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## **RESEARCH INTERESTS**

Health, Climate, Energy, and Dynamic Firms.

## **POSITIONS**

*Jun 2007- Sep 2007* : Visiting fellow, Department of Economics, Cornell University, USA

*Jan 2009-Jun 2009*: Visiting professor, Department of Economics, NUS, Singapore

*Jan 2011-Mar 2011*: Research fellow, NUS Business School, Singapore

*Jul 2008- : Researcher, Toulouse School of Economics (TSE-R,INRAE)*

## **EDUCATION**

PhD in Economics, University of Paris 1, Panthéon-Sorbonne, 2007

MSc in Mathematics, Hanoi Institute of Mathematics, 2003

## **PROJECTS**

1. Leader (09/2024-09/2025) **Climate Policy Uncertainty, Energy Transition and Firm Resilience**, Sophie Germain program funded by the French Ministry for Europe and Foreign Affairs and the UK Department for Science, Innovation and Technology
2. Co-Leader **Socio-économiques du changement climatique au Viet Nam et stratégies d'adaptation** (GEMMES VN) ( 2020-2022)
3. Co-Leader: **AI Marketplace Project: A Business Model and Analysis** (Aus4Innovation Program – CSIRO, 2021-2023)
4. Leader WP6: **Socioeconomics impacts Vietnam Space Climate Observatory** (VietSCO project, SCO CES-Toulouse, 2021-2025)
5. Leader: **Environmental Health and Climate Change** (AFD) 2019-2022
6. Co-leader: **Risk Analysis and Policy Assessment for Wheat Health** (POLIRISK) Métaprogramme SMACH INRA, 2016-2019
7. Leader: **Impacts of Coastal Erosion in Vietnam: Theoretical Models and Empirical Approaches** (VIET-EROSION) 2017-2019
8. Leader: **Assessment of climate change impacts on NgheAn, Vietnam: Mitigation and adaptation**, 2012-2014, VIETFLOOD
9. Key member: **Croissance Économique et Demande d'Énergie en présence du Progrès Technique Endogène (CEDEPTE)**, ANR project, CNRS 2007-2009
10. Member: **Insurance and remote sensing data in agriculture**, CoEDITAg, ANR et INRAe, 2023-2026.

**REFEREES:** *Econometrica, Economic Theory, European Economic Review, Journal of Public Economic Theory, Journal of Mathematical Economics, Macroeconomic Dynamics, Environmental Modeling & Assessment, Mathematical Social Sciences, Economic Analysis and Policy, Journal of Asian and African Studies, Ecological Modelling, Economic Bulletin.*

## WORKING PAPERS

- Aging in the Air: The Impact of Carbon Emissions on Health-Related Quality of Life,  
T Luong, MH Nguyen  
*TSE Working Paper, 2024* ([PDF](#))
- Climate change, labor market frictions and inequality,  
A. Goenka, L. Liu, MH. Nguyen and H. Pang, TSE Working paper, 2025 ([PDF](#))
- M.H Nguyen, Le V.C, Artificial intelligence and firm-level productivity, WP 2024
- The two energy transitions and the Hotelling rule: Exhausting a resource while building, maintaining and scrapping a dedicated capital,  
JP Amigues, M Moreaux and M.H Nguyen, Working paper , 2024, ([PDF](#))
- The optimal timing of environmental policy and welfare cost under ecological and economic uncertainties,  
M.H Nguyen and T Luong, Working paper, May, 2024 ([PDF](#))
- Impact of energy-related uncertainty on firm's productivity,  
C Berner and MH Nguyen, Sep 2024.
- COVID-19, lockdown and labor uncertainty,  
T Luong, M.H Nguyen, TSE Working Paper, n. 20-1137, August 2020 ([PDF](#))

## ARTICLES

1. M.H Nguyen, VN Hoang, S Nghiem, LA Nguyen,(2025). The Dynamic and Heterogeneous Effects of COVID-19 Vaccination Mandates in the USA, *Health Economics*,34: 51-536. ([PDF](#))
2. Nguyen, L.A., Nguyen, M.H., Reynaud, A., & Simioni, M. (2024). A comparative study of residents and tourists' valuation for a heterogeneous environmental good: The case of coastal erosion. *Marine Policy*, 161, 106038.
3. Goenka, A., Liu, L., & Nguyen, M.H. (2024). Modelling optimal lockdowns with waning immunity. *Economic Theory*, 77(1), 197-234.
4. Dang, H.A., Huynh, T.L.D., & Nguyen, M.H. (2023). Does the Covid-19 pandemic disproportionately affect the poor? Evidence from a six-country survey. *Journal of Economics and Development*.
5. Ha, L.T., Hung, N.M., & Van Chon, L. (2023). Decomposed and partial connectedness between economic globalization, non-renewable and renewable energy consumption in Vietnam. *Environmental Science and Pollution Research*, 30(55), 117061-117081.
6. Nguyen, L.A., Nguyen, M.H., Hoang, V.N., Reynaud, A., Simioni, M., & Wilson, C. (2023). Tourists' preferences and willingness to pay for protecting a World Heritage site from coastal erosion in Vietnam. *Environment, Development and Sustainability*, 1-22.

