

# Kristin Muthui

Ph.D student, development economics

UMI-SOURCE

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Summary: Kristin Muthui is a Ph.D student at the UMI-SOURCE laboratory, Université Paris-Saclay. Her thesis is focused on the role of climate change and adaptation in the structural transformation of low-income and emerging economies. Her research interests include structural transformation, climate change adaptation and resilience, agriculture, and ecosystem services.

## EDUCATION

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- 2020 - Present **Ph.D. spécialité Sciences économiques**  
*Thesis title: Le défi éco-démographique de l'Afrique: emploi et agriculture dans le contexte de l'adaptation au changement climatique*  
Université Paris-Saclay, France
- 2017 - 2019 **Master 2: Economie théorique et appliquée au développement durable**  
Université Versailles Saint Quentin en Yvelines, France
- 2006 -2010 **Bsc. International business administration**  
United States International University, Kenya

## WORKING PAPERS

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### Structural transformation and climate-related extreme events

*Presented at: Semaine Formation-Recherche en économie et management, 2022*

**Summary:** We develop a system of simultaneous equations to assess the direct and indirect effects of droughts, floods, and heatwaves on structural transformation in 51 low-income and emerging economies from 1990 to 2018. We find that droughts and heatwaves have a detrimental effect in both the short and long run, while floods have a short-term positive effect.

### The role of ecosystem services in agriculture productivity and resilience against climate induced weather extremes

*Presented at: Les journées scientifiques de l'UMI SOURCE, 2022*

**Summary:** We employ a system of simultaneous equations to estimate the direct and indirect effect of ecosystem services on agricultural TFP change in low-income, emerging and advanced economies from 1996-2010. We find a positive and direct effect of ecosystem services on agricultural TFP change, as well as a mediating effect on rainfall and temperature variability on short-term agricultural TFP change.

## TEACHING EXPERIENCE

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- 2020 - 2022 **Chargé de Travaux Dirigés**  
**Université Paris-Saclay, campus UVSQ, France**
- Grands Problèmes Économiques Contemporains: Licence d'Economie-Gestion
  - Introduction à la statistique: Licence d'Economie-Gestion

## PROFESSIONAL EXPERIENCE

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- 2018 **Research intern**  
**Centre de coopération internationale en recherche agronomique pour le développement**
- Preliminary research to inform research project on modelling and evaluation of agriculture employment and quality in sub-Saharan Africa
- 2017 **Project Evaluator**  
**Yvelines coopération internationale et développement**
- Evaluation of two agriculture micro-projects supported by YCID in Senegal
- 2014 - 2016 **Consultant – sustainable development**  
**C&E Advisory LTD, Kenya**
- Scoping studies, research, project planning and evaluations in food systems, sustainable development and adaptation to climate change

## THESIS SUPERVISORS

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### Natalia Zugravu-Soilita

Professeur des Universités en Sciences économiques  
Université de Paris-Saclay  
Université de Versailles Saint Quentin en Yvelines

### Vincent Geronimi

Professeur des Universités en Sciences économiques  
Université de Paris-Saclay  
Université de Versailles Saint Quentin en Yvelines

## SOFTWARE

STATA



Microsoft Office



LaTeX



R Programming



## LANGUAGES

English



French

