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PANTEION UNIVERSITY OF SOCIAL AND POLITICAL SCIENCES



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«ΔΙΕΘΝΕΙΣ ΣΧΕΣΕΙΣ & ΣΤΡΑΤΗΓΙΚΕΣ ΣΠΟΥΔΕΣ

The outsourced production of western economies in developing
countries: socio-economic effects and international relations dynamics

ΔΙΠΛΩΜΑΤΙΚΗ ΕΡΓΑΣΙΑ

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Αθήνα, 2021

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Περίληψη

Από την στιγμή που η πρακτική της εξωτερικής ανάθεσης(outsourcing) πέρασε τα όρια των τοπικών αγορών, μετατράπηκε από μια απλή επιχειρηματική στρατηγική, σε μια διεθνή μορφή εμπορίου εμπλέκοντας ετερογενείς κρατικές οικονομίες, ικανή να προκαλέσει κοινωνικές και οικονομικές μεταβολές. Αρχικά το outsourcing επεκτάθηκε με την ίδρυση μεταποιητικών εταιρειών κυρίως σε αναπτυσσόμενες χώρες που ιδρύθηκαν από δυτικές οικονομίες. Στην συνέχεια, η τεχνολογική πρόοδος ενίσχυσε την επέκταση της εξωτερικής ανάθεσης σε όλο το φάσμα των επιχειρηματικών δραστηριοτήτων, από τα αγαθά στις υπηρεσίες και από τη διανομή στην έρευνα και ανάπτυξη (R&D). Με στόχο τη μεγιστοποίηση των κερδών και της παραγωγικότητας, αναπτύχθηκαν διαφορετικές φόρμουλες εξωτερικής ανάθεσης δημιουργώντας τις κατάλληλες συνθήκες για μια πολυδιάστατη ανάπτυξη συνεργειών, εμπορίου και τεχνολογικής ανταλλαγής. Η συζήτηση για το outsourcing και συγκεκριμένα για την υπεράκτια παραγωγή(offshore production), έχει προσεγγιστεί κυρίως από δύο αντίθετους πόλους σκέψης. Από τη μια πλευρά, εκείνοι οι οικονομολόγοι που υποστηρίζουν ότι η υπεράκτια εξωτερική ανάθεση μπορεί να δημιουργήσει οικονομικό κέρδος τόσο για τις χώρες προέλευσης όσο και για τις χώρες προορισμού μακροπρόθεσμα, και από την άλλη πλευρά, εκείνους που υποστηρίζουν ότι αυτού του τύπου το outsourcing μπορεί να επιφέρει επιζήμια αποτελέσματα στην αγορά εργασίας για τη χώρα προέλευσης και να δημιουργήσει έναν παγκόσμιο αθέμιτο ανταγωνισμό μεταξύ των εργαζομένων. Ανεξάρτητα αν τα συγκεκριμένα αντίθετα επιχειρήματα βρίσκονται στη σωστή ή όχι πλευρά, είναι αναμφισβήτητο ότι η εξωτερική ανάθεση έχει άμεσες και έμμεσες επιπτώσεις στην οικονομική και κοινωνική ζωή, επηρεάζοντας την απασχόληση, συμβάλλοντας στην ανταλλαγή τεχνογνωσίας ή μειώνοντας το χάσμα μεταξύ ανεπτυγμένων και αναπτυσσόμενων χωρών με τρόπο που μπορεί να κλονίζει τη διεθνή ισορροπία, επιβάλλοντας νέες προκλήσεις για επιχειρήσεις και κυβερνήσεις. Οι μέχρι πρότινος διεθνείς ισορροπίες δέχονται πιέσεις σήμερα από την εμφάνιση νέων οικονομικών και τεχνολογικών δυνάμεων (π.χ. Κίνα) και οι εγχώριες οικονομίες των δυτικών χωρών αγωνίζονται να καλύψουν τα κενά ανεργίας που οφείλονται εν μέρει στην υπεράκτια παραγωγή. Οι κυβερνήσεις που αντιμετωπίζουν αυτό το πολύπλευρο φαινόμενο, αξιολογούν καινοτόμες στρατηγικές που περιέχουν τη σωστή δόση

εξωτερικής ανάθεσης και προστατευτισμού προκειμένου να διατηρήσουν την παραγωγικότητά τους και να ελαχιστοποιήσουν τις απώλειες.

Η παρούσα έρευνα αποτελεί μια θεωρητική προσέγγιση και παρέχει ένα σύνολο στοιχείων, για το πώς η επιχειρηματική πρακτική της εξωτερικής ανάθεσης έχει επηρεάσει τις ισορροπίες των διεθνών σχέσεων. Προσφέρεται επίσης μια εκτενής ανάλυση των κύριων κοινωνικοοικονομικών επιπτώσεων που έχουν παρατηρηθεί στις χώρες προέλευσης και προορισμού του outsourcing. Επιπλέον, για την κατανόηση του φαινομένου, παρέχεται ένα αμβλύ πλαίσιο με τους σημαντικότερους τύπους outsourcing και των βασικών αιτιών που οδηγούν στην επιλογή του ως επιχειρηματική στρατηγική.

Η προσέγγιση της τρέχουσας έρευνας προσφέρει μια θεωρητική διαδρομή σχετικά με τις πιθανές επιπτώσεις της εξωτερικής ανάθεσης, διαφορετική από την κυρίαρχη βιβλιογραφία, δημιουργώντας με αυτόν τον τρόπο τους θεωρητικούς πυλώνες για περαιτέρω έρευνα και για πιο συγκεκριμένα εμπειρικά αποτελέσματα.

Λέξεις-κλειδιά: εξωτερική ανάθεση, offshore outsourcing, αναπτυσσόμενες χώρες, διεθνείς ισορροπίες, τεχνολογική κυριαρχία

The outsourced production of western economies in developing countries: socio-economic effects and international relations dynamics

Georgios Siligardos

Abstract

Since outsourcing crossed the boundaries of the local markets, it was transformed from another business strategy to an international form of trade which blended heterogeneous state economies and generated several consequences both social and economic. Initially outsourcing interested manufacturing companies mainly in developing countries established by western economies. Successively, the technological progress enhanced the expansion of outsourcing in the entire spectrum of business activities, from goods to services, and from distribution to research and development. Different formulas of outsourcing have been employed in order to maximize profits and productivity and multidirectional development of synergies, trade and technological exchange has been created under its spectrum. The discussion regarding outsourcing and specifically the offshore production, has been approached mainly by two opposite thinking poles. From one side the economists which advocate that offshore outsourcing can create economic gain for both origin and destination countries in the long term, and from the other side, those who sustain that offshore outsourcing could produce detrimental results for the labor segment for the origin country and create an unfair competition among workers. Wherever, these opposing arguments are on the right side or not, it is undeniable that outsourcing, generates direct and indirect effects for the economic and social life, by affecting employment, stimulating technological shifting or lessening the gap between developed and developing countries creating a mixture that shakes the international equilibrium by imposing new challenges for firms and governments. The old international balances are stressed today by the emergence of new economic and technological powers (e.g. China) and the domestic economies of western countries are struggling to cover the unemployment gaps that partially owing to offshore production. Governments which facing this multifaceted phenomenon, assess innovative strategies that contain the right dosage of outsourcing and protectionism in order to maintain their productivity and minimize the losses.

The present research offers a viewpoint and provides some evidences, on how the business practice of outsourcing has affected the balances of international

relations. It is also offered an extensive analysis of the main socio-economic effects that have been generated in the origin and destination countries. Furthermore, in order to comprehend the phenomenon of outsourcing, it is provided a solid framework of the most important types of outsourcing and of the primary causes that lead to its selection as a business strategy.

The approach of current research offers a thinking path on the possible effects of outsourcing, different than the mainstream literature on the subject, creating in that way the theoretical pillars for further research and more concrete empirical evidences.

Keywords: outsourcing, offshoring, developing countries, international balances, technological dominance

Introduction

During the last decades, the establishment of outsourced manufacturing companies in developing countries by western economies has generated several consequences both social and economic. The technological progress enhanced the expansion of outsourcing in the entire spectrum of business activities, from goods to services, and from distribution to research and development. Different formulas of outsourcing have been employed in order to maximize profits and productivity. A multidirectional development of synergies, trade and technological exchange has been created under the spectrum of outsourcing.

