




# UNIVERSITY OF MARYLAND

Department of Economics  
Tydings Hall, Room 3114D  
College Park, Maryland 20742-7211  
301.405.3544 TEL 301.405.3542 FAX

To: Dean of Research and Graduate Studies  
From: Director of Graduate Studies in Economics  
Date: *May 5, 2025*

This is to certify that *Manuel Esteban Molina Soto* made substantial contributions to the relevant aspects of the jointly authored work included in this dissertation.

  
\_\_\_\_\_  
*John Shea* (Chairman)

  
\_\_\_\_\_  
*John Shea* (Director of Graduate Studies)