



**Industrial Upgrading in the White Goods
Global Value Chain: The Case of Arcelik**

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Abstract:

The present article sheds light on the process that has allowed a firm from a developing economy to transform itself successfully from an OEM producer to an OBM MNE. We study that case of Arcelik, a consumer electronics MNE from Turkey, and identify four factors for successful internationalization: rapid strategy execution, investment to build technological capabilities and organizational adaptation, focus on international marketing capabilities and distribution networks, and leverage on business group resources. The analysis suggests that globalisation is being driven not just by the giant incumbent firms but also by emerging firms internationalising from the periphery.

Keywords: Emerging country MNEs, global value chains, innovation, internationalization

JEL codes: L2, L6, M1

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Industrial Upgrading in the White Goods Global Value Chain: The Case of Arcelik

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1. Introduction

Recent years have seen the rise of a growing number of multinational enterprises (MNEs) from emerging markets in a variety of industries. These MNEs appear to be driven directly by firm-to-firm contracting in a global setting – as would be expected in an epoch of multiplying global inter-firm connections that offer more possibilities for firms (even quite small firms) to be drawn into the global economy. As latecomers on the global stage, MNEs from developing countries rarely have at hand resources such as proprietary technology, financial capital, brands, and experienced management. Successful MNEs from emerging economies have turned this latecomer disadvantage into a strength to leapfrog stages in their overseas expansion in a wide range of industries.

What are the factors explaining their success? What was the role, if any, of technological and organisational innovation in explaining their successful internationalisation? In order to provide some answers to these questions, we consider the large household appliance (so-called “white goods”) industry and the emergence of a regional leader from Turkey, Arcelik, which has successfully transformed itself from new OEM into an OBM MNE.¹ By resorting to a qualitative case study, we allow for in-depth investigation of the broader phenomenon, something which would not be possible in a larger quantitative study. Further, by taking an evolutionary approach and elaborating on firms’ resource and capabilities, we aim to bring new insights for the general theme of corporate upgrading in less developed economies. The emphasis on the endogenous process of capability development also responds to recent criticisms that specific firm-level efforts remain largely unexplored in the GVC literature (Morrison *et al.*, 2008).

This paper is organized as follows. The next section briefly presents a conceptual framework to explain the internationalization scheme of emerging market MNEs. We then explore the white goods industry, which has experienced significant fragmentation of production and seen the emergence of new, key players from emerging economies. The case of Arcelik allows to pin down the key factors for successful

internationalization from an OEM producer to an OBM MNE. In the conclusions, we present some implications for firms in developing economies that wish to turn their latecomer status into a source of competitive advantage.

2. Global value chains and multinational enterprises from emerging economies

Recent years have seen the rise of a growing number of multinational enterprises (MNEs) from emerging economies as diverse as Brazil, China, South Korea, India, Malaysia, Mexico, Russia, Singapore, Taiwan and Turkey. The new emerging market MNEs (EMNEs) operate in a variety of industries, but they all appear to be driven directly by firm-to-firm contracting in a global setting – as would be expected in an epoch of multiplying global inter-firm connections that offer more possibilities for firms (even quite small firms) to be drawn into the global economy (Goldstein, 2007).

As latecomers on the global stage, these EMNEs rarely have at hand resources such as proprietary technology, financial capital, brands, and experienced management. In other words, they do not have the ownership advantages that have been identified as the main drivers of multinational expansion for companies from mature industrial economies. Moreover, EMNEs do not have the luxury of waiting – market liberalisation is eroding protection at home and time-to-market is reduced. Successful EMNEs have turned this latecomer disadvantage into a strength to leapfrog stages in their expansion overseas. Moreover, they have followed quite different patterns to reach, or at least approach, global competitiveness. EMNEs operate in global value chains (GVCs) and leverage various kinds of strategic and organizational innovations in order to establish a presence in industrial sectors already heavily populated with world-class competitors.

These new MNEs did not delay their internationalisation until they were large, as did most of their predecessors, and often become global as a result of direct firm-to-firm contracting. Many grow large as they internationalise; conversely, they internationalise in order to grow large. This growing phenomenon challenges traditional approaches to the theory of internationalisation, such as the eclectic or OLI paradigm (Li, 2007). This rapid international expansion also runs counter to what the theory of incremental internationalization suggests – i.e. that firms gradually learn about foreign markets and incrementally increase commitments to those markets to maximize the benefits of learning and reduce hazard of failure (Chang and Rhee, 2007). Forced as they are to catch up with the forerunners in advanced economies, firms from emerging economies see rapid expansion into overseas markets as a valuable asset (Chang and Rhee, 2007). Mathews (2006), for instance, proposes a new model to understand corporate

internationalisation from emerging markets. EMNEs would engage in FDI not to exploit existing internal advantages, but rather to create new sources of competitive advantage, by establishing strategic partnerships, learning and leveraging on such linkages. Building technological capabilities, making organizational adaptations and developing international marketing and distribution networks, may serve latecomers to catch up with early movers and ultimately catch up with the frontier and participate in global business games.

