

*Wladimir Andreff*. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

## **OUTSOURCING IN THE NEW STRATEGY OF MULTINATIONAL COMPANIES: FOREIGN INVESTMENT, INTERNATIONAL SUBCONTRACTING AND PRODUCTION RELOCATION\***

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### **ABSTRACT.**

The article is dealing in the first place with the definition of (offshore) outsourcing in relation with foreign direct investment and international subcontracting process, as well as with some connected issues such as fragmentation of the production process, international production relocation, de-industrialisation in developed countries and industrialisation in newly industrialising, now coined emerging countries. In the second place, it aims at finding how global strategy differentiates from traditional MNC strategies and how much outsourcing fits with such global strategy. The last section of the article briefly screens the economic impact of outsourcing on the world trade structure – with the two enlightening snapshots of global trade in sports goods and European Union 15's outward processing trade with Central Eastern European countries (CEECs)-, as well as on home developed and host emerging countries. The article conclusion is that outsourcing has grown faster than world trade in the past two decades and has skyrocketed during the very last years because it is a cornerstone of a new global strategy adopted by multinational companies since the late 1980s.

**KEY WORDS:** Offshoring, outsourcing, new strategy of multinational companies.

**JEL CLASIFICACION:** F14, J23, L6.

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## **INTRODUCTION.**

Outsourcing is a very old process which emerged with manufacturing industry development. *Offshore outsourcing* is more recent since has emerged in the 1960s alongside with spreading multinational companies (MNCs) and international subcontracting. It must be kept in mind that outsourcing will refer to offshore outsourcing in this entire article. The newest evolution is offshore outsourcing that was brought about by globalisation of the world economy in the past two decades, and hot debates that such connection has triggered in economic literature. Since outsourcing is assessed to be one dimension of globalisation, it must have something to do with a new strategy of MNCs – their so-called global strategy (Dunning, 1993; Andreff, 1996a; Yip, 1997) -, which is tightly linked to overall globalisation process. The relationships between outsourcing and global strategy increasingly adopted by MNCs is the core issue covered here.

First, we define (offshore) outsourcing in relation with foreign direct investment (FDI) and international subcontracting as well as some connected issues such as fragmentation of the production process, international production relocation, de-industrialisation in developed countries and industrialisation in newly industrialising, now coined emerging countries (1). Then we focus on how global strategy differentiates from traditional MNC strategies and how much outsourcing fits with such global strategy (2). A last section (3) briefly screens the economic impact of outsourcing on the world trade structure – with the two enlightening snapshots of global trade in sports goods and European Union 15's outward processing trade with Central Eastern European countries (CEECs) -, as well as on home developed and host emerging countries.

## **1. MODES OF OUTSOURCING AND CONNECTED ISSUES.**

Strictly speaking, outsourcing is defined as developing a supply source which is located outside a plant, a factory or an office in charge of producing some final products or services. By definition, outsourcing pertains to supplying inputs (raw materials, tools, spare parts, components, equipments) and/or semi-finished products that must still be further elaborated or assembled in a plant, factory or office to become a final product or service, which implies that some value is added to outsourced supplies in the production (assembly) process. When a supply source is located abroad, we are facing international or offshore outsourcing. However, taking property rights into account, when a supply source abroad is simply owned by as a firm's (MNC's) subsidiary, some economists would talk about international insourcing (Mucchielli, 2008). Since our approach is not focused on property rights issues, outsourcing within a single firm – between a subsidiary and a mother company – is kept in our topic.

The first historical form of outsourcing had been witnessed as soon as in Karl Marx's *Das Kapital* when he stressed a so-called 'putting-out system' through which industrial enterprises, in the 19th century, were decentralising the working process of their factories (and thus were avoiding strikes due to a high number of workers concentrated in a single location) into home work achieved outside the factory by peasants, women, youngsters, etc.; such decentralisation was happening in a same country, often in a same district. Putting out system maintained itself in developed

*Wladimir Andreff*. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

market economies up to the 1950s or early 1960s in some specific industries such as the sports goods industry.

Usually outsourcing first developed within the borders of a same country, since a mother company was relocating some plant or workshop in another region or district; or it was subcontracting with other producers in the same country. A new trend emerged in the 1960s when outward FDI and international subcontracting started to be used as frequent tools of offshore outsourcing. Since the late 1980s, outsourcing had become a systematic element in a new global strategy that had been adopted by an increasing number of MNCs (**2.2** below). However, outsourcing cannot spread to the same extent in all industries because a prerequisite for its development is that production process can be fragmented. Thus, offshore outsourcing is very easy in the services industry, quite common in manufacturing industry, depending on technological properties of the product and production process, but nearly impossible in agriculture.

### **1.1. Fragmentation of production process and international production networks.**

Fragmentation is not a new phenomenon; nor is outsourcing. The former is a precondition for the latter. Both trace us back to the beginning of industrial revolution but both have acquired an international dimension and complexity in the globalisation era and now represent most important distinguishing features of contemporary globalisation (Arndt & Kierzkowski, 2001). Intra-product specialisation can only take place when various phases of a production process are physically separable, *i.e.* when the manufacture of a product or the delivery of a service is amenable to fragmentation. With technological change, the various phases of production may now be spatially separated and undertaken at locations where costs are lowest. Of course, physical dispersion of production induces certain costs, especially those of communication and coordination. On the other hand, the gains inherent in intra-product specialisation and potential savings in learning costs should encourage the creation of firms focusing on component production. Large and small firms can now use the global economy as their production partner. MNCs face a much more competitive environment in the form of small and medium-sized companies who operate successfully in global production networks.

International production networks involving producers operating in different countries or continents have become not only feasible but rational. The growth of international production networks, in which different stages of producing a good take place in different countries, is sometimes referred to as vertical specialisation reflecting countries production of different stages of a good and the consequent trade in intermediary products (Barba Navaretti & Venables, 2004). Thus, fragmentation creates a vertical intra-industry international trade of components and unfinished (semi-finished) products. A part of this trade generates within MNCs but when it comes out from international subcontracting, it is usually defined outward processing trade (M. & W. Andreff, 2000 & 2001a). The more a product can be broken up into its component parts - hundreds or thousands parts for an airplane, a car or a computer - , the more such trade is likely to occur. A good share of North-South FDI takes place because MNCs have geographically fragmented their production, outsourcing parts of their production processes. These stages may be the production of components or

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

stages of manufacturing process, and are also increasingly services activities (call centres, information technology support, etc.). The rationale is very simple: MNCs move different stages of the production process to countries with lower costs.

The major causes of fragmentation can be sketched as follows. When Fordism production had been abandoned for post-Fordism production (2.2 below), technological change had started to shape a flexible production process rather easy to be fragmented in different workshops, branches and intermediary products in manufacturing industry. In recent years, technological innovations, liberalisation of international trade in services, convergence of legal and regulatory systems, and increased freedom of establishment have significantly reduced international coordination costs, thus opening up new opportunities for fragmentation across national frontiers. Integrated technologies, *i.e.* technologies which do not allow fragmentation, come to be replaced by fragmented technologies. Under fragmented production, it is no longer necessary for producers to master entire production chains and to organise them within single firms. With fragmentation, offshore sourcing and offshore production have become commonplace in many industries, including the automotive, aircraft, computer and apparel industries. National economies are increasingly intertwined as production sharing spreads.

Technological change in the services sector is the most obvious candidate for triggering more fragmentation in the future: reduction in the cost of international telephone calls, reduction in transport costs, availability of Internet connections, lower costs of making banking transactions between countries, all this helps spreading the delivery of services anywhere in the world economy. Various service functions of the firm like billing, accountancy, or recruitment can be increasingly outsourced. Also deregulation of services activities has pushed forward their fragmentation.