Therefore, the discussion regarding outsourcing and specifically the offshore production, has been approached mainly by two opposite thinking poles. From one side the economists which advocate that offshoring can create economic gain for both origin and destination countries in the long term (Farrell, 2005), and from the other side those who sustain that offshore outsourcing could produce detrimental results for the labor segment for the origin country and create an unfair competition among workers. Wherever, these opposing arguments are on the right side or not, it is undeniable that outsourcing has become a global business practice, producing direct and indirect effects for the economic and social life, shaking the international equilibrium by imposing new challenges for firms and governments.

The old international balances are stressed today by the emergence of new economic and technological powers (e.g. China) and the domestic economies of western countries are struggling to cover the unemployment gaps that partially owing to offshore production and designate new strategies with the right dosage of outsourcing and protectionism. It is documented, that the insecure condition for offshorable jobs in the developed countries could generate protectionist sentiment among local workers, leading them to oppose further trade liberalization. Consequently, governments likely will respond to these interests by formulating protectionism policies (Owen, 2017). Furthermore, the shift of technological expertise, out in third countries because of outsourcing, generates concerns for the future of digital technology interdependence and for national security jeopardy.

From another perspective the outsourcing of manufacturing, in a first stage and subsequently the outsourcing of services and high technology products, lessened the divergence between the western economies and developing countries, creating in

this way, bases for multilateral collaboration and early development. Furthermore, outsourcing as a form of trade, it is believed that enhances mutual cooperation between countries and minimizes the probabilities of conflicts, as it has been identified in the past, where confirmed a strong and robust negative association between conflict and trade (Polachek, 2004). Moreover, outsourcing entails deeper interaction between the engaged parts than simple trade. The exchange of knowledge and expertise, between western economies and developing countries, it is often inevitable, thus forming a convergence of their competencies level. The exploitation of this outsourcing's *side-effect*, by the hosting country (in more cases a developing country), it is very likely to generate an increase of the domestic technological and industrial capabilities. Therefore, seems that this opportunity, is not offered to the majority of developing countries, as they don't possess the required infrastructures and the readiness to absorb and utilize that knowledge.

Analyzing the evolution of the phenomenon of outsourcing, seems that the opportunity for low labor force, through the years, was transformed in a necessity for competent technological partners, which in their turn in some cases, became considerable competitors for the origin countries.

The aim of this work is intended to create a thinking path and provide some evidences, on how the business practice of outsourcing has affected the balances of international relations, as much to analyze the main socio-economic effects that have been generated in the origin and destination countries. Furthermore, in order to comprehend the phenomenon of outsourcing, it is provided a solid framework of the most important types of outsourcing and of the primary causes that lead to its selection as a business strategy.

The current research, consists of five main chapters; In the first chapter there is a presentation of the current literature and the main contributions of the discussion on the subject. In this section, it is tried to frame the characteristics of the phenomenon "outsourcing" and the different ways that is approached as much the main arguments on the topic. In the second chapter it is offered a framework of the various types of outsourcing, a description of the essential basic terms, as well as, different definitional approaches. The third chapter, is dedicated to the analysis of the causes that drive companies to outsource. In the chapter, are examined also the main decisional processes for the location and the selected functions to outsource. In the fourth chapter, are assessed the effects that outsourcing produces in both origin and

destination countries. Lastly, in the fifth chapter, it is tried to provide some evidences on how outsourcing has affected international balances. In the conclusion they are summarized the main evidences of the research and implications for further research.

Chapter 1

Theoretical approach – Literature

Since the first use of the term “outsourcing” in scientific publications about four decades ago the popularity of the term has seen a constant increase in the academic literature and the practice of outsourcing has been approached by numerous perspectives. The term was first used in 1979 in the Journal of the Royal Society of Arts, describing the British auto industry contracting out engineering design work to Germany (Amiti et al, 2005), although, even before of being formally identified as a business strategy, the practice to create contractual arrangements for the procurement of non-core competences was already present in different organizations. As claimed by James and Weidenbaum (1993), outsourcing is not something new, as the longstanding practice of subcontracting production activities can be viewed as outsourced services; for instance, the use of external lawyers, accountants or consultant provider firms. Although, these two practices are not to be confused as, subcontracting concept means that part of the work is transferred to another company that has special skills or resources, capable to perform tasks clearly specified, in better conditions. In other words, a subcontractor works for the buyer in specific limits, while a seller cooperates with a buyer (Dolgui and Proth, 2013).

Outsourcing has been assessed from various points of view, and whether is about its definition or its various forms (materials or services), the decision when or where to implement, or the effects that produces, it is apparent that collects the attention of different scholars forming an amalgam of scientific studies, able to create an extended view of the phenomenon but also discrepancies on its influence.

In the literature there are numerous approaches in defining outsourcing, a fact that reveals the multifaceted nature of such business practice, as much the plurality of the effects that generates. Heywood in 2001 defined outsourcing, ‘as the transfer of an internal business function or functions, plus any associated assets, to an external supplier or service provider who offers a defined service for a specified period of time, at an agreed but probably qualified price’ (Heywood, 2001:27). Abramovsky, Griffith and Sako, in 2004 in their research for the UK economy, provided a definition where outsourcing is described as the specialization outside the firm. They explained that this occurs when firms opt to buy rather than make in-house, a practice

that involves greater specialization as firms switch from sourcing inputs internally to sourcing them from separately owned suppliers (Abramovsky et al, 2004). Another definition comes from Eltschinger in 2007, where indicates that outsourcing is the practice of taking internal company functions and paying an outside firm to handle them. Such process of transferring the operation of business processes to an external service provider, then becomes accountable for those services (Eltchinger, 2007).

Rolstadås, Henriksen and O'Sullivan (2012), in their handbook for manufacturing outsourcing, they describe outsourcing as company's position in the supply chain and a make or buy decision which is one of the most important strategic decisions of a manufacturing company as it affects most of its other strategic decisions (Rolstadas et al, 2012). The United Nations Conference on Trade and Development (UNCTAD), approaches the definition of outsourcing by introducing another dimension slightly different from the merely managerial perspective, that of geographical issue. Analyzing offshoring and outsourcing, argues that these concepts should be considered in the context of two dimensions: organizational and geographical. In the organizational dimension, production can be internalized or externalized, and the latter situation is synonymous to outsourcing. In the geographical dimension, production can be done in one economy or moved to another country. The latter situation corresponds to offshoring in a broad sense (UNCTAD, 2004). In the same path, Chakrabarty in 2006, in his analysis on the various facets of domestic and global sourcing of information systems (IT) needs, in defining offshoring and outsourcing, starts with the distinction between geographical and organizational dimensions in which production fragmentation can take place. Among various categorizations that sets in the sourcing strategies, he tries to make clear the double faceted of outsourcing process in domestic and foreign. He defines outsourcing the practice of buying from an independent supplier, while insourcing that situation where goods and services are to be provided by a subsidiary or another entity within the same organization (Chakrabarty, 2006). Levy in 2005 by describing offshore outsourcing, he frames it as new phenomenon that entails the organizational and technological ability to relocate specific tasks and coordinate a geographically dispersed network of activities. He distinguishes the geographic location from the economic value creation and argues that the result is the creation of global commodity markets for particular skills and a shift in the balance of market power among firms, workers, and countries (Levy, 2005).

The term “outsourcing” is often utilized to define broadly organizational processes including all dimensions of geographic and organizational production fragmentation (Williamson, 2008), and has become even a media-friendly term utilized often as the cause for the dislocation of jobs from developed countries to the poorest ones.

Whether outsourcing is defined as a transfer of functions, a form of cooperation between enterprises, a tool to create a competitive advantage or generally as an innovative organizational process, it is apparent that its core function represents a form of trade that enhance the interaction between corporations within the same state or even across the borders, creating a fertile ground for the emergence of new dynamics on business, economic and social life.

