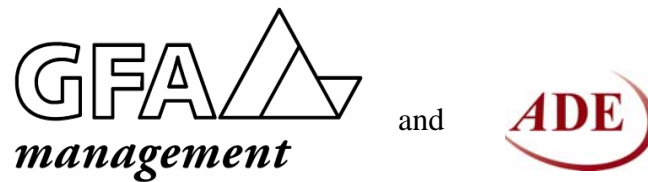


## **Strategic Sector Study on the Egyptian White Goods Industry**



*28 February 2005*

# Executive Summary

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## Global Situation

**Products** The main product groupings that were used to assess the global situation were; kitchen appliances, cooling appliances (air conditioners and fans) and water heaters (gas and electric). The main product areas under which useful statistics could be identified are; air conditioners, refrigerators, washing machines and cookers / ovens.

**Production Growth** Average annual production growth rate across all four product areas between 1998 and 2002 3.3% indicating the global white goods sector has been experiencing a slow rate of growth compared to many other sectors. The products with the highest annual average production growth rates was in air conditioners, at above 12.8%, compared to: 2.5% for washing machines; 1.3% for refrigerators; and a decline of 1.5% for cookers / ovens. The rate of growth in world production is projected to increase during the second half of this decade due to higher levels of economic growth in developing economies.

**Export Growth** Average annual world growth in exports was 4.6% between 1998 and 2002, with the highest levels of 6% each in electric water heaters and air conditioners; and the lowest rates of under 3% in fans, dishwashers and freezers.

**Regional Markets** The main regional consumer markets are: Asia / South East Asia / Pacific 35%; Western Europe 23%; North America 20%; Eastern Europe 8%; Latin America 7%; and Middle East and Africa 7%. Egypt's regional market comprises 7% of the world market.

**Top Countries** In 2001 the top five world producers of white goods were: China 50.3 mn units; Japan 32.0 mn units; USA 27.3 mn units, excluding air conditioners; South Korea 24.9 mn units; and Italy 16.1 mn units; accounting for nearly three quarters of world production. Other countries which produced more than 1 million units of the four main products, included: Brazil (6.1); Mexico (4.9); Germany (4.5); France (4.4); Turkey (4.0); Austria (3.7); Oman (3.3); Indonesia (3.0); Russian Federation (2.6); India (2.5); Poland (1.3); Hungary (1.2); and Denmark (1.2).

**Product Specialisation** Leading country manufacturers of white goods have at least 40% of their national production in one of the four main product areas, indicating increasing product specialisation at the national level. The exceptions to this are South Korea and Mexico that have managed to maintain consistency of production across all four main product areas. The product specialisations, by country are:

- Air conditioners                      China, Indonesia, Japan and Oman.
- Refrigerators                              Brazil, India, Italy, Russian Federation, Turkey and USA.
- Washing machines                      France, Germany and Italy.

- Cookers / ovens                      Austria.

**Manufacturing Relocation** Although there has been a considerable shift of manufacturing capacity away from the developed consumer markets of Europe and North America to low cost manufacturing locations, individual countries have still achieved impressive growth in levels of production. Examples of growth in production in selected white good products by EU countries between 1993 and 2002 are:

- Austria                      Cookers / ovens                      from 0.064 to 3.643 mn units.
- Germany    Washing machines        from 2.703 to 4.751 mn units.
- Italy                      Refrigerators                      from 4.753 to 7.088 mn units.  
                                 Washing machines        from 5.693 to 8.884 mn units.

**Consolidation** There has been a high level of consolidation of worldwide manufacturing. In Europe, 400 white goods manufacturers accounted for 70% market share in 1970, with this having changed to 3 manufacturers accounting for 58% of the market by 2002.

**Leaders Getting Stronger** There are high levels of manufacturing concentration in the top producing countries (the following results exclude Egypt, Israel, Jordan, Saudi Arabia and Tunisia):

- Air conditioners – China, Japan and South Korea account for 94% of world production, with the top 6 producers accounting for 99.8% (this assessment excludes USA production).
- Refrigerators – China, Italy, South Korea and USA account for 67% of world production, with the top 6 producers representing 78%.
- Washing machines – China, Italy and USA account for 62% of world production, with the top 6 accounting for 85%.
- Cookers / ovens – Austria, South Korea and USA account for 88% of world production, with the top 6 accounting for 97%.

**Squeezing Other Countries** Increasing consolidation of production amongst the world's leading producing countries has squeezed the level of production activity in the group of countries in the "other" category. The level of production from "other" countries fell from 44.3 mn units in 1993 to 22.1 mn units in 2002. The percentage of world production amongst the "other" category of countries fell by main product area:

- Air conditioners from 6.2% in 1993 to 0.2% in 2002.
- Refrigerators from 43.2% in 1993 to 22.0% in 2002.
- Washing machines from 27.8% in 1993 to 14.8% in 2002.
- Cookers / ovens from 23.6% in 1993 to 3.4% in 2002.