The outsourcing dimension of international fragmentation lies somewhere in between total ownership on the one hand, and complete arm's-length transactions (foreign trade operations) on the other hand. Two important elements make outsourcing different from traditional arm's-length transactions: the long term nature of the relationship and the amount of information, in the form of detailed instructions and specifications on the part of the customer, which accompany outsourcing. MNCs also represent traditional spatial fragmentation. Such firms wish to keep control over all the production chain, even if it could be split up, in order to preserve their proprietary technology and know-how, or because there are other sources of rents (such as mineral rights) which might be endangered if it is contracted out; these are also the roots of a so-called efficiency seeking FDI (2.1 below). International subcontracting followed with outward processing trade is another option.

## **1.2. International production relocation.**

International production relocation is sometimes referred to as *offshoring* or *offshore production*, in particular in the services industry. With the most restrictive definition, international production relocation is defined as the process of closing a plant in one home country (say France) followed with opening a *same* plant abroad, in a host country, in view of re-importing in the home national territory those goods and services that have been produced abroad at a lower cost (or in view of continued delivery to export markets from this new plant abroad). According to Mucchielli & Saucier's (1997) broader definition, international production relocation by a MNC

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

involves closing down a manufacturing unit in home country to replace it with a new unit (which is not supposed to be the same) abroad. Even a wider definition states that international production relocation is the operation that transfers partly or entirely, by any means, a production abroad in view of re-importing lower cost products in the national territory; then it triggers offshore outsourcing. Such relocation does not necessarily concern the whole production process: only a fragment can be relocated, for instance the assembly line or the production of one specific component.

The most common type of relocation is followed by re-imports of goods previously manufactured in home country at a higher cost. Typically, relocation could be the “removal” of a production unit to a low production cost country *via* outward FDI. Otherwise, it could be that the relocated production is contracted out to a foreign subcontractor without any FDI or removal of a production unit. Or it can arise through different types of agreements such as joint ventures, co-production agreements, and original equipment manufacturing arrangements. In all cases, this means an industrial reorganisation of a MNC and outsourcing lies somewhere in. In most cases, it is a move of manufacturing or services labour intensive production towards emerging countries. Looking for lower unit labour costs is a major motivation of MNCs engaged in outsourcing: the idea is to have a product or a service produced by a subsidiary or a subcontractor at a lower cost than in home country. Labour costs differentials are often pointed at as an explanation for relocation, but wage differentials have to be adjusted for productivity differences. It is the *unit labour cost* (labour cost divided by labour productivity) that matters. Moreover, labour cost does not represent a major part of manufacturing expenses in a number of industries.

International production relocation can affect not only industrial plants – the most publicised case in the press – but also services production, in particular those services the production of which requires some industrial goods – say “industrialised” services (see below the example of a data base). Finally, international production relocation is often assessed as “an unavoidable consequence of firms global reorganisation” and a “reorganisation of the firms’ process on a global base strengthens their chance of survival in an increasingly unstable environment” and even “the most efficient firms are those adopting a global organisation at world level” (Fontagné & Lorenzi, 2005). Such sentences implicitly flavour the typical strategy of global MNCs evidenced in Andreff (1996).

### **1.3. Vertical FDI, international subcontracting and outward processing trade.**

When outsourcing derives from outward FDI, the latter is qualified as *vertical FDI*. The latter is predicted to occur when factor cost savings are large relative to the costs of fragmenting activities in several locations. Thus, vertical FDI is more likely to occur for MNCs with production processes that can be easily fragmented into several stages characterized by different factor intensities and between countries with different factor endowments. Trade and transport costs tend to encourage horizontal FDI, but discourage vertical FDI. These costs have dramatically decreased in the long run, since Second World War, and such a trend favours vertical FDI and outsourcing. Labour cost differentials are an explanatory factor of vertical FDI, and of outsourcing as well. But many studies do not control for differences in productivity (to

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

compare unit labour costs) and none of them is able to distinguish between the labour costs of skilled versus unskilled labour.

The ratio of affiliate imports from parent companies for further processing to total subsidiary sales is referred to as a measure of outsourcing FDI. This ratio is negatively affected by trade costs. The negative effect of transportation costs and host country trade barriers on the index of outsourcing FDI means that higher trade costs raise the cost of importing intermediate inputs and make the subsidiaries less competitive as suppliers of world and home markets. Most studies that assessed vertical versus horizontal FDI concluded that the latter (attracted by market demand) has been more important and prevalent than vertical FDI so far. Empirical evidence pointing in the same direction is that foreign subsidiary sales are heavily dominated by local sales. Nevertheless the importance of vertical FDI has increased since the 1990s.

As regards to outsourcing through *international subcontracting*, it has been the most important type of industrial redeployment in some industries such as textile-clothing, much more so than FDI (Graziani, 1998). The UN official definition of subcontracting is: “a subcontracting relationship exists whenever a business (subcontractor) acts for the account of another (main contractor) undertaking in the process of working and making a specific product to plans and technical specifications supplied by the main contractor, who has final economic responsibility” (UNECE, 1995). When the subcontractor and the main contractor are not located in a same country, we face international subcontracting, which appears to be a frequent means of production relocation, technology transfer, improvement of managerial skills, product design adaptation to the world market, just like FDI, while it comparatively saves on capital expenditures and corporate governance costs. It is a component of lean production and global outsourcing. Firms (MNCs) pay special attention to building an efficient network of suppliers at a lower degree of vertical integration than subsidiaries, which means a bundle of autonomous enterprises strongly interrelated through outward processing trade (Halpern, 1994).

*Outward processing trade* (OPT) takes place when some phases of the production chain – typically the sewing phase in textile-clothing - are carried out by foreign subcontractors. Such trade is registered under a specific customs classification and refers to exports of components and semi-finished products that flow from the main contractor’s country and, after some fashioning or assembling, re-imports of more elaborated intermediary products or even final products that flow back from the subcontractor’s to the main contractor’s country. OPT is sometimes considered as a sub-category of counter-trade, a transaction where exports and imports are linked (Neale & Sercu, 1993). The objectives of OPT are outsourcing from lower unit labour cost countries and benefiting from lower customs duties, due to a specific OPT customs regime.

Outsourcing based on international subcontracting and outward processing trade is the most significant on a global scale in industries such as textile-clothing, the leather-shoe industry, electrical machinery, electronic components, high-tech household equipment, iron and steel and non ferrous metallurgy.

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

#### **1.4. Developed countries de-industrialisation, emerging countries industrialisation.**

De-industrialisation refers to a diminishing share of manufacturing industry production in GDP, in the most developed Triad countries (North America, Europe and Japan). It may have two causes; one is a declining productivity and competitiveness of a country, the other one is much more important, that is the increasing share of the services industry in GDP of Triad countries due to new information and communication technologies (NICT) and an increasing role of finance in capitalist development under globalisation. Economic literature has coined both evolutions under the same label of de-industrialisation, even though the most significant one should have been more accurately labelled 'tertiarisation' (in reference to the services industry as a tertiary sector). Although de-industrialisation (tertiarisation) is basically a process that arises inside each post-industrial developed economy, outsourcing and production relocation are often tightly associated to globalisation and a newly emerging structure of global trade between de-industrialising developed countries and newly industrialised emerging countries. By the same token, a number of firms and production units are selected to survive in this process after some significant restructuring while some others miss enough restructuring and are deemed to vanish from the business, namely in developed countries. Outsourcing is part and parcel of such restructuring and its outcome is to increase the share of inputs imported from low cost countries in overall inputs supplied to firms (MNCs) based in developed countries, thus increasing the latter's productivity, competitiveness and chance of survival. The overall impact of industrialisation in emerging countries through outsourcing and imports is assessed to be 10% of French de-industrialisation over 1990-2002 (Fontagné & Lorenzi, 2005).

