

*Rome, June 10th, 2022. International
workshop*

European Trade Policy and Global Value Chains

Book of Abstracts



With the support of the
Erasmus+ Programme
of the European Union



Rossi-Doria
Centre for Economic and Social Research
Centre of Excellence - Roma Tre University



SAPIENZA
UNIVERSITÀ DI ROMA



UNIVERSITÀ DEGLI STUDI
DEL SANNIO Benevento



FONDAZIONE MANLIO MASI
Osservatorio Nazionale per
l'Internazionalizzazione e gli Scambi

INTRODUCTION

Are the Global Value Chains meant to disappear due to the reshoring? Or are they simply changing their shape to deal with the new challenges – protectionism, automation and, more recently, the COVID-19 pandemic? In this context, which is the role of the local institutions? Can firms still foster their productivity by taking part in them? And what about the effects of EU trade policies on the firms, particularly those engaged in the agri-food sector?

This book of abstracts of papers presented at the VI International Workshop on the Global Value Chains aims at providing the main insights of the most recent works on this topic, contributing to picture the puzzle of the GVCs in the coming years.

As for the geographical patterns of GVCs, Carlo Piccardi, Lucia Tajoli and Riccardo Vitali show that they are non-linear structures and there is not a univocal tendency emerging across industries and countries. At the industry level, the general resilience of GVCs related to its “relational approach” is confirmed by the authors’ results.

On another dimension, Michele Mancini, Pierluigi Montalbano, Silvia Nenci and Davide Vurchio show up a new dataset available for GVC analyses, particularly useful to get positioning measures (upstreamness/downstreamness) used in the empirical literature.

Alexander Jaax, Sébastien Miroudot, Elisabeth Van Lieshout focus on the “deglobalisation”: is it happening? They point out that this phenomenon has been exaggerated. Although a slowdown in the expansion of GVCs, the international fragmentation of production remains at the highest level in 2018. Moreover, there was no sign of reshoring, regionalisation of value chains or higher concentration of supply before the pandemic. Then, a reduction in the ease of trade and a more uncertain environment seem to be the main drivers of the reorganisation of supply chains and increasing cumulative trade costs for some GVCs.

At the industry level, Enrica Di Stefano, Giorgia Giovannetti, Michele Mancini, Enrico Marvasi and Giulio Vannelli show that COVID-19 did not spur large waves of reshoring or plant closures nor changes of existing suppliers among Italian multinationals, even if Long-run trade policy uncertainty might still lead firms to revise their internationalization strategies.

From a different perspective, Cecilia Jona-Lasinio, Valentina Meliciani and Silvia Sopranzetti find that GVC participation, especially the backward participation, has strong productivity enhancing effect, but it can differ substantially across countries and sectors due to asymmetries in managerial capabilities.

Federico Colozza and Carlo Pietrobelli evaluate the role of Global Value Chains (GVCs) and green technologies in affecting the regional emission of air-pollutants, shedding a new light on this topic.

Giulio Cainelli, Roberto Ganau and Anna Giunta find a positive effect of regional institutions on manufacturing firms’ performances across Western European Union countries. In particular, suppliers – serving other firms with tailored, produced-to-order goods – benefit the most from high-quality local institutions, while local institutions are neutral for final firms serving end markets. Among suppliers, high-quality regional institutions enhance the growth performance of only local-embedded ones with operations confined to their own regional market – i.e., the ‘weakest’ node of the value chain.

To follow, Ilaria Fusacchia and Luca Salvatici study the impact of EU trade policies on agri-food firms, finding a heterogeneous effect across member countries depending on the structural characteristics of

exporting economies. Germany is the most impacted country showing the highest index in both gross and value-added terms (5.73% and 4.63%, respectively), while France seems to be the less affected (1.49% for gross exports and 1.29% for domestic value-added). Overall, the impact is lower for indirect exports of agricultural value-added, that is the agri-food value-added embedded in other sectors' exports.

