The Single Market and the Rise of the 'European Champions'

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Abstract

This paper casts light on the "European Champions", those big players that have capitalized on the opportunities provided by the Single Market. Compared to the "National Champions" of decades that are now long-gone, "European Champions" reflect a much larger change than just a simple variation in adjectives: the entire nature of species has evolved. No longer do these enterprises come into existence at the will of the Prince (Type I, according to our taxonomy); rather, it is now market operations -- i.e. cross border merger and acquisitions (M&As) - that determine their form (Type II). These big players can and must play a relevant role on increasing R&D investments and fostering structural change; In short, firms with the scale and scope needed to compete internationally.

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1. Introduction

Since its beginnings during the 1940s and 50s at Harvard University, market structures and economic behaviour have been at the center of all studies of Industrial Organization (IO) (Scherer, Ross 1990). The process of European integration, which was going on concomitantly, offers an excellent case-study for understanding growth strategies of enterprises in a market that is growing ever larger and more competitive. The following two sections are dedicated to these two "plots" (section 2) and to their interrelationship (section 3).

Out of this analysis of the Single Market, the crucial role of large enterprises will emerge, given their significant importance in a contemporary world of new economic powers in international markets and incessantly advancing technological innovation. Section 4 will thus offer a review of some of the most original studies that have been carried out on the Big European Players over the past few years.

In the same vein, section 5 is devoted to our analysis of "European Champions". It starts by briefly describing the fundamental transformation of the economic landscape, and explains how this has changed – and will continue to change – the 'playing field' for European companies. It then provides a basic taxonomy of "European Champions": first of all, we have the "Champions" that we call "Type I" and which have come about – at least at the initial stages – as a result of supranational cooperation and concerted public policy support for the development of technology in "strategic sectors" involving firms from more than one EU country. In so doing, it looks at the undisputable success-story of Airbus and asks whether there are other sectors where this approach could be replicated and how this could be reasonably done. We then note the emergence of another type of large European company: the "Type II Champions". These are companies that have taken form under the pressures of the Single Market, and as a result of consecutive merger and acquisition (M&A) waves. Section 6 briefly concludes this paper.

2. Two "Plots" from the 1950s …

Theory and practice have always shaped studies on Industrial Organization (IO); what has changed over the years within the discipline is the relative weight given to one or the other element. The proverbial "swing of the pendulum" may be useful to illustrate the situation, albeit in summary form. Let's begin at the start of the 1950s at the fundamental moment when Joe Bain [1951, 1959] – building on the seminal papers of Edward Mason [1939, 1949] – published his pioneering work in which the celebrated Structure-Conduct-Performance (S-C-P) paradigm tied to the "Harvard School" was formulated within the field of IO.[1]

This would be followed at the end of the 1960s by an initial, partial oscillation of the pendulum upon the success of the "Chicago School", linked primarily to the name of George J. Stigler.[2] Nevertheless, cross-section analyses at the industry level were still at the center of research agendas. Along the way, though, the traditional empirical structure became less and less satisfying as a method for explaining causal relationships, and the solution to these unsatisfying results lay in a new generation of theoretical clarification (1970s and first half of the 1980s). This is the era during which the pendulum swung as far as possible away from the position of S-C-P with the introduction of "Game Theory": a fundamental theory, yes, for deepening our understanding of rational behaviour in small-number situations, but not always armed with a sufficient predictive capability. And the story doesn't end here, as the new dominant approach was about to be subjected to another oscillation.

The June 1987 volume of *The Journal of Industrial Economics* was published as a monograph with the following significant title: "The Empirical Renaissance in Industrial Economics". Toward the end of the

[1] For a recent contribution on the Joe Bain's seminal work and "the origins of industrial economics", see: Bianchi [2013].
[2] The two influential articles, *The Economies of Scale* in 1958, and *A Theory of Oligopoly* in 1964 were, amongst others, republished by Stigler himself in *The Organization of Industry* [1968].

1980s, after two decades during which most studies focused on theoretical issues, there is thus a return of interest in empirical studies. As often happens when traditional practices return to favour, its new variation has somehow evolved in order to overcome the previous limitations recognized to be inherent in the original form.[3] In general, we can claim that a central role in the new IO was now played by the (different) interpretation of the evolution of market structures, no longer simply accepted as exogenous. The first two volumes of the *Handbook of Industrial Organization* [Schmalensee and Willig 1989], published precisely at this time, reflect this new form and learn from the theoretical and empirical advances made in the discipline. In the same vein – one that leads to a continually-improved understanding of the analysis of the endogenous nature of market structures – we should mention the essays by Alexis Jacquemin [1987] and John Sutton [1991].[4] Both manage to bridge the gap between the new generation of models linked to game theory and the more traditional empirical spirit; both are able to shed light on the strategic behaviours of economic agents. As a consequence, the pendulum, which had gone through wild and often unpredictable swings during the previous decades, has come to rest in a more centralized, more balanced position.

Rather than prolong (or go into greater depth about) this story, it would be better to now start out on a parallel journey. Let us thus return to the very beginning of the 1950s – the publication date of Bain's work – because it is exactly in this year, as a fortuitous coincidence, that the process of European integration had its formal beginnings. In fact, 1951 saw the introduction of the European Coal and Steel Community (ECSC): "the first big federalist step", according to Baldwin and Wyplosz [2004, 10]. Shortly thereafter, in 1957, the Treaty of Rome set the foundations for the creation of the European Economic Community (EEC)[5]: this Treaty "committed the Six to extraordinary deep economic integration" [Baldwin and Wyplosz 2004, 11]. This commitment, in turn, has been brought to a more complete fruition between the second half of the 1980s and the first years of the 1990s – during the Jacques Delors presidency of the European Commission – thanks to the "Single Market Programme" (SMP): it "was set out in the celebrated Commission White Paper of June 1985 (*Cockfield Report*) and incorporated into the EU legal system by the 1986 Single European Act" [Baldwin and Wyplosz 2004, 20]. These are also the years during which a second fundamental and brilliant goal of European integration – the first being the Single Market – began to take shape: the formation of a monetary union, which was brought into being by the Maastricht Treaty in 1992 ("Treaty on European Union").

There's more: the early 1990s, after the fall of the Berlin Wall, were without doubt the fundamental years for the launching of Eastern enlargement. This is the third successful goal we encounter on our brief excursus into European integration. Like the previous enlargements[6], this one toward the Central and Eastern European Countries (CEECs)[7] should be primarily seen from an *economic perspective*, without neglecting its political and cultural significance. From this perspective, it means a further expansion of the Single Market: an expansion – as the SMP stated – of "an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured" – i.e the size of the market has becomes bigger.[8] A Single Market in which 19 out of 28 member states have, up to now, adopted a single currency, the Euro (at the same time, Brexit occurred and the UK is leaving the EU).

[3] In our case, three new trends tried to overcome the limits of case studies and cross-section analyses. The "empirical renaissance" referred to by the Journal consists of: *i)* the use of new sources of data or data-sets, collected in new methods with respect to the past; *ii)* the growing use of the advances made in economic theory and in econometric methods; *iii)* the movement away from industries and toward enterprises as the object of investigation [Bresnahan and Schmalensee 1987, 371-378]. It is worth remembering, as the editors themselves noted, how little these new essays resemble those from the 1960s and 1970s, even if they come out of the same tradition of cross-section studies.

[4] It is of great relevance that in Sutton's second book, dedicated to the evolution of market structures, his example of "endogenous sunk costs" are R&D investments in the high-tech industries [Sutton 1998], whereas in his first book these costs were represented by advertising in the food and drink industry [Sutton 1991].

[5] The other Treaty signed in Rome on 25 March 1957 created the European Atomic Energy Community (Euratom). These three institutions – the ECSC, the EEC and Euratom – were merged into the "European Communities" (EC) in 1965.

[6] First enlargement (1973): UK, Ireland, and Denmark -while Norway refused EEC membership in a referendum; second enlargement (1981): Greece; third enlargement (1986): Spain and Portugal; fourth enlargement (1995): Austria, Finland and Sweden.

[7] Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia entered the EU on 1 May 2004, while Romania and Bulgaria in 2007.

[8] After the "historic milestone" of 2004 (and 2007), it was Croatia's turn, entering on July 1, 2013.

The grave economic and financial crisis that has buffeted the EU with all its strength for eight-nine years now has naturally led to an underestimation of this potential. It behoves us then to focus our attention, for illustrative purposes, on the situation during the years immediately preceding September 2008.

André Sapir [2007], in his introduction to *Fragmented Power*, draws a map of Europe and of the world, splitting apart the latter so as to reflect the traditional protagonists (USA, Japan, G7) and the newcomers (geographically-close countries like Russia, emerging economies like China, India, and Brazil, other developing nations). The image that develops around the mid-2000s – see the following table – shows how with just 7.6% of global population, the EU-27 accounts for 20.4% of global GNP. The corresponding figures for the United States are 4.6% and 20.1%, while the BRICs have values of 43.2% and 26.6%.

Tab.1 - Europe and the World

	Population [2005] (% of world)	**GDP at PPP [2005] (% of world)**	**GDP per capita [2005] (EU27=100)**	**GDP Growth [1998-2007] (% per annum)**
EU27	**7,6**	**20,4**	**100,0**	**2,4**
(Euro area)	(4,9)	(14,8)	(112,5)	(2,1)
Neighbours*	**10,9**	**8,5**	**29,1**	**4,2**
(Russia)	(2,3)	(2,6)	(42,1)	(5,4)
United States	**4,6**	**20,1**	**162,8**	**3,1**
Other advanced	**4,5**	**13,9**	**115,1**	**1,8**
(Japan)	(2,0)	(6,4)	(119,2)	(1,3)
Emerging economies**	**60,8**	**34,5**	**21,1**	**6,1**
(China)	(20,7)	(15,4)	(27,7)	(9,1)
(India)	(17,3)	(6,0)	(12,9)	(6,6)
(Brazil)	(2,9)	(2,6)	(33,4)	(2,4)
Other developing***	**11,6**	**2,6**	**8,3**	**4,3**
World	100,0	100,0	37,2	4,1
G7 ****	11,4	41,2	134,6	2,4
BRICs *****	43,2	26,6	23,0	7,8

*Rest of Europe (including Russia and other CIS countries), Middle East and North Africa.
**Developing Asia and Latin America.
***Sub-Saharan Africa.
****Canada, France, Germany, Italy, Japan, United Kingdom and United States.
*****Brazil, Russia, India and China
Source: A. SAPIR [2007], *Fragmented Power*, p. 4.

From these data, the first question that the united Europe must address, and which remains pressing today, is the perpetual gulf that separates the EU, in terms of per capita GNP, from the United States: if the EU-27 is given a value of 100, the USA has a value of 162.8. Consequently, this gap lifts the veil on the different dynamics of productivity growth, which since the middle of the 1990s has divided in stark fashion the two great economies that face each other from different sides of the Atlantic. But Sapir's data raise another relevant question, this time in relation to the emerging economies: during the period of 1998-2007, these enjoyed a growth rate in GNP that doubled or tripled (and in some cases, even more) the performance of the EU-27, which had a rate of 2.4% (2.1% in the Euro area). Taken together, as we might have expected, we can say that there were both bright and dark spots in the process of European integration in the years just before the bankruptcy of Lehman Brothers.

At the same time, a long-term retrospective look of the period from the ECSC and the EEC (1950s) to the three success stories of the 1980s and 1990s (the Single Market, the Euro, and Eastern enlargement) offers confirmation of the value of the process of European integration.

3. … And Two "Plots" that Intertwine

Now, can we try to reasonably establish an early and partial connection between the two levels of analysis discussed above? We have summarized the two fifty-year-old "plots".