#### **1.5. The magnitude of outsourcing.**

Industrial FDI in developing countries amounts to only 4% of overall industrial FDI from France, 8% from European Union countries and 7% from the US. Since a part of it is not linked with outsourcing (market and asset seeking strategies, see **2.1** below), it means that, at first sight, outsourcing through FDI is quantitatively limited in manufacturing industry. However its qualitative significance is more than proportional to quantity in a global strategy of MNCs (see **2.4** below). Once international production relocation in the services industry is taken into account, one reaches about 20% of outward FDI from Germany and over 10% from France that relocate activities in emerging countries. With such figures, the magnitude of outsourcing is under-evaluated since what is outsourced by means of international subcontracting and OPT is not encompassed. Viewed from a major host country, that is China, outsourcing has accelerated in past recent years (Gaulier *et al.*, 2006). It has reached nearly one fifth of Chinese industrial value added and over 60% of value added by foreign companies settled in China. In 2005, more than half Chinese overall export came from assembling and manufacturing imported components and semi-finished products, 80% of which were achieved by subsidiaries of foreign MNCs located in China. Chinese surplus in outward processing trade has trebled from 2001 to 2005.

*Wladimir Andreff.* Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

Anyway, measuring the magnitude of outsourcing is submitted to a number of methodological and statistical tricks that are not resolved so far, so that we would not focus on the quantitative dimension of outsourcing here.

## **2. A NEW GLOBAL STRATEGY OF MULTINATIONAL COMPANIES.**

The economic analysis of MNC strategies is very much influenced by two theoretical models respectively elaborated on by John Dunning and James Markusen in the late 1980s and early 1990s. Both models are definitely relevant for analysing MNC's investment strategies until the late 1980s. However, with the new globalisation era, both models do not take over the fact that one major factor of globalisation<sup>1</sup> is a new global strategy designed by MNCs since the mid-1980s.

### **2.1. Multinational company traditional strategies.**

Dunning's approach of MNC strategies stabilised in the early 1990s (Dunning, 1993) around four typical strategies, recently inserted in a more general framework (Dunning, 2006; Dunning & NarulW, 2004), which are resource seeking, market seeking, efficiency seeking and asset seeking strategies.

*A. Resource seeking:* It basically developed when major companies were keeping their production units in developed countries and were investing abroad only to secure the delivery of some natural resources, raw materials or primary goods (such as agricultural inputs and products). In one of its earliest forms, production-sharing activities involved the production of primary products in developing countries, shipment of these goods to industrial nations for further processing, and then the re-exportation (in part) of the processed product back to the primary-commodity-producing country (Yeats, 2001). MNCs adopt this strategy in countries possessing an absolute advantage in a given scarce natural resource, namely in developing countries. Thus, this strategy consists in FDI to acquire inputs for further processing activities.

*B. Market seeking:* Here MNCs duplicate their units of production abroad in order to open or enlarge their access to a foreign market. Such strategy developed after World War II when MNCs started to gear their FDI more toward developed market economies than toward developing countries and former colonies. In such strategy, FDI is primarily oriented to supplying goods and services, often substituting previous exports, to markets with high level of economic development (GDP per capita) and, therefore, with a demand emanating from high revenue consumers. MNCs look for production economies of scale due to the size and wealth of host market and transport cost saving due to export substitution. Such strategy basically fits with FDI in developed rather than developing countries, even though it is accurate for big emerging economies (Brazil, Russia, India, China) as well, in particular when their domestic markets are somewhat protected.

*C. Efficiency seeking:* MNCs reorganise their activity on a global scale in specialising their subsidiaries in different activities, including the production of some inputs and semi-finished products in a network of plants located in different countries, namely in a number of low labour cost countries. FDI is locating manufacturing (and now

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<sup>1</sup> It is probably the most important factor of globalisation after the emergence of global finance.



Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

services) activity in middle-income and emerging countries to exploit lower costs and improve efficiency, and often to use the relocated plant as an export base toward all relevant markets. This process sometimes goes along with closing higher cost plants in MNCs' home countries. The same objective can be reached through offshore outsourcing based on international subcontracting. One prerequisite for this strategy is the existence of a cluster of local manufacturing producers; that is the reason why efficiency seeking cannot be developed by MNCs in the least developed countries (sub-Saharan Africa, the poorest Asian and Latin American countries) where labour costs are the lowest in the world, but labour productivity is even comparatively lower.

*Asset seeking:* MNCs acquire assets located abroad that are likely to facilitate their further expansion, productivity and competitiveness, for example research laboratories, technological infrastructure, high tech plants, and financial assets. Such strategy is the only one that cannot rely on greenfield investment or international subcontracting and is entirely based on transborder mergers and acquisitions. Agglomeration effects and positive externalities are looked for in host economy, and MNCs select assets to be acquired accordingly. A major part of transborder mergers and acquisitions have developed throughout developed market economies, but the share of newly industrialising and emerging countries is increasingly significant.

The last two strategies are associated both with the process of globalisation (Dunning & Narula, 2004) and outsourcing *lato sensu*. Resource seeking FDI is also some sort of outsourcing, but it may be rather footloose when host countries lost their absolute advantage (ex.: the discovery of oil or gas in another country) and resource-seeking investment often is not tightly integrated in the organisational structure of MNCs. In the following, we exclude it from outsourcing that we are talking about.

There is also a usual distinction between *horizontal* and *vertical* FDI which has been coined and further analyzed by Markusen (1984, 1995 & 2002). Horizontal FDI replicates abroad the same sort of production units as the domestic ones in order to widen the access to a local market (the concept is close to Dunning's market seeking). Vertical FDI organises a vertical division of labour within a firm (from backward to forward industries, from inputs to the final product, along the value chain) in order to benefit from international differences in production costs, which implies outsourcing (the concept is close to Dunning's efficiency seeking). With horizontal FDI, MNCs often settle distribution subsidiaries in host countries while with vertical FDI it is always a production subsidiary which is set up abroad. Outcomes of vertical FDI are an increase of international trade in intermediary products, inputs and components (Fontagné, 1991; Hanson *et al.*, 2003) and a North/South distribution of the value chain within the firm: invention, innovation, finance and commercial networks merely remain in home country whereas manufacturing activities are increasingly located in host emerging economies.

However, Markusen's approach exhibits that location of foreign subsidiaries is mostly driven by factors consistent with the horizontal model (market demand, similar factor endowments), which means that vertical FDI associated with outsourcing covers only a minority share of global FDI. Horizontal FDI is a substitute for trade and occurs when trade costs are relatively high; vertical FDI is a complement to trade costs, occurring when trade costs are low (Barba Navaretti & Venables, 2004). Nowadays vertical FDI can be integrated in a new global strategy of MNCs where its qualitative

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

dimension is much more important than its usual quantitative measurement (2.2 below), and such aspect is missing in Markusen's model. Moreover, with current data, the distinction between horizontal and vertical FDI is not always clear-cut. It requires micro data at the firm level rather than macroeconomic data of international trade. In addition, outsourcing is not confined to vertical FDI since it can be achieved through subcontracting. MNCs' strategies are often more complex than the dichotomy horizontal/vertical FDI suggests it and, thus, we have to turn now to these complex global strategies. In particular, when a MNC resorts to both horizontal and vertical FDI, the firm transforms into a network of enterprises (subsidiaries) all around the world; when some outsourcing is achieved through international subcontracting with foreign partners, we witness an international network of firms (from different countries) some of which being themselves a network of subsidiaries (Andreff, 1996b).

## **2.2. The various dimensions of a global strategy.**

Since the late 1980s, some economists started mentioning, often in passing, that MNCs' strategies were evolving to become more global. Dunning (1988) evoked a "new style" MNC. Porter (1986) referred to firms with a global vision of competition operating in global industries; or in global oligopolies according to Chesnais (1994). Ohmae (1985) coined an enterprise global strategy within the borders of so-called Triad countries (North America, Europe, Japan). Dunning (1993) considered MNCs as global players involved in globalisation of business in order to survive under the strain of oligopolistic competition. Stopford (1995) pointed at global competition across MNCs to take over resources, *i.e.* global outsourcing. Later on, some have attempted to more deeply characterise a MNC global strategy, but it corresponds few references in the literature. For instance, DeAnne Julius (1990) provided first insights about global companies. Yip (1997) defined MNC global strategy as a 'globally coordinated or integrated approach to operating multinationally, particularly in contrast to multi-domestic strategies', the latter analysed in Porter (1986). Global strategy lies in global rather than local optimisation of MNC performances, market participation, activity location, and uniform marketing. We would recall here how we had elaborated on the concept of 'global multinationals', *i.e.* MNCs involved in a global strategy for all dimensions of their activity and business (Andreff, 1996a, 1999a & 2003).