Valentina Raimondi, Andreea A. Piriu, Jo Swinnen and Alessandro Olper study whether participation in global value chains (GVCs) reduces government incentives to raise trade barriers in the agricultural and food sectors, confirming the reduction effect of GVC participation on trade protection.

To conclude, Angela Stefania Bergantino and Ada Spiru build an augmented gravity model to assess the impact of the transportation networks in emerging economies, finding that trade costs arising from geographic distance between trading partners are partly moderated by the national transportation system, in particular related to the backward integration of emerging countries. Moreover, they find that both network and nodes of within-country transportation are important facilitators of integration in the global production of emerging economies.

PATTERNS OF VARIABILITY IN THE STRUCTURE OF GLOBAL VALUE CHAINS: A NETWORK ANALYSIS

Carlo Piccardi, Lucia Tajoli, Riccardo Vitali

Global Value Chains (GVCs) are a feature of the organization of production in many sectors and countries, and they deeply affect international trade patterns. How far the separation of production stages - generating increasingly widespread GVCs - can go, is currently a matter of debate. The main focus of this paper is to investigate GVCs at the industry-level by modelling them through the construction of a specific network, and then by exploiting the tools of network analysis. In particular, the aim is to assess how the structure of GVCs and their length has changed over time. Analyzing this evolution is important to better understand the role played by countries in the production chain, with implications for the final price formation and income distribution along the GVC, as well as their fragility or resilience in presence of external shocks. Our results show that there are relevant differences among sectors and countries in terms of the evolution of GVCs, especially considering direct or indirect links. Overall, we find evidence of a general resilience, confirming the importance of the “relational approach” in GVCs. But the shifts in geographical patterns of the links also support the view that firms organizing this complex form of production are ready to grasp better opportunities when they appear in the global markets.

Keywords: global value networks; length; resilience

POSITIONING IN GLOBAL VALUE CHAINS: WORLD MAP AND INDICATORS. A NEW DATASET AVAILABLE FOR GVC ANALYSES.

Michele Mancini, Pierluigi Montalbano, Silvia Nenci, Davide Vurchio

Recently, a strand of the international trade literature has developed measures of the positioning of countries and industries in GVCs using the global Input-Output tables, with information on the various entries. These measures allow scholars from different research fields to conduct qualitative and quantitative analyses on GVCs at the aggregate and sectoral level and inform policymaking. To compute these indicators, a common approach is to consider the extent to which a country-industry pair sells its output for final use to consumers worldwide or instead sells intermediate inputs to other producing sectors in the world. Following this approach, we compute and make available to scholars a new dataset of GVC positioning indicators at the country-industry level. These indicators are now available for all the economies and industries included in the EORA dataset (189 countries and 26 sectors) for the period 1995-2015 and in the ADB MRIO database (63 countries and 56 sectors) for the period 2007-2019. Specifically, we compute two popular measures: 1) a measure of distance or upstreamness of a production sector from final demand, which was developed by Fally (2012), Antras et al. (2012), and Antras and Chor (2013, 2018); 2) a measure of distance or downstreamness of a given sector from the economy’s primary factors of production (or sources of value-added), originally proposed by Fally (2012). These indicators are “ready-to-use” and can be freely downloaded from this Journal. We also provide an international comparison, by sectors and countries, of these fresh indicators and their evolution over time. Lastly, to illustrate the possible use of these indicators, we test the effects of these measures on productivity by country and sector worldwide.

Keywords: Global Value Chain, positioning indicators, upstreamness, downstreamness, country-sector analysis, data.