Outsourcing has enhanced the production fragmentation and contributed to its vertical disintegration. It is characteristic the example of the production segmentation of a specific US car, described almost 2 decades ago in the annual report of the World Trade Organization (1998). In the report it is referred that, thirty per cent of the car’s value goes to Korea for assembly, 17,5% to Japan for components and advanced technology, 7,5% to Germany for design, 4% to Taiwan and Singapore for minor parts, 2,5% to the United Kingdom for advertising and marketing services and 1,5% to Ireland and Barbados for data processing. This means that only 37% of the production value was generated in the United States (Grossman, 2005).

An interesting aspect that is also discussed extensively in literature, concerning outsourcing, are the factors and the main reasons that evoke outsourcing. According to Feenstra, in his scientific research in 1998, the rising integration of world markets has brought with it, a disintegration of the production process, in which manufacturing or services activities done abroad are combined with those performed at home. In that environment, companies tend to outsource increasing amounts of their production process as this is resulting more profitable and the outsourced process can take place either domestically or abroad. Feenstra also annotates that this emerging trend represents a breakdown in the vertically-integrated mode of production (the so-called “Fordist” production, exemplified by the automobile industry) that strongly characterized the American manufacturing sector (Feenstra, 1998). Farrell in 2005, is pointing at the digital revolution and the decrease of international telecommunication costs, as the main factors that created the opportunity for businesses to outsource and consequently taking advantage of high-

skilled, low-wage workers in emerging markets. (Farrell, 2005). Jones in 2008, indicates that globalization and international fragmentation of production has enhanced the practice of international outsourcing of production blocks between countries, involving in large part those less developed (Jones, 2008).

In more specific approaches on the key drivers of outsourcing emerges that the main drivers are the cost saving and the efficiency of the organization processes. De Vita and Wang in 2006, distinguish three different periods (generations is the term utilized by the authors) of outsourcing that each one is driven by slightly different factors and comprises different activities (De Vita and Wang, 2006). In their research, in the first period, firms outsource simple back-room functions or peripheral activities, such as payroll processing, security, cleaning etc, driven mainly by cost or headcount reduction purposes. In the second period from the mid 1980s firms are starting to outsource their near-core activities, giving more importance on core competences and outsourcing complementary capabilities. In the third period outsourcing is driven more by the technological competition and the necessity to respond quickly to customer demand and satisfaction.

Another chronology of outsourcing evolution, is identified by Dolgui in 2010, where indicates that outsourcing activities initially concerned low added value products such as textiles, consumer electronics, followed in the next periods by products with high added value such as software, semiconductors or medical equipment, to arrive to outsource in China higher added value products and services like research and development (R&D) processes, key auto parts or key airplane components (Dolgui and Proth, 2010).

Following the literature, it is perceptible that the practice of outsourcing has been evolved during the years, becoming from an auxiliary component of business strategy driven by cost reduction and concerning mainly low value products to an indispensable function, in some cases, in order to adapt to the emerging competition.

Beyond the definitional effort and the examination of the magnitude and trends of outsourcing there is large part of scholars focusing on its effects on productivity, wages and development. As mentioned before, outsourcing it is often utilized in the debate whether or not its expansion in offshore locations has led to reduced employment at home. (see e.g. Desai, Foley, & Hines, 2009; Mankiw, 2004; Mankiw & Swagel, 2006). In that direction there is a block of scientists that sustain a long term positive outcome from the practice of outsourcing, and as for many is seen

as a trade phenomenon, it is subject to the usual theoretical conditions and practical responses that leads to gains from trade, and its effects on jobs and wages are not qualitatively different from those of conventional trade in goods. Blinder in 2007, paragon outsourcing to the industrial revolutions and specifically as the main component of the third industrial revolution, in order to say that this new phenomenon will not drive all impersonal services off shore. And just as the first Industrial Revolution did not banish agriculture from the rich countries, and the Second Industrial Revolution has not banished manufacturing, the evolvement of offshoring will not lead to mass unemployment, but in the same time advises of the necessity for large and complex adjustments (Blinder, 2007). Under this perspective, without any further analysis on the other effects of outsourcing, and approaching outsourcing as a new form of international trade, it is accepted that can twist the global market in the short term by creating winners and losers, but at the end creates gains to overall productivity and incomes, obtaining a general positive sign (Mankiw and Swagel, 2006). In the same theoretical line, Jones in 2008 recognizes, that the continuously increase of globalization that occurs in both in highly developed countries and in countries at earlier stages of development, creates various concerns, but in the same time recognizes that almost any change in world market conditions creates losers as well as winners, both among countries and within countries (Jones, 2008). Other scholars recognizing numerous benefits in outsourcing, as well as some negative effects, tend to underline the differences between outsourcing in countries having similar living standards and social welfare, and those with diverging levels (Dolgui 2010).

It is apparent that the debate about the advantages and disadvantages of outsourcing, maintain an important space in the literature, and more and more scholars analyzing the causes and effects of outsourcing try to find different aspects of its expansion in the global economy (see Feenstra, 1998; Osterman et al, 2001; Polachek 2004).

Despite the extension of the literature on the subject of outsourcing and its economic effects, there are less scientific researches focusing in some other aspects like the social impact or the political relations between the countries that are intertwined from outsourcing. Of course, there is always the widely extended literature for world trade, and as outsourcing can be easily seen as a form of trade or at least as a strong stimulator for trade, the literature for outsourcing can borrow some

common results from the relation between trade and political relations. In the relationship between political relations and trade, it has been seen that the presence of trade, tends to strength the relations among countries.

Almost three centuries ago, the economic philosopher Montesquieu said, “Peace is the natural effect of trade”, “Not is, but should be”, said the Scotch economist Adam Smith (Young, 1926), signaling the very early discussion of trade effects on international political relations. Since then, there a lot of studies analyzing the effects of trade for the political relations or the relationship between economic interdependence and political conflict. The predominant view that enhanced by empirical support is that heightened interdependence fosters cooperative political relations (see Arad and Hirsch, 1981; Mansfield and Pollins, 2003). Shrinking the field in a more oriented analysis to outsourcing, in the recent study of Polachek in 2004, where assess the relationship between outsourcing and bilateral political relations, he confirms the benefits of trade, and hence the benefit of outsourcing for the political interactions, and evidences a strong and robust negative association between conflict and trade. He points out that for the most part, country pairs engaged in trade have the least conflict (Polachek, 2004).

Another interesting approach that has remain in the shadow of the main researches for outsourcing, is that one assessing the impact on the host countries and specifically those less developed. During the recent years, have seen the light, works that focusing on India, one of the main outsourcing destinations and especially in IT services analyzing social and economic effects (see Joseph, 2002; Kumar and Joseph 2005; Srinivasan, 2005). Although, there is not still formatted a scientific body that provides a holistic consideration about how outsourcing shaped the evolvement of developing countries and in what level conditioned the international dynamics.

Chapter 2

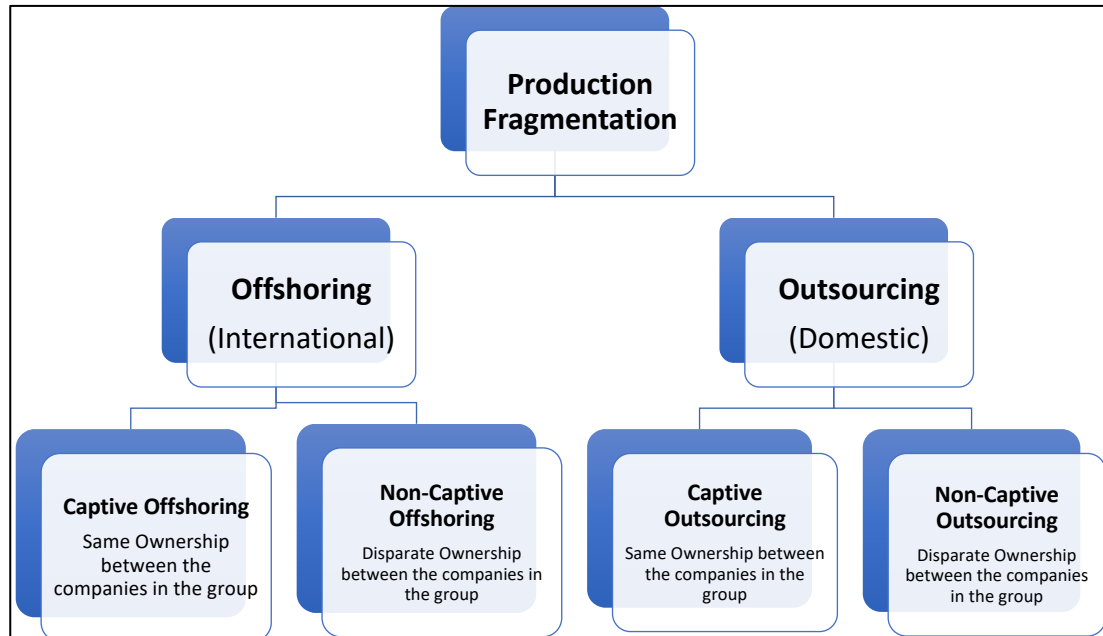
The practice of outsourcing or offshoring: Definitions and Typology