The first characteristics of MNC global strategy is that it combines, links, integrates or even merges into a single strategy, within a single firm, all the previous strategies, that is resource seeking, market seeking, efficiency seeking, and asset seeking – and by the same token global offshore outsourcing. Playing on all cords, such a strategy makes MNCs nearly free (or footloose) from any national territory (Andreff, 1996b) and weakens the efficiency of any state intervention aiming at influencing MNCs' behaviour. With a global strategy, a MNC assesses potential host countries competing for hosting its foreign subsidiary and no longer a nation state (government) that trades off between MNCs looking where locate a new outward FDI (Andreff, 1999a). After a sophisticated evaluation of different countries' advantages (investment climate, country risk, foreign investor treatment, comparative advantages), a global MNC is used to rank those potentially attractive countries and then bargain for the best investing conditions while national governments overbid on

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

these conditions for effectively hosting foreign investment (Andreff, 1999b; Michalet, 1999).

Global strategy is led by a global vision of markets, competition and performances. No domestic market is significant compared to world market and a global MNC would accept to lose market shares in some domestic markets if it is compensated by increasing market shares in fast growing markets. Consolidated profit is maximised: some foreign subsidiaries may be in the red on purpose (for instance in countries with heavy taxation) in order to make other subsidiaries profitable in different countries (with friendly taxation). Global MNCs react swiftly to any international shock. They adjust much faster than local firms, virtually instantly, as if there were no frictions even though they adjust less than local firms: for any given change in the wage rate, the change in employment is smaller (Barba Navaretti *et al.*, 2003). People who work in a global MNC are less likely to be laid off, but if it happens it happens fast or instantly.

Global MNCs do compete together at the world level and no one of them is concerned with any form of 'economic patriotism'. They are basically global even though the mother company is based in the US, the UK, Japan, Germany, France, etc. Moreover, global MNCs are interdependent in a global oligopoly in each industry or product market (motor cars, computers, etc.), which means that competition is not anonymous like in economic textbooks. Ford, Renault-Nissan or Toyota do know that no more than a dozen competitors matter in the industry and can threaten their own market share, and they have a good knowledge about competitors' strategies, including because they develop economic intelligence activities to gather such information. In a global oligopoly, anyone struggles for life, *i.e.* an increasing or at least not decreasing world market share. Since lowering prices is nearly excluded (a price war is too much dangerous since it will eliminate some oligopolists, including possibly the war initiator), competition in global oligopolies rely on global product standardisation and differentiation, global marketing and advertising, technological innovation and its propagation all around the world in view of reaching the best fit with any consumer needs (or sometimes the other way round, fitting any consumer need into the range of production possibilities thanks to advertising).

Global MNCs are capable of such adjustment to global and local demand because they handle a process of flexible manufacturing (or services delivery) and/or lean production. For example, the evolutionary process of globalisation of Japan's motor industry is an emanation of its past developmental experiences which witnessed the spread of lean production (Ozawa, 1997) in components-intensive, assembly-based industries: just in time delivery system, in-process quality control, on the job training of shopfloor workers for multi-skilling via job rotation. More generally, global MNCs emerged in the transition process from former Fordism production to post-Fordism production. In the Fordist system of production, the firm's objective was to manufacture as many (hundred thousands, millions) copies of a same uniform product: "all Americans will have their own car provided it is a black T Ford" allegedly Henry Ford once said. The efficiency of Fordism production was based on economies of scale and increasing returns to scale on the one hand; on the other hand, a popular advertising addressed to anyone coupled with rather good wages that fuelled a huge demand for standardised products. These roots of Fordism

*Wladimir Andreff.* Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

triggered its success for decades until the early 1980s. Since then, post-Fordist plants and factories swiftly outdated the Fordist mode of production.

In post-Fordism production, the intent is not to satisfy on average anyone's need, on the contrary it is to satisfy the specific needs of each consumer in the world with a product specifically designed for him/her: no longer a black T Ford for all, but YOUR pink cabriolet with all the many specifications you have chosen in the catalogue and, possibly, your name on the bonnet. You no longer buy a car choosing it in the car shop window. You order a car after having described (or chosen in the catalogue) all the possible trade offs you want to make as regards many components of your car; then your order is sent to a flexible car factory that will manufacture exactly the requested copy. The technical problem to be solved is to produce million absolutely different copies of a same good. The post-Fordist response to this problem is flexible production, the process of which can be fragmented, each fragment capable to adapt to a specific demand.

For instance, I had visited in 1984 one of the first most flexible plants in the world, a Fujitsu factory in Japan that was capable to manufacture – after orders had been sent from mother company – thousands of different (specific) copies of dozens different products (computers, electronic typing machines, ATMs, TV sets, rolling usual robots, etc.). The production programme and process were readjusted every morning on request, *i.e.* to a specific assortment sent from mother company by means of telecoms and computers. Of course, parts of such flexible process can be fragmented and relocated elsewhere (namely abroad) taking production costs here and there into consideration. Thus, the efficiency of post-Fordism production is less based on economies of scale than on economies of scope, and on outsourcing, including offshore outsourcing after some fragments of the production process have been relocated abroad. In order to benefit from lower unit labour costs, MNCs reorganise their production process on a global basis; just to give an example, in a French big company, in 2002, unit labour costs were 28 € in France, 24 € in the US, 4 € in Brazil and Mexico, and 1.30 € in China, for an average manpower qualification. However, skilled manpower was relatively more expensive in China, the unit labour cost of an engineer was 14 times lower than in France compared to 24 times lower for a blue collar worker (Fontagné & Lorenzi, 2005).

Post-Fordist processes have extended to services production in the 1990s. Moreover, the frontiers of manufacturing industry become increasingly blurred since many products are 'de-materialised' while a number of products and services are tightly linked (Curien & Muet, 2004) both in their consumption and production. The service-content of goods we buy is very great indeed. Take a computer (a material product) and a data base (a service). In the commercial value of a computer, 80% are traced back to the value of software (services) while 20% are enshrined in material products (hardware). On the other hand, a data base requires the use of computers, telecoms, and satellites to be made available for sale anywhere in the world. Or look at the linkage between computers, electronic components, audio-video sets, telecom equipment and services such as sales and rental office machinery, radio-TV broadcasting and numerical and satellite diffusion.

Post-Fordist system of production requires high technology, in particular NITC such as computers, telecoms, numerical networks, satellites and so on, in order to connect

*Wladimir Andreff.* Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

and integrate different factories and distribution subsidiaries all along the chain value although all these production units are located all around the world. Paralleling these international flows of information and decision, outsourcing moves components and semi-finished products across foreign subsidiaries located in dozens of countries (even though primarily concentrated in Triad and emerging countries). NITC have solved technical issues of data non-transferability and non-storage and other services and have enabled the fragmentation of services production. A number of services can be supplied from anywhere, independently of their geographical location; their production and supply can instantaneously occur in different places. Thus, MNCs can relocate their services (management, data treatment, R&D, call centres, reservation systems) in low cost countries and use them to coordinate plants and affiliates in their internationalised post-Fordist system of production.

Above-described MNC global strategy is more than often completed with help of transborder mergers and acquisitions and sometimes international business alliances and partnerships between MNC mother companies (ex.: GM-Toyota, Ford-Honda, Chrysler-Mitsubishi before the merger with Daimler Benz, Renault-Nissan before their merger). One consequence of this is that the delineation between global oligopolistic competitors is blurred, less and less clear-cut. An overall implication of MNC global strategy is that products can no longer be labelled 'made in followed with a country name'; they are nearly all 'world made'. Identifying the diverse national origins of a modern product is nowadays quite impossible (Price, 2001).