**Size Of Manufacturing Facilities** Manufacturing facilities are becoming increasingly larger around the world. Examples are: Electrolux's new refrigerator plant in Mexico has annual production capacity of 2.4 mn units; Merloni's new plants in Poland and Russia, are each designed with annual production capacities of 1 mn

units; in Turkey during 2003 Arcelik's production in its separate single product factories reached 1.9 mn refrigerators, 1.8 mn washing machines and 1.5 mn cookers / ovens.

**Top Companies** The world's top 10 white good corporates achieved combined global sales of \$ 61 – 89 bn in 2003. It is difficult to present a more accurate figure due to the wide product ranges of these companies and problems in being able to extract data only for white good products. Of the top 10: 3 are based in USA (GE, Maytag and Whirlpool); 3 in the EU (Electrolux, BSH and Merloni); 2 in South Korea (LG and Samsung); 1 in China (Haier Group); and 1 in Japan (Matsushita).

All of these companies have spread their manufacturing bases to a significant extent out of their "home" countries and regions, except Maytag and Merloni that still retain most of their manufacturing capacities in North America and Europe, respectively.

The top 10 companies that have dedicated manufacturing facilities in the Middle East and Africa are: BSH in Turkey and more recently in Jordan; Matsushita in Turkey; and Merloni in Turkey; and Whirlpool in South Africa.

**Sector Dynamics** between the top companies include:

- Strategic supply chain management, including: global sourcing strategies; real-time transport and logistics; and client-centred distribution networks.
- Pooling R&D budgets.
- International strategic alliances.

**Import Opportunities** Regional production gaps, where the level of production is below the level of consumption, thus indicating import potential are:

- Asia / South East Asia / Pacific none of the four main product areas.
- Western Europe air conditioners, refrigerators and cookers / ovens.
- North America washing machines.
- Eastern Europe air conditioners, washing machines and cookers/ Ovens.
- Latin America air conditioners and cookers / ovens.
- Middle East and Africa all four main product areas.

**Environmental Considerations** Exporters into the leading consumer markets, in particular into the EU, must take into account regulations relating to:

- Minimum energy efficiency standards.
- Product labelling.
- Ozone protection measures, banning the use of specified substances.
- Product recycling.

## White Goods Sector In Egypt

**Protection** There remains a high level of protection of Egypt's white goods manufacturers with import tariffs at 40% applied across all final products.

**Manufacturing Businesses** From various sources the number of white good manufacturing businesses are reported at 120 – 140, which is high by international standards and indicates a lack of consolidation. On closer examination the breakdown of businesses is:

• Final product manufacturers	89	
• Commercial applications	14	
• Suppliers		17
• Non-household products	2	
• Total		122

Even within the above allocation there are issues with businesses claiming to manufacture final products, but having the word “workshop” in their title and others that could be importing agencies. It is also not clear when the base data was collected and whether businesses that claimed to manufacture white goods products a number of years ago are still producing the same items. The most accurate we can be is that the number of white good manufacturers is somewhere between 40 and 89, but is not as high as 140 as has been indicated by some sources. A thorough review of the businesses that claim to be manufacturing white goods is recommended as it is expected that there will have been a natural process of consolidation within the sector and there is no point in stating to deliver business development activities based on an inflated number of manufacturing businesses.

**Pressures For Consolidation** Egypt has been experiencing weak pressures for consolidation, due to a number of factors, not just the continuing high import tariffs. The domestic market is large and has a significant segment that prefers to buy cheap low tech products, such as: manual washing machines; semi-automatic washing machines; and basic gas and electric water heaters. The recession from 1998 to 2002 appears not to have shaken-out the inefficient producers. Annual production capacities, by product, range from 6,000 to 180,000 units. None of the global companies have dedicated manufacturing facilities in Egypt, except Toshiba.

**Production Performance** Egypt has a large white goods manufacturing sector, which ranks 13<sup>th</sup> in the world, ahead of countries such as: Czech Republic; Hungary; India; Indonesia; Iran; Malaysia; Poland; South Africa; Spain and the Russian Federation. Egypt has a particular production strength in cookers / ovens being ranked 4<sup>th</sup> in the world. In washing machine production it is ranked 12<sup>th</sup> and refrigerators 13<sup>th</sup>. In 2003 its levels of production have been estimated to be:

• Cookers / ovens	1,650,000 units.
• Refrigerators	980,000 units
• Washing machines	907,000 units
• Water heaters	707,000 units

Across the three main product areas, refrigerators, washing machines and cookers / ovens Egypt's production was 3,537, 000 units compared to 3,934,000 units for Turkey. Although these levels of production activity are comparable, they are far

behind the world leaders; USA with 27,338,000 units, and China with 26,929,000 units.

Egypt's white goods manufacturers have benefited from strong annual growth in the protected domestic market of: 14.5% for refrigerators; 13.5% for water heaters; 10.5% for cookers / ovens; and 6.5% for washing machines. These annual growth rates in production are much higher than reported earlier for the global economy.

Egypt has a world strength in its WG production position. This is a sector that GoE should be looking to support its new approach to economic development, by achieving continued strong export growth, as indicated in exhibit II.1