As it has been seen in the previous chapter, outsourcing it is described by numerous scholars and each definition has an added value to the clarification of this organizational practice. Starting from a more generic definition, we can borrow that of Dolgui and Proth in 2013, where describes outsourcing ‘as the act of obtaining semi-finished products, finished products or services from an outside company if these activities were traditionally performed internally’ (Dolgui and Proth, 2013:6770). Usually the company that outsources its internal business activities is called ‘buyer’ or ‘client firm’, instead the company that provides the service is known as the ‘vendor’ or ‘outsource provider’. Although, outsourcing since its appearance, has been evolved and enriched, containing by now multiple different characteristics that formulate separate types and categories.

It is illuminative the categorization made by Radlo in 2016 in order to clarify the structural patterns of outsourcing (Radlo, 2016). In his approach there is a description of different basic terms, considering as a distinguishing line the geographical and organizational dimension of the production fragmentation. Radlo, refers to the production fragmentation as the ‘division of (or the process of dividing) the production processes into separate components that are made by different companies sharing common ownership or not, located in one or more countries’(Radlo, 2016:21). Based on the location of the companies (vendors) there is then a distinction between outsourcing and offshoring. When those companies are located in the same country there is a domestic production fragmentation described under the term outsourcing. Instead, when the companies are located in more than one country there is international production fragmentation, named offshoring. Production fragmentation according Radlo, is the broadest concept and includes all geographical and organizational dimensions of offshoring and outsourcing. Furthermore, there is an additional distinction between companies that share or not, the same ownership. For those companies that share the same ownership are categorized under *captive* outsourcing or offshoring, while those that functioning under a different ownership are defined as *non-captive* (Figure 1).

This type of classification, is one of several proposed by the scholars in the field of outsourcing, but provides a clear first image of the possible intertwinings that can be created.

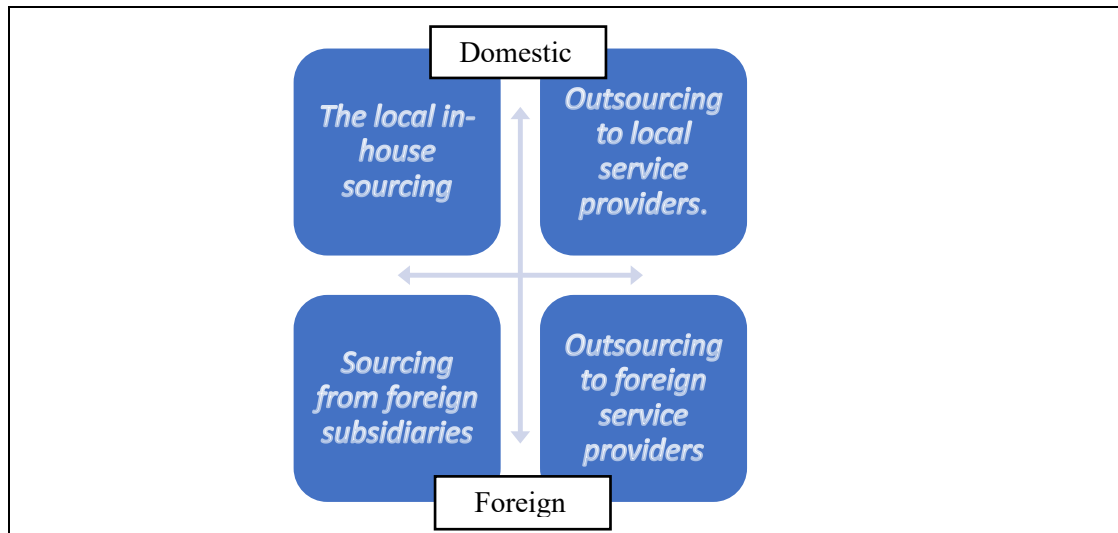
Figure 1. Classifications of Outsourcing



Source: Radlo, 2016, elaborated by the Author

In a similar theoretical path, there is a four-level categorization, that is provided by McIvor, Wall, Humphreys and McKittrick in 2009 (Figure 2). The first two levels are considered intra-domestic segmentation, within the borders of the country. *The local in-house sourcing* and the *outsourcing to local service providers*. The local in-house sourcing occurs when an organization, sources services internally from business functions such as human resources, information technology and finance and accounting. Instead, the outsourcing to local service providers involves an organization sourcing services from service providers within its national boundaries. The second two levels are subject to foreign synergies. The *sourcing from foreign subsidiaries* and the *outsourcing to foreign service providers*. The former involves an organization establishing and managing a subsidiary in a foreign location to avail of local skills and lower labor costs, instead the latter, involves sourcing services from an independent service provider in foreign locations (often referred to, as offshoring). (McIvor et al, 2009)

Figure 2: Four level categorization for Outsourcing



Source: McIvor, 2009, elaborated by the Author

Another way that can form a division lever, is that of the inherency to different business functions. There are certain segments or business functions that have been treated differently in the long path of outsourcing evolvement. For instance, low value manufacturing products had for years a constant increase for offshore outsourcing, instead in the more recent years services and specifically those of IT are concentrating the large volume of outsourced activities. Categorization, according business function has a particular importance for the measurement and the analysis of the phenomenon. Under this approach, we can list: the outsourcing for Information Technologies (IT) services, the outsourcing for business processes, the outsourcing of facilities management, for manufacturing, for software maintenance support or for marketing functions etc. Each of the different business functions can necessitate different type of synergies in order to obtain an efficient and lucrative scheme. For that reason, we can find numerous IT vendors in India than in Peru, or far more manufacturing vendors in Mexico than in Canada. For instance, assembly services represent a large share of U.S. imports and are originated from low-wage countries. Typical example, the high percentage of imports from offshore assembly plants in Mexico to the US market (Feenstra and Hanson, 1996). Instead, for another

business process like research and development (R&D) processes, has been preferred for years to outsource only in the developed countries. (Cohle, 2019)

Following then, a more managerial approach we can find multiple types of outsourcing that each one has been evolved for specific organizational purposes and engages in a different way the interested parts.

Offshore outsourcing: Occurs when the outsourcing of business activities is addressed to a provider located in a different country from the client firm. In case the client firm offshores their operations to another country by starting up their own business in the foreign country, there is a captive offshoring, instead if the offshoring is achieved between nonaffiliated companies, there is a non-Captive offshoring. This type of offshoring operation is considered a form of insourcing.

Transitional outsourcing: When outsourcing an older business system so the firm can concentrate on making a new system work. For instance, when an outsourcer is engaged to run an older computer-based ordering system for current customers, while the client firm installs a new system and makes it operational (Schniederjans et al, 2005).

Transformational outsourcing: Occurs when an organization brings in, a service provider to completely re-engineer the work of a function, probably developing new systems and building up a reliable skill base for the client to take over (Heywood, 2001).

Co-sourcing: When the provider's payment is based on achieving a particular goal such as improving the client's business performance.

Spin-offs: Occurs when outsourced business activities of one company being brought together into a completely new and separate firm. For example, when an outsourced accounting department becoming a separate accounting services firm.

Nearshore outsourcing: Occurs when the countries where companies are engaged in outsourcing synergy are neighbors (e.g., U.S. firm outsourcing to a firm in Canada, or France outsourcing to Germany)

Backsourcing: A kind of insourcing where a client firm, having experienced less than desirable outsourcing, moves the outsourced business activities back to the client firm.