DEGLOBALISATION? THE REORGANISATION OF GVCs IN A CHANGING WORLD

Alexander Jaax, Sébastien Miroudot, Elisabeth van Lieshout

Global Value Chains This paper analyses changes in GVCs (degree of fragmentation, sourcing patterns) over the period 1995-2019. To disentangle changes related to the price of inputs from the structural reorganisation of GVCs, we create new inter-country input-output tables in previous year's prices (PYP) that allow to create GVC indicators in chain-linked prices. In a subsequent step, trade and multinational production data from input-output tables are used to estimate trade costs and multinational production costs along the value chain. By applying techniques commonly used in the literature on structural change to GVC data, we employ structural decomposition analysis to evaluate drivers of changes in the organisation of GVCs.

Keywords: global value chain; input-output tables; decomposition analysis

RESHORING AND PLANT CLOSURES IN COVID-19 TIMES: EVIDENCE FROM ITALIAN MNEs

Enrica Di Stefano, Giorgia Giovannetti, Michele Mancini, Enrico Marvasi, Giulio Vannelli

This paper provides new evidence on reshoring and plant closures exploiting a novel dataset of Italian multinational firms surveyed throughout 2020 and 2021, the years of the Covid-19 pandemic. We find that Covid-19 did not spur large waves of reshoring nor plant closures. Even though the pandemic has caused severe losses to firms, including multinationals, most did not stop foreign production nor are willing to do so in the near future. Furthermore, they maintained existing suppliers. Tariffs and trade policy uncertainty, on the other hand, are more likely to induce reshoring and plant closures. This evidence is consistent with a simple multi-period model, illustrating how offshoring, on the one side, and reshoring or plant closures, on the other side, are asymmetric in important ways. In the presence of sunk costs, reshoring and plant closures require sufficiently large and permanent shocks to demand, trade and foreign production costs to induce behavioural changes. Covid-19 was a major shock, but it was mostly perceived as temporary, while persistent trade policy uncertainty, especially if combined with other shocks, might induce firms to revise their internationalization strategies.

Keywords: Reshoring, MNEs, Global Value Chains, Covid-19, Heterogeneous firms

14:30 - 16:00 SESSION 2 – Chair: Beniamino Quintieri (Manlio Masi Foundation; Tor Vergata University of Rome)

ORGANIZATIONAL CAPITAL AND GLOBAL VALUE CHAIN PARTICIPATION: FOSTERING PRODUCTIVITY GROWTH IN THE DIGITAL ECONOMY

Cecilia Jona-Lasinio, Valentina Meliciani, Silvia Sopranzetti

This paper investigates the impact of backward participation in global value chains (GVCs) on productivity growth considering the mediating effect of organizational capital and distinguishing between high and low digital intensive sectors (OECD, 2018). Using industry data from EUKLEMS, WIOD and INTAN-Invest, the analysis focuses on a sample of eleven European economies plus the US over the period 1998-2015. Our

findings show: a) a positive and statistically significant productivity impact of backward participation; b) a larger marginal effect of backward participation on productivity growth in countries-industries with a higher intensity of organizational capital; c) a larger productivity impact of backward participation and organizational capital in high digital sectors. The results suggest the relevance of managerial capabilities to extract value from participation in global value chains, particularly in high digital intensive sectors.

Keywords: Organizational capital; global value chains; productivity growth; digitalization