These are levels of analysis that are intrinsically different, but we believe that a connection can be made. At the very least, the historical moment seems auspicious. On one side, theory and practice seem to have found the right balance within studies of IO, in particular in the study of two rather important questions: (*i*) the determinants of market structures and the difference in the degree of concentration across different industries; (*ii*) the motivations and the effects of horizontal integration – through mergers and acquisitions (M&As), joint ventures, etc. – and the consequent trade-offs between market power and efficiency.[9]

On the other side, the process of European integration needs to rediscover the élan of past decades both as a means for overcoming the crisis and for completing its model of economic governance, first of all among the nations in the Euro area, but without forgetting the more general outline for structural economic and social reforms for the entire EU. Nevertheless, the principle of "One Market, One Money" contributed to the construction of a level playing field, within which enterprises could formulate their growth strategies on a genuinely continental, or pan-European, basis: it is from this perspective that we will devote our attention, in the next sections (section 4 and section 5), to the big European players, speaking in particular of "European Champions".

This new playing field obviously does not mean that differences have disappeared. Again, it does not make all countries and companies the same, especially in terms of growth opportunities. On the contrary, when the monetary union celebrated its (first) ten-year anniversary in May 2008, the differences within the euro area were significant. Jean Pisani-Ferry *et al.* [2008], in their report on this first decade, analyzed – among other things – the divergence in the relationship between "real exchange rates and export performance in the euro area"[10]. Germany's performance has been literally astonishing, and notable have been the differences between the North and the South of Europe (which have been intensifying, as is sadly known, in the years since the big crash of 2008).

Summing up, the EU (Euro area) member states are not all equal. A relevant part of the explanation of this diversity can be found in *macroeconomic* management (a topic which falls outside the scope of this work). But a not-insignificant part of this same explanation – as we will shortly see – is found in *microeconomic* features; i.e. the countries' industrial structure and the firms' behaviour: "S-C-P" still matters, even if redefined from Harvard's first paradigm of the 1940s and 1950s. Returning to the question raised above, the purpose is to offer empirical evidence to our positive response about the intertwining of the two "plots", which we can reduce to a single storyline: the new European oligopoly.

[9] It is the third and latest volume of the *Handbook of Industrial Organization*, edited by Armstrong and Porter [2007], that presents the state of the discipline; particular mention must be made of the chapters by J. Sutton [2007] on "market structure", which takes as its reference point the essay by Schmalensee [1989, chapter 16] in the first volume of the *Handbook*, and by M. Whinston [2007] on "horizontal mergers", which updates the chapter by A. Jacquemin and M. E. Slade [1989, chapter 7].

[10] See, in particular, the chapter written by Pisani-Ferry et al. [2008, 73-74]: "It was noted that enduring divergences in prices developments could be observed within the euro area, which possibly resulted in real exchange rate misalignments. In their words, the so-called competitiveness channel was too slow and too weak to prevent boom-and-bust cycles fuelled by excessively low real interest rates. As the boom ended, Spain and Ireland, the two champions of the euro's first decade, plunged into deep and probably long recession". On the same subject, see also: Pisani-Ferry and Posen [2009].

Our emphasis will fall on large enterprises, often on multinationals, as will become clear in the pages that follow. No one wishes to undervalue or deny the role played by SMEs in the economies of almost all the EU member states, be they old (Western countries) or new (Eastern countries)[11].

Nevertheless, we believe that our emphasis on large enterprises is justified on two accounts – in this context – from a methodological point of view.

The first has to do with the "pro-competitive effect" *a la* Baldwin-Wyplosz. This effect – they argue – "put pressure on profits, and the market's response is 'merger mania'. That is, the pro-competitive effect squeezes the least efficient firms, prompting an industrial restructuring where Europe's weaker firms merge or get bought up. In the end, Europe is left with a more efficient industrial structure, with fewer, bigger, more efficient firms competing more effectively with each other". The history of European integration teaches that an important wave of M&A in the manufacturing sector was felt, not accidentally, during the years of the Single Market Programme (1985-1992). And even though there would still be a fairly high level of M&A activity in the years immediately following, another peak would be achieved toward the end of the 90s: the years of the Euro and the New Economy. In 2001, the collapse of stock market values worldwide in the wake of the failure of many of the new dot.com companies inevitably slowed M&As. But once the initial panic had passed and normal rhythms were re-established, a "new frontier" began to open up in the EU via Eastern enlargement (2004). At the same time, the Monetary Union was paying off one dividend after another. As we will show in the section on "European Champions", it is in these years that M&A activity picks up speed again in the EU, led both by large manufacturing enterprises and by services (banks, insurers, and public utilities). We will also see how the crash of 2008 has slowed but not nullified this activity, which has even returned to the fore over the last few years.

But there is, as we stated before, a second methodological justification, one that is related to what the European Commission has called the "Top R&D investing companies" [Joint Research Centre and European Commission 2013]. In fact, *The 2012 EU Industrial R&D Investment Scoreboard* (*The Scoreboard*) "includes the 1500 companies investing the largest sums in R&D in the world while maintaining an EU focus by complementing this coverage including the top 1000 R&D investing companies based in the EU"[12]. The Scoreboard's key messages tell us that "performance of the world's top R&D investors regained pre-crisis level in 2011", and the "EU based companies increased R&D investments by 8.9%, above world average (…)". As far as companies and industries are concerned, the report points out that "Toyota Motor leads the R&D ranking in 2011, with Volkswagen climbing to third place from sixth last year. Companies in the ICT sector continue to show the largest R&D increases in the top ranks. As in 2010, R&D growth figures of the EU Scoreboard sample are to a large extent driven by the automobiles sector, with BMW (21.6%) and Renault (19.4%) leading the increases". And finally: "Companies showing high performance over the last decade (at least doubling sales) operate in the ICT and health related sectors[13], all of high R&D intensity. The US is strengthening its relative specialisation in these high R&D intensive sectors that account for the largest amount of R&D and the largest numbers of high performers. No significant shift of structure towards these high R&D intensive sectors is observed in the EU-based *Scoreboard* companies over the last decade (…)" (pp. 5-12).

[11] According to the "Commission recommendation 2003/361/EC" [European Commission 2003] - valid since Jan 1, 2005 - concerning the definition of "micro, small and medium-sized enterprises (SMEs)", the "category is made up of enterprises which employ fewer than 250 persons and which have an annual turnover not exceeding EUR 50 million, and/or annual balance sheet total not exceeding EUR 43 million" (article 2). Within the SME category: *microenterprise*, fewer than 10 persons and annual turnover and/or annual balance sheet total does not exceed EUR 2 million; *small enterprises*, fewer than 50 persons and annual turnover and/or annual balance sheet total does not exceed EUR 10 million. As a matter of fact, "microenterprises" (with a maximum of 10 persons), according to data from the *SME Performance Review* account throughout the EU for more than 90% of the total number of firms, roughly 30% of total employment, and 21% of the value added (see: Appendix C).

[12] More in details, the *Scoreboard* "concentrates on the analysis of the world's top 1500 companies that invested more than approximately €35 million in R&D in 2011. The sample comprises companies based in the EU (405), the US (503), Japan (296) and other countries (296) including Switzerland, Taiwan, South Korea, China, India, Cabala, Norway, Australia, and a further 20 countries. A sample consisting of the top 1000 R&D investing companies based in the EU is analysed separately in chapter 6; these all have R&D investment exceeding €3.8 million" (pp. 13-4).

[13] In this report, "health related sectors" mean "pharma, biotech and medical equipment".

A new European industrial policy, one with the goal of strengthening the third side (technology policy) of the "triangle", is exactly what we advocated (Mosconi 2015)[14]. The role of enterprises that are capable of growing within the Single Market and of increasing their investments in R&D, technology, and highly-skilled human capital is of vital importance.

It follows that now more than ever something profoundly important is taking place in the (enlarged) European Single Market, especially in manufacturing given its role for economic growth. This affirmation begs the question: *what* is changing within European industry? Reformulated into the terms of our present topic: which Europe will we discover from the perspective of big industrial players? This is the issue we will now turn to.

4. The Big Players in Europe: A Summary

4.1 Introduction

Many studies in the last decade have focused on the large European enterprises that have successfully exploited the potential of the Single Market, and that in many cases have then been able to move out from this European base onto the global stage, where they match their strengths with American and Asian competitors (and more generally, with emerging nations). In this section we will review some of the most authoritative and original works on the subject, while in the next (sect. 5) we will present our own investigation into the "European Champions", and propose a possible taxonomy of them ("Type I" and "Type II")

4.2 "Farewell National Champions": the "Trend Towards Europeanisation of Europe's Largest Companies"

The first study in our series *Farewell national champions* is the one published ten years ago by Bruegel [Véron, 2006], the Brussels-based think-tank. The author investigated Europe's 100 largest listed companies *vis-à-vis* the American counterparts, asking himself: where exactly is "home" for a modern corporation? His survey showed that "the share of European sales in their total revenue is almost identical, on average, to the share of US revenue for the US Top 100, at 65%. The share of their national (or, for smaller countries, regional) base is on a rapidly declining trend and stands at 36.9% of global revenue in 2005 against 50.2% in 1997". It follows that for Europe's 100 largest firms "their home market is increasingly Europe as a whole rather than any particular country within it".

Véron [2006] called all of this "the trend towards Europeanisation" of Europe's largest companies, stressing the "policy challenge". In fact, this trend – he argued – "undermines the effectiveness of policies aimed at national economic performance through the support of 'national champions' – when this support takes place at group rather than plant level. Moreover, it lowers the obstacles to the mobility of corporate headquarters within European borders. This could set the stage for more regulatory competition in the future in areas which include securities law, taxation and corporate governance. European policymakers need to adapt this new landscape".

It is not irrelevant to note that during the same years of the publication of Véron's data which demonstrated the "Europeanisation" of large European enterprises, more than one government intervened to block cross-border mergers, giving birth to a phenomenon called "economic patriotism". France assumed the position of the leading protectionist member state, but it was not alone in Europe in pursuing the double standard of a closed-door policy toward inward investments and a simultaneous enthusiasm and support for

[14] As I pointed out [Mosconi 2015], "An extensive report by Conseil d'Analyse Économique (CAE), set up by the French Minister's Office [Cohen and Lorenzi 2000], notes how – in the European tradition – industrial policy was a result of a triangle formed by (1) Competion Policy, (2) Commercial (Trade) Policy, (3) Technology Policy (…). A suitable path should be (…) a definite reinforcement of the triangle's third side at European Level, without weakening the other two".

outward-bound investments[15]; nor did the US remain untouched by this phenomenon[16]. With hindsight, we can state that this "phenomenon" was no more than just a collection of individual cases at one moment in time (the mid 2000s), and that these did not interrupt in any significant way the basic tendencies behind enterprise growth in the European Single Market.

We see evidence of this both in the summary of this section and in the following analysis of "European Champions". As *The Economist* rightly noticed at the time: "Europe's nationalisms cannot reverse or perhaps even much affect the market-opening action of their companies. But they may increase its costs" (2 March 2006).

4.3 The Bruegel Reports on the "Internationalisation of European Firms"

There are three Bruegel reports published on the "internationalisation of European firms". The first one – *The Happy Few* [Ottaviano and Mayer, 2007] – focused on "the characteristics of European firms involved in international activities through exports or foreign direct investment ('internationalised firms', IFs)". This first analysis of firm-level evidence revealed that: (*i*) "IFs are superstars"; (*ii*) "IFs belong to an exclusive club"; (*iii*) "The pattern of aggregate exports, imports and foreign direct investment (FDI) is driven by the changes in two 'margins'. The 'intensive margin' refers to average exports, imports, FDI per firm. The 'extensive margin' refers to the number of firms actually involved in those international activities"; (*iv*) "The 'extensive margin' is much more important". In short, Ottaviano and Mayer pointed out that "the international performance of European countries is essentially driven by a handful of high-performance firms. Moreover, the opening up of trade and FDI triggers a selection process whereby the most productive firms substitute the least productive ones within sectors. This is good for productivity, GDP and wages".