Analysing a number of MNCs as global companies is increasingly widespread in the literature in the 2000s. However, a few economists resist this view like Rugman & Verbeke (2004) who reject the idea that MNCs are global because their sales remain concentrated in a same region (which means a continent, Asia, Europe, etc.) of the world. There are two tricks in their argument, first the conception of a region, second the use of only sales as a criterion. Adding location of (relocated) production, assets and employment to sales, many MNCs are definitely global.

### **2.3. An alternative global strategy based on international subcontracting: Nike versus Adidas.**

Separability of ownership is an important determinant of the organisational structure of cross-border production sharing; where it is not feasible, MNCs and FDI are likely to play a dominant role. Where ownership is separable, arm's-length relationships (foreign trade) are possible and FDI is less important. In between, there is an option for international subcontracting taking advantage of preferential customs duties applied to outward processing trade (OPT). Some additional advantages of international subcontracting are the following. A MNC incurs governance costs in supervising its subsidiaries abroad; it is much less so with international subcontracting since a subcontractor is a foreign company legally independent from the main contractor (MNC). A MNC is legally accountable for any misdeeds of its foreign subsidiaries; it is not accountable for misdoings perpetrated by its foreign subcontractors, as it is illustrated below with the Nike case. Any shock, say a demand fall, can be switched by MNCs on to reducing their foreign sub-contractors activity and employment, without any production reduction or redundancies affecting MNCs themselves. International subcontracting is even more flexible than post-Fordist flexible production and introduces to the genuine realm of lean production. A

*Wladimir Andreff.* Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

MNC can engage so far in international subcontracting that, at the end of the day, it gives up all manufacturing activity and becomes a 'hollow corporation' where all material (semi-finished and finished) products are outsourced from low production cost countries and subcontractors.

In some industries, international subcontracting has gone as far as being more significant than FDI: Italian textile-clothing industry is a case in point (Balcet & Vitali, 2001). Another one is the sport goods industry (Andreff, 2006). Since the 1960s, and for decades, MNCs expanded their production abroad through outward FDI in the sports goods industry: Adidas, Puma, Fila, Rossignol, Salomon, Head, Lafuma, Kunnan, Tae Hwa and others. For instance, Lafuma had adopted Adidas model since 1986 with the settlement of a subsidiary in Tunisia while firing a quarter of its manpower in France, then it opened new subsidiaries in Morocco, Hungary and China. Nevertheless, in the 1980s, some MNCs changed for an international subcontracting strategy: Nike, Reebok, Mizuno, Asics for example. They were so performing that later on, in the late 1990s and early 2000s, most of their competitors started to mimic Nike's strategy. Adidas itself switched to the Nike model, including because it had merged Reebok in 2005, a company involved in a subcontracting strategy in Asia similar to the one of Nike.

Nike has found that its comparative advantage lies in design and marketing, leaving unto others all the manufacturing (Jones & Kierzkowski, 2001). It is the most fragmented firm, a sort of international 'virtual' corporation, which has decoupled management from production on a global basis (Price, 2001). Increasingly, in developed countries, this firm manufactures nothing at all directly, but contracts out all but its innermost core competence. It has become a pure service entity. Nike has kept 2,500 jobs in the US that concentrate on conception and organisational (mainly distribution and finance) activities and has located 75,000 jobs in Asia in sports goods production. Nike farms out its production of shoes to subcontractors, which allows it to concentrate its energies on the design of the next generation of footwear (Price, 2001). Nike is one of the MNCs which had gone the furthest with outsourcing in a global strategy since it does not own and run any longer a manufacturing plant in the US. Nike has become a typical hollow corporation: it does not produce a single sports product by itself whereas all the manufacturing production has been relocated in Asia to foreign subcontractors. Nike's major asset is its property rights over the brand name Nike. Labour costs amount to only 4% of the price of Nike sports goods due to low unit labour cost in Pakistan, Indonesia, China, etc., where they are produced on the one hand and, on the other hand, because marketing, advertising and distribution costs are proportionally high in the sports goods industry (Andreff, 2006).

Nike's strategy is not without its problems. Many Nike's subcontractors are located in Pakistan, Indonesia and China. In the Bogor plant (Indonesia), in 1998, the daily wage was half a dollar and a glass of milk while the 13 members of Nike's board of directors were earning an annual income over 5 million \$ each, twice the overall annual wage bill of 6,600 workers employed to produce for Nike trademark in the Djakarta area. The Sialkot assembly line of soccer balls (Pakistan) was sadly infamous and publicised for resorting to mass child labour (Riddle, 1997). Nike attempted to protect itself from criticism saying that accountability falls on its subcontractors. By end of 1997, eventually the World Federation of the Sporting

*Wladimir Andreff*. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

Goods Industry (whose the most influential member is Nike) and ILO adopted a Model Code of Conduct for global business practices that addresses working conditions (child labour, forced labour, wages, the length of working day, the right of unionisation and so on) in the sports goods industry. The code is a gentleman's agreement or a moral code rather than binding economic regulation. In the past recent years, it seems that Nike's subcontractor's bad practices have more than slightly reduced, but it is more due to NGO counter-advertising against Nike products than to the code of conduct.

#### **2.4. How much outsourcing fits with global strategy?**

Global strategy with fragmentation of the production process has maximum potential in a situation where an industry is internationally footloose in production terms, that is, factor requirements are such that it can potentially relocate anywhere. The immediate consequence is outsourcing of factors, inputs, components and semi-finished products. The required post-Fordism flexible production adjustment to extremely differentiated ('individualised') demand is also facilitated by offshore outsourcing under the prerequisites of computerised internationally transmitted orders, just-in-time delivery, robotising assembly lines, process quality control, and on the job training of shopfloor workers. Thus, outsourcing is a core development which acted as a rocket pad for MNC global strategy together with high tech, NITC and instant international transfers of information, decision and finance.

### **3. IMPACT OF OUTSOURCING ON WORLD TRADE, HOME AND HOST COUNTRIES.**

Now, we briefly sketch some major consequences of outsourcing, embedded in MNC global strategy. It is only a short survey because an in-depth analysis of outsourcing impact on world trade, home and host country's economies is dampened with a number of unresolved methodological tricks which is a topic (and an issue) in itself.

#### **3.1. Impact on world trade.**

A very crude assessment of the outsourcing impact consists in reminding that roughly one third of world trade is made up of transfers from country to country within MNCs (between all subsidiaries and mother companies). Most of these transfers are connected with outsourcing even though they are not market transactions and are achieved at transfer prices and not at world market prices. Another third of world trade is a trade between MNCs (including subsidiaries) and mono-national firms, a part of which is obviously linked to outsourcing through international subcontracting and OPT. Probably between 20% and 30% of this second third of world trade is OPT, if we assess OPT in the range of 7% to 10% of overall global trade (*Andreff et al.*, 2001). Finally, a last third of world trade is entirely independent from MNCs; an unknown share of it is related to outsourcing. All this means that at least 40% of world trade are linked to outsourcing. Another evaluation relies on considering the share of intermediate products trade in overall global trade. Due to outsourcing, production fragmentation and relocation, intermediary products now reach nearly half of overall international trade.

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

Outsourcing takes on greater significance when the products being imported are neither basic raw material, nor finished consumer goods, but are at an intermediate stage of processing (Feenstra, 1998). In that case, it is very plausible that stages of the production process (or value chain) shift across borders as new trade opportunities emerge. Imports of manufactured goods from emerging countries that are directly operated by industrial enterprises based in developed countries are a better proxy<sup>2</sup> for trade generated by vertical FDI and international subcontracting. International trade data generally have not differentiated between components and assembled products. Revisions of the SITC now make it somewhat easier to tabulate intra-industry trade in components in several broad industry groups. The share of components in total OECD SITC 7 exports has steadily increased over the period 1978 to 1995 (Yeats, 2001). This trend clearly signals the increasing interdependence of production-sharing operations in the whole machinery and transport sectors.