GLOBAL VALUE CHAINS AS CHANNEL OF GREEN KNOWLEDGE IN EU REGIONS. A TWOSTEP GMM ANALYSIS

Federico Colozza, Carlo Pietrobelli

Nowadays, climatic issues are in the top of the EU agenda. If on one hand the related health issues remain unresolved, on the other the globalization of industrial structure is going forward, faster than ever. Besides considering these problems at national-level, not enough has been done for analysing the regional air pollution, and to what extent the globally-connected industrial structure might affect it. In this research, we seek to fill this gap by evaluating the role of Global Value Chains (GVCs) and green technologies in affecting the regional emission of air-pollutants. In this work, we reduce the national Air Pollution (AP) data to regional level, that allow us to test – through the use of a twostep GMM model – our hypotheses for EU nuts-2 regions. Our findings show that the integration in GVCs influences negatively the levels of air pollutants, as well as green technologies. Analysing in-depth this mechanism, the national awareness of environmental issues is able to shape the impact of both GVCs and green patents on environmental pollution. Indeed, in regions with a lack of awareness on environmental topics, we find that GVCs and green patents have a key role in abating the levels of air pollutants, differently from the specialization in manufacture. Conversely, in regions with environmental awareness, GVCs still reduce the Air Pollutants, as well as the specialization in manufacture. This research shed new light on the AP emissions at regional level, by analysing the role of GVCs and green technologies. We conclude this work by suggesting some policies recommendation for coping with the environmental issues related to the emissions of AP (NO_x and SO_x) in the EU regions.

Keywords: Air Pollution, Global Value Chains, Green Technologies, Climate Change, Nuts2 regions, European Union.

VALUE CHAIN, REGIONAL INSTITUTIONS, AND FIRM GROWTH IN EUROPE

Giulio Cainelli, Roberto Ganau, Anna Giunta

We analyse whether and to what extent the quality of regional institutions has a differential effect on firms' growth driven by heterogeneity in firm value chain positioning. We analyse the turnover growth during the period 2010-2013 for a sample of manufacturing firms located in four European countries – France, Germany, Italy, and Spain. We distinguish final firms serving end markets from suppliers serving other firms. Our instrumental variable estimates point to high-quality regional institutions enhancing the growth performance of only local-embedded suppliers with operations confined to the own regional market – i.e., the 'weakest' node of the value chain.

Keywords: Regional institutions; Value chain positioning; Firm growth; Europe

16:30 - 18:00 SESSION 3 – Chair: Domenico Scalera (University of Sannio)

TRADE POLICY AND THE COST OF EXPORTING FOR AGRI-FOOD FIRMS IN SELECTED EU COUNTRIES

Ilaria Fusacchia, Luca Salvatici

Since production and trade are increasingly organized within global value chains (GVCs), assessing who effectively pays the cost of protection is not straightforward, and since production processes are internationally fragmented, quantifying the effects of trade policy requires an enhanced analytical framework that takes international input–output linkages into account to assess the implications trade costs have on competitiveness at national and sector levels. This contribution defines new synthetic measures of trade protection based on the value added (VA) in trade, capturing the effects that the tariff structure has on exporting firms that rely on imported intermediate inputs. The indexes, defined in a general equilibrium framework, provide a theoretically sound protection measurement in the context of GVCs. We assess trade protection by defining and computing new protection indexes on both gross exports and VA exports using the Global Trade Analysis Project computable general equilibrium model. These indexes are used to investigate the relationship between the European Union tariffs and the integration of the agri-food GVCs taking into account inter-sectoral linkages. Results show that EU tariffs impact the export performance of the EU countries under examination. The impact of the same EU trade policy is heterogeneous across member countries, depending on the structural characteristics of exporting economies. Germany is the most impacted country showing the highest index in both gross and VA terms (5.73% and 4.63%, respectively), while France seems to be the less affected (1.49% for gross exports and 1.29% for domestic VA). In all the cases under examination, the impact is lower for indirect exports of agricultural value added, that is the agri-food value added embedded in other sectors' exports.

Keywords: Trade policies, Trade restrictiveness index (TRI), Global trade analysis project (GTAP), Global value chains (GVCs), Value added trade

GLOBAL VALUE CHAINS, TARIFFS AND NON-TARIFF MEASURES IN AGRICULTURE AND FOOD

Valentina Raimondi, Andreea A. Piriou, Jo Swinnen and Alessandro Olper

We study whether participation in global value chains (GVCs) reduces government incentives to raise trade barriers in the agricultural and food sectors. Theory suggests that tariffs in final goods should be decreasing in the country participation in GVCs. In addition, this effect should be stronger outside free trade agreements (FTAs), when domestic content of foreign produced final goods is considered. Using data from 1995 to 2015 of about 150 countries, we show that GVC linkages play indeed a crucial role in shaping both tariffs and non-tariff measures (NTMs) in the agri-food sector. However, we find mixed evidence that the domestic content of foreign goods reduces tariffs only outside FTAs. In addition, when NTMs are concerned, we find similar effect of GVC linkages both inside and outside trade agreements. Overall, our

findings confirm the reduction effect of GVC participation on trade protection. However, they also highlighted the governments' difficulty to cooperate over trade policy when the agri-food sector is at stake.