Business process outsourcing (BPO): Outsourcing of an entire process or department within a firm (e.g., outsourcing all information systems services or the finance or accounting departments).

Business transformation outsourcing (BTO): This type as the process where the vendor focuses on helping the client firm create a new infrastructure or business model.

Multisourcing outsourcing: When multiple outsource providers are used simultaneously to ensure, for example, competitive bidding in the outsourcing arrangements.

Shared outsourcing: When one outsource provider works for more than one client firm at the same time (e.g., a software outsourcing provider working on the same computer software code for several banks all of which require the same type of software for their customers).

Netsourcing: The process concerning mainly net services, like renting computer applications, services, and infrastructure over web networks.

Value-added outsourcing: Client and provider strengths are combined to market products or services.

Joint venture outsourcing: A joint venture agreement involves setting up a new company to exploit a perceived business opportunity. The client's staff and assets will then be transferred to this joint venture company, rather than to the service provider. (Heywwod, 2011; Schniederjans, 2005)

Chapter 3

The main reasons for outsourcing: Key drivers and decisional processes for location and functions

The underlying reasons for outsourcing, are illuminative in order to comprehend the evolution of the phenomenon, but also for the comprehension of the evolvement of globalization's synergies. The causes for outsourcing could be seen as a living organism that transform itself according the environment. What was established three decades ago as the only path for outsourcing, may have today a totally different direction. For example, the outsourcing in some countries, guided from merely cost reduction reasons has been transformed today as a necessary condition in order to remain competitive in the market, putting the cost driver in a second place. Those cases concern mainly China, that in the course of the global transformation, became an essential and highly specialized vendor in numerous technological sectors.

Outsourcing is a form of trade, and in several cases the dynamics of its expansion have the same roots as trade. Blinder in 2006, denotes that 'countries trade with one another for the same reasons that individuals, businesses, and regions do: to exploit their comparative advantages' (Blinder, 2006:114). For some countries the advantages are natural, like the deposits of oil in some places or the tourist attractiveness of certain cities because of their natural heritage. Although, in modern economics nature's peculiarity is far less important than it was in the past. Today, much comparative advantage derives from human effort rather than natural condition (Blinder, 2006). Under this point of view, assessing the key drivers that trigger the shifting of certain industries among different centers across the globe, can be evinced that the competitive advantage may take different forms, such as, cost reduction, industrial efficiency or increased productivity. Proportionally, in outsourcing the moving force is the competitive advantage that companies identify, given the circumstances and the necessities of their business.

In the literature, there are several studies that examine the causes and the benefits of outsourcing. What characterize the majority of these researches, is the common finding that the underlying reason is in large part the cost reduction. In the various forms of outsourcing, there some of particular interest where the core company is not seeking an external partner with specific expertise, but a raw producer

to which commit the production of something that already have knowledge of how to produce, aiming to lower labor costs. In a report by United Nations in 2004, it is documented that 70% to 80% of firms interviewed in various studies, cited lower costs as the main reason for offshoring service functions. Furthermore, savings of 20% to 40% are commonly reported, a gain that is not only attributed to access of cheaper labor, but also from the consolidation of activities in fewer locations and economies of scale. Consolidation enables firms to become increasingly specialized, workers become more experienced, some tasks can become increasingly standardized and the processes of designing job specifications and contracting for them becomes increasingly streamlined, as familiarity and experience grow with both parties to the transaction (United Nations World Investment Report, 2004). Although, in the same report it is noted that benefits can raise quality at the same time as they lower costs, which helps to explain why offshoring occurs in both developed and developing countries.

Numerous scholars have argued during the past, that the primary reason for outsourcing is standing on the cost reduction policy. Low labor and production costs in combination with the increase of revenues, constitute the main motivation to outsource.

In 1996 Abraham and Taylor were mentioning three pillars above were firms could base their decision to outsource; wage and benefit savings, the transfer of demand uncertainty to an outside contractor and the access to specialized skills possessed by the vendor (Abraham and Taylor, 1996). Profit motivation has been also identified as a key driver even in IT services. Shao and David in 2007, framed the decision to offshore outsourcing in two dimensions, the technological and economic dimension. Under the economic perspective, they recognize that due to the sluggish economic climate, many companies have turned to offshore sourcing to keep their costs in line. This has been achieved as the vendors in developing economies usually cost one-third less than domestic vendors and even less when compared with in-house operations (Shao and David, 2007). The same evidence, that labor cost reduction, constitutes the first rationale for offshore outsourcing, is pointed out even in more specific analyses regarding those of small and medium-sized (SMEs) manufacturing enterprises. In a research conducted in 2011 for SMEs it has been identified that labor cost reduction leads the causes of offshoring, followed by the gain of flexibility in resource allocation, that benefits both manufacturing SMEs and their suppliers with

an opportunity to enter new markets (Sinha et al, 2011). It is indicative also, the affirmation of Yao, Jiang, Young and Talluri in 2010 in their research for outsourcing contracts, on cost reduction's *magnet effect* in outsourcing process: 'While outsourcing may enhance a client's firm's value in several ways, such access core competency, current research finds that cost reduction ranks the highest among other outsourcing benefits' (Yao et al, 2010).

The list of scholars sustaining that cost reduction is the main key driver for outsourcing is extensive (see also Baldwin et al., 2001; Farrell, 2005; Sanders et al., 2007; Bengtsson et al., 2009). Despite that main trend, not all industries set in the same level the priority of cutting costs (Paul and Wooster, 2010), and not all the outsourcing processes are characterized by cost reduction trend.

In many cases of offshoring, cost is only the trigger. There are plenty of evidences that many companies offshored to access skills and to improve the quality of the services provided. Subsequently, they are staying in the host country and expanding in order to take advantage of the entire range of benefits resulting from the international division of labour in the production of services (United Nations World Investment Report, 2004). This international division of labor may enhance substantially the efficiency and the productivity of the firm, and there are many possibilities that other firms are likely to follow that pattern, for fear of compromising their own competitive position.

There are also those companies that offshore their production, focusing on other motivations for outsourcing. They can seek through outsourcing, innovation and improvements, economies of scale, longevity of demand for the activity, quality, access to knowledge, skills or greater geographical coverage (Kakabadse and Kakabadse, 2000). In other cases, companies may choose to outsource due to the lack of resources and capabilities (Grant, 1991). The reasons to outsource are continuously enriched and shaped by innovative business structures or geographical transformations (Table 1), but after all, one of the central causes that gave birth to outsourcing, is the concentration on the core competencies of the firm, by outsourcing all the secondary processes. Core competencies can be defined as the expertise of the company with regard to its strengths, that is to say, the activities that make that the company is ranked ahead of the competition (Dolgui and Proth, 2013). Because of the importance of the core competencies, this is the point where are set the boundaries of outsourcing activities, in order to protect the individuality of the firm. Although,

technological progress has intertwined numerous processes with the consequence of knowledge exchange between vendors and buyers.

Table 1. Key drivers for Outsourcing
Labor cost reduction
Transfer the volatility of demand
Access to specialized skills
Enhance the flexibility in resource allocation
Economies of scale
Access to knowledge
Greater geographical coverage
Lack of resources and capabilities
Concentrate on core competencies

Note: elaborated by the Author

The decision of the location it is another strategic and highly variable subject, in first place the decision to outsource domestic or foreign, and subsequently the decision over the offshore destinations. The equations among different international destinations can endorse various parameters that shape the final decision. Several scholars have assessed the decisional procedure where to outsource, although the majority of these studies have mainly a managerial approach. For instance, Grossman in 2005 explored the relationship between contracting possibilities, profitability and the number of component producers in each country and the relative wages. He pointed out that given the number of component producers in each country and the relative wage there is an improvement in contracting (Grossman, 2005). Another research, from Demirbag and Glaisterin in 2010, based on a large dataset of multinational enterprises for Research and Development projects located in developed and emerging countries, examined the impact of home and host country, industry, and firm level variables on choice of location. They found three main determining factors for location decision: a)the wage difference and knowledge infrastructure difference between home and host countries, b)the science and engineering talent pool size, and c) the political risk level of host countries (Demirbag and Glaisterin, 2010).