7. Nguyen, C.V., Nguyen, M.H., & Nguyen, T.T. (2023). The impact of cold waves and heat waves on mortality: Evidence from a lower middle-income country. *Health Economics*, 32(6), 1220-1243.
8. Luong, T.A., Nguyen, M.H., Truong, N.T.K., & Le, K. (2023). Rainfall variability and internal migration: The importance of agriculture linkage and gender inequality. *Economic Analysis and Policy*, 77, 326-336.
9. Nguyen, M.H., Le, C.V., & Atkinson, S.E. (2022). The production inefficiency of US electricity industry in the face of restructuring and emission reduction. *Journal of Economics and Development*, 24(4), 278-292.
10. Aubert, C., Dang, H.A., & Nguyen, M.H. (2022). The Unequal Impact of the COVID Pandemic: Theory and Evidence on Health and Economic Outcomes for Different Income Groups. *Revue française d'économie*, 43-77.
11. Arnaud, R., MH, Nguyen., & Cécile, A. (2022). Correction to: Is there a demand for flood insurance in Vietnam? Results from a choice experiment. *Environmental Economics and Policy Studies*, 24(2), 305-305.
12. Le, M.H., Luong, C., & Nguyen, T.A. (2022). The relative roles of domestic and foreign capital in aggregate production of GDP and CO<sub>2</sub>-equivalent emission across OECD countries. *Environmental Science and Pollution Research*.
13. Nguyen, M.H., Le, D.P., & Vo, T.T. (2021). Vulnerability to natural disaster and welfare effect: A case study of flood risk in Vietnam's North Central region. *Journal of Asian and African Studies*, 56(8), 1879-1898.
14. Espagne, E., Ngo-Duc, T., Nguyen, M.H., Pannier, E., Woillez, M.N., Drogoul, A., et al. (2021). Climate change in Viet Nam; Impacts and adaptation. A COP26 assessment report of the GEMMES Viet Nam project. *Paris AFD*, 612.
15. Goenka, A., Liu, L., & Nguyen, M.H. (2021). COVID-19 and a green recovery? *Economic Modelling*, 104, 105639.
16. Nguyen, M.H., Nguyen, T.L.A., Nguyen, T., Reynaud, A., Simioni, M., & Hoang, V.N. (2021). Economic analysis of choices among differing measures to manage coastal erosion in Hoi An (a UNESCO World Heritage Site). *Economic Analysis and Policy*, 70, 529-543.
17. Goenka, A., Liu, L., & Nguyen, M.H. (2021). SIR economic epidemiological models with disease-induced mortality. *Journal of Mathematical Economics*, 93, 102476.
18. Goenka, A., & Nguyen, M.H. (2020). General existence of competitive equilibrium in the growth model with an endogenous labor-leisure choice. *Journal of Mathematical Economics*, 91, 90-98.
19. C Le, M.H Nguyen, LA Nguyen (2020). The economic impact of climate change on the fishing industry in Vietnam. *Journal of Asian Economic and Business Research*.
20. M.H Nguyen, LA Nguyen, T Nguyen (2020). Economic valuation of the coastal erosion prevention program: A case study of Hoi An. *Journal of Asian Economic and Business Research*.
21. Le Van, Q., Viet Nguyen, T., & Nguyen, M.H. (2019). Sustainable development and environmental policy: The engagement of stakeholders in green products in Vietnam. *Business Strategy and the Environment*, 28(5), 675-687.

