

Curriculum Vitae
30/01/09
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Personal information

Surname(s) / First name(s) GUERRA HERNÁNDEZ, ANA ISABEL

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Nationality(-ies) Spanish

Date of birth 21/06/79

Gender Female

Scientific Experience

Dates From 01/10/05 to 30/04/06

Occupation **Research collaborator**

Main activities and responsibilities Collection of data sources, literature and methodology proposals

Project Human Capital, Consumption and Efficiency in Spain

Research Professor José Luis Raymond Bara

Coordinator and leader Department of Economics and Economic History
"UNIVERSIDAD AUTÓNOMA DE BARCELONA"

Financing Institution Spanish Ministry of Education and Science

Dates From 2006 to 2009

Occupation **Research collaborator**

Main activities and responsibilities Collection of data sources, methodology proposals and applications

Project Essays in Computational Economics and Simulations

Research Professor Ferran Sancho Pifarré

Coordinator and leader Department of Economics and Economic History
"UNIVERSIDAD AUTÓNOMA DE BARCELONA"

Financing Institution Spanish Ministry of Education and Science

Dates From 01/10/08 to 30/09/10

Occupation **Research collaborator**

Main activities and responsibilities Theoretical Model and GAMS Programming

Project "An Empirical General Equilibrium Analysis of the Factors that Govern the Extent of Energy Rebound Effects in the UK Economy" (ESRC ref, RES-061-25-0010)

Research Coordinator and leader Dr. Karen Turner
Fraser of Allander Institute
UNIVERSITY OF STRATHCLYDE
GLASGOW (UK)

Financing Institution First Grants Initiative by the Economy and Social Research Council (ESRC)

Education

Dates From 01/09/98 to 30/06/02

Title of qualification awarded **Bachelor in Economic Sciences**

Name and type of organisation providing education and training Faculty in Economic Sciences
UNIVERSIDAD DE SALAMANCA (ESPAÑA)

Level in national or international classification 14'5 over 20

Dates From 01/09/02 to 01/09/03

Title of qualification awarded **Master in Economic Sciences**

Name and type of organisation providing education and training KATHOLIEKE UNIVERSITEIT LEUVEN
(BELGIUM)

Level in national or international classification 13,65 over 20

Dates From 01/10/03 to 30/07/06

Title of qualification awarded **Master in Applied Economics**

Name and type of organisation providing education and training UNIVERSIDAD AUTÓNOMA DE BARCELONA
(SPAIN)

Level in national or international classification 18 over 20

Grants

Dates From 01/05/05 to 01/05/09

Institution that provides the grant **Ministry of Education and Science**
Spanish Government

And Aims of the Grant **Financial support for the PHD:**
"A GENERAL EQUILIBRIUM
ASSESSMENT OF THE REBOUND EFFECT: THE SPANISH CASE"

Mediator Institution

"UNIVERSIDAD AUTÓNOMA DE BARCELONA" (SPAIN)

RESEARCH VISITS

Dates

From 01/09/08 to 01/12/08

Institution that provides the grant

Spanish Ministry of Education and Science

And Aims of the Grant

Host Institution Coordinator

Professor Peter McGregor

Post: PROFESSOR OF ECONOMICS AND DIRECTOR OF THE FRASER OF ALLANDER INSTITUTE

Host Institution

FRASER OF ALLANDER INSTITUTE

STRATHCLYDE UNIVERSITY

GLASGOW (UK)

PUBLICATIONS IN JOURNALS AND BOOKS

Title

"MODEL SPECIFIC EFFECTS AND QUALITY-ADJUSTED PRICE INDEXES"

Authors

GUERRA, A.I

Journal/book Reference

SUBMITTED TO "INVESTIGACIONES ECONÓMICAS". NOW IN SECOND REVISION BY REFEREES

Title

"MODELOS ECONÓMICOS PARA EL ANÁLISIS AMBIENTAL Y CAMBIO CLIMÁTICO" ("ECONOMIC MODELS FOR ENVIRONMENTAL AND CLIMATE CHANGE ANALYSIS")

Authors

GUERRA, A.I AND SANCHO, F

Journal/book Reference

IN "EL CAMBIO CLIMÁTICO: ANÁLISIS ECONÓMICO Y POLÍTICAS" ("CLIMATE CHANGE: POLICIES AND ECONOMIC ANALYSIS"), VEGARA, J.M^a (ed), COLECCIÓN ESTUDIOS ECONÓMICOS, LA CAIXA" *forthcoming*.

