivers of real wage inequality, overshadowing the contribution of capital-side adjustments. A structural estimation of the model reveals that trend-asymmetries in the elasticities of substitution between ICT capital, routine and non-routine workers account for 94% of observed wage variance, while stronger sorting and segregation effects further exacerbate such dispersion. Upon neutralising structural differences between industries, SBTC reckons merely 6-15% of the observed wage inequality.

Work in Progress	***Euro Area Production Networks and the slope of the Phillips curve***

with Colciago A. (DNB, UniMiB), Siena D. (PoliMi, Bocconi), and Zago R. (BdF, CdF, ESCP)

Where to Sit in the Chain: Microfoundations and Micro-to-Macro Implications of Global Value-Chain Positioning
with Siena D. (PoliMi, Bocconi)

TEACHING

2024/2025-still	***International Macroeconomics*** *(Grad), TA Lecturer*	POLYTECHNIC UNIVERSITY OF MILAN
2024/2025-still	***Macroeconomics*** *(UndGrad), TA Lecturer*	POLYTECHNIC UNIVERSITY OF MILAN
2023/2024-still	***Computational Macroeconomics*** *(Grad), TA Lecturer*	UNIVERSITY OF MILANO-BICOCCA
2023/2024-still	***Dynamic Asset Pricing*** *(Grad), TA*	UNIVERSITY OF MILANO-BICOCCA
2023/2024-still	***Economia dei Contratti Finanziari*** *(Grad), TA*	UNIVERSITY OF MILANO-BICOCCA
2023/2024-still	***Macroeconomics*** *(UndGrad), TA*	UNIVERSITY OF MILANO-BICOCCA

SKILLS

Languages:	ITALIAN (native), ENGLISH (fluent), FRENCH and SPANISH (intermediate)
Programming:	MATLAB, DYNARE (advanced); STATA, R (proficient); LATEX (advanced)
Microsoft Office:	WORD, EXCEL, POWERPOINT, OUTLOOK

CERTIFICATES

2021	Introduction to Linear Algebra	MATLAB
2021	Introduction to Statistical Methods	MATLAB
2021	Fundamentals	MATLAB
2021	OnRamp	MATLAB
2021	Optimization OnRamp	MATLAB

PROFESSIONAL ACTIVITIES

Conferences

2025	3rd Milan Ph.D. Economics Workshop, *Organizer*; Naples School of Economics: 4th PhD and Post-Doctoral Workshop, *Presenter*
2024	2nd Milan Ph.D. Economics Workshop, *Organizer*

References

Andrea Colciago

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Gino Gancia

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