**Table 1: Vertical intra-industry trade in international trade of machinery in Asian countries, 1990-2000 (share in %)**

	Share of machinery in overall trade		Trade in product fragments & components	
	1990	2000	1990	2000
<b>General machinery</b>				
China	20	64	18	81
Indonesia	5	30	7	36
Philippines	0	37	0	42
Malaysia	42	69	48	80
South Korea	51	34	77	34
Thailand	36	73	47	86
<b>Electrical machinery</b>				
China	23	65	25	80
Indonesia	12	35	14	39
Philippines	0	49	0	47
Malaysia	54	68	59	75
South Korea	58	32	81	31
Thailand	54	80	53	87

Source: Adapted from Ando (2006).

Another approach is to compute the input content of exports with input-output tables, which has been done for ten OECD countries (Hummels *et al.*, 2001). According to this calculation, in the early 2000s, international trade of components and product parts reached about 30% of OECD countries overall exports, compared with 21% in 1970. The share of intermediary products in overall exports from Mexico grew from 10% in 1980 to 30% in 1997, and the same evolution is witnessed for Ireland, South

<sup>2</sup> Manufactured imports from emerging countries by industrial enterprises based in developed countries can also result from purchases to industrial enterprises based in emerging countries (in addition to imports linked to FDI and international subcontracting).



Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

Korea and Taiwan. International trade of emerging countries has transformed a lot, in particular in Asian countries: the share of vertical intra-industry trade has swiftly increased, from 20% in 1990 to 64% in China, from 5% to 30% in Indonesia, from 36% to 73% in Thailand, and from 42% to 69% in Malaysia (for product fragments and components in machinery trade, see Table 1). Fragmentation and vertical intra-industry trade have also developed with the European Union, in particular through a relocation of low cost and low value added production in the new members, *i.e.* Central Eastern European countries (CEECs). Within Europe, outsourcing and production relocation move labour intensive activities towards Eastern Europe while Western Europe specialises in high value added activities.

**Table 2: French manufacturing imports from emerging countries: share in overall manufacturing imports**

	1993	1999	2002
Clothing- leather	45.6	50.1	56.5
Press-edition	4.3	3.8	6.6
Pharmaceutical industry	2.4	7.2	7.3
Household equipment	18.2	25.6	34.6
Automotive industry	4.4	4.4	8.4
Aircraft and shipbuilding industries	2.1	2.8	3.7
Machine building industry	2.3	4.7	6.2
Electrical & electronic machinery	10.4	24.0	25.8
Minerals	4.1	5.7	7.7
Textile	13.9	20.1	25.3
Wood paper	5.8	9.3	11.1
Chemical industry, plastic	6.0	7.3	10.1
Metallurgy (steel & non ferrous)	18.8	19.4	20.2
Electronic components	11.5	28.5	22.4
Total	9.4	14.2	15.8

Source: SESSI.

The share of emerging countries in French manufacturing imports is very significant in some industries such as clothing-leather, consumer durables (household equipment), electrical and electronic equipment, textile and electronic components (Table 2). An increase in this share is witnessed from 1993 to 2002. The share of French manufactured good imports from outsourcing countries has grown from 9.4% of overall imports from these countries in 1993 to 15.8% in 2002, with a large variance of this percentage across industries. Moreover, one third of French manufactured good imports from emerging countries are intra-MNC trade with subsidiaries located in these host countries. It is a measure, though restrictive, of offshore outsourcing. OPT deriving from international subcontracting should be added as well as a part of manufactured imports independent from MNCs, their subsidiaries and subcontractors. Those French manufactured good imports from outsourcing countries that are the most significant come from Asia, namely China, CEECs and Maghreb countries (Table 3).

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

**Table 3: Relative importance of geographical areas in French imports of manufactured goods (%)**

	1993	1999	2002
Asia (excluding Japan)	4.3	7.1	6.6
of which China	1.0	2.4	2.6
Central Eastern Europe	1.3	2.9	4.5
Latin America	1.2	1.2	1.5
Africa	0.8	0.6	0.7
Maghreb	1.6	2.0	2.2
Middle East	0.3	0.3	0.3
Outsourcing (relocation) areas	9.4	14.2	15.8
Rest of the world	90.6	85.8	84.2
Total	100.0	100.0	100.0

Source: SESSI.

In France, seven industries have a major contribution to international subcontracting: automotive industry, aircraft industry, shipbuilding, machinery, electrical and electronic equipment, textile-clothing, and household equipment. In 2002, 15,000 French enterprises had subcontracted abroad for 53 billion € in manufacturing industry, of which 13 billion € in automotive industry (363 MNCs), 9 billion € in aircraft and shipbuilding industries (250 MNCs), 7 billion € in machine building (2,818 enterprises), 5 billion € in electrical and electronic equipment (753 MNCs), 4 billion € in metallurgy (3,128 enterprises), 3 billion € in pharmaceutical industry (403 MNCs), 2.7 billion € in textile-clothing (996 enterprises), 2.6 billion € in chemical industry (1,479 enterprises), 2.3 billion € in press and printing (1,158 enterprises), 1.5 billion € in components (690 enterprises) and 1.3 billion € in consumer durables (916 enterprises). Only 1,400 French enterprises (*i.e.* 5% of French enterprises employing 20 employees or more) have significant subcontracting relationship with emerging countries.

Global trade of services has grown from 358 billion \$ in 1984 to 2,000 billion \$ in 2004, primarily in computerised services (22% per year, ahead of financial services 13%).

### **3.2. The example of global trade in sports goods.**

A major part of the sports goods industry had been relocated from Europe and the US to Asia, South America and Maghreb since the late 1980s. Today, between 80% and 90% of world production of 'trite' (non sophisticated, non high tech) goods such as balls, sport shoes, sportswear, and anoraks are achieved in emerging and developing countries. Outsourcing by Adidas, Nike, Reebok, Asics, Mizuno, etc., results in a typical structure of global trade exhibited in a recent study (M. & W. Andreff, 2008). At the most disaggregated SITC level, one can witness a clear-cut specialisation within this intra-industry trade. The three major sports goods exporters in 2004 are China, Pakistan and Indonesia, *i.e.* the three countries which concentrate

*Wladimir Andreff.* Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

the great bulk of production under Nike label (and various MNCs of the sports goods industry). Those three countries as well as Tunisia, Morocco, India, Philippines, Thailand, Romania, Bulgaria, Malaysia and Mexico are the most significant net exporters of sports goods in the world.

A typical specialisation comes out from MNCs outsourcing and relocation strategies. The production of more sophisticated, high tech and high value added sports goods is kept in home countries. Thus, developed market economies are specialised and some of them are net exporters of skis and skis equipment, surfs, golf clubs, balls and equipment, and boats; the production of all these products requires an important technological content and highly skilled labour. On the other hand, developed countries are net importers of sportswear, sport footwear, anoraks, balls, rackets, skates, tennis tables and gymnastic equipment from emerging and developing countries. Due to specialisation in exporting all the latter goods, primarily based on outsourcing, China is the major player (exporter) on the global market for sports goods in 2004.

### **3.3. EU and France outward processing trade with transition and Maghreb countries.**

EU outward processing trade had been reoriented towards CEECs (future new EU members) in the 1990s as a result of their transition to a market economy as well as low labour unit cost to be paid for manpower nearly as much skilled as in Western Europe. In addition, OPT between EU countries and CEECs benefited from specific and advantageous regulations and tariffs until 1997 when the free trade area between EU and associated members (CEECs) had been completed. Since then, there is no longer a specific OPT data registration regarding East-West trade in Europe. Fortunately, some studies have been achieved when it was statistically feasible, including a rather exhaustive one (Andreff *et al.*, 2001). Even though the study stuck to outsourcing based on international subcontracting (excluding production relocation through FDI), it reached some significant results. The most involved MNCs in OPT with CEECs in 1997 were those from Germany, Italy and France. Among CEECs, the most important OPT host countries were first Romania, then Poland, Hungary, the Czech Republic, Slovakia, Slovenia, Bulgaria as well as other transition economies such as Macedonia, Moldova, Ukraine and Belarus. Depending on host country, OPT was amounting at least to 7-8% of overall EU-CEEC trade and up to more than 25% in the case of Romania. Without surprise OPT had primarily spread in textile-clothing, leather-shoes, electrical and electronic equipment, and machinery. A quite smaller share was witnessed in automotive industry, chemicals-plastics, and furniture.