It is in this context that we analyze the specific case of the white goods industry to explore the main characteristics of its global value chain, its innovation patterns and the specific case of Arcelik to identify the main factors that facilitate corporate upgrading in a developing economy.

3. The white goods global value chain

White goods constitute a producer-driven GVC, characterised by mature technology and rapid delocalisation to developing countries, where not only input costs are lower, but demand growth rates are higher – giving a decided latecomer advantage for the internationalisation of these MNEs. Production cost, however, is not the only factor. Since household appliances are experience goods and reputation matters, brand loyalty is a very important competitive factor in this market (Paba, 1986). It acts as an information-based barrier to entry, reduces the amplitude of short-run demand shifts and allows firms to experiment (brand reputation cannot be brushed away by a single product innovation failure). For some products, moreover, consumers are still willing to pay higher prices for goods produced in a specific country. The big players have been in the business for more than fifty years, built strong brands, acquired those of competitors and established trust relationships with retailers (Nichols and Cam, 2005, Hunger, 2003).

This GVC is dynamic. Outsourcing, once limited to neighbouring firms in the industrial cluster, has expanded geographically. Maytag dishwashers use Chinese motors and Mexican wiring and are assembled in the US. OEMs in developing countries are also producing on behalf of Western OBMs (e.g. Daewoo produces refrigerators with freezers on top sold under the Maytag brand). The processing is now moving further as the world's white goods – and not simply their components – are indeed increasingly being made in emerging markets. Major players have also set design and R&D centres in their largest overseas markets. This is the case, for instance, of Electrolux in Brazil, China and India (Feriotti and Figueiredo, 2005). Investment flows are not unidirectional. Big players from the “periphery”, such as Haier (China) and

Arçelik (Turkey), have heavily invested in manufacturing capacity in high-income countries to get closer to where knowledge and innovation are produced, bypass transport and tariff barriers, and build an international reputation for their brands (Bonaglia *et al.*, 2007). These companies first set up R&D centres in their home countries and then moved to establish some outposts in major markets.

4. Innovation patterns in white goods industry

The production of white goods constitutes a mature and global industry. Products are relatively similar and simple to produce, although assembling different parts and subsystems requires the combination of knowledge domains ranging from mechanics to electronics and plastic moulding (Sobrero and Roberts, 2002). Although environmental and energy savings concerns, as well as the development of wireless technologies and connectivity, are pushing towards convergence with other technologies such as domotics, the basic production technology is also mature (Granstand *et al.*, 1992; Ferigotti and Figueredo, 2005). A major recent change in the industry has been the simplification and standardization of production platforms that allow using standard engineering frameworks to which parts can be added or subtracted (Nichols and Cam, 2005). The development of common platforms also allows to speed up product renewal and time to market, which are necessary to avoid price erosion. The search for greater efficiency, rather than pure price competition, had a dramatic impact on the plant organization of labour. Flexibility means that a production line can process different models without any special tooling up time or pauses in the production flow. It also implies the minimization of on-process and finished products stocks. Producers and buyers order more frequently in smaller lots and expect to track their shipments so that they can synchronize deliveries with their own production schedules and with a minimum of warehousing (Nichols and Cam, 2005, Perona and Saccani, 2004).

In the framework developed by Pavitt (1984), the white goods industry can be characterised as scale-intensive. This means that competitiveness derives from exploiting scale economies and the innovative activity chiefly concerns process and organization. Companies use similar technology and manufacturing processes. Innovation is mainly the result of development or engineering activities rather than formal research, and the innovation capacities of firms mainly stems from specific, and in great part tacit, internal capabilities and learning processes (Coriat *et al.*, 2002).

White goods firms need to have access and combine various types of technical knowledge. They rely mainly on internal source of technology (e.g. internal R&D

departments) to support product innovation. Innovation diffusion from other sectors largely takes place through acquisition of intermediate goods and interactive learning with specialized suppliers. It does not mean that relations with academic research and science-based firms are unimportant, but they concern mainly engineering disciplines or general scientific knowledge, such as mathematics and computer science. Meanwhile, the industry clearly benefits from the parallel development of complementary sectors, such as furniture and related materials, lighting and design (Ghedini, 2003). Patenting intensity is relatively low and counterfeiting and pirating of rivals' goods is not unknown. Innovations, generally introduced for top quality products, spread quite rapidly to other producers and product ranges. In his analysis of the US white goods market, Hunger (2003) noted that, aside from patented features, no one producer could successfully keep a new innovation to itself for more than a year.