Location decision, shares many characteristics with the *‘Why Decision’*, low labor cost countries are up in the list as outsourcing host destinations. It is illuminative, in that direction the list of leading countries in providing outsourcing services (Table 2). In the list published on data of Gartner company (Bilan et al, 2017), where are summarized the leading locations for offshore services in 2014, we

made a further elaboration contraposing the average monthly net salary for each country in the list (wage levels for the year 2020). Moreover, we classified the countries in percentiles. It is pointed out that the highest wage percentile rank of the sample, falls below the sixty-third percentile and almost 67% of the countries in the list falls under the fiftieth percentile. Furthermore, circa 25% of the sample, fall below the twenty-fifth percentile and the average percentile rank is 38. Even if considering some fluctuations in wage levels, it is apparent that countries which are preferred as offshore destinations are in the lower levels of labor cost.

Table 2: Leading locations for offshore services and average monthly net salary for each country			
Regions	Countries	Wage World Ranking Position (out of 108)	Percentile Rank
Americas:	Argentina	80	25
	Brazil	87	19
	Chile	60	44
	Costa Rica	53	50
	Mexico	66	38
	Panama	54	50
	Peru	85	21
Asia/Pacific:	Bangladesh	96	11
	China	41	62
	India	77	29
	Indonesia	94	12
	Malaysia	52	51
	Philippines	92	13
	Thailand	59	45
	Vietnam	75	30
Europe and AMED	Bulgaria	56	48
	Czech Republic	39	63
	Egypt	103	4
	Hungary	51	52
	Mauritius	69	36
	Morocco	76	28
	Poland	46	63
	Romania	55	49
	Slovakia	43	60
	South Africa	35	66
	Turkey	98	9
	Ukraine	71	35

Notes: Average monthly net salary for each country provided by www.numbeo.com, Leading locations for offshore services on “Gartner’s data republished by Bilan et al, 2018, Percentile Rank elaborated by the author

Notwithstanding, cost reduction is a variable that can trigger the initial decision but not necessarily a constant driver of the process. By that, we mean, as companies gain experience, they see other benefits in the form of improved quality of

services. “Went for cost, stayed for quality” as Dossani and Kenney named their research on the role of India in the offshoring of services (Dossani and Kenney, 2004). In our table, we can observe that China, one of the two countries (China and India) that maintain today the largest attraction for offshoring (Cohle, 2019), its position on the wages list of our sample is 41st out of 108 countries, in the sixty-second percentile(the second highest of our sample), a position that cannot be translated as very low wage country. Considering even, that China’s wages level had an increase of almost 70% since 2014 (source: tradingeconomics.com), we could say that despite the large wage increase during the recent years, China managed to maintain its position as main outsourcing vendor, confirming the title “went for cost, stayed for quality” or paraphrasing it “went for cost, stayed for competitive advantage”.

Chapter 4

The socio-economic effects for each part: Origin and Hosting countries

Outsourcing is often mentioned as a form of trade with enhanced and penetrating features, stimulating further than trade the interconnection between the involved parts. Especially when businesses cross international borders, the interaction of the parts is taking place in a global sphere, producing global effects. The medley of heterogeneous countries under these processes, is a generator of miscellaneous economic and social footprints, in both origin and hosting country. Outsourcing affects corporations' efficiency and productivity but at the same time, can also shape the productivity or the industrial competency of the country. What has been mainly reported in the literature and in the broad discussion of outsourcing in the media, has concerned the dislocation of jobs from developed countries versus other destinations. Despite the fact, that migration of jobs is the main trend of discussion, outsourcing represents a rich source of numerous effects and is the cause of societal chain reactions with positive or negative outcomes. Some of these effects have been assessed profoundly since the appearance of this phenomenon, some others attracted less interest, leaving ample space for further discussion and research.

4.1 Effects for the origin countries

The controversies about the impact of offshore outsourcing on wages and employment in the developed countries, has shown an increasing interest, since the expansion of the phenomenon. It is a topic that has divided economists, politicians and social opinion. In the politics there are several references for outsourcing as a lever of deterioration for the local labor market. In the US according Mansfield and Mutz (2013), that examined attitudes toward offshore outsourcing, pointed out that a majority of the U.S. public consistently opposes outsourcing. Mankiw and Swagel in 2006, described how concern about outsourcing increased during 2003 and accelerated as the US presidential election of 2004 approached, with the democratic candidate arguing that offshoring was a threat to the United States because of its detrimental effects on the labor market (Mankiw and Swagel, 2006). In the same direction, some years later, during late 2010s, the republican president Trump, was

claiming that the era of U.S. offshoring has to stop, promoting campaigns of protectionism and reshoring strategies (Scott, 2020). But the discrepancy of the opinions is also registered in more scientific discussions like those in the economic field. It is characteristic, during the early 1990s, the debate on whether the main cause of the deteriorating situation of unskilled workers in developed countries has been the expansion of trade with developing countries, or that this problem is caused mainly by technological changes, in which Adrian Wood was arguing for the former and a block of scholars for the latter (see Wood, 1991,1995; Lawrence et al, 1993; Krugman and Lawrence, 1994; Feenstra and Hanson, 1996). In defense of outsourcing, Feenstra and Hanson, also explained that outsourcing has contributed to an increase in the relative demand for skilled labor in the United States, counteracting the losses of low skilled jobs.

Yet, there are some evidences, that flexibility and time when they subsist, are important elements to point up outsourcing's positive sides. Amiti, Wei, Haskel, and Auriol (2005), claimed that, if there are rigidities in the labour market then outsourcing could lead to net employment losses, at least in the short run. In this case, even a small amount of outsourcing could lead to large job losses (Amiti et al, 2005). Farrell in 2005 pointed out that inflexible labor markets reduce the structural changes in the economies and result in the lack of ability to absorb human resources released as a result of offshoring, losing in this way the positive effects that could have been registered (Farrell, 2005). Economists favorable of globalization and in their effort to persuade protestors in U.S. who were against, they conclude that due to outsourcing it is very probable that some good jobs may be lost in the short run, but still total U.S. net national product must be raised in the long run due to the economic laws of comparative advantage (Samuelson, 2004). Regarding that point of view, it can be said that the total growth is not be attributed in per capita income, but in total amount for the economy, which for the protestors could be translated, more income in the hands of few corporations. Furthermore, there is the claim of numerous outsourcing firms, that offshore outsourcing had a very positive effect on the US manufacturing industry. Considering the growing international competition, costs in the industry were too high for them to survive in the world markets. By outsourcing the activities which have the highest cost, including service activities, were able to reduce costs enough to remain competitive and thus avoid complete demise (Deardorff, 2006).

Another discussion regarding offshore outsourcing is that on its relation with immigration. A negative relationship has been found between immigration and outsourcing (Bandyopadhyay and Wall, 2005). In this direction, we can add that by increasing outsourcing versus developing countries and consequently increasing the labor demand in the host country, is very probable to have a reduction in immigrations flows versus western countries.

4.2 Effects for the destination countries

In a broad discussion regarding outsourcing in developing countries, it is not rare the opinion, that where are settled outsourcing companies, occurs exploitation of less evolved populations, taking advantage of low wages and poor labor regulation. In the antipode, there is the belief that by outsourcing in less developed countries it is created an opportunity window for those countries, to excel in some sectors, dragging in that way the whole economy of the country in the development path.

The expansion of outsourcing in number of products and typology, entails in many cases from the part of the vendor, an augmented specialization and technological capacity. Outsourcing is the push force that can accelerate the convergence between developing and developed countries.

If we follow the evolution of outsourcing activities, through the years, we will discover that outsourcing switched from very low added value products to higher added value and services. Dolgui and Proth in 2010, have constructed a chronology of the main underneath products of outsourcing during the last decades. In the seventies, outsourcing activities concerned low added value products such as textiles, consumer electronics, toys, etc. In the eighties, outsourcing incorporated car parts and even full assembly of cars. In the nineties, there is the tendency to trade more high added value products, such as software or semiconductors and since then more high technological products and core services are getting in to the list, key auto parts, key airplane components or R&D services (Dolgui and Proth, 2010). When hosting countries are involved in value added products and services, the related technologies can migrate from the developed countries to the vendors. This can happen because outsourcing usually occurs through joint venture, equity stakes and co-production agreements, which leads to sharing know-how and, in addition, makes the buyers more and more dependent on the vendors (Dolgui and Proth, 2013).

