UNIVERSITY of LIMERICK
OLLSCOIL LUIMNIGH

KBS RESEARCH BULLETIN
NOVEMBER 2016
ISSUE 47

As a leading Irish business school in a public university system, KBS is committed to excellence in teaching and to fostering knowledge and understanding of business and society within a diverse, research active and socially engaged environment.

Research at KBS serves this mission. Our goal is to cultivate excellence in research, underpinned by our core values including commitments to promote learning and discovery as well as social responsibility and ethical behaviour; to protect academic freedom and enhance knowledge; to maintain a future orientation and an international perspective; to promote inclusive and sustainable societies and facilitate the involvement of industry.

Our research finds a focus in the four academic departments of the School as well as in themes (Work, Knowledge & Employment; The Services Economy & Tourism; Entrepreneurship, Innovation & Marketing; and Public Policy, Enterprise, Governance & Sustainability) and clusters (Accountability (ARC); Digital Marketing ; Emerging Risk Assessment & Underwriting; Interpretive Consumer Research; Psychological Science in Business; Privatisation & PPP; and Quality of Work).

See http://www.ul.ie/business/research for more information.

Public Support for Business Innovation in Mexico: A Cross-Sectional Analysis

Dr. Juan L Martinez-Covarrubias, Prof. Helena Lenihan, Prof. Mark Hart

Synopsis

A wide variety of activities and actors operating across geographies are required to bring products and services from conception to commercialisation. This process is known as the Global Value Chain (GVC). This paper explores the impact of government support in Mexico on the likelihood of firms upgrading in GVCs. Employing a unique dataset, regression analysis was undertaken to estimate the predicted probabilities of firms upgrading in GVCs considering their regional location. The results suggest that firms located in Mexico City are more likely to achieve upgrading vis-à-vis northern firms. Additionally, the presence of an R&D laboratory is crucial if firms are to engage in upgrading. There was no evidence that government support affects the likelihood of firms achieving upgrading.

Introduction and Background

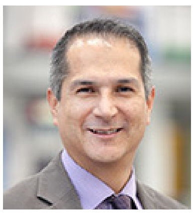
International organisations such as the United Nations Conference on Trade and Development and the Organisation for Economic Cooperation and Development are increasingly debating the topics of innovation and ways in which firms can upgrade in GVCs in the context of developing countries. However, these institutions have not developed methods that accurately evaluate the impact of government innovation interventions (support) aimed at helping firms to upgrade in GVCs. This may reflect the fact that the literature on innovation policy evaluation (Todd and Wolpin, 2010) has fallen short in this respect.

There are four types of upgrading for firms: process, product, functional, and inter-sectoral (Pietrobelli and Rabellotti, 2006). The third and fourth types of upgrading have particular importance in terms of improving a firm's position within GVCs. Functional upgrading is the acquisition of new, superior functions in the value chain (such as design or marketing) or the abandonment of lower-value-added functions so that the firm can focus on higher-value-added activities. Inter-sectoral upgrading, on the other hand, involves the application of competence acquired in a particular function to move into a new sector, often in superior products or services.

This paper investigates empirically the factors that impact upon the likelihood of firms achieving functional and/or inter-sectoral upgrading, explicitly incorporating government support for business innovation and testing for regional differences when firms upgrade in GVCs. The research makes both theoretical and policy based contributions. This is the first time that: 1) the likelihood to upgrade in GVCs is estimated by means of econometric analysis; and 2) regional heterogeneity to upgrade in GVCs in Mexico has been tested, proving that region matters.

AUTHORS

KEMMY BUSINESS SCHOOL University of Limerick



Dr. Juan L Martinez-Covarrubias
The Three Regional Assemblies Ireland and formerly Kemmy Business School Graduate Research Centre, University of Limerick, Limerick, Ireland.

Prof. Helena Lenihan
Department of Economics, Kemmy Business School, University of Limerick, Limerick, Ireland.
helena.lenihan@ul.ie

Prof. Mark Hart
Enterprise Research Centre and Economics, Finance and Entrepreneurship Group, Aston Business School, Aston University, UK
mark.hart@aston.ac.uk

Issues and Questions Considered

Drawing from the literatures pertaining to GVCs, regional economic performance, and on the rationale for government intervention, the central theoretical arguments that shape this research are as follows: First, functional and inter-sectoral upgrading in GVCs are the type of innovation required by developing countries, as they offer opportunities for firms to compete successfully in the global economy. Therefore, it is necessary to explore the factors affecting the likelihood of firms upgrading in GVCs. Second, differences in regional characteristics and economic performance are important when designing policy support interventions. Regional features should inform policies, such as the availability of a specialised labour market, local inputs, and ease of access to markets and market information. Third, given the role of government in promoting innovation, it is paramount to determine the impact of government policy in terms of firms upgrading in GVCs. These three central arguments shape the following two research questions:

What factors affect the likelihood of firms functionally and/or inter-sectorally upgrading in GVCs? Is government policy intervention effective in promoting firms functionally and/or inter-sectorally upgrading in GVCs?