Process improvements for more efficient manufacturing of current products (compared to new-product development) tended to dominate research and development efforts in the appliance industry. Historically, the industry has been characterised by low intensity in product research and development because of intense cost competition and demand for higher reliability. Until the late 1990s, the basis for effective competition had been in producing the fewest basic components necessary in the most efficient plants. Although individual designs might vary, the components inside the appliances were becoming more universal and were being produced in highly automated plants using computer integrated manufacturing processes (Nichols and Cam 2005).

What product innovation takes place is mostly linked to regulatory developments, mainly related to environmental protection and energy efficiency. The 1987 signature of the Montreal Protocol on the Substances that Deplete the Ozone Layer and the issuing of texts for protection of the stratospheric ozone layer, and the more recent regulations restricting certain hazardous substances and on the recycling of waste electrical and electronic equipments,² have turned the ability to produce energy-efficient and environmental-friendly appliances into a crucial factor in marking product differentiation and sustaining corporate competitiveness.³ Appliance manufacturing shifted in the 1990s from its primary emphasis on quality and reliability to speed and agility. This meant that manufacturers worked to improve their use of logistics in order to provide better service to their distributors. Concepts similar to Just-in-Time had been applied in the 1990s to distribution and marketing. In the early years of the 21st century, U.S. appliance manufacturers were moving toward a stronger product-market orientation. Appliance makers had long known that their emphasis on quality and

reliability meant that people replaced their appliances only when the appliances wore out or when they changed houses. By 2002, a survey of 500 residential U.S. households found that energy efficiency had replaced price as the top appliance-purchasing consideration (Hunger 2003).

Convergence between different network technologies (including electronics, software and wireless communications) is another driver.⁴ Smart devices can be used for instance to have the appliances simulate sequential operation during the hours of cheapest electricity, so that their various cycles – such as defrosting and clothes washing – does not occur simultaneously, thereby ensuring optimum energy usage and lowest cost. The use of modern sensors with intelligent control systems is a key for differentiation between different appliance products and companies (Tschulena, 2005).⁵ The scope for further technological innovation is larger in the “washing” and “cold” sub-sectors than for heating appliances, where innovation mostly concentrate on aesthetics.

The above-mentioned technological and organizational innovations taking place in the industry are creating a window of opportunity for latecomers, without the prior routines that drag down incumbents. In their successful internationalisation from the periphery, EMNEs are using the multiple connections of GVCs to internationalise rapidly, leveraging on strategic partnerships. In parallel, they are making strong investment in technological capabilities and organizational innovation as well as marketing capabilities and distribution networks. As the case of Arçelik will make clear, they also use group membership as a strategic asset.

5. The case of Arçelik

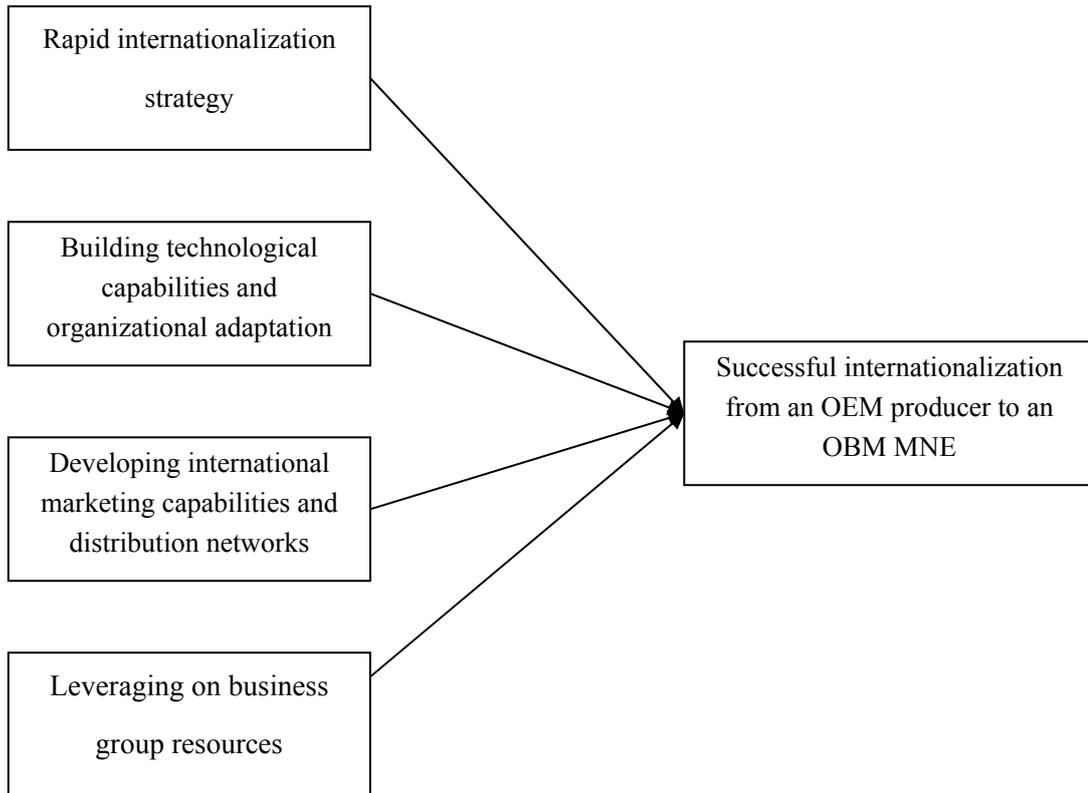
At the corporate level, the world home appliances industry is still rather fragmented with no single manufacturer commanding more than ten per cent of the world market. Fragmentation reflects the high incidence of transport costs, persistent differences in consumers’ preferences and brand loyalty. The world’s top ten manufacturers, ranked by sales, include three US companies, four Japanese ones, and one each from Sweden, Germany, and China. In this top league, Arçelik has emerged as a dynamic challenger, rapidly expanding its operations in old and new Europe and more recently in Russia and China. In 2007 it was the third-largest manufacturer in Europe, with a ten per cent market share. (Arçelik, Investor Presentation, 2007).