SKILLS

LANGUAGES

Mother tongue(s)

SPANISH

Other language(s)

	Understanding		Speaking		Writing
	<i>Listening</i>	<i>Reading</i>	<i>Spoken interaction</i>	<i>Spoken production</i>	
ENGLISH	<i>GOOD</i>	<i>GOOD</i>	<i>GOOD</i>	<i>GOOD</i>	<i>GOOD</i>
FRENCH	<i>MEDIUM</i>	<i>MEDIUM</i>	<i>MEDIUM</i>	<i>MEDIUM</i>	<i>GOOD</i>

SCIENTIFIC SOFTWARE KNOWLEDGE

- GAMS :** **(GENERAL ALGEBRAIC MODELING SYSTEM)** CONSTRUCTION AND SOLUTION OF LARGE AND COMPLEX MATHEMATICAL PROGRAMMING MODELS. THIS SOFTWARE IS OFTEN USED IN APPLIED GENERAL EQUILIBRIUM FRAMEWORK.
- STATA AND EViews:** DATA ANALYSIS AND STATISTICAL SOFTWARE

CONGRESS ATTENDANCE

2-7 OCTOBER 2006

AUTHORS: A. I. GUERRA

TITLE OF THE PRESENTATION: "FUEL EFFICIENCY OF GASOLINE CARS: A HEDONIC PERSPECTIVE"

CONGRESS: "INFRACTRUSTURE MODELLING AND POLICIES" BERLÍN UNIVERSITY OF TECHNOLOGY (GERMANY)

4-5 JUNE 2008

AUTHORS: A. I. GUERRA

TITLE OF THE PRESENTATION: "MODEL SPECIFIC EFFECTS AND QUALITY-ADJUSTED PRICE INDEXES"

CONGRESS: ECONOMÍA APLICADA (APPLIED ECONOMICS). "UNIVERSIDAD DE SALAMANCA" (SPAIN)

4-5 JUNE 2008

AUTHORS: A. I. GUERRA

TITLE OF THE PRESENTATION: "MODEL SPECIFIC EFFECTS AND QUALITY-ADJUSTED PRICE INDEXES"

CONGRESS: ECONOMÍA APLICADA (APPLIED ECONOMICS). "UNIVERSIDAD DE SALAMANCA" (SPAIN)

THESIS OUTLINE

TITLE: "A GENERAL EQUILIBRIUM ASSESMENT OF THE REBOUND EFFECT: THE SPANISH CASE"

1. MOTIVATION AND OBJECTIVES

The empirical estimation of the Rebound Effect or Take-Back effect is extremely relevant when evaluating improved energy efficiency policies. These policies consist of incorporating new technologies aimed at reducing energy use and consequently, pollution. The direct effect of these policies leads to a reduction in the effective price of energy. Not only is Energy used as a production factor, but it is also part of consumers' final demand. Thus, it is necessary to analyse the

direct effect of improving energy efficiency from both perspectives. From the supply side perspective, if the given technology of production is flexible, the industry will replace other production inputs by the energy input. Since production costs will have been reduced; the fall in prices will push the output level and consequently, the energy input demand. If production increases, more energy inputs will be required.

Although after the policy implementation, the energy-output intensity will have decreased, there is a price induced process that will increase output. Therefore, potential energy savings will not coincide with actual energy savings. The difference between potential and actual savings is the so-called Rebound Effect. From the demand side -perspective, the decrease in energy savings leads to income and substitution effects that should be also analyzed.

However, there are also indirect effects caused by these policies that can be only analysed using general equilibrium models. These indirect effects stem from the interdependencies among markets. In other words, in general equilibrium models, the rebound effect in each market is affected by the rebound effect taking place simultaneously in its connected markets. Thus, controlling for market interdependencies is crucial when analysing the effects of improved energy efficiency policies. Therefore, we have considered appropriate the CGE approach.

Thus, the main reasons that have motivated this thesis project are three. The first reason is the lack of empirical evidence of the Rebound Effect for the case of the Spanish Economy. The second reason is to centre our research on analysing market interdependencies and their impacts on the Rebound Effect. The third reason is to evaluate economy-wide effects when combining improved energy efficiency policies together with Environmental taxes.

2. THESIS WORK SCHEDULE

2.1. Description of the State of the Art

2.2. Constructing a SAM for the Spanish Economy ("2004")

2.3. Input-Output analysis focused on industry interdependencies. Analysis of the production chains.

In order to identify the aforementioned production chains it is necessary to transform the input-output data in average propagation distances. These distances are defined as the average number of productive processes needed for an industry cost change affecting the costs the industry. The estimation of these distances allows us to answer the question: how does the production chain structure of the economy affects the price interdependencies between industries and consequently, the rebound effect.

2.4. Calibration of the CGE model.

2.5. Relaxing assumptions of the basic CGE model

The domestic production is the result of the combination of a two stage CES production function. In the first stage value added and intermediate inputs are obtained through flexible technologies (i.e. all the domestic production technical coefficients are flexible). Then, in the second stage, value added and intermediate inputs are combined for the production of domestic output.

2.6. Evaluating alternative environmental fiscal policies and their impacts over the Rebound effect.