Methodology

The evaluation framework adopted comprises a cross-sectional analysis for the period 2006-09 and employs a 2-step Heckman (1979) selection model. This method is robust and considered best practice within the field for this kind of evaluation. A bi-probit Heckman approach is used (Savignac, 2008) to measure the likelihood of firms achieving functional and/or inter-sectoral upgrading in GVCs. Relevant variables for evaluating public support for business innovation impact in developing countries were identified using the prevailing evaluation literature (O'Regan et al., 2006, Gereffi, 2014).

A unique data set comprising business performance and innovation measures during the period 2006 to 2009 from 477 firms in Mexico was collected by means of a telephone survey. The representative sample enabled the construction of a treatment group and two control groups.

Outcomes and Findings

The estimation results demonstrate that firms functionally and/or inter-sectorally upgrading in GVCs depends on a diverse set of criteria. The results corroborate the suggestion of Pietrobelli and Rabellotti (2006) that the likelihood of firms functionally upgrading is simultaneously affected by how the governance of a GVC is organised (e.g., hierarchical governance vs. network or market governance) and the collective efficiency of the business clusters in which the firm operates. In addition, it is shown that inter-sectoral upgrading is more difficult to achieve than functional upgrading. The implication is that different types of upgrading probability should be prioritised when designing policy programmes and interventions.

Our results corroborate the findings of Chavez and Fonseca (2012), who claim that Mexico has strong inter-regional disparities in income and productivity. Moreover, our results suggest that the effect of some variables (i.e. having a dedicated R&D laboratory) have more or less influence in different regions. Thus, we provide new evidence by identifying another inter-regional disparity: the likelihood of firms to achieve functional upgrading in GVCs.

With regard to our second research question, we found no evidence that government support for business innovation affects the likelihood of firms achieving functional and/or inter-sectoral upgrading.

This paper contributes to the theories of the impact of innovation policies in developing countries and GVCs and provides new evidence. This study constructed a unique dataset and employed econometric analysis to test the effectiveness of business innovation policies. The construction of the database and methodology used represents an original contribution to knowledge given the nature of the firm-level data obtained. From a policy perspective, the variables identified as affecting functional and/or inter-sectoral upgrading can serve as a guide to policy makers as they design future innovation policy interventions and instruments in the context of developing countries.

Additional and currently unexplored questions arise from the findings of the paper and merit future investigation. For example, how do the effects of government support for business innovation evolve over time? How might functional and inter-sectoral upgrading affect the performance of firms? The ideas presented in this paper are merely the first step in this type of analysis. However, there is no denying that the non-significance of public policy intervention for business innovation is a very important result of the current research. It points towards a Mexico-specific context that justifies more investigation with deeper analysis and is certainly a field ripe for future research.

A full copy of the paper can be obtained at:

Regional Studies DOI: 10.1080/00343404.2016.1245414

http://dx.doi.org/10.1080/00343404.2016.1245414

Authors:
Dr. Juan L Martinez-Covarrubias
The Three Regional Assemblies Ireland and formerly Kemmy Business School Graduate Research Centre, University of Limerick, Limerick, Ireland.
juan74luis.mc@gmail.com
Prof. Helena Lenihan
Department of Economics, Kemmy Business School, University of Limerick, Limerick, Ireland.
helena.lenihan@ul.ie
Prof. Mark Hart
Enterprise Research Centre and Economics, Finance and Entrepreneurship Group, Aston Business School, Aston University, UK. mark.hart@aston.ac.uk

For further information and comments, please contact:

Dr. Sheila Killian
Assistant Dean, Research
Kemmy Business School
University of Limerick, Ireland
T: +353 61 202237
E: sheila.killian@ul.ie

Forthcoming Research Bulletin

Title: Embracing Qualitative Research: A Visual Model for Nuanced Research Ethics Oversight, Qualitative Research
Authors: Doyle, E. and Buckley, P.

About the KBS Research Bulletin

The purpose of the KBS Research Bulletin is to make our research more readily accessible to a wide range of interested stakeholders, and so allow our work to have a useful impact on the society in which we operate. We regard this as an important part of our stakeholder engagement. Their dissemination aligns with both the UL focus on excellence and impact in research, and on the KBS strategic goals of cultivating excellence in research while contributing to our community of stakeholders in a responsible and sustainable manner.

KEMMY BUSINESS SCHOOL
University of Limerick