Arçelik was founded in 1955 by Vehbi Koç, founder of the eponymous group, to produce metal office furniture. Koç Holding, Turkey’s largest multinational, owns 57

per cent of Arçelik shares; another conglomerate, the Burla Group, controls 20 per cent, and the remaining 23 per cent are publicly traded on the Istanbul Stock Exchange. Arçelik moved quickly into home appliances, manufacturing Turkey's first washing machine in 1959 and first refrigerator in 1960. By the early 2000s it had seven production plants in Turkey to produce a complete range of home appliances. As the leading firm in Turkey's consumer durables industry, Arçelik accounts for 53 per cent of domestic sales and 54 per cent of exports. From 16 per cent in 1997, foreign sales represented 48 per cent of total 2006 turnover and approximately two thirds of sales corresponded to own-brand products. Over the past five years the company has almost doubled its turnover, passing the bar of US\$5 billion sales revenues, becoming in 2006 the third-largest European producers of white goods (Arcelik, Investor Presentation, 2007).

Four key features characterise the success of Arçelik as illustrated in Figure 1: building technological capabilities and organizational adaptation, developing international marketing capabilities and distribution networks, leveraging on business group resources and engaging in rapid internationalization. Arcelik leveraged its strategic partnership with established MNEs – often in the form of sub-contracting technology licensing agreements – and heavily invested in R&D and branding to upgrade its operations, evolving from the production of simple goods, into new product lines developed through their own design, branding, marketing and distribution capabilities. The recipe of its success has been the ability to treat global competition as an opportunity to build capabilities, move into more profitable industry segments, and adopt strategies that turn latecomer status into a source of competitive advantage. Below we discuss the four decisive factors for the successful internationalization of Arcelik from an OEM producer to an OBM MNE. ⁶

Figure 1 Factors for the successful internationalization of Arcelik



5.1. Rapid internationalization strategy

Since the late 1980s, the internationalisation process of Arcelik has followed a two-pronged strategy: organic growth through exports and targeted acquisitions of new companies to enter or consolidate the company's position in foreign markets and complete its product range. Exporting started on an opportunistic basis to utilize the production surplus of the company in neighbouring countries especially in Middle East and North Africa, to eventually become a core element of the company growth strategy. In those initial attempts, however, there was no separate model for exporting; when the first machines were exported to Saudi Arabia, for instance, they did not have any manuals in the host country's language, only in Turkish (Subasi, 2006).

When the country abandoned the import substitution regime and turned toward an export-led growth model in the 1980s (Colpan *et al.*, 2007), exporting started to gain in importance. For Arcelik, exporting became important also to counter the increase in imports and make the most of heavy sunk investments in new machinery and equipment,

as Turkey agreed a schedule of phased tariff reductions with the European Community in 1988. In this context, first, an OEM contract was secured with Sears Roebuck in the U.S. in 1988 to supply refrigerators under the Kenmore name. That was followed by a similar, but much larger, European deal with Whirlpool for dishwashers nine years later (Root and Quelch, 1997). As parts of these deals, Arcelik committed not to sell similar products in Europe under own brands. The company thus began to use the ‘Beko’ brand in the three main EU markets starting in 1990. By the late 1990s, the company had set up sales offices in France, Germany and the UK and identified specific strategies to enter each market.