Among country case studies that accompanied the previous core study, French OPT appeared to be concentrated on CEECs and Maghreb countries in the 1990s (M. & W. Andreff, 2000 & 2001b). Basically, France-CEECs OPT had the same profile as the EU-CEECs one. Between 1993 and 1997, some significant changes were observed due to new outsourcing strategies of French MNCs towards CEECs and Maghreb countries, the two major areas of French production relocation in emerging economies. French firms increasingly substituted CEECs to Maghreb as their outsourcing base. Moreover, FDI was progressively substituted to OPT in CEECs, which means both that French MNCs were attempting to control more tightly their

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

outsourcing base and were switching to some extent from vertical to horizontal FDI<sup>3</sup> while economic growth and individual incomes were recovering in CEECs. A weaker specialisation of Maghreb countries in OPT, focused on supplying intermediary goods such as textile-clothing, leather-shoes in which they were losing their comparative advantage over CEECs, was detrimental to their OPT with France (compared with CEECs) and to their inward FDI from France (compared to OPT).

### 3.4. Impact on home countries.

Is the impact of outsourcing on home countries positive? It is the most debatable question that fuels the great bulk of literature about outsourcing consequences.

Offshore production can improve *competitiveness* of an industry whose end products face competition from imports. Industry competitiveness rises, and with it employment, output and wages. Outsourcing lower production costs and improve productivity: the cost of hardware in the US computer industry is now 10% to 30% lower than that it would have been without outsourcing while the positive impact of this cost reduction had been 0.3% of US GNP per year over 1995-2002 (Mann, 2003). Vertical FDI, which relocates stages of production previously carried out at home, reduces home value added. But in the longrun, these effects could be reversed if MNCs gain market shares because of the cost saving induced by vertical FDI: the remaining home activities may then get strengthened. *Consumers* in home countries benefit from cheaper products due to their lower cost of production. Outward FDI can also be an effective channel to transfer foreign *technological knowledge* at home.

Since production relocation and international subcontracting favour the emergence of new demand in host countries, it develops *exports* of more sophisticated and expensive goods (with a highly skilled labour content) from home countries. Vertical FDI, by fragmenting the production chain, is found to enhance exports from home plants since it reduces production costs for a MNC as a whole, therefore it raises output and employment of complementary activities in home country or prevents them from declining. Most empirical studies show that an increase in foreign subsidiary sales (abroad) is typically associated with an increase in exports by MNC home operations (Lipsey, 2000; Fontagné & Pajot, 2002), in particular when FDI is vertical. Exports from home countries toward host countries of outsourcing activities usually increase due to the new demand created in emerging countries where wages and incomes raise. This new demand is basically addressed to more sophisticated products that require high tech and highly skilled manpower that both are in shortage in emerging countries so that it generates an opportunity for exports from MNCs' developed home countries. Thus, employment in home countries may remain nearly unaffected by production relocation when home MNCs develop new high technologies required for producing sophisticated goods to serve emerging countries' markets (Fontagné & Lorenzi, 2005).

On the other hand, the vertical FDI model predicts that the relative *demand for skills* and capital is likely to rise in high-income home countries, as labour-intensive activities are transferred to cheap labour countries. If home activities become more

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<sup>3</sup> The same trend of MNCs prioritizing a motive of supplying host CEEC markets is exhibited in Manea & Pearce (2004).

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

skilled and capital intensive, this change might impinge on income distribution, as changes in factor demand affect relative factor prices. The specific impact of outsourcing resembles to a biased technical progress *against unskilled manpower* (Feenstra & Hanson, 1996). Firms react to competing imports through technical progress and fragmentation of their production process in order to take advantage of disparities in relative costs and, so doing, they deeply alter the required level of manpower qualification in home country. Outsourcing differentiates salaries in home countries between qualified and unskilled manpower. Outsourcing production abroad usually increases and upgrades employment of qualified personnel in home country and reduces and downgrades employment of unskilled manpower without a much significant impact on the *overall level of employment*. The process combines a substitution of foreign to domestic production with an increase of domestic firms competitiveness which translates into an overall growth of their production. Thus, outsourcing leads first to firing a number of unskilled workers and, in a second step, to hire more qualified employees required by growing production. It is by no means obvious that employment as a whole will drop, especially as the process reduces costs, thus stimulating demand (Price, 2001). Moreover, the demand for managerial (and entrepreneurial) functions will increase. Outward FDI generates a need for supervising, coordinating and managing tasks (*i.e.* qualified workers) in mother companies, in home country, while it creates a demand for less skilled labour in foreign subsidiaries in low labour cost emerging host countries since these subsidiaries are specialised in unskilled labour intensive tasks. But outsourcing creates *unemployment* in home country's firms that do not adjust fast enough to globalisation.

When MNCs invest abroad they divert resources and jobs to foreign countries. The size of activities in home country could still decline as employees get laid off and domestic plants are downsized or closed down. The impact basically depends on domestic and foreign output and employment being either complements or substitutes; this relationship is tested in some empirical studies (Head & Ries, 2001). Outsourcing and vertical FDI generally complement domestic activities whereas horizontal FDI is more often a substitute for them. Another issue is whether MNCs employ more skilled personnel than national firms. Firm-level studies in developed countries have found that skill intensity in home country increases as a consequence of FDI, in particular when domestic MNCs invest in developing countries (Slaughter 2000; Head & Ries, 2002). Such empirical evidence is consistent with the presumption that vertical FDI relocates unskilled labour intensive stages of production to countries where this type of labour is relatively abundant.

Indeed, there are four main *effects of relocation on employment* (Mucchielli & Saucier, 1997): 1/ foreign production can replace domestic production: there is then a direct effect of employment loss; 2/ MNCs from home country can supply foreign subsidiaries with parts, materials and equipment; this raises exports and generates new production in home country: there is an indirect effect of job creation by stimulation of exports; 3/ relocating abroad the production of standardized goods may increase management staff concerned with this production as well as R&D activity in the parent company and the production of sophisticated goods intensive in skilled labour: there is an indirect effect of increasing a job's qualification requirements; 4/ production relocation can stimulate, within the firm's national boundaries, a rise in

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

related jobs in banking, consultancy and advice services: it will create jobs related to international business.

At a microeconomic level, most studies share the common finding that there are price complementarities between employment in foreign subsidiaries in cheap-labour countries and home employment. Once a, say, UK MNC has invested in a Chinese plant, then Chinese labour and the remaining UK labour are complements, as they perform two complementary stages of the production process. A decline in Chinese wages makes the whole MNC more competitive and its total output increases, including UK output (which brings about an increase in UK employment). Given the widespread fear that jobs in high-income countries get exported to developing countries through FDI, such result is partly reassuring (Barba Navaretti & Venables, 2004).

Empirical tests provide blurred results overall. In the US, Forrester Research estimated that 40% of 1,000 enterprises of the *Fortune* ranking have partly relocated their production and 3.3 million jobs could be relocated abroad in the fifteen years to come which would make a loss of 136 billion \$ in payroll (the NICT industry is going to relocate 500,000 jobs in the years to come). The overall impact of outsourcing on the US economy is assessed to be limited: "The US economy every quarter generates many more jobs than are projected to be lost to offshore outsourcing over the next decades" (Kirkegaard, 2004). In the US, two thirds of jobs affected by outsourcing are in manufacturing industry (about 200,000 jobs) and one third in the services industry (about 100,000 jobs).