Hansen in 2008, summarized by different sources the growth of outsourcing and trade for developing countries, revealing the increased penetration of developing countries in the international scheme. He reported that 1/3 of world trade is now internal to transnational corporations and another 1/3 is between them and their foreign alliance partners. Furthermore, the share of developing countries in world merchandise trade rose to 31 per cent in 2004, the highest since 1950 and the share of manufactured goods in developing country exports increased from 12 per cent in 1960 to 65 per cent in 2000. Developing countries have expanded their exports in services four times in the last decade. Proportionally the specific segment of outsourcing and offshoring gained importance with growth of 30-40 per cent annually and an increase of the overall value of offshore outsourcing jobs created in the developing world. Moreover, offshoring of IT services, is also increased, with projections to predict that 25 per cent of traditional IT-related services will be outsourced to developing countries by 2010. The same trend of growth, is registered for outsourcing of business process operations and the higher value-added services of Research & Development activities (Hansen et al, 2008).

The tendency of large information technology companies to outsource their research and development functions to different developing countries with innovative minds, had a key role in the development experienced in the information technology (Steger, 2003). Outsourcing, opened an opportunity, to some creative minds to participate in the innovation and development process, that otherwise wouldn't be possible. Therefore, by providing an avenue for the development and growth in information technology, outsourcing has helped speed up the globalization process (Kheyrian, 2015). In the affirmation of Kheyrian, it can be added, that it has been more a reciprocal contribution between globalization and outsourcing than one direction flow. While outsourcing helped the globalization process, it is the same process that gave in outsourcing those essential elements to expand.

When companies in developed countries outsource from developing countries, they also encourage the investment in the hosting country. Subsequently, these investments help boost the local economy of the vendor, by enhancing their standard of living, and also assist reduce the unemployment rate. It is then amplified this chain reaction, when the production in developing countries refers to complex high technology products. The specialization of developing countries in the production of such high technologies, enhances the development on their territories of high

technology industries, which leads to the effect of the accumulation of knowledge and experience, and therefore makes them a center of innovation and development (Bilan et al, 2017). It is characteristic the example of India, where India's high-tech sector grows at 30% annually due to outsourcing, which makes the country a recognized center in the field of outsourcing in information technology placing on its territory about 80% of global projects in this area (Clements et al, 2004). This flow of technological knowledge helps enterprises in developing countries and emerging markets to reduce the knowledge gap from the developed west economies, offering a talented workforce at a fraction of the price. Outsourcing, it might even enable developing countries to skip the industrial development stage, turning their services sectors into the main engine of economic growth and development. Developed and developing economies are exploiting each other's markets, economies and labor forces in a new era of international trade, based on virtual networks and driven by a rapidly evolving global business and technology services culture (Beardsell, 2007).

Another side effect of offshoring outsourcing, is reported by Jacob Kirkegaard in 2008, where explains that the impact in hosting countries (referring to India for IT services) can be expanded even in sectors not directly related with those of outsourcing activities. For instance, the necessity to supply educated labor force the segments with technological requirements, could trigger the improvement of both primary and higher education in the country (Kirkegaard, 2008).

It is apparent then, that the current strategy of outsourcing of the developed countries, leads to the migration of production and services to developing countries with multiple positive side effects for the destination economies.

Although, this medley of knowledge, in certain levels, can generate an undesirable exchange of expertise, that is essential characteristic of the core competencies of the firm. As denotes, Dolgui in 2013, it can be difficult to maintain a tight barrier between the buyer and the vendor, especially if the collaboration continues and if the vendor is well organized in the collection of data. Furthermore, the vendor may exert pressure to access to core competencies or the collection of sensitive data can be complemented by indirect means, mainly if the technical and technological level of the vendor is high. It is therefore possible that the vendor acquires the skills of the buyer and in medium term become a competitor of the buyer (Dolgui and Proth, 2013).

Chapter 5

How outsourcing affected international balances

Following the studies regarding the effects of outsourcing, in both developed and developing countries and consequently in international level, we can observe that this form of trade, generates multiple positive and negatives effects in short and long term, reshaping in many cases the bilateral or multilateral relations of the involved countries. The technological progress and the expansion of outsourcing for higher value-added products and services opened an opportunity to the developing countries to endorse in their industrial processes, some of technological miracles that otherwise it will be impossible to access.

Already, trade it is well known that contributes in fostering the relations between countries and minimizes the possibilities of conflict. As conflict leads to a diminution of trade, then the cost of conflict is the lost gains from trade. The higher these gains from trade losses, the more important is trade in deterring conflict and the more important is trade in promoting peace (Polachek, 2004). Outsourcing being even more penetrating than trade, reinforces the ligaments of the involved parts, and by its nature, generates a form of interdependence that could promote economic unions, tax and customs unions and sets the pillars for high levels of convergence. In the same direction, outsourcing can also help the fostering of interrelations within a union, as Stefanova in 2017, pointed out in her work for the effect of outsourcing in the European Union and the East-European Enlargement, the cost efficiency and the resource allocation functions of outsourcing can facilitate the homogenizing dynamics of regional integration (Stefanova, 2017).

During the last decades, Europe and United States were the main competitors in international markets. They were selling their products and services across the globe and at the same time they were taking advantage of low-cost labor in developing economies. In the course of their dominance they promoted measures to ease labor and business environmental standards such as the privatization of state enterprises and the reduction of tariffs. This expansion of globalization triggered the increase of competition and enhanced the efficiency and effectiveness of production agents resulting to an increment in employment opportunities for people in different regions (Kheyrian, 2015).

Therefore, the augmented competition, in the same way that converges developing countries versus western economies, it can also stress the competition among developing countries. This outcome is not aligned with the theory, that gains of trade are associated with the inherited comparative advantages of developed and developing countries, rather, it emphasizes the necessity to engage in cost reducing strategies with labour costs and wage reductions playing an important role as measures to increase competitiveness (Amadeo, 1998). Such development would lead to a divisional line between developing countries that have the capacity to sustain high educated work force and investments in R&D and those that are not capable to exploit the flow of outsourced knowledge. Although, upon that divisional line, is where reside those countries that could absorb the benefits of outsourcing as a host country and transform their economy versus more competitive levels.

5.1 The impact of outsourcing in technological dominance and the reshaping of international balances

As it has been mentioned, outsourcing of high technological knowledge entails the risk of core competencies dispersion, in the hands of vendors. Since European and US companies outsource critical functions, vendors are learning vital know-how and technologies from the buyers, and thus gain access to core competencies of the buyers companies (western countries). China is one of those countries that managed to exploit the incoming expertise, in order to develop its own competitive footprint. Implementing a successful strategy to attract outsource activities with low wages and tax incentive policy, China has also managed to acquire large part of the technology and knowledge as payment for allowing outsourcing in its territory (Dolgui and Proth, 2010).

If the job flows and labor policies, stimulated by outsourcing, weren't enough to shake the global balances, it is the technological reorder, triggered by outsourcing, that have made it.

The fast economic transformation of China, the re-emergence of Russia, the intensification of global organizations and the further European integration from the late 2000s, formed the pillars for a new hegemonic challenge. This power reorder coincided with a new era of intense changes in technology and its social and global effects, particularly in geopolitics (Ortega, 2020). These innovative transformations,

that the so called fourth industrial revolution produce, are affecting global balances in a different way, shaping economies, societies and political regimes of the 21th century (Dominioni, 2019).

In these transformations China has been proved to be prepared, having absorbed all the necessary outsourced knowledge during the last decades and have transferred it in solid and innovative investments, in order to compete in this new battlefield. China offered a direct support to its tech industry, embracing a strategy of “civil and military technology fusion” through which the authoritarian regime can control all economic sectors (government, business, and academia) but also creating spillover economic benefits (Donahoe and Polyakova, 2020).