The second pillar of the internationalisation strategy consists of targeted acquisitions of foreign competitors, to enter new markets and reinforce technological and productive capabilities. The first experiences with direct investment took place in developing countries (Tunisia and Uzbekistan), but did not live up to expectations. The 2001 macroeconomic crisis, which saw GNP in real terms fall by 9.4 per cent (Onis, 2003) and the demand for consumer durables contract even more, made the need to internationalise even more pressing. In 2001 Arçelik made its first bid in Europe to acquire France’s Brandt, although the Commercial Court of Nanterre eventually sold Brandt to Elco of Israel.⁷ The next year, building on the experience acquired while bidding for Brandt, Arcelik acquired three foreign companies – Blomberg (a subsidiary of Brandt) in Germany, Elektra Bregenz in Austria, and Arctic in Romania – and the Leisure (cookers) and Flavel (appliances and TV sets) brands in Britain. These acquisitions are part of Arcelik’s strategy to become a ‘global company’.⁸

In June 2005 Arçelik launched the construction of a refrigerator and washing machine greenfield plant in Russia, where production started in 2006. Arçelik expanded further its international reach by entering the Chinese market and signing a partnership agreement with the leading white good producer in Oceania in 2007. In the same year it bought Shanghai-based Changzhou Casa Shinco Electrical Appliances and started operating a washing machine factory in China, registered as BEKO Electrical Appliances. It has already invested \$2 million to upgrade the facility and planned another \$15 million investment to expand the factory capacity and boost exports to the United States. Arcelik also entered into a strategic partnership with New Zealand’s Fisher & Paykel Appliances to distribute the latter branded appliances in Eastern Europe, the Commonwealth of Independent States and the Middle East through its own distribution network. That partnership also covers sourcing and technical co-operation.

Table 1 summarizes the rapid internationalization strategy together with the technological innovation efforts of Arcelik. Interestingly, in its internationalization

strategy, the company has leveraged some of its domestic strengths. For instance, in terms of products, in the United Kingdom a new 70-cm refrigerator line (a width traditionally only used in Turkey) has been a big success. Similarly, the company has built on its experience with exclusive dealers within Turkey to set up an international distribution and after-sale service network.

Table 1 Internationalization and innovation at Arcelik

1955	Establishment of Arcelik
1959	Production of first washing machine in Turkey
1960	Production of first refrigerator in Turkey
1988	Start of OEM exporting to US (Kenmore brand for Sears Roebuck)
1991	Establishment of R&D Centre
1997	Start of OEM exporting to Europe (Whirlpool)
1998	Promotion of 6-sigma quality program and reorganisation of KH household appliances division
1999	Arcelik-LG Klima JV established
2000	Adoption of Beko brand for exports
2001	Unsuccessful bid for French Brandt
2002	Acquisitions in EU (Blomberg, Elektra Bregenz, Leisure and Flavel)
2002	Romanian household appliance company Arctic acquired
2005	New chest freezer production line established at Arctic
2006	New production line in Russia inaugurated (14 October); acquisition of Grundig brand

Source: Adopted from Bonaglia *et al.*, 2007.

5.2. Building technological capabilities and organizational adaptation

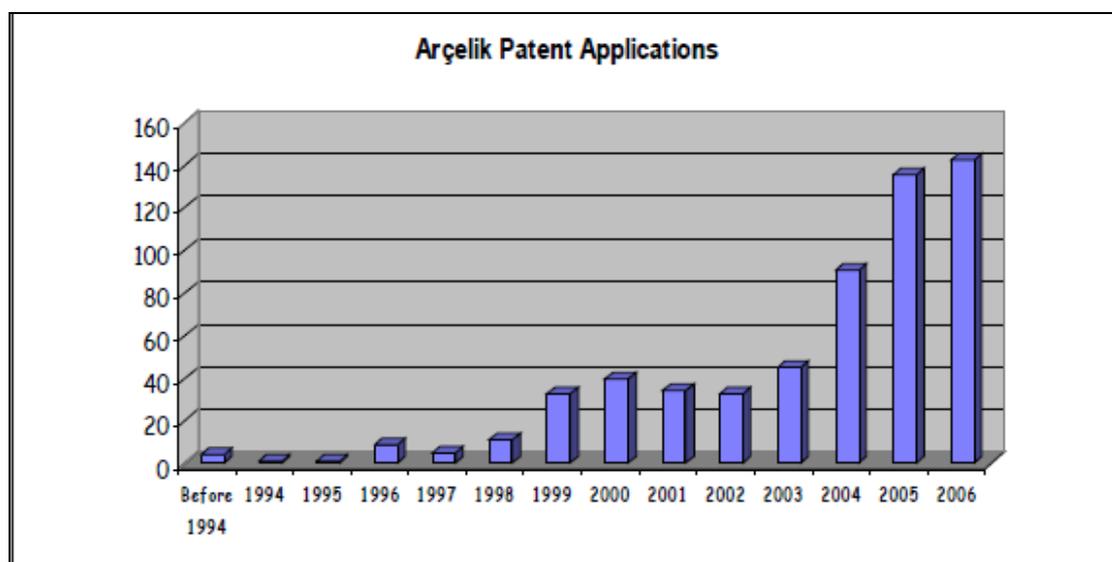
Building technological capabilities and organizational adaptation constitute a second key strength of Arcelik. The company decided to invest massively into R&D and quality control to make sure it can achieve market leadership in Turkey and target higher quality segments abroad, overcoming the perception held in some European markets of Turkish products as synonymous of low quality. As a result, Quality Safety Units were created in 1990, various types of ISO certification were secured in the early 1990s⁹. Further, the management decided to approach Total Quality Management globally and systematically and do its first self-evaluation according to the Malcolm Baldrige model in 1992. Systematic total quality operations (6 Sigma) and three-year product guarantees were introduced in 1998. These efforts paid off as witnessed by various prizes that Arcelik won in international contexts, such as the European Quality Award, the TPM Excellence Award or the European Energy+ Appliance Awards. In November 2005 Arçelik launched the first domestic dryer of Turkey, mostly directed to export markets, which won the Europe Plus X Award 2005 in the innovation category with an A-class energy performance.