All over Europe, from January 2002 to July 2004, 1,456 restructuring operations had been registered destroying 780,394 jobs. Out of these operations, 104 were production relocations, with 36,977 jobs destroyed, and 45 were due to international subcontracting - 19,155 jobs destroyed (Fontagné & Lorenzi, 2005). In the UK, 27 big MNCs had relocated at least 50,000 jobs in the services industry over 2002-2004, that is 0.24% of all services employment, but 700,000 tertiary jobs seem to be threatened by further outsourcing. Marin (2004) estimated that 90,000 jobs had been lost in Germany due to production relocation over 1990-2001, *i.e.* 0.7% of employment in those firms concerned and 0.3% of overall employment in Germany, a relocation which appears to be primarily concentrated on new EU members (Geishecker, 2006).

The French Ministry for Finance has assessed in 1991 that French trade with developing countries generated a deficit of 330,000 jobs. Of course only an unknown part of this trade is linked to outward FDI and even less to outsourcing linked to FDI. End of 2001, French MNCs had 770,000 jobs abroad in their manufacturing subsidiaries, which means about 20% of industrial jobs in France, this percentage was still only 13% in 1999.

In France, outsourcing and production relocation in manufacturing industry, in view of re-importing low cost goods, had reached about 19 billion € in 2003, *i.e.* 16% of French overall manufactured products imported (and 3% of production of the enterprises concerned). Production relocation through FDI to CEECs and Maghreb countries amounts to 5% of outward FDI in these areas and 1% in more remote markets. A recent study has measured the number of jobs affected by production relocation as follows: it has counted jobs lost when an enterprise reduces its

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

employment at least by 25% in the short term while the same enterprise increases its import of the same product previously manufactured in France (Aubert & Sillard, 2005). In the French manufacturing industry, 95,000 jobs have been suppressed and relocated between 1995 and 2001 (on average, 13,500 per year). Among these relocated jobs, a little bit less than a half have been relocated to emerging countries, *i.e.* about 6,400 jobs per year, 0.17% of industrial employment. Thus, low labour cost countries encompass nearly half of jobs destroyed due to production relocation mainly towards China and other Asian countries, CEECs, Maghreb countries and South America.

### 3.5. Impact on host countries.

Overall impact of outsourcing on host countries is less controversial since it is basically positive, even though all the revenues from outsourcing do not remain in host countries.

Fragmentation and component *specialisation* eliminate the need to gain competency in all aspects of production and allow emerging countries to enter into the network of global production sharing by focusing on mastery of just one facet of production. Such countries may begin by developing competency in the more labour-intensive components of complex products and gradually move on to more capital and human-capital-intensive activities. Production-sharing relationships with producers in developed countries facilitate knowledge transfer and greater and cheaper access to advanced technologies.

MNCs impact is expected to improve productivity in host country through *spill over effects*. MNCs and local firms interact in a variety of ways. They may trade directly with each other for supply of inputs or new technologies. They compete in product and factor markets. And there are non market interactions between them (externalities). When technological transfer is external to an explicit transaction, but through externalities that do not bring any direct return to the MNC, we are in the face of a spillover. The latter can occur in a great number of ways, some absolutely unpredictable: two managers playing golf together talking about the last MNC equipment, MNCs employees could move to local firms bringing along what they have learned, etc. Inter-firm mobility of managers is a basic spillover for transferring foreign specific management practices (Caves, 1996). However, many studies do not find general positive effects of MNCs on domestic efficiency. Transmission of spillovers depends on a host of country and industry specific conditions. The problem is often absorption capacity of national firms, namely in developing countries, which must be over a minimum technological threshold. In such case, FDI has little impact on transforming domestic industry. National firms are likely to benefit from their role of input suppliers to MNCs and, to this extent, outsourcing is of interest to host countries. Foreign MNCs are used to support local suppliers in setting up their production facilities, by providing technical assistance to raise product quality, and by training employees and managers.

MNCs have an impact on *competition* in local markets. If they are best performers, they could have pro-competitive effects by reducing price-cost mark ups. But the entry of MNCs on the local market often increases concentration so that their profitability can rise without any efficiency improvement. Most studies have shown

*Wladimir Andreff.* Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

that MNCs are, on average, more productive than local firms when we consider value added and output per employee both in developed and developing countries. MNCs increase imperfect competition in the domestic market and may reduce the market share of local firms and force them to exit their activity. Negative competitive effects can more than offset favourable technological externalities (Aitken & Harrison, 1999). Overall, empirical evidence is blurred. The only clear message is that the likelihood of positive effects on the host country's economy depends on specific factors: depth of technological gap between MNCs and host country, extent of vertical linkages between MNCs and local firms, nature of competition in a specific industry, geographical proximity between MNCs and local firms, on the one hand. On the other hand, results are strongly influenced by the econometric methodology used (Barba Navaretti & Venables, 2004).

Labour productivity (also total factor productivity) in foreign subsidiaries of MNCs is higher than in domestic firms, but in some host countries (the UK, Italy), the difference appears to be statistically non significant. Lipsey (2002) concluded his extensive survey of home and host countries effects of FDI writing: "it is rare to find a study of FDI and wages in any host country that does not find that foreign owned firms pay higher wages, on average, than at least privately owned local firms". MNCs are usually expected to employ, on average, higher-skilled labour than local firms. They attempt to minimise turnover, through high wages, to prevent technological and procedure knowledge of being spread throughout all the local competitors. They seek to build reputations as good employers in order to attract the best job applicants. High wage is also to compensate more volatile employment in MNCs. It means that MNCs accept (or are compelled by local government) to refrain using their monopsonistic power on local labour market as big employers. Nevertheless, MNCs often bargain from a privileged position with (national or local) governments and unions, thus sometimes obtaining exceptions on hiring and firing practices and being more resilient to political and social pressures.

On average, MNCs pay higher wages for a given level of skills than national firms in host countries. Empirical evidence is that the wage premium varies between 6% and 26% depending on the study (Lipsey, 1994; Griffith & Simpson, 2001). But there is no crystal clear evidence that foreign MNCs employ more skilled workers than do local firms in host countries. The only successfully tested pattern, using industry-level data, is that the gap in skill intensity between MNCs and national firms is larger in developing countries than in developed countries (Feenstra & Hanson, 1996). People working in a foreign MNC face a higher risk of losing their jobs than face people working in locally owned firms. Employment volatility is higher in MNCs because they are organised to operate several plants in different countries and thus they have lower costs of relocation than national firms. Moreover, these lower costs of relocation make MNCs less accountable to national authorities and regulations than national firms.

The impact of relocating production by German MNCs in CEECs over 1990-2001 was to create 460,000 jobs in these countries while it had destroyed 90,000 jobs in Germany (Marin, 2004), which means, at a global level of the world economy, a net creation of 370,000 jobs. Japanese FDI in Asia over 1987-1998 had created 514,000 jobs in this area whereas it has destroyed 577,000 jobs in Japan – in this case a net destruction of 63,000 jobs in the world economy. Production relocation amounts to 10



*Wladimir Andreff.* Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

to 15% of all jobs created by French subsidiaries in Morocco. Relocating production of back office services in emerging countries started in 1993 in India (American Express). Then British Airways came to India in 1996, followed by General Electric in 1997, and Hewlett Packard, HSBC and JP Morgan Chase in 2000. Now hosting services outsourced by MNCs is a routine in India, and in various Asian and North African countries as well.

#### **4. CONCLUSION.**

The precise measure of outsourcing and production relocation still remains an issue as regards to both the value of production involved and consequences on employment. We did not take over the very numerous methodological implications of such measurement in this paper all the more so that they are in their infancy so far. We refer the reader to few existing attempts in the literature mentioned in our bibliography, in particular Fontagné & Lorenzi (2005) in the French case. Nevertheless, outsourcing has grown faster than world trade in the past two decades and has skyrocketed during the very last years because it is a cornerstone of a new global strategy adopted by multinational companies since the late 1980s. Various broad and rough observations do confirm this evolution.

Wladimir Andreff. Outsourcing in the new strategy of multinational companies: foreign investment, international subcontracting and production relocation.

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