Keywords: Global value chains; Tariffs, NTMs, Political economy, Agri-food sector.

PARTICIPATION IN GVCs: AN AUGMENTED GRAVITY MODEL TO ASSESS THE IMPACT OF NATIONAL TRANSPORTATION SYSTEMS IN EMERGING ECONOMIES

Angela Stefania Bergantino, Ada Spiru

Despite GVCs are often considered a defining feature of the current wave of globalization, little is known about what drives countries to participate in GVCs. This yields to the question what separate less successful countries from successful ones. The increased geographic spread of production processes in different countries induces an increasing role of physical transportation of inputs and outputs. In this context, geographic distance between trading partners is considered to be a barrier to the integration in international production networks (Stöllinger and Stehrer, 2015) as it represents the main trade cost related to transportation. Specially, increasing international trade and enhancing the participation in global value chains are high priority objectives for emerging economies (Percoco, 2014; Bensassi et al., 2015; Rao & Dhar, 2018), while the improvement of their national transportation systems is considered an important driver of a country's attractiveness in today's globalized production network (Memedovic et al., 2008; Bosker and Westbrock, 2014). Thus, the role of transportation is considered more than a mere support to the mobility of freight within global commodity chains, but an integral part of the value generation process of a country (Rodrigue, and Hesse, 2006). Furthermore, infrastructure is quantitatively important in determining transport costs and it depends both on countries' geography and on their level of infrastructure (Limao & Venables, 2001). Therefore, not only the between countries transportation costs matter, but also the availability and the quality of the transportation system of the country involved in GVCs.

This work aims to investigate the determinants of the integration in international production networks, of both emerging and developed markets, in a transport economic perspective. We refer to two different measures of participation in GVCs, the backward and the forward integration, following the methodology developed by Koopman et al. (2014). Starting from the assumption that trade between two countries is conditional to several characteristics of the countries involved that can either enhance or hinder bilateral business activities (Zwinkels & Beugelsdijk, 2010), by implementing an augmented gravity equation (Silva and Tenreyro, 2006; Correia et al., 2020), we investigate the role of the national transportation system of a country in moderating the negative effects of geographical distance on GVC-related trade flows. We take into consideration, with a trade policy focus, various aspects of "distance": geographical, institutional, cultural and economic.

Using information provided by the World Input-Output Database (WIOD) for the period 2000-2014, integrated with other data sources, we bring empirical evidence to support the hypothesis that the national transportation system is able to moderate the between-country trade cost related to physical distance, and in doing so it reduces the "remoteness" of emerging economies in the global production network. We find evidence confirming that trade in value-added is conditioned to different distance dimensions, and that trade costs are partially moderated by reducing geographical distance through higher availability and quality of national transportation systems of the host country. This is especially true for the backward integration of emerging economies.

Keywords: Transport infrastructure and logistics, GVCs, emerging and developed economies, gravity model



With the support of the
Erasmus+ Programme
of the European Union



Rossi-Doria
Centre for Economic and Social Research
Centre of Excellence - Roma Tre University



SAPIENZA
UNIVERSITÀ DI ROMA



UNIVERSITÀ DEGLI STUDI
DEL SANNIO Benevento



FONDAZIONE MANLIO MASI
Osservatorio Nazionale per
l'Internazionalizzazione e gli Scambi