Arçelik initially lacked the necessary capabilities to develop its own technology and thus depended on licensing technology from foreign companies until the 1980s. Key technology was imported from Amcor of Israel, GE and Bosch-Siemens. The company inaugurated its own R&D centre in 1991 to further develop its indigenous technological capabilities and started coming up with its own designs (Subasi 2006). The aim of the R&D commitment was to circumvent some restrictions attached to technology licensing contracts and to survive in increasingly competitive international environments (Arcelik Annual Report, 2006, Subasi 2006). At present, Arcelik possesses and integrates two separate R&D ranks. At the company level, the R&D directorate emphasizes basic research activities. In addition, in 1994 Arcelik split off all development functions into Product Development Management (PDM) at the individual factory level. For more than ten years this division of labor between R at the corporate headquarters and D within manufacturing facilities has functioned reasonably well (Ercil, 2007).

The company earmarks approximately 2 per cent of its total annual turnover to R&D and employed around 550 researchers in its central and operational R&D department in 2007 (up from less than 50 in 1990). The company's investment in training is also substantial: over 25 hours/year for workers and over 40 hours/year for engineers. The company's technological efforts are confirmed by its leadership in patent applications. According to company sources, Arçelik owns 13% of the patents issued in Turkey and 45% of the international patent applications filed by Turkish companies with the World Intellectual Property Organization in the past three years (see

Figure 2 that illustrates the increasing patent applications of the company). Arcelik’s innovation management process focuses on both consumer needs and core company competencies, which are defined through benchmarking. Targeted acquisitions and strategic partnerships are also used to fill competency gaps¹⁰. The general rule of the company in this context is to implement a maximum of six innovation projects per year.¹¹

Figure 2 Technological innovation at Arcelik



Source: Inan, C., 2007.

Management claims that these impressive results stem from the fact that Arçelik has a less hierarchical culture than, for instance, its Italian competitors – “a marketing manager has more power here and will solve his own problems instead of relaying everything to the boss”¹² (Bonaglia *et al.*, 2007). Workers at Arçelik facilities appreciate the changes that exposure to modern Western management techniques and shop-floor practices have brought about, but it would be incorrect to conclude that a fully democratic workplace has emerged. Although slightly outdated, available evidence paints a fairly different picture – the expression “Kaizen from above” seems better suited to define the situation (Nichols *et al.* 2002). Similarly, Beko “introduced participatory practices as part of its competitive strategy but failed to sustain [them] once its production and increased, [workers were] denied participation due to the primacy of meeting the production targets” (Ozkan 2003, p. 42).

5.3. Developing international marketing capabilities and distribution networks

Developing international marketing capabilities and distribution networks are a third pillar to explain the successful internationalization of Arçelik. In terms of international marketing capabilities, the company has paid significant attention to branding. Although Arçelik has consistently been ranked Turkey's most widely known brand by AC Nielsen surveys, in export markets it suffered from an association to the poor quality of Turkish products prevailing in the old days of import substitution industrialisation. To overcome that image, the company adopted a new logo in 2002, designed by the same American corporate graphic studio which had created the Koç Holding logo in 1987, and introduced a new logo illustrating Arçelik's dynamic and innovative structure (Enberker and Ergin, 2003). The objective was to signal the transformation of the company into a serious player in a global industry hitherto dominated by Western firms and in which Arçelik wished to compete on the basis of high technology and innovation, as opposed to low labour costs. The company also used the Beko brand on international markets for built-in and stand-alone appliances, televisions, air conditioners, heaters and small household appliances, as it was already known in major markets in Europe.¹³ Furthermore, Blomberg was launched with a new image in Germany, Denmark, Belgium, Russia, Israel and Switzerland in 2004 with the Determination to turn it into the group's global brand. (Arçelik website at arcelikas.com.tr).