The second Bruegel report – *Of markets, products and prices: the effect of the euro on European firms* [Fontagné, Mayer and Ottaviano, 2009] – was published two years later, and firstly confirmed "the consensus that emerges from a growing body of literature: contrary to expectations trade flows have not increased meaningfully since the introduction of the euro"[17]. However, as Bruegel's Director argued in his Foreword [Pisani-Ferry 2009], "trade effect cannot be measured by trade volumes alone (…) As important, if not more so, is *who* is trading and at *what prices*". The authors answered both issues: (*i*) on the "*who issue*", they find that "the increase in the number of exporting firms has remained small. For the typical euro-area SME, life has not changed with the single currency and the market remains primarily national (…)"; (*ii*) "Fortunately there is better news about the *what price issue*. Here the euro has resulted in less volatile and lower prices, especially within the euro area, and this is a clear plus for consumers".

It was just in 2009 that Bruegel, together with its partners[18], launched the EFIGE (European Firms in a Global Economy) project, in order to conduct a multi-country company survey on firm internationalisation and performance relying on new and internationally-consistent data[19]. In so doing, a report of the title *The*

[15] During 2005 and 2006 – following an accurate reconstruction [Sabatier 2006] – the French government foiled the acquisition of the Danone Group, maker of yogurt and mineral water, by the American giant Pepsico, and pushed for the recent merger between water utility company Suez and the national gas company GdF to prevent Suez becoming prey to the Italian energy concern Enel. In addition, the government chaired by Dominique de Villepin introduced legislation designed to block hostile takeovers of French companies in eleven "strategic sectors". Meanwhile, Spain blocked "a German company taking over one of its own energy producers" (respectively, E.ON and Endesa); Poland thwarted "the purchase of several of its banks by Italians", while Italy did the same for some time, "as evidenced by the long-running battle in 2005 to fight off the takeover of Antonveneta bank by the Dutch giant ABN Amro"; and Germany "staunchly defends its 'Volkswagen law', protecting its auto industry from foreign predators". The blocked takeover of Italy's Autostrade by the Spanish group Abertis could also be added to the list.

[16] In the same years – P. Sabatier [2006] added – "Outside the EU one need only look at the spat over the acquisition of six US port operations of P&O by Dubai Port World or remember the furore over the Chinese oil firm CNOOC attempting to buy Unocal"; a subsequent takeover was made by Chevron (US).

[17] Trade flows – Fontagné, Mayer and Ottaviano [2009] wrote – "may have grown by a couple of percentage points at most".

[18] The Centre for Economic Policy Research (CEPR) and other partners from seven countries (www.efige.org).

[19] The newly collected *EU-EFIGE/Bruegel-UniCredit survey* of 15,000 manufacturing companies in seven EU countries: Austria, France, Germany, Hungary, Italy, Spain and the UK.

global operations of European firms [Barba Navaretti et al. 2011] was then published: the third report of our series.

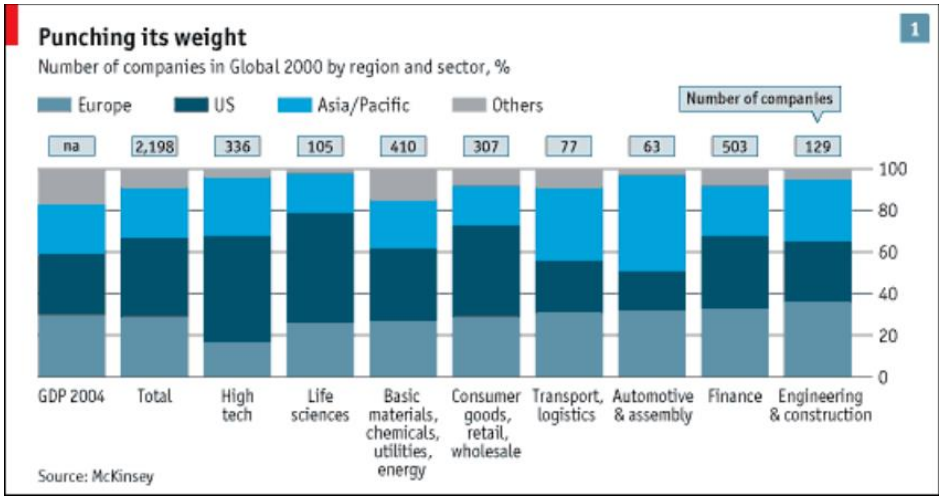
Among the main messages of this report – a six-point list of "Facts" – we should draw our attention on the following: (*i*) "In all countries, firms involved in international markets are, in general, *larger, more productive, more skill intensive and more innovative*"; (*ii*) "The international performance of European firms is primarily explained by firm-specific characteristics" – i.e., "*it is firms that are at the heart of competitiveness*"; (*iii*) "*Companies that internationalise successfully their sales or their production have similar features in all European countries*. Size, productivity, the skill intensity of the workforce and the ability to innovate are positively related to firms' export performance in all countries (…)"; (*iv*) "*Internationalisation patterns of countries differ mainly because nations differ in their internal industrial structures* – i.e. in the distribution of their firms' characteristics, such as *size and sectoral distribution*, and *innovative capacity and productivity*"; (*v*) "The fact that firm characteristics are of central importance raises new challenges for policy. Should policy making aim to foster those firm-specific drivers of internationalisation? (…) The importance of firms' characteristics – Bruegel's answer goes – *supports the view that policies focused on improving the general business environment, on reforming institutional, regulatory, infrastructural or other factors that hinder long term investments, innovation capabilities and firms' growth, are likely to be more effective in strengthening international competitiveness than targeted intervention, such as measures for export promotion* (…)".

4.4 "Who are the Champions?"

In its survey of "European Business" (February 10, 2007), *The Economist*, quoting an analysis by McKinsey, argued that "Europe has 29% of the world's leading 2,000 or so companies, broadly in line with its 30% share of world GDP. It punches its weight in most global industries except IT, where America is leagues ahead" (see figure 1).

In the same survey, referring to *Fortune*'s rankings of world companies, the British weekly wrote again: "Europe has for many years played a large part in global business. A table compiled by *Fortune* (2006) magazine shows that half the world's 30 leading companies by revenue are European. But in two key sectors Europe trails badly: high-tech (which mostly means IT) and life sciences".

Fig. 1 – The Big Players



Source: 'The Economist', 10 February 2007

4.5 Mediobanca's "Multinationals"

The last study here summarized is *Multinationals: Financial Aggregates (403 companies)*, annually undertaken by *R & S*-Mediobanca [2016][20]; in the table printed below (tab. 2), we present the essential data for the 2016 edition, the latest available (the twenty-first edition).

Tab. 2 - Multinationals: Financial Aggregates

	No. of companies	Net sales in EUR bn	Total asset* in EUR bn	No. of employees in '000
Europe	156	3.969	4.235	10.093
North America	67	2.912	2845	6250
Japan	37	1.265	1498	3914
Total. triad regions	*260*	*8.146*	*8.578*	*20.257*
Asia-Russia	50	2164	2503	6485
Rest of the World	21	433	763	1338
Total INDUSTRIALS	*331*	*10.743*	*11.844*	*28.080*
Software & Web	22	371	565	932
Telecommunication	29	988	1429	2865
Utilities	23	686	1344	1071
TOTAL	*403*	*12.788*	*15.182*	*32.948*

Source: R & S-Mediobanca [2016]

> "Our survey – *R & S* points out – covers the leading industrial, telecommunications companies and utilities and Software & Web in the world all considered at group level. The survey covers a total of almost 64,000 companies including consolidated subsidiaries [*R & S* 2016, XXI].

On the whole, by taking a look at the highlights published in Table 2, the status of Europe is already confirmed when we analyze the world's big players in the manufacturing industry. Quoting Mediobanca researchers: "Globally, the majority of industrial activities as measured by total net sales are located in Europe (36.9%), followed by North America (27.2%)".

Obviously – as we learned from the previous surveys summarized in this paragraph – the overall data conceal both geographical (among the EU countries) and sectoral differences. With regard to the first aspect, the survey states that "the companies analysed here do not all show the same degree of domestic presence. Measured by total net sales as a percentage of GDP in their respective home countries, Switzerland-Liechtenstein has the highest concentration of multinationals in Europe (sales to GDP ratio equal to 50.9%), followed by the UK; Italy and Spain have the lowest, the latter two featuring prevalently small and medium-sized enterprises".

[20] R & S-Mediobanca's definition of its study is given in the following: "*Objective*: a study of the aggregate accounts of the largest multinationals in the world. *Object*: companies with sales over 3 billion Euros, equal to at least 1% of the total sales in its respective area or nation. *Sectors*: manufacturing and energy industry, telecommunications and utilities; businesses not involving manufacturing are not included: construction, finance, etc. *Geographic Area*: global, divided into three macro-areas: Triad (Europe-North America-Japan), Asia-Russia, and the Rest of the World. (…)".

As for the second aspect, the *R & S* survey continues: "It is worth noting the low presence of electronics in Europe, where this sector accounts for only 7.7% of aggregate world net sales, the lowest percentage in the world; at the opposite end of the spectrum there is the Asian-Russian area (38.7%), followed by North America (34.4%). Europe leads North America and Japan especially in the chemical-pharmaceutical sector, with 50.1%, in the food and drinks industry, with 43.2% and in the mechanical engineering, with 40.1%. Japan leads North America in the automotive sector, with 27.3%, but below the European share (39.9%)".

Europe has an industrial specialization that we are getting familiar with and that we will investigate further in the next paragraph, which focuses on the *Fortune Global 500*.

After this review, it is time to deal with the issue at hand: the "European Champions" in the making.

5. The Age of the "European Champions"

5.1 Introduction

The European Union will be able to exploit the chances offered by the single market – and this is my firm conviction – only if we decide to create European Champions in areas [...] such as electrical energy, postal services, etc." [Merkel 2006].

These are the views expressed by the German Chancellor, Mrs. Merkel, on 9 May 2006 during the "European Forum" of the WDR, which could be backed up by other positions she took in that period. In fact, Mrs. Merkel had already referred to "European Champions" on at least two other formal occasions, such as at the press conference that concluded the European Council in Brussels (23-24 March 2006) and a speech she gave on 2 May, when the first stone was laid for the "N3 – Arnstadt Engine Servicing Centre", in which she specifically mentioned the joint venture between Lufthansa and Rolls-Royce as an example of "European Cooperation.

These statements – the benefits that the Single Market and companies capable of growing on a continental basis can bring to our prosperity, and, in a more general sense, the need to develop a "European way of thinking" about competitiveness – taken together have contributed to bringing to the forefront the issue that now goes by the name of "European Champions". Naturally, emphasis needs to be placed on the adjective, since the noun might bring to mind – as if by magic – the "National Champions" of the past: and no one today can reasonably think that this instrument, typical of the industrial policies of European countries during post-World War II years, is still apt for competing in the new international context. So it is not simply a question of vocabulary.

Now, the question that comes to mind is: in what do the two model-types of "Champions" – the "National" of the 1960s and 70s (and beyond) and the "European" of the 2000s – differ? Like all developing issues, this one is the subject of lively discussion and at the present time offers no unambiguous definitions that one can ascribe. By simply googling the expression *European Industrial Champions* and patiently looking at the very first pages that come up on the search engine, one realizes that discussion is still wide open. On the other hand, it is true that with the passing of time important empirical evidence is being gathered (see the previous section 4) that could allow us to make a first attempt at understanding the defining characteristics of "European Champions" or, at least, "big European players".

This section – as already mentioned – tries to provide an inaugural definition of "European Champions", explaining how they differ from the former "National Champions". It starts by briefly describing the fundamental transformation of the economic landscape that has been underway for more than a decade now, and explains how this has changed the "level playing field" for European companies. It focuses on the competition brought about by globalization and by the rise of the new industrialized countries, on the ICT revolution, and on the challenges and opportunities brought about by the Eastern Enlargement of the EU.

5.2 The Transformation of the World's Economic Landscape at a Glance

The economic context facing European firms today is significantly different from that prevailing during much of the second half of the twentieth century. Three developments have brought about this remarkable change: globalization and the rise of the 'new' emerging economies; the ICT revolution; and, at home, the consolidation of the Single Market, the birth of the Euro, and the enlargement to the East.