While the technologies are evolving pulling inside the vortex consumers and politics, China find itself in the middle of attention, possessing technologies like, Artificial Intelligence, 5G technologies, data collection and essential electronic components (i.e. semiconductors). In this new digital order, the main rivals are US and China. The tech companies of both states play key roles in the international system, being market leaders for many digital products and technologies. Regarding the AI technologies the United States currently leads the race, with China rapidly catching up, and the European Union behind both (Castro et al, 2019). In the specific field of AI, it is representative the ranking of the three poles, published by the Center for Data Innovation, where is measured the score of what is considered as the main components for AI capability (Table 3).

Table 3. Rankings in Artificial Intelligence (AI) of the three poles			
Category	China	European Union	United States
Talent	3 rd	2 nd	1 st
Research	3 rd	2 nd	1 st
Development	3 rd	2 nd	1 st
Adoption	1 st	2 nd	3 rd
Data	1 st	1 st	2 nd
Hardware	2 nd	1 st	1 st
Source: Center for Data Innovation			

The United States leads in four of the six categories of presented metrics (talent, research, development, and hardware), China leads in two (adoption and data), and

the European Union leads in none, although, it is closely behind the United States in talent. Notwithstanding, the approach of this research captures more the potentiality than the current tech impact of such technology, it is framing clearly the dynamics of a trilateral relation.

In this new order, at the top of the agendas of each side are investment, regulatory and trading policies in order to sustain their commitment in the tech race and obtain independence from foreign technologies. For instance, China with the aim to create a separate technopolitical sphere of influence is pursuing twofold goals of first becoming independent from the United States in core digital technologies, and then disseminating its own technologies globally (Schulze and Voelsen, 2020).

The technological independence is pursued by all sides whether has to do with AI, semiconductors or 5G. The potential threat of national security or just the avoidance of extra interdependence, is what enables the reaction of each pole. For instance, in July of 2020 United Kingdom announced that it no longer would allow the Chinese technology firm Huawei to be part of its 5G telecommunications network recalling concerns about cyber vulnerabilities and security issues. Other countries followed that decision, like Australia and Japan. In political level, such decision was considered to be a success for the Trump administration's lobbying of its closest ally (Olsen, 2020). Policy leaders from Washington to Brussels recognize that these issues have to be resolved timely, before the US and EU become dependent on insecure 5G services with no plan for how to sustain cyber readiness for the larger 5G ecosystem. (Rugge 2020). In that logic, in US during the administration of republican president Trump, it has been registered a tough stance on China, because of the concern that the latter is about to outcompete the United States for technological leadership in a number of sectors considered critical for national security on both sides of the Pacific. (Gros, 2019). From another point of view, Trump's national populism and protectionist trade policies have effectively undermined the very liberal order that once justified US leadership (Araya, 2019).

Until the emergence of critical technological outsourced products, the stake was minor, but the intensification of the digital order created new global competitors that gained a key role in the international field speeding up the events. Another parameter that has to be considered in the escalation of these smashing forces, is that this rivalry might be also accelerated from the pandemic crisis of COVID-19, which functioned occasionally as an accelerator for the transatlantic differences (Arvanitopoulos, 2019).

Under that logic, Europe only fully reacted to the risks of Chinese technology during the COVID-19 crisis realizing that Chinese tech suppliers cannot be trusted because of the illiberal nature of the People's Republic (Larsen, 2020).

The formation of new dynamics and new policy trends is what characterize this transitional period. China sprung out from the muddy world of the developing countries, by taking advantage of its position as outsourcing destination, having now a main role in the race for technological dominance and shaking the international old balances. Three main players are struggling to find the right balance between interdependence and autonomy, designating new strategies that would permit them to sustain their sovereignty in the global environment.

Conclusions

Since the time the first company decided to outsource an internal business process to another local company, in order to increase productivity of its core competencies or reduce costs, a real and extensive evolution has been registered in the field of outsourcing. Although, it was difficult at the time of the very first steps, to imagine the dimension of synergies and chains reactions that would follow. From an intrastate business practice, the phenomenon of outsourcing was expanded gradually beyond the borders of the countries involving heterogenous political and economic systems. In the same way trade transformed the world, outsourcing as a special form of trade had its own impact on the local and global economy, as much in the societal life.

Outsourcing, interested both developed and developing countries and consequently the whole globe, by generating multiple positive and negative effects in short and long term, reshaping in many cases the bilateral or multilateral relations of the involved countries. Large part of the literature and social attention has been focused and raised concerns over the impact of offshore outsourcing on wages and employment in the developed countries. This topic has divided economists, politicians and social opinion. In the same way the discussion regarding outsourcing in developing countries, collected different views. From one side those who advocate that where are settled outsourcing companies, occurs exploitation of less evolved populations, taking advantage of low wages and poor labor regulation. And from the other side it is believed, that by outsourcing, in less developed countries it is created an opportunity window for those countries, to excel in some sectors, dragging in that way the whole economy of the country in the development path.

Following the chronology of the evolution of outsourcing, it is pointed out that over time, its underneath products, became more complex and technologic. Outsourced activities initially were dealing with low added value products, in large part limited in the basic manufacturing sector, followed in the next periods by products of high added value such as software, semiconductors or medical equipment. Today, outsourcing has been evolved further with more advanced products and services. In China for instance, are outsourced very high added value products and services, like Artificial Intelligence (AI) or research and development (R&D) processes. This technological progress and the expansion of outsourcing opened an

opportunity to the developing countries to endorse in their industrial processes, some of the most advanced technological miracles which in different circumstances would be an exclusivity only to the western countries.

This flow of technological knowledge helped enterprises in developing countries and emerging markets to reduce the knowledge gap from the developed west economies, offering in the same time a talented workforce at a fraction of the price. This side of outsourcing, contributed for a faster economic growth and development of the developing countries, helping them skip the industrial development stage and turning their services sectors into the main engine of their economies.

Although, such development highlighted a divisional line between developing countries. The opportunity to assimilate the flow of knowledge, is not offered to the majority of developing countries, as they don't possess the required infrastructures and the readiness to absorb and utilize it. The divisional line keeps separate those countries that have the capacity to sustain high educated work force and investments in R&D and those that are not capable to exploit the flow of outsourced knowledge. The fact is, that upon that divisional line, is where reside those countries that can absorb the benefits of outsourcing as a host country and transform their economy versus more competitive levels.

The momentum for the emergence of new competitors in the global arena, has been reinforced with the new era of intense changes in technology and its social and global effects. In these transformations, China has been proved to be prepared, having assimilated all the necessary outsourced knowledge during the last decades and have transferred it in solid and innovative investments, establishing itself as global competitor in this new battlefield. By implementing a successful strategy to attract outsource activities with low wages and tax incentive policy, China has also managed to acquire large part of the technology and knowledge as payment for allowing outsourcing in its territory. China offered a direct support to its tech industry, and by sustaining the blending of civil and military technology, intensified the economic and technological competition with United States and Western Europe. A new race for technological dominance has started, with one competitor having inverted the *trojan horse* of outsourcing for its own gain.

In the present work it has been tried to frame another aspect of outsourcing, that until recently hadn't revealed its potential. The dispersion of core competencies

because of outsourcing, can minimize the gap between developed and developing countries, but can also, where the circumstances permit, to create a real competitor to the old powers. Surely, the example of China, in this evolution coincides with other global transformations that they were maturing during the last decade. Without denying the singularity of this case, it can't be excluded, that other emerging powers will capitalize the knowledge and procedures acquired by outsourcing buyers in order to become global players in technology or in other fields. As it has been said earlier, outsourcing needs time and flexibility to reveal its final effects. Although, in this scenario, where the dislocation of jobs and labor policies stimulated by outsourcing, weren't enough to shake the global balances, it is the technological reorder, triggered by outsourcing, that have made it.

The approach of current research offers a thinking path on the possible effects of outsourcing, different than the mainstream literature on the subject, creating in that way the theoretical pillars for further research and more concrete empirical evidences. Outsourcing remains a complex business practice and a multifaceted phenomenon that affects corporations' efficiency and productivity, but at the same time is capable to foster unions, create synergies, deviate immigration or produce other socio-economic effects that necessitates a further and continuous analysis.

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