The other strength for Arçelik has been the control over Turkey's largest distribution and after-sales service network. In a country with a history of chronic inflation and high debtor delinquency rates, a crucial advantage for Arçelik has been the possibility to rely on other Koç affiliated companies for extending consumer credit on top of factory-sourced finance, often at slightly negative real interest rates (Root and Quelch, 1997). Further, the successful experience with its exclusive dealer network in Turkey has also led the company to spread the "exclusive Beko shop system" in international markets. Expanding its distribution network rapidly, the company is selling its products in over 100 countries as of 2007. The Beko shops can be found in countries such as China, Lebanon, Serbia and Ukraine. Arçelik targets to increase the number of exclusive shops outside Turkey from 250 to 500 from 2007 to 2010. In China alone, as of 2007 it has 89 point corners in 12 cities, with plans to expand them to 100. Furthermore, the strength of Arçelik's network is also witnessed by the important deals that the company has signed to distribute Sony products in Turkey and, more recently, to distribute New Zealand's Fisher & Paykel branded appliances in Eastern Europe, the Commonwealth of Independent States and the Middle East (Arçelik website at arcelikas.com.tr).

5.4. Leveraging on business group resources

Leveraging on business group resources is the fourth key factor for Arcelik's success in general, and in its internationalization in particular. As we previously mentioned, the Koç group is the largest private business in Turkey, with a presence in a diverse range of products and industries including automotive, consumer electronics, petrochemicals, banking and insurance, tourism and IT services. In terms of turnover, Arçelik accounts approximately for 10 per cent of the Koç Group and in terms of employment for 20 per cent (Koç Holding Annual Report, 2006, Arcelik Annual Report, 2006).

The foundation of Koç Holding in 1963 as a central controlling and coordinating organization heralded the group's reorganization into a modern business group (Colpan et al. 2007). As a result, the basic strategies of Arcelik are naturally shaped by Koç's overall strategic intent (Arcelik Annual Report 2006). In taking strategic-decisions, for instance, the general manager of Arcelik works closely together with Koç CEO and the board, as well as with the representatives of the Koç family. Majority ownership and control implies that Arçelik product domain is bounded by the Group's entire portfolio. That is, Arcelik's entry into industry domains where other Koç companies are already operating is next to impossible, unless that strategy is formulated at the group level (Colpan et al., 2007).

Despite all these constraints in terms of product diversification, group membership yields several benefits for Arcelik (Colpan et al, 2007). Most important of all, it allows Arçelik to tap into intra-group capital markets and accumulated management skills, both of which firms in less developed economies critically lack. Arcelik current CEO was previously with Beko Elektronik, another Koc group company in the electronics industry. He is also President of Koc Holding's Durable Goods Group, thus bringing the company a wider exposure to the conglomerate. Another Arcelik key manager, the head of human resources and strategic planning, comes from Koc Holding. Furthermore, most directors are Koc family members who also sit on the board of Koc Holding and were previously in executive positions at group firms (Colpan et al., 2007, Koc Holding Annual Report, 2007, Arcelik Annual Report, 2006).

Further, accumulated technological know-how and established overseas networks within the group have been no doubt instrumental in the company's internationalization efforts. The Koç name by itself functions as a critical competitive asset insofar as it enjoys international recognition, especially among overseas manufacturers and distributors. Thanks to these resources, Arcelik has had a competitive advantage in its internationalization trajectory.

Being a Koç company also produced significant benefits when Koc decided to restructure the durable goods businesses, especially in terms of R&D and marketing.

Arcelik and Beko Elektronik, the other electronics firm in Koc group, have been gradually integrated since 2001, as Arcelik slowly increased its equity interest in Beko Elektronik to 72.46 per cent. This integration, which primarily aimed to raise operational efficiency and improve cost effectiveness, eventually allowed to unify the R&D activities of the two leading electronics companies within the Koc Group and generate technological synergies. The decision to use the Beko brand name in export markets brought further benefits, since it was already known in major markets in Europe. Later on, additional synergies were created through the merger of three other firms operating in the appliances and marketing divisions of the Koc group, the Turkish Electricity Industry, Atilim Marketing and Degisim Marketing, into a single entity under Arcelik (Koc Holding Annual Report 2006; Bonaglia et al. 2007).

6. Conclusion

In this article we have illustrated how a firm from a developing economy could transform itself successfully from an OEM producer to an OBM MNE. By taking an evolutionary approach and elaborating on firms' resources and capabilities, we have brought new insights into the debate on corporate upgrading in emerging markets. The emphasis on the endogenous process of capability building was also taken to respond to recent criticisms that specific firm-level efforts remain largely unexplored in the GVC literature (Morrison et al., 2008).

Arcelik evolved from an OEM to OBM status and established itself as one of the leading international producers, rapidly expanding into neighbouring geographical markets and, more recently, venturing into distant ones such as China and the US. The specific focus on a market where name recognition and brand loyalty function as high barriers to entry made it possible to single out four decisive factors: rapid pace of overseas expansion; build-up of technological capabilities, followed by organizational adaptation; developing international marketing and distribution networks; and leveraging on business group resources.

The key driver of Arcelik's success has been the ability to treat and utilize global competition as an opportunity to build distinctive capabilities, move into more profitable industry segments, and adopt strategies that turn a latecomer status into a source of competitive advantage. Arcelik leveraged its strategic partnerships with established MNEs – often in the form of sub-contracting with technology licensing agreements – and heavily invested in R&D and branding to enhance operating efficiency and strategic effectiveness. In the process it could evolve from the generic production of commodity goods to new product lines developed through its own design, branding, marketing and distribution capabilities. Simultaneously, the company bought

established brands in “old” Europe and added manufacturing capacity in “new” Europe and then in Russia and China.

These insights are suggestive of visible trends that make it more plausible to argue that globalisation has lately been driven not just by the giant established firms in mature economies but also by emerging firms internationalising from the periphery, which capture competitive space from incumbents because of their ability to exploit the linkages available through globalisation and to cultivate continual cross-border learning and value-addition. Nonetheless, for firms in developing economies, participating in GVC does not automatically produce upgrading and catching up with the technology forerunners. As the Arcelik experience clearly shows, companies must first make the necessary investments in several areas of resources and capabilities and exploit the advantages of group membership, if they happen to have one.

Notes:

¹ See Bonaglia, F. A. Goldstein and J. Mathews (2007) “Accelerated internationalization by emerging markets' multinationals: The case of the white goods sector”, *Journal of World Business* No. 42.

² In particular, the European Directives on waste electrical and electronic equipment (WEEE, 2002/96/EC) and on the restriction of certain hazardous substances in electrical and electronic equipment (RoHS, 2002/95/EC), which entered into force on 13 February 2003. RoHS requires that any product containing any of six hazardous substances will have to be redesigned or withdrawn from the market by July 2006. Starting from 13 August 2005, producers are responsible for the financing of the management of electro-scrap.

³ In the early 1990s refrigerators and freezers accounted for an estimated 20 per cent of the domestic electricity usage in the United States and in Germany. According to the U.S. Department of Energy minimum energy standards in effect since July 2001, the amount of energy used by a typical refrigerator must equal no more than that used by a 55-watt light bulb and since 2007 clothes washers must be 37 per cent more efficient than those built in 2001.

⁴ Whirlpool, for instance, has launched new oven/refrigerators, which can be programmed to keep food cool all day and then cook it in time for supper.

⁵ Still, the increased capacity of manufacturers to steer consumers by offering a *prima facie* increasingly diversified models mix (in particular, between bottom- and top-range products) is in practice much more limited than would seem to be the case judging by the information provided by the manufacturers (Barbiroli and Focacci 2003).

⁶ Arcelik shares some of the key factors discussed here with other firms in the white goods industry that transformed themselves successfully from an OEM producer to an OBM MNE, such as Haier of China and Mabe of Mexico. See Bonaglia et al (2007) for a detailed discussion. These firms show the different strategies from incumbent firms in the white goods industry to succeed in becoming global players. Although the case of Arcelik may not be entirely representative of the universe of developing country MNEs, it illustrates some of the key features other latecomer firms can reflect on for their internationalization.

⁷ Arçelik had proposed to operate the six factories of Brandt located in France and to employ 4,105 workers. The Israeli company took over seven factories and agreed with the Court to employ 4,197 of 5,300 workers.

⁸ Commenting on the acquisition of Arctic, Nedim Esgin, CEO of Arcelik stated, "Known brand, new market share, competitive production cost, and potential of additional capacity are not only great opportunities for our business goals, but also values that contribute to our target to become a "global company" ("Arcelik Acquires Arctic of Romania", *Appliance Design*, 5 September 2002) .

⁹ In 1992, the central functions of the Cayirova and Eskisehir Plants were certified according to the ISO 9001. Today, all production facilities possess the ISO 9001 Quality Management System Certificate given by the Turkish Standards Institute (TSE) and the ISO 14001 Environmental Management System Certificate given by SGS Yarsley.

¹⁰ For example, Arcelik forged a partnership with Ubicom, a Californian company, to use Internet processors and networking softwares that enable device-to-device communication. Arcelik also bought a 1.92 per cent stake in a California-based company called Scenix which produces chips to be used in smart household devices.

¹¹ "Adapting to Change", *Appliance Design*, 1 June 2004.

¹² "AMDEA 2005 Reveals UK Market Trends", *Appliance*, June 2005.

¹³ Beko Elektronik is one of Europe's largest television OEM/OBM producers. The Beko brand was introduced in Turkey in 1956 and used for "brown goods." In light of the different market structure, Arcelik decided to develop as an OBM in the UK and in France, leveraging on the Beko name, while continuing to operate as an OEM in Germany.

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