Without going into a discussion on the many definitions of the term "globalization", we shall employ it here to refer to two major trends that have had an enormous impact on the world economic system in the last two decades or so. On the one hand, there has been not only an increasing free flow of circulation of the factors of production (goods, services, labour and capital) but also an increasing speed and ease of relocation of technologies and production processes (think of the "great unbundling" originally described by Richard Baldwin [2006]). On the other hand – and very much influenced by the above – there has been the rise of new world economic giants: China, first and foremost, but more in general all the well-known "BRICs economies" [Goldman Sachs 2003], followed by the "Next 11 (N-11)" [Goldman Sachs 2007][21]. The whole group of emerging markets and developing economies[22] has been regarded by the Western industrialized countries – at the same time – as a source of cheap labour, a platform for their business operations (via FDI), an important market for their products and services (via exports), and a strong competitor in the technological race. The following table describes the competition between the two major groups of countries: something like the (old) West vs. the (new) East

[21] Looking "Beyond the BRICs" – to quote the title of Goldman Sachs' paper [2007] – a set of eleven countries emerged; the "Next 11" (N-11) include: Bangladesh, Egypt, Indonesia, Iran, Korea, Mexico, Nigeria, Pakistan, Philippines, Turkey and Vietnam.

[22] "Emerging Market and Developing economies", instead, is the expression proposed by the International Monetary Fund in its *World Economic Outlook(s)* (see, for example, the latest one [IMF 2014, 2]), where it is possible to see their aggregate growth projections (5.0 for 2015) and to find subsets of countries such as: "Commonwealth of Independent States", with Russia among them (projected rate of growth for 2015: 1.6%); "Emerging and Developing Asia" (e.g., China, India, and ASEAN-5: Indonesia, Malaysia, Philippines, Thailand, Vietnam), growing at 6.6%; "Emerging and Developing Europe" ((2.9%); "Latin America and the Caribbean" (e.g., Brazil and Mexico), growing at 2.2%; "Middle East, North Africa, Afghanistan, and Pakistan" (3.9%); Sub-Saharian Africa (e.g., South Africa), growing at 5.8%. A further sign of how the world's economic geography is changing can be found in "The Group of Twenty (G20)" composition. "The G20 was formally established in Sept. 1999 when finance ministers and central bank governors of seven major industrial countries met in Washington (…)" – the web page shows (www.g20.org) – while starting from Nov. 2008 "it brings together finance ministers and central bank governors from 19 countries (…) plus the European Union". Together with the G7 countries and the four BRICs, there are: Argentina, Australia, Indonesia, the Republic of Korea, Mexico, Saudi Arabia, South Africa, and Turkey. Again from the web page: "G20 members represent almost: 90% of global GDP; 80% of international global-trade; 2/3 of the world's population lives in G20 member countries; 84% of all fossil fuel emissions are produced by G20 countries".

Tab. 3 - G6 vs BRICs in perspective (*billions of $ USA*)

	"BRIC" economies				G6*							
	Brazil	**China**	**India**	**Russia**	**France**	**Germany**	**Italy**	**Japan**	**UK**	**USA**	**BRIC****	**G6*****
2000	762	1.078	469	391	1.311	1.875	1.078	4.176	1.437	9.825	2.700	19.702
2050	6.074	44.453	27.083	5.870	3.148	3.603	2.061	6.673	3.782	35.165	84.201	54.433

* Goldman Sachs analysts removed Canada from the present G7 configuration due to its negligible weight in terms of total GDP.
** It is the sum of Brazil, China, India and Russia as reported in the left hand column of the table.
*** It is the sum of G6 in its present configuration, as reported in the right hand column of the table (from France to USA); according to these projections of the GDP, only USA and JAP will continue to be part, from now until 2050, of this (hypothetical) club of the major industrialised countries in the world.

Source: Adapted from Goldman Sachs [2003], *Global Economic Paper No 99,* 1st October.

A great facilitator of these globalizing trends has been another major development: the revolution in information and communication technologies (ICT). This is considered to have been one of the driving forces of America's "New economy" during the second half of the 1990s (for an excellent review see: Council of Economic Advisers [2001]), and a driving force behind the gap in productivity growth levels between Europe and the US. Furthermore it is felt that the use of ICT in other industrial or service sectors has been crucial in determining their respective productivity performances [European Commission 2001; O'Mahony and van Ark 2003].

Finally, developments in Europe during the last twenty years have also had a tremendous impact on the level playing field for European companies, and not only. The completion of the Single Market has progressively been consolidated through the gradual privatization of state-owned companies, on the one hand, and the increasing – even if patchy – liberalization of markets in various sectors, on the other. The impact on competition within the Single Market has been impressive, with the M&A waves in the energy, manufacturing and financial sectors being prominent examples (see next section 5.6). In addition, the economic importance of "Eastern Enlargement" cannot be underestimated: it has offered Western European (i.e., EU-15) companies access to new markets and cheaper resources, while at the same time raising competitive pressures significantly, especially in the border regions; the Eastern countries have gained in both employment opportunities and technological know-how. In short, enlargement has brought about new opportunities for a pan-European reorganization of companies, on the condition that goods, services, capital and labour are allowed to freely circulate within the Single Market [European Commission 2001; Sapir 2005].

To sum up, the combined impact of these three developments on European industry are enormous and multifaceted. The EU companies now face increased competition from many fronts – not only, as it was in the 1980s, from the US and Japan (the old "Triad"), but also from the "BRICs" (and from Emerging countries in general). National governments have become increasingly unable to protect and support the once "favoured" firms or industries. At the same time, innovation [Sapir *et al*. 2003; Aghion 2006; Brusoni and Malerba 2007] has become the main determinant and driver of the ability to add value and to grow.

The effects of the 2008 economic crisis posed a stumbling block to many of these processes; the significant slowing of economic growth experienced by the central-Eastern countries of Europe is one of many such indicators. Yet this is a crisis that has given birth to a new awareness throughout the Western world of the central role played by manufacturing in achieving lasting, real economic growth.

In the meantime, technological progress and globalization have not slowed down one whit; rather, they have continued on their path – so much so that it has become the norm to speak of a "new industrial revolution" – and will continue to do so for the foreseeable future. As often happens in history, what is destined to change

is the relative strength of the main actors (in this case, Nations). An important OECD study [2012] *Looking to 2060: A Global Vision of Long-Term Growth,* gives us the opportunity to glimpse the changes predicted for the next fifty years.

Tab. 4 - Changes in the composition of global GDP(*) – Percentage of global GDP in 2005 PPPs

	2011	2030	2060
United States	23	18	16
Japan	7	4	3
Euro area	17	12	9
Other OECD	18	15	14
Other non-OECD	11	12	12
China	17	28	28
India	7	11	18

(*) Global GDP is taken as sum of GDP for 34 OECD and 8 non OECD G20 countries.
Source: OECD [2012, 8]

As the table clearly shows, "there will be major changes in the composition of global GDP", which is "expected to grow – the Paris-based Organization points out [OECD 2012, 1] – at around 3% per year over the next 50 years, but wide variations are forecast between countries and regions. Fast-growing emerging countries will be the principal driver of the long-term outlook. Growth rates of emerging countries will eventually slow, converging towards those projected for the OECD area (…) In parallel, the relative size of economies will change radically over the next 50 years. The combined GDP of China and India will soon surpass that of G7 economies and will exceed that of the entire current OECD membership by 2060".

In the face of such data, there is a strong temptation to borrow Francis Fukuyama's [1989, 1992] celebrated prophecy and apply it not to the "universalization of Western liberal democracy as the final form of human government", but to the unstoppable rise of Asian (and more generally, Eastern) economies.

Are we thus on the eve – or the cliff – of another "End of History"?

But this would appear be, once again, a false prophecy, or at the very least a hasty one, as Fukuyama's was eventually deemed to be in light of historical events[23]. But let's get back to us. Manufacturing in Europe is hardly a lost cause. The decline of the EU in relative terms compared to the emerging economies of the planet – a decline shown both in the data from Goldman Sachs on the BRIC and from the OECD on 2060 – should not lead us to underestimate the solidity of the European oligopoly or the muscles that it is still able to flex.

As a final conclusion, we can say that the Big European Players are real, and that they play a fundamental role on the global stage. It is to the analysis of this role that we now turn in the final section of this paper: we will start with perhaps the most famous "European Champion" of them all (the EADS Company, builder of Airbus), which we will call "Type I", before looking at "Type II" Champions, those which were formed (and are still being formed) in the Single Market, especially through M&A transactions.[24]

5.3 Type I "European Champions": Is the Airbus Case a Model?

Bringing together all the various insights and policy advice that have been put out by the Commission in various documents on industrial or research and technology policy over the past decade, we can see which sectors/industries/technologies have gained most prominence in the last few years: ICT, energy, defence, space, biotechnology and pharmaceuticals.

[23] Among the events that followed the hypothetical "End of History", we recall the "clash of civilisations" – as postulated by Samuel P. Huntington [1996] – that the world has been experiencing since the fall of the Berlin Wall, as well as the not-exactly liberal democratic nature of the two principle "emerging countries", China and Russia.
[24] For a first assessment, see: Mosconi [2009].

It is evident that the core businesses of firms in these sectors are all very high-tech and R&D-intensive. In order for European companies to develop a leading edge in such sectors, two factors are absolutely crucial: first, they must have access to a high level of financial resources in order to conduct R&D at the required level; second, they must be able to hire excellent researchers, engineers and managers – human capital – who have the right skills and knowledge to come up with new and innovative production, organizational and management outputs. As a result, developing strong European Research, Technology, and Education policies, overcoming the segmentation of policies of individual national governments, is key to any "champions-related policies for innovation and growth of economies".

Of course, this is not an argument for returning to the old-fashioned policy where politicians and economists were inclined to "picking the winners"; i.e. companies or sectors to be promoted and supported with public money. Indeed, today three policies – diametrically opposed to the old approach – must play a fundamental role. First, the strict enforcement of competition policy, not only in terms of mergers control but also with regard to state aid, should foster the development of excellent European companies able to take on global markets. Second, the completion of the Single Market, in particular in the services sector, is crucial for the future development and competitiveness of European industry in general, and not only of European Champions. Finally, well-designed welfare and labour market reforms should be completed in order to accommodate industrial restructuring.

Rejecting the old "picking the winners" philosophy, the argument for strengthening the European Research, Technology and Education policies has a different basis, i.e. the theoretical and empirical insights gained recently with regard to sectors at or approaching the 'technological frontier', heavily dependent on high R&D spending, and subject to externalities as well as to scale and scope effects. However, the vital question at this point is: are the numerous policy tools and approaches adopted by the Commission over the last few years directed at the same goal, that is, towards the creation of new European Champions (which we label "Type I" or "Airbus-model Champions": big European firms that have stemmed from multilateral governmental cooperation and public funding in very sensitive sectors)? An equally important question is whether they *should* aim to achieve this goal. Answering these questions is not at all easy, as the liveliness with which the issue is being debated throughout Europe shows. Any attempt to do so, however, must look not only at the (hopefully) pan-European research and technology policy, as we have done so far, but also at the evolution of market concentration.

The economic literature suggests [Sutton 1998, 2007] that in some cases and sectors too low a concentration level cannot bring about either equilibrium or optimal solutions and, despite an increase in the size of the market, the degree of concentration may remain far from zero. In Sutton's words: "Central to the Bain approach was the notion of barriers to entry as an explanation for the joint observation of high concentration and high profitability. As long as such barriers can be taken as exogenously given features of the underlying pattern of technology and tastes, then they can indeed serve as a candidate explanation for market structure. But once we pass beyond scale economies (to which Bain devoted much of his argument) to factors such as advertising intensity or R&D intensity, than we are dealing with entities that are themselves endogenously determined as part of an equilibrium system" [Sutton 1998].

There are four key factors that shape concentration by "bounding it from below", away from the zero value that the idealistic competitive setting requires: the need for R&D spending, economies of scope, a critical size for being innovative and financial requirements.

Markets where R&D effectiveness is important will see a higher level of concentration, because a fragmentized market may lead to dispersive and unprofitably duplicated research spending. In such a situation, the returns for a high-spending new entrant will be large, making it profitable for one (new) firm to outspend the research outlays of the incumbents. Clearly, then, the case in which only small low-spending firms subsist would not be a stable configuration of the market [see, in particular, Sutton 1998].

The sectors identified by the Commission as needing a joint European presence – biotechnology, ICT, energy and aerospace – can be seen to a certain extent as the kind of sectors this literature is talking about. These sectors require a strong European presence for at least two different but related reasons. First, the high

level of R&D outlay required in order to be competitive in the global market is difficult to attain at the national level. Second, the high R&D spending requirement induces the market structure to change, by bringing about a higher level of concentration, which makes it worthwhile for Europe to address this process.

The argument applies for the "Airbus case", whose successful experience can be regarded as the emblematic pathway to follow in other sectors for the emergence of new European Champions. This, however, can be regarded only as a general principle, because we have to bear in mind what Paul Seabright [2005] found in his assessment of the "Airbus experience": that it has been "a rather special case whose applicability to other project and sectors is fairly limited" due to the technological characteristics of the aerospace sector, i.e. with "high fixed costs of production, variable costs of production that fall significantly with scale, [and] products [that] are somewhat less differentiated than in other comparably high-technology sectors such as motor vehicles and precision instruments".

ST (formerly STMicroelectronics) should be considered another good example of Type I: the company is a global semiconductor company with an "unwavering commitment to R&D" [ST 2016].

Although the recent proliferation of policies at the EU level has been of the right kind, there is a danger that their results will in practice be limited for the reasons identified by Seabright above. In other words, the success of Airbus cannot be replicated with ease on all of the 31 ETPs, 6 JTIs, 10 FP7 programmes etc., because not all these sectors have the characteristics of the aerospace programme that have facilitated the accomplishment of Airbus. Therefore, there is a danger that vital funds and other resources allocated at the EU level are being distributed too thinly for them to have a significant effect on the competitiveness of European industry and on the development of "Type I" European Champions. Thus, it is necessary to refocus the EU Technology Policy with this insight in mind, and also to concentrate efforts on those sectors where a genuinely tight "strategic cooperation between the private and the public sectors" [Rodrik 2004] is likely to emerge.

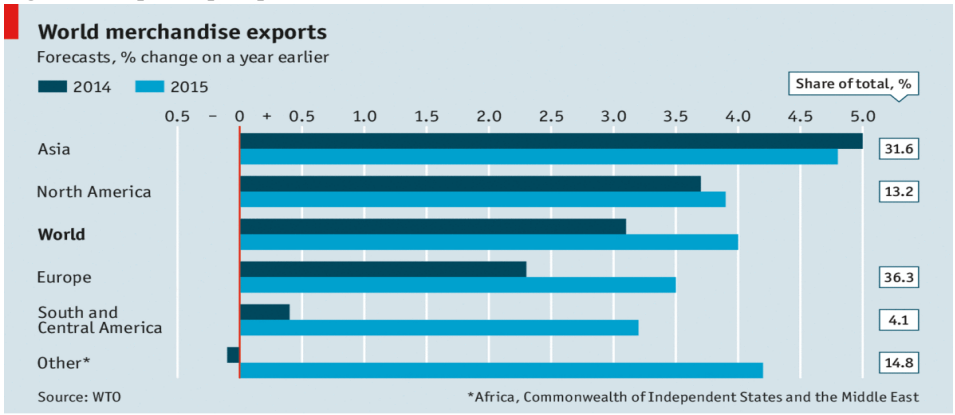
Having explained in detail the policy context surrounding Europe's firms, what is natural to do at this point is to examine how the wider process of EU integration itself is bringing about a transformation of the European market structure and the creation of a new type of "European Champions" – a type driven and supported by market forces alone.

5.4 "Type II" European Champions: Something New Afoot?

In order to elucidate what we mean by "Type II" Champions, let's take a look at an authoritative empirical study on the subject – *Fortune Global 500. The World's Largest Corporations* – presented here alongside some of our own observations.

In general terms, the relative strength of European industry in the global scenario has already been displayed in the previous sections, and the data on export performances further highlight, as the following figures shows, this point.

Fig. 2 – Europe's export performances



Source: 'The Economist' 27 September 2014

From a microeconomic perspective, it is possible to find another way of looking at this strength: that is, the role of European big players. In addition to the review presented in the previous section (see section 4), reference must be made to one of the most distinguished source on this score: the annual rankings by "Fortune". The table below (tab. 5) presents the essential data of these rankings according to our classification (a five-year period and macro-areas).

Tab. 5 - Big Players: *Fortune Global 500* - The World's 500 largest corporations ranked within Countries

Countries/Macro-areas(*)	**2011**	**2013**	**2015**
Austria	1	1	1
Belgium	4	2	2
(Britain/Netherlands)(**)	1	1	1
Denmark	1	1	1
Finland	1	1	0
France	32	31	29
Germany	32	28	28
Great Britain	26	27	25
Ireland	2	2	2
Italy	9	9	9
Luxembourg	2	1	1
Poland	1	1	1
Netherlands	12	12	13
Spain	8	8	9
Sweden	4	3	3
Hungary	1	-	-
Total EU	*137*	*128*	*125*
Brazil	8	7	7
Russia	7	8	5
India	8	8	8
China	73	95	103
Total BRICs	*96*	*118*	*123*
United States	132	128	133
Canada	11	10	11
Mexico	3	3	2
Total NORTH AMERICA	*146*	*141*	*146*
South Korea	13	17	15
Japan	68	57	52
Singapore	2	2	2
Thailand	1	1	1
Taiwan	6	5	7
Malaysia	1	1	1
Indonesia	=	2	1
Total SOUTH EAST ASIA	*91*	*85*	*79*

(*) In order to complete the full list, in EUROPE we must also consider (for the year 2015): 15 for Switzerland; 1 for Norway; 1 for TURKEY. In the MIDDLE EAST 1 Saudi Arabia; Finally, 9 for Australia, bringing the total to 500
(**) Unilever

Source: Adapted from 'Fortune *The Global 500', various years.*

At first glance, the position held by Europe's industrial giants, when looked at through international eyes, comes out clearly from these data, and it confirms the empirical data that had already been seen at the macroeconomic level. What can a closer analysis of these ranking reveal?

5.5 *"Fortune Global 500"*: A Glance at their Geographical Distribution

The position of the EU remains relevant even if has witnessed the departure of 12 companies over the last five years covered by Global 500 (from 137 to 125).

In this period Europe has lost ground with U.S. In 2013 Europe showed itself to be neck and neck with the USA (128 vs. 128) while in 2015 125 vs 133. In addition – as shown in Table 5 – the EU presence in this ranking was superior to that of the US in 2011 (137 vs. 132). Taking this battle to the continental level (Europe vs. North America), the situation is almost perfectly balanced (143 vs. 141).[25] And when looking at the third member of the (old) Triad – Japan, reduced to 52 companies in 2015 – we see that the EU has more than double that number in the *Global 500*.

What, then, can we say about the comparison between the EU and the BRIC nations, where the Chinese presence is of particular importance? Looked at in terms of total numbers, the EU in 2015 has still two more companies in the ranking (125 vs. 123), though the lead has narrowed compared to the previous years (137 vs. 96 and 128 vs. 118), and not insignificantly (from 41 corporations to 3). In this period the growth of Chinese companies in the ranking has been impressive.

Widening the field to include other "emerging nations" (using the IMF definition and/or members of the G20, the N-11, etc.), we notice how the *Fortune* rankings give an ever clearer picture of the rapid changes taking place on the global economic stage. To the 123 BRIC corporations from Table 5, we must add all of the other Asian (27, Japan excluded), which brings the total to 150. This number is greater than the European total (123 for the EU and 138 for Europe as a whole). In any event, the sum of corporations in the category we have called "emerging" requires grouping together nations that are geographically distant and very different culturally/politically, and which are linked by trade agreements (in most cases, and in small sub-groups). The history of the EU is different, starting from the largest Single Market in the world, which represents the first force behind European integration. Will it continue to be so in the foreseeable future?

In an attempt to answer this question, the initial data on the geographical distribution of the *Global 500: The World's Largest Corporations* must now be confronted with some fundamental structural economic indicators. Then in the last part of this section, we will move toward an *ad hoc* census of the cross-border M&As that have taken place in the European Single Market over the last decade. In fact, M&A activity that seeks to reinforce European enterprises (the Champions) is, in and of itself, a symptom of the market's health, a health that is further stimulated by the fact that 19 of the 28 member states (becoming 27, because of brexit) share the same currency.

The following Table places these two sets of data side by side for the major global economic powers, using for GDP the "global vision" of the OECD (see table 4 in this section). The 391 corporations divided here into five macro-areas represent almost 80% of the *Global 500* both in terms of their total number and in terms of their total revenue.

[25] Considering, in 2016 (with 2015 data), Europe as a whole we must add to the big EU players: 15 for Switzerland, 1 for Norway and 1 for Turkey; whereas, considering the North American continent (or NAFTA) we must add to the big U.S. players: 11 from Canada and 2 from Mexico.

Tab. 6 - Why Europe has a role to play

		Number of Corporations (and % of total N°)	**Revenue ($millions)**	**% of Total World Revenue**	**% of Global GDP (*in 2005 PPPs*)**
	World	*500 (100%)*	*27.634,058*	*100,00%*	*100.0(√√)*
1. Europe	**Euro area**	95 (19.0)	*5.570,08*	*20,08%*	17
2. U.S.		133(26.6)	*8.387,90*	*30,35%*	23
3. Japan		52(10.4)	*2.577,66*	*9,33%*	7
4. China		103(20.6)	*5.855,01*	*21,18%*	17
5. India		8 (1.6)	*344,22*	*1,25%*	7

(*) 'Fortune' [2016]
(√) OECD [2012]: "Global GDP is taken as sum of GDP for 34 OECD and 8 non-OECD countries" (p. 8)
(√√) 2011: Other OECD 18%, other non-OECD 11% (p. 8).
Source: Author's elaboration.

The Euro area accounts for 17% of global GDP (the far-right column), a percentage that becomes significantly higher when its portion of the *Global 500* is calculated: 19% (number of corporations) and 20.8% (total revenue). The same – or rather, a more than proportional incidence of the *Global 500* itself compared to GDP – can be said for the other two historically great industrial powers, the USA and Japan, and starting from 2013 for China as well (in the previous years it had three similar values, all around 17%)[26].

But prosperity is not guaranteed. As we know, the OECD's vision of the world at 2060 shows that the GDP of the Euro area is destined to decline significantly, already by 2030. It is of the greatest import to be fully aware of this trend; underestimating it would be a serious mistake. But it would be an equally serious mistake to underestimate the productive base that Europe (and the Euro area in particular) still represents for the world today. Strengthening this base would provide an important contribution to the European growth problem, perhaps the most pressing issue in Europe for years. And an adequate "new" industrial policy (one that links all three sides of the "triangle") would contribute to this strengthening.

But this strengthening can never be truly virile without the involvement of industrial enterprises, starting with the largest of them. What do the 125 corporations in the EU from the *Global 500* produce? Is manufacturing still the prevailing core business among them? We must take a look at their industrial specializations before moving our analysis forward into M&As.

No one is surprised any longer that the top positions in the *Global 500* are occupied by Oil & Gas and Energy companies (in 2015, six of the top seven, with the exception of Wal-Mart at number 1). The highest spots – the top thirty, let's say – are also well-represented by telecommunications (and utilities in general) and finance (banks). But it is in these first thirty positions that manufacturing demonstrates its long-lasting importance in each of the great world economic zones. We find: Volkswagen (8th), Toyota Motor (8th), Apple

[26] India presents a very different case as an economy experiencing great growth but with very few big Indian players based in-country. It is, more than anything, a nation where many Western groups have established significant portions of their operations in a process of delocalization, especially in the IT sector. Nevertheless, in the world of international finance, India has at least two very famous groups: the group led by business tycoon Ratan Tata shows up twice in the rankings (Tata Motors and Tata Steel), while the other tycoon of Indian capitalism (Lakshmi Mittal, "the steel tycoon") shows up under the heading of Luxembourg, site of the legal headquarters of the colossal ArcelorMittal, created in 2006 through the merger of Arcelor and the Mittal Steel Company.

(9th), Samsung Electronics (13th), Daimler (16th), Exor Group (19th)[27], General Motors (20st), Ford Motor (21th), and General Electric (26th). Some of these corporations are even on the rise compared to 2011, such as the first two carmakers and Apple (up from 55th of two years ago). When we look at the top fifty, other industrial giants come up: Honda Motor (36th), and Hewlett-Packard (48th). And widening further the field to the top one hundred, our list grows to include: BMW (51th), Nissan Motor (53th), Siemens (58th), Boeing (61th), Nestlé (66th), Hitachi (79th),International Business Machines (82nd), Hyundai (84th), Procter & Gamble (86th), Basf (88th), and– while Airbus Group comes in at the 100th slot (up from114th).

We could go on, but we believe that the first one hundred positions are sufficient to reveal both the relative strengths of nations and their main specializations: automotive and chemical in Germany, automotive and consumer electronics in Japan (and South-East Asia), automotive, IT and consumer goods in the USA.

At this point, though, our study necessitates an *infra-European* comparison of EU member states to shed light on the various paths toward business growth. And a comparison among the Big Five of the EU should be adequate for our task. The following table focuses on the manufacturing enterprises that appear in the *Global 500* for each of these five nations (see: table 7). What becomes immediately clear is the reality of the "varieties of capitalism" that stretch across Europe, with Germany (the "Rhine Model") defending and upgrading its robust industrial base, and Great Britain (the "Anglo-Saxon Model") choosing the route of finance.

Tab. 7 - A tale of two capitalisms

	Total from 'Global 500'Corp(s)	***Of Manufacturing which: Corp(s)(*)***	***Manufacturing Revenues - $ millions (and % of total revenues of each Country)***	***Top Five in Country's Manufacturing Ranking (Country's total ranking/ Global 500 Rank)***
Britain	25	4	107.834,0 (9.4%)	Glaxo Smith Kline (10^/278^). BAE Systems (17^/415^). AstraZeneca (19^/435^). Roll-Royce Holdings (24^/499).
France	29	9	346.406,0 (21%)	Peugeot (9^/140^). Renault (13^/178^). Saint Gobain (15^/196^). Chistian Dior (18^228^). Sanofi (19^/233^)
Germany	28	12	982.342,0 (52,5%)	Volkswagen (1^/7^). Daimler (2^/16^). BMW Group (5^/51^).Siemens (6^/^71). Bosch (7^/87^)
Italy	9	1	152.591,0 (26%)	Exor Group (1^/19^)(**)
Spain	9	-		-

(*) Energy and Construction not included.
(**) The revenues of Exor Group combined automotive (Fiat and Fiat Industrial, now FCA) with many other industrial and service activities.

Source: Author's elaboration based on 'Fortune Global 500 – (2016)'

In truth, Italy too has preserved its solid industrial base, and it remains the second largest manufacturing economy in Europe (after Germany) and one of the largest in the world. It is, however, an

[27] Exor S.p.A. is the Italian holding company – controlled by the Agnelli family – with a controlling stake in automaker FIAT and FIAT Industrial (CNH and Iveco). During the year 2014, FCA (Fiat Chrysler Automobiles) was formed by merging FIAT and Chrysler.

industry that is concentrated in the Center-North regions of the country and which is comprised primarily of SMEs and industrial districts[28] rather than of large corporations (which in Italy tend to operate in the finance, energy, and utilities sectors). Put another way, the *Global 500* – by its very nature – underestimates the importance of Italy in European manufacturing, while the opposite is true in the case of France, whose manufacturing forces are concentrated in large corporations: let's call it a *sui generis* case (or capitalism). Spain, more similar to Italy, has very few corporations in the *Global 500* and in the same sectors (energy, Tlc, and banking), once protected from competition and still today subject to heavy government regulation. But Spain's backbone of SMEs and industrial districts is decidedly more fragile than Italy's, making it difficult to postulate a "Mediterranean Model" from this perspective.

To round out the data in Table 7, Appendix A, as already mentioned, gives a more complete extract of the "Global 500 Ranked Within Countries", which details the significant role played by the EU's big five on the world's manufacturing scenario primarily thanks to excellent performance of Germany.[29]

If the EU-based corporations in the *Global 500* are already, by definition, "Champions", there are many other medium and large enterprises in the Single Market that are pursuing growth strategies (primarily through external growth via M&As, joint-ventures, etc.) that are destined to become tomorrow's Champions. Perhaps, in reality, they have already become so: it is now time to turn our attention to the new tendencies afoot in Europe.

5.6 Cross-border Mergers and Acquisitions (M&As) and the Reshaping of the European Market Structure

The focus of this section will be on (large) European firms' recent behaviour, and especially on the growth strategies they are adopting in light of the increasing completion of the level playing field – the European Single Market. In many of the sectors we mentioned so far in our discussion, a strong M&A wave has swept through in the last decade, with many deals being of a cross-border nature and leading to the emergence of what we will label "Type II" European Champions. Moreover, as long as the Single Market continues to release its potential through deepening (think of the adoption of the Euro) and widening (think of Eastern enlargement) measures, we can expect this new type of European Champion to consolidate even further as a result of future M&A activity.

To sum up, what are the most important facts that appear from the 15-year wave of M&As occurring in Europe? Several well-known databases are monitoring worldwide M&A activity in general terms[30], and the European Commission itself continuously monitors deals in the context of its institutional duties[31]. Our

[28] For a short account: see Appendix C

[29] Many other member states of the EU should deserve attention for their performances in "The Global 500": for example, Benelux (the Netherlands in particular); as an aside, *Fortune* lists the headquarters of the multinational Unilever (140th position) simultaneously in Britain/Netherlands – a singular case in the entire ranking. We should find other examples in the Scandinavian countries (Finland with Nokia, Sweden with Volvo and Ericsson). The CEEC nations that entered with the enlargement of 2004 are – as one might expect – poorly represented: Hungary and Poland have only a single corporation apiece, and operating in the same sector (Oil & Gas). Last, outside the EU but firmly within Europe, we must make note of Switzerland, site not only of world-famous financial giants, but also of important industrial corporations such as Nestlé, Novartis, Roche Group, and ABB.

[30] On global M&As, to give an example, Dealogic is the most cited source in *The Economist's* articles and surveys referring to this topic.

[31] In the light of the Council Regulation (EC) No. 139/2004 [Council of the European Union 2004], the European Commission, explaining "which mergers get reviewed by the EU", points out that "in principle [it] examines only larger mergers with a *European dimension*, meaning that the merging forms reach certain *turnover thresholds*. About 300 mergers are typically notified to the Commission each year. Smaller mergers which do not have an EU dimension may fall instead under the remit of Member States' competition authorities". Then, the Commission explains: "There are two alternative ways to reach turnover thresholds for EU dimension. The first alternative requires: (i) a combined worldwide turnover of all the merging firms over €5,000 million, and (ii) an EU-wide turnover for each of at least two of the firms over €250 million. The second alternative requires: (i) a worldwide turnover of all the merging firms over €2,500 million, and (ii) a combined turnover of all the merging firms over €100 million in each of at least three Member States, (iii) a turnover of over €25 million for each of at least two of the firms in each of the three Member States included under ii, and (iv) EU-wide turnover of each at least two firms of more than €100 million. In both alternatives, an EU dimension is not

analysis takes a necessarily narrow view, as both the following Tables (Tab. 8a, Tab. 8b) and Appendix B will show.

These tables and Appendix are the result of an empirical study, and have been organized in the following manner.

First of all, they show the most important cross-border M&As that have taken place in Europe over the latest three-year period (2015-2017), the period during which this type of transaction was at its highest level in many years, and was quite significantly "industrial" in scope – having two or more firms sharing the same core business join together.

Second, the major transatlantic M&As over the same period (2015-2017) are similarly listed and examined[32].

In Appendix B, on the other hand, a wider sample of the wave of M&As in the EU during the period of 2004 to 2014 is published: this is the period, it should be noted, that begins with the Eastern Enlargement of the European Union (ie, as it can be otherwise stated, with a further widening of the Single market); this decade is itself divided into two sub-periods (2004-2008, 2009-2014) in order to keep tabs on the significance of the financial crisis that began toward the end of 2008 with the collapse of Lehman Brothers.

In total, around 150 M&A operations have been listed and scrutinized.

This collection of data pertaining to M&As that led to the creation – within the Single market – of "European Champions" is rounded out by the publication (see again Appendix B.I) of a summary chart from 'The Economist' on the global M&A operations of this decade (2004-2014, see Appendix B.II).

Tab. 8(a) – Main European Cross-Border M&As (*)

Year	Target	Bidder/Acquirer	Industry
2015	GlaxoSmithKline PLC (Oncology Business)	Novartis AG	Pharmaceutical
2015	Alcatel Lucent	Nokia	telecoms
2015	BG	Shell	Oil & Gas
2015	Lafarge SA	Holcim Ltd	Building materials
2015	Net-A-Porter	Yoox	E-commerce (luxury fashion)
2015	SABMiller	AB InBev	Food & Beverage
2016	Carte Noir	Lavazza	Food & Beverage
2016	Grand Marnier	Campari	Food & Beverage
2016	Alstom Sa (from General Electrics)	Ansaldo Energia	Gas turbine sector
2016	Pioneer (from UniCredit)	Amundi	Finance
2016	Mediaset	Vivendi	Media
2016	Telecom	Vivendi	telecoms
2017	Essilor	Luxottica	Fashion
2017	Opel (from GM)	PSA	Automotive
2017	STX France	Fincantieri	Shipbuilding industry
2017(**)	Abertis	Atlantia	Infrastructure (toll road)

(*)The London Stock Exchange and Deutsche Börse merger blocked by EU in March 2017.
(**)Ongoing.

Source: Adapted from 'The Economist', 'Il Sole 24 Ore', KPMG, and corporate reports.

met if each of the firms archives more than two third of its EU-wide turnover within one and the same Member State" (see: *Competition: Merger control procedures*, http://ec.europa.eu/competition/mergers/procedures_en.html).

[32] Notwithstanding the centrality of a European-oriented M&A wave – and the trend toward "the Europeanisation" of European companies – two other perspectives deserve attention. First of all, *transatlantic* alliances and deals are not rare: examples include the takeover of Lucent Tech. by Alcatel, the joint venture between STMicroelectronics (now ST) and Intel and the Nokia takeover completed by Microsoft (April 2014); in the financial system, the NYSE's agreed bid for Euronext (the Paris-based stock exchange operates bourses in Paris, Amsterdam, Brussels and Lisbon), creating the first transatlantic stock market (at the exact moment when Deutsche Börse was withdrawing its proposed merger with Euronext for a pan-European solution). Secondly, step by step, BRIC-based companies are entering the European stage – the successful bids of Indian-based Mittal Steel (for the French Arcelor) and Tata Steel (for Corus, an Anglo-Dutch competitor) spring immediately to mind. And both perspectives are destined to become more and more forceful.

Tab. 8(b) – Main Transatlantic M&As(*)

Year	Target	Bidder/Acquirer	Industry
2015	Allergan Inc (USA)	Actavis PLC (Ireland/USA)	Pharmaceutical
2015	Covidien PLC (Ireland)	Medtronic Inc (USA)	Medical Technology
2015	Sigma-Aldrich Corp (USA)	Merck KGaA (GER)	Pharmaceutical
2016	Monsanto (USA)	Bayer (Ger)	Agricultural, Chemical & Pharmaceutical

(*)Kraft Heinz (USA) withdrew Unilever (UK+NL) takeover bid in February 2017

Source: Adapted from 'The Economist', KPMG, and corporate reports.

If we now return to our analysis, we can ask: what can we learn from the European cross-border deals that have taken place in the periods under scrutiny? And from the deals that are still taking place? In this 2017, think of Essilor-Luxottica ('The Economist' 2017a), PSA-Opel ('The Economist' 2017b), Fincantieri-STX France ('Il Sole 24 ore' 2017) and Atlantia-Abertis ('Bloomberg' 2017).

The lesson, at least, is fivefold:

(i) the entire spectrum of economic activities and industrial sectors has been involved in the M&A wave: everything from mining to commercial services;

(ii) the financial system (banks, insurance companies, and stock exchanges) was the catalyst for many operations – for better or for worse, we might add. During our first period (2004-2008), operations of a certain "industrial" nature were predominant, seeking to extend the presence of banks in the nations of Eastern enlargement; while in the second period (after September 2008), enormous public resources had to be invested in bailout operations of European financial markets (banks above all);

(iii) the macro-sector of Oil & Gas and public utilities – at an equal level to the financial system – was the setting for many operations, taking advantage of the processes of privatisation and liberalisation of markets which were launched by all EU governments during the 1990s;

(iv) the image that comes forth out of manufacturing – European and global – is that of an economic activity that has by no means fallen from grace. All industries – from steel to fashion to defence to space, and so on[33] – concluded numerous operations both before and after the breaking point of September 2008. These are sectors characterized both by different levels of technology and by diverse levels of contamination by the services sector (for example, throughout ICT, the immaterial/intangible component is predominant);

(v) the size of the main actors and the frequency of operations in the first period show Europe's leading position in M&A activity in the middle years of the 2000s.[34] The crisis that followed the bankruptcy of Lehman Brothers, and in particular the chaos that it created in financial markets worldwide, brought an inevitable shrinking of operations in 2009, 2010 and 2011; however, there has been a healthy rebound of operations over the following years.

As we have already said, our "sample" of M&As makes no claim of being exhaustive (in part because this would take us well beyond our means and our ends). A complete tally of the thousands of operations that take place every year can be found in the official sources mentioned above, as well as in others [KPMG 2016]. Our objective, we should recall, was more focused: study the European Single Market both from the

[33] Pharmaceuticals and biotech are also industry sectors where many deals are occurring: here, high R&D-intensity and the growing necessity to outspend for this sort of investment seems to be the main engine.

[34] From a European point of view, the M&As waves are also reflected in the number of "notified cases" being filed every year by the European Commission-DG Competition. The "notifications" were 402 in 2007 up from 168 in 1997, a decade earlier, while the following years showed many ups and downs (from 348 in 2008 to 259 in 2009, and from the latter to 274 in 2010 and 309 in 2011; and finally, from over 300 to 283 in 2012 and 277 in 2013). For the full list from 1990 till today, see the following statistics: http://ec.europa.eu/competition/mergers/overview_en.html

perspective of market structure and from the perspective of firms' behaviour. This analysis has revealed the role of the big players, whom we have renamed "European Champions".

Overall, the underlying strategy of Europe's biggest firms is to concentrate on their core business, therefore using M&As to carry out a strategy of "horizontal integration". There seems to be a widespread consensus that a takeover is more likely to pay off when companies are in the same or similar industries, because they tend to offer greater opportunities for exploiting economies of scale and scope (the famous argument for "synergies").

6. Conclusion

The strategies of the "European Champions" make a crucial contribution to the emergence of those "global champions" which Barry Eichengreen [2007] – in his review of the role of the institutions that contributed most to European integration from the Treaty of Rome onward – called "firms with the scale and scope needed to compete internationally". In short, they are the big players that have capitalized on the opportunities provided by the completion of the European Single Market.

If, here at the end of our analysis of the current M&A wave, we turn briefly to politics, we have to raise the issue of economic nationalism (or patriotism) and the concomitant policy of protectionism. The assumption behind the behaviours of many European national governments is that the nationality of ownership matters. The "Type II" European Champions, since they are the final outcome of market-opening activities by firms (beginning from the biggest ones), appear to be more coherent with the EU Treaties than any attempt at protecting the old-fashioned "National Champions".

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Appendix A

'FORTUNE Global 500' (2016) 'The World's Largest Corporations' Ranked Within Countries: EU-5

(manufacturing companies marked with *)

BRITAIN: 25 Companies(^) and 1,146,393.0 $ millions of total revenues

		500 Rank
1	BP	10
2	HSBC Holdings	68
3	Tesco	72
4	Prudential plc	126
5	Vodafone Group	133
6	Barclays	181
7	Lloyds Banking Group	193
8	SSE	216
9	Centrica	220
10	GlaxoSmithKline*	278
11	Aviva	279
12	Sainsbury's	288
13	Rio Tinto Group (^^)	296
14	Royal Bank of Scotland Group	361
15	BT Group	369
16	Compass Group	387
17	BAE Systems*	415
18	International Airlines Group	421
19	AstraZeneca*	435
20	Morrisons	437
21	National Grid	471
22	Greenergy Fuels Holdings	477
23	Standard Chartered	498
24	Rolls-Royce Holdings*	499
25	Old Mutual	500

(^) Plus Unilever ($ 59,093.6) ranked 147 as company for Britain/Netherlands

(^^) Mining

FRANCE: 29 Companies and 1,650,219.0 $ millions of total revenues

		500 Rank
1	Total	24
2	AXA	33
3	BNP Paribas	39
4	Societe Generale	43
5	Carrefour	73
6	Credit Agricole	77
7	Électricité de France	80
8	GDF Suez	89
9	Peugeot*	140
10	Groupe Auchan	144
11	Groupe BPCE	155

12	Finatis	170
13	Renault*	178
14	CNP Assurances	182
15	Saint-Gobain*	196
16	Orange	204
17	Vinci	210
18	Christian Dior*	228
19	Sanofi*	233
20	Bouygues (§)	280
21	SNCF	319
22	Schneider Electric*	354
23	Air France-KLM Group	363
24	L'Oreal*	378
25	Veolia Environnement	382
26	La Poste	418
27	Danone*	433
28	Michelin*	451
29	Sodexo	466

(§) Infrastructure, construction.

GERMANY: 28 Companies and 1,872,883.0$ millions of total revenues

		500 Rank
1	Volkswagen*	7
2	Daimler*	16
3	E.ON	32
4	Allianz	34
5	BMW*	51
6	Siemens*	71
7	Bosch*	87
8	BASF*	88
9	Deutsche Telekom	90
10	Metro	101
11	Munich Re	106
12	Deutsche Post	108
13	Bayer*	165
14	Deutsche Bank	166
15	RWE	174
16	ThyssenKrupp*	184
17	Deutsche Bahn	203
18	Continental*	213
19	Lufthansa Group	285
20	Talanx	289
21	ZF Friedrichshafen*	320
22	Edeka Zentrale	321
23	DZ Bank	334
24	Fresenius*	341
25	Phoenix Pharmahandel*	416
26	Energie Baden-Württemberg	453
27	SAP	462
28	TUI	467

ITALY: 9 Companies and 591,029.0 $ millions of total revenues

		Rank 500
1	EXOR Group*	19
2	Assicurazioni Generali	49
3	ENI	65
4	Enel	78
5	Intesa Sanpaolo	224
6	UniCredit Group	300
7	Poste Italiane	305
8	Telecom Italia	404
9	Unipol	491

(°)The revenues of Exor Group combine automotive (FCA) with many other service activities

SPAIN: 9 Companies and 378,488.0 $ millions of total revenues

		500 Rank
1	Banco Santander	75
2	Telefonica	137
3	Banco Bilbao Vizcaya Argentaria	219
4	Repsol	250
5	ACS	255
6	Iberdrola	295
7	Gas Natural Fenosa	365
8	Mapfre Group	434
9	Inditex	463

Source: Excerpt from FORTUNE GLOBAL 500 [2016], http://fortune.com/global500/

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Appendix B.I

A sample of the main "European" cross-border M&As (2004-2014)

Industry	2004-2008	2009-2014
FINANCE (BANKS, INSURANCE, STOCK MARKETS)	Santander - Abbey National UniCredit[h] - HVB BNP Paribas – BNL; ABN Amro —Antonveneta[g]; Crédit Agricole – Emporiki Bank Royal Bank of Scotland /Santander/Fortis - ABN Amro[a] Assicurazioni Generali – PPF Group (Czech Republic), and Assic. Generali -- Banca del Gottardo UniCredit -- Ukrsotsbank (Ukraine), and AFT Bank (Kazakhstan) Intesa SanPaolo -- BOF Leasing (Slovakia) Crédit Agricole - Cariparma Euronext – NYSE (*transatlantic*) LSE – Borsa di Milano Deutsche Börse -- ISE, International Securities Exchange (*transatlantic*) US Nasdaq Stock Market – OMX (*transatlantic*)[b]	2008-09: Commerzbank – Dresdner Bank (m) 2010: Banco Financiero y de Ahorros SA – FROB Fondo de Reestructuración Ordenada 2011: Caixa d'Estalvis de Catalunya – FROB Fondo de Reestructuración Ordenada 2012: Ageas - Ageas SA/NV 2013: CVC Capital Partner - Cerved Group SpA
ICT & MEDIA	Telefonica – 02 Alcatel – Lucent (*transatlantic*); Nokia – Siemens (*netwok divisions*) Mondadori – EMAP France Thomson Corp. - Reuters News Corporation – Dow Jones (*WSJ*) Telefonica[c] – Telecom Italia RCS Media Group – Recoletos Mediaset – Endemol	2011: Wind Telecom SpA (Weather Investments SpA) - VimpelCom Ltd 2011: Société Française du Radiotéléphone SA - Vivendi SA 2011: Autonomy Corp Plc - Hewlett-Packard Vision BV (*transatlantic*) 2012: Deutsche Telekom – MetroPCS (*transatlantic*) 2013: Dentsu Inc. (*From Japan*) - Aegis Group Plc 2013: Siemens Ag - Invesys Rail Ltd (UK) 2013: Microsoft – Nokia (*transatlantic*) 2013: Vodafone Vierte Verwaltungs AG - Kabel Deutschland Holding AG 2013: Google – FlexyCore (*transatlantic*) 2014: Portugal Telecom SGPS SA – Oi Sa (*From Brazil*) 2014: Publicis Group SA -Omicorp Group (*transatlantic*)
MANUFACTURING/I (PHARMA & BIOTECH, AND FOOD)	UCB – Schwarz-Pharma; Nycomed – Altana; Bayer – Schering;	2009: Merck & Co – Schering Plough (*transatlantic*) 2009: Roche – Genentech (transatlantic)

	Merck – Serono Schering-Plough – Organon BioSciences (*transatlantic*) Astra-Zeneca – MedImmune (*transatlantic*) Novartis – Alcon (from Nestlé) [i] Pernod Ricard – Vin&Spirit Sanofi Synthélabo – Aventis	2011: Genzyme Corp - Sanofi-Aventis SA (*transatlantic*) 2011: Nycomed International Management GmbH - Takeda Pharmaceutical Co Ltd (*transatlantic*) 2011: Alcon Inc - Novartis AG (*transatlantic*) 2012: Alliance Boots GmbH - Walgreen Co (*transatlantic*) 2012: Actavis-Watson Pharmaceuticals Inc 2012: Nestlé SA - Pfizer Nutrition (*transatlantic*) 2012: Heineken – Asia Pacific Breweries Ltd. (*from EU to Asia*) 2013: Bayer – Conceptus (*transatlantic)* 2013: AstraZeneca PLC - Pearl Therapeutics 2014: Novartis – GlaxoSmithKline (s) 2014: Actavis - Forest Laboratories 2014: Medtronic Inc - Convivien Plc (*transatlantic*) 2014: AbbVie – Shire (*transatlantic*)
OIL&GAS, UTILITIES[(d)]	Iberdola – Scottish Power Suez – Electrabel AEM & EDF – Italenergia Enel – Endesa Suez & La Caixa – Agbar ENI – Burren Energy, and ENI – Distrigas[l]	2011: GDF Suez Energy Europe & International - International Power Plc 2011: Petrohawk Energy Corp - BHP Billiton Plc (*transatlantic*) 2012: Electrabel SA - International Power Plc 2013: Energetický a Prumyslový Holding "EPH" - Slovak Gas Holding 2013: Fincantieri (Cantieri Navali Italiani) - STX OVS AS 2014: LetterOne Group - RWE Dea AG 2014: Altice Nubericable - SFR Vivendi
MANUFACTURING/II (LUXURY GOODS & FASHION)	PPR – Puma Luxottica – Oakley (*transatlantic*)	2011: LVMH(p) – Bulgari 2011: PPR(q) – Brioni 2011: E-Land – Mandarina Duck 2012: E-Land – Belfe, Lario 1898, Coccinelle 2013: LVMH SA – Loro Piana 2013: Guccio Gucci SpA (Kering Group) - Richard Ginori 2013: PAI Partners SAS - Marcolin

MANUFACTURING/III (AUTOMOTIVE)	Porsche – Volkswagen (VW), and previously VW – Scania (--› Man + Scania in the commercial-vehicles division) Tata Motors – Land Rover and Jaguar (UK-based firms owned by Ford and bought by a BRIC's corporation) Fiat's three joint ventures with Severstal (Russia), Tata Motors (India), Chery Auto (China)	2009: Fiat – Chrysler(n) (*transarlantic*) 2012: Audi – Ducati(r) 2012: Volkswagen AG - Porsche AG(o)
MANUFACTURING/IV (SPACE & DEFENCE, MECHANICS, ELECTRICAL EQUIPMENT, ETC.)	Finmeccanica -- SELEX Sensors and Airborne Systems, and Finmeccanica – DRS Technologies (*transatlantic*) Brembo – Hayes Lemmerz (*transatlantic*)	2012: Cooper Industries Plc - Eaton Corp (*transatlantic*) 2013 (April): Siemens – Invensys Rail 2013: General Electric Co - Avio SpA (*transatlantic*) 2013: ASML Holding NV - Cymer Inc (*transatlantic*) 2013: Ltd - Ceram Tec GmbH 2014: General Electric – Alstom (Energy Division) (*transatlantic*) (f)
MANUFACTURING/V (STEEL)	Mittal (*from BRICs*) – Arcelor Tata Steel (*from BRICs*) – Corus Tenaris – Hydril (*transatlantic*)	2013: Fives – OTO Mills (subsidiary of the Marcegaglia Group) 2013: Chicago Bridge & Iron Company - The Shaw group Inc.
CONSTRUCTION & INFRASTRUCTURE		2013: Concessions SaS - ANA Aeroportos de Portugal SA 2014: Holcim - Lafarge
MINING	Bhp Billinton – Rio Tinto	
COMMERCIAL SERVICES (RETAILING & TRAVEL FIRMS, PROPERTY MANAGEMENT, ETC.)	TUI – First Choice Thomas Cook – My Travel Autogrill (with Altadis) – Aldeasa (2005) Autogrill – Alpha Group Plc (2007), and Autogrill -- World Duty Free Europe (2008), and full control of Aldeasa (2008) Air France/KLM – Alitalia (e) 2008: Lufthansa – Swiss International Airlines	2009: Lufthansa – Austrian Airlines, and 2012: Lufthansa – BMI (British Midland International) 2010: British Airways - Iberia 2012: Terra Firma Capital Partners – Annington Homes Ltd.

Legend: (a) Before: Barclays Bank's unsuccessful offer for ABN Amro.

(b) Agreement between Nasdaq and Bourse Dubai to buy OMX, where Dubai receives Nasdaq's stake in the London Stock Exchange plus a 19.9% stake in the U.S. exchange operator.

(c) Together with some of the Italy's biggest financial companies (Assicurazioni Generali, Intesa Sanpaolo, Mediobanca).

(d) Domestic M&A (i.e., «National Champions»): Gaz de France (GDF) + Suez.

(e) Air France had then withdrawn its offer to buy Alitalia.

(f) See also Tab. 8.

(g) During 2007, Banco Santander acquired Banca Antonveneta through its participation in a three-way break-up bid for ABN Amro. Subsequently, Banca Monte dei Paschi di Siena buys Antonveneta from Santander creating Italy's third biggest bank after UniCredit Group and Intesa SanPaolo.

(h) Additionally, in May 2007, UniCredit acquired Capitalia in Italy's domestic market.

(i) 25% of Alcon (contact-lens and eye drop), an American firm owned by Nestlé, which has an option to sell its remaining 52% btw 2010 and 2011.

(l) After exclusive talks between Suez and Eni to sell Distrigas stake.

(m) Previously (2002-08) Dresdner Bank was a subsidiary of the insurance corporation Allianz;

(n) They signed in June 2009 a strategic alliance brokered by the U.S. government, one day after the Supreme Court cleared the path for the deal. Fiat will initially take a 20% stake in the company; its share can go up to 35%. Subsequently, on Jan. 2014 Fiat completed Chrysler acquisition in $ 4.35 billion deal.

(o) A takeover of one by the other has been on the cards since October 2008 when Porsche failed to buy up Volkswagen, racking up more than €10bn in debts but falling short of the 75% of shares targeted. The German car company responded by purchasing 49.9% of Porsche. On July 2012, VW bought up the remaining 50.1% of Porsche;

(p) LVMH (Moet Hennessy Louis Vuitton SA), owned by Mr. Bernard Arnault, bought in 2010 a stake in Hermes International

(q) The group owned by Mr. François Pinault includes other brands such as, for example, Gucci and Yves Saint Laurent;

(r) In 1998 the German carmaker bought Lamborghini.

(s) Acquisitions of Glaxo Cancer Drugs.

Source: Author's elaborations based on corporate reports and media releases.

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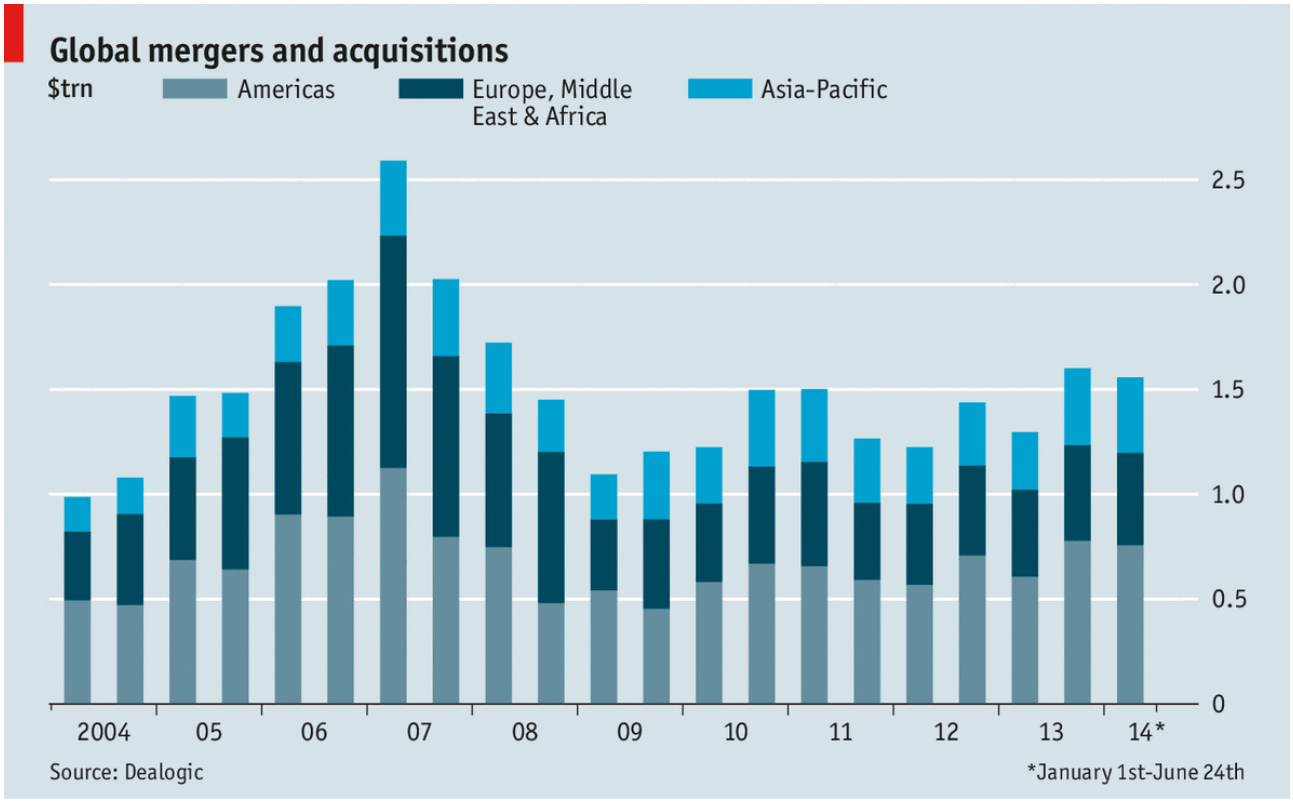
Appendix B.II

Global M&As: An Overview (2004-2014)



Source: 'The Economist' June 28th 2014

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Appendix C

SMEs, Makers and the New Industrial Revolution: A Short Account

The great transnational firms – the "European Champions"- have both the necessary size and know-how of their American counterparts to conduct their own R&D activities in their own laboratories and patent their own inventions. They also have the capacity and the resources to compete independently or in partnership with universities, research centers and other firms, in the important Community level funding *calls* for research and innovation (previously the seven Framework Programmes, now the Horizon 2020).

Not to mention the strategic role that European Champions play in supporting numerous supply chains. To give just a single truly transnational example, take the case of a great Swedish multinational - "The world's leading food processing and packaging

solutions company" - which has its headquarters for Southern Europe in a traditionally industrial city in the region of Emilia-Romagna. More than 800 people work in this office, half of them in R&D, design, and planning. Up to this point, nothing special: that's how it is when you are looking at large firms that work in medium-high or high-tech sectors. Where do the productive district and the supply chain come in? Exactly at the point where the machines that have been envisioned and designed by the multinational are not built on site, but are placed into the hands of a family-owned, highly-specialized mechanical engineering firm. This firm is located in the same geographic zone that produces fully-operational machinery for the multinational, passing work along down the line to its own subcontractors.

In so doing, information flows easily and rapidly between the multinational and the specialized suppliers, technological spillovers guarantee constant spread of knowledge and innovations, and everyone involved – entrepreneurs, executives, and workers – thus becomes gradually more specialized in their fields, developing and perfecting necessary skills.

And so all three of the Marshallian "sources of industrial localization" have a concrete impact on this territory. These are, according to Paul Krugman's [1991] rereading of the original: "labor market pooling", "intermediate inputs", and "technological spillovers."[35]

These reasons (the virtuous circle that flows between large multinationals and small businesses working in districts/clusters) as well as others (such as the significant weight of SMEs in the EU), lead us to add to this paper, focused on the "European Champions", a short account at precisely those SMEs.

We should start by making one minor premise with respect to the "new industrial revolution"; ("Industry 4.0"). The thesis that Chris Anderson [2012] first expressed in his book *Makers* is constantly finding more supporters, and has been used in innumerable practical applications around the world. His thesis is that the "3D printer" – which the author considers the contemporary equivalent of the power loom – will open countless new opportunities for the "smallest businesses and for digital craftsmen," because it presents the possibility of "printing objects the way you would print a piece of paper, creating a private factory."

If we also keep in mind that today, right alongside 3D printers, we find nanotechnologies, new materials, and ever-more intelligent robots and software, it follows that not a few SMEs will truly be able to benefit from this "new industrial revolution."

This same argument shaped the core of Peter Marsh's [2012] book, the subtitle of which – *Consumers, Globalisation and the end of mass production* – explains one of the author's strongest theses: "the greater focus on tailor-made goods aimed at specific individuals and industry users." Despite the (slightly) different breakdown of the great changes wrought by manufacturing since its beginnings (Marsh postulates that we are currently in the fifth great leap), the finish line is the same. The international success of many niche products is made possible today by great technological advances, including computers, semiconductors, lasers, the Internet, and nanotechnology, to name just a few that made their appearance during the final decades of the 20th century.

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[35] Today, the experiences of industrial "Districts" and/or "Clusters" go well beyond the traditional boundaries of Western industrialized countries; for an analysis of "Industrial Clusters" as policy tools to boost industrialization in the world's largest emerging economy (China), see: Frattini and Prodi G. [2013].

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