22. Nguyen, T.V., Nguyen, M.H., & Le Van, Q. (2018). Is green growth possible in Vietnam? The case of marine capture fisheries. *BioPhysical Economics and Resource Quality*, 3, 1-10.
23. Reynaud, A., Nguyen, M.H., & Aubert, C. (2018). Is there a demand for flood insurance in Vietnam? Results from a choice experiment. *Environmental Economics and Policy Studies*, 20, 593-617.
24. Le Van, Q., Nguyen, M.H., & Nguyen, T.V. (2018). Towards green growth in Vietnam: the case of marine capture fisheries. *Biophysical Economics and Resource Quality*, 3(9).
25. Nguyen, M.H., & Nguyen-Van, P. (2016). Optimal endogenous growth with natural resources: Theory and evidence. *Macroeconomic Dynamics*, 20(8), 2173-2209.
26. Reynaud, A., & Nguyen, M.H. (2016). Valuing flood risk reductions. *Environmental Modeling & Assessment*, 21, 603-617.
27. Ha-Huy, T., Le Van, C., & Nguyen, M.H. (2016). Arbitrage and asset market equilibrium in infinite dimensional economies with short-selling and risk-averse expected utilities. *Mathematical Social Sciences*, 79, 30-39.
28. Reynaud, A., & Nguyen, M.H. (2016). Valuing Flood Risk Reductions. *Environmental Modeling & Assessment*, 21(5), 603-617.
29. Nguyen, M.H, T. Phan (2015). *Macroeconomics with Corruption Temptation*. Available at SSRN: SSRN 2615556.
30. Nguyen, M.H. (2015). *Optimal Endogenous Growth with Natural Resources*.
31. Goenka, A., Liu, L., & Nguyen, M.H. (2015). Infectious diseases and economic growth. *Journal of Mathematical Economics*, 50, 34–57.
32. Goenka, A., Liu, L., & Nguyen, M.H. (2014). Infectious Diseases and Economic Growth. *Journal of Mathematical Economics*, 50, January, 34–53.
33. Aubert, C., Nguyen, M.H., & Reynaud, A. (2013). Living with floods: flood protective behaviours and flood risk perception of Vietnam households. *The Geneva Papers on Risk and Insurance - Issues and Practice*, 38, July, 547–579.
34. Goenka, A., Levan, C., & Nguyen, M.H. (2012). Existence of competitive equilibrium in an optimal growth model with heterogeneous agents and endogenous leisure. *Macroeconomic Dynamics*, 16, April, 33–51.
35. Minh, N.K., Nguyen, M.H., & Hung, N.V. (2011). Modeling transformation in Vietnam using smooth transitions. *Environmental Economics*, 2(3), 16–32.
36. Levan, C., Luong, T.B., Nguyen, M.H., & Nguyen, T.A. (2010). New Technology, Human Capital, and Growth in a Developing Country. *Mathematical Population Studies*, 17(4), October.
37. Ha-Huy, T., & Nguyen, M.H. (2010). No unbounded arbitrage, weak no market arbitrage and no arbitrage price system conditions; Equivalent conditions. *Journal of Mathematical Economics*, 46(1), January 20, 128–131.
38. Luu, D.V., & Nguyen, M.H. (2009). On alternative theorem and necessary optimality conditions for efficiency. *Optimization*, 58(1), January, 49–62.
39. Le Van, C., Nguyen, M.H., & Vailakis, Y. (2007). Equilibrium dynamics in an aggregative model of capital accumulation with heterogeneous agents and elastic labor. *Journal of Mathematical Economics*, 43, 287–317.
40. Nguyen, M.H, Luu D.V, (2006). On necessary conditions for efficiency in directionally differentiable multiobjective optimization problems. *Nonlinear Functional Analysis and Applications* (No. 12, pp. 439–453).

41. Luu, D.V., & Nguyen, M.H. (2004). Invexity of constraint maps in mathematical programs. *Nonlinear Functional Analysis and Applications* (No. 9, pp. 289–304).

#### **Books, chapters and articles**

1. Climate change in Viet Nam; Impacts and adaptation. A COP26 assessment report of the GEMMES Viet Nam project (E Espagne, T Ngo-Duc, MH Nguyen, E Pannier, MN Woillez, A Drogoul) , 2021, 600 pages.
2. Climate change in Vietnam: impacts and adaptation, *The Conversation*, 8 March, 2022. <https://theconversation.com/climate-change-in-vietnam-impacts-and-adaptation-173462>
3. Environmental Health and Climate Change, Chapter 3, GEMMES, AFD, COP26 (Lead author: M-H.Nguyen et al)
4. The Resilience of Energy System under Climate change , Chapter 5, GEMMES, AFD, COP26 (Lead author: M-H.Nguyen et al) [Download: PDF](#),
5. Choice experiment methods in natural disasters management, Manuscript, Nafosted, 2021.
6. *Optimality conditions and optimal economic growth models*, Lambert Academic Publishing, **230 pages**, ISBN: 978-3-8383-6112-3, 2010. [Link to the book:](#)
7. *Selected Mathematics Problems : Methods and Comments*, 500 pages, 3rd edition, (in Vietnamese), *Hanoi National University Publisher*, 2004.

#### **TEACHING**

- **Toulouse School of Economics**: Topics in Environmental Economics (M2-ERNA), 2015-
- **National University of Singapore**: Advanced Mathematical Economics (PhD course EC6104) 2009
- **National University of Singapore**: Macroeconomic Analysis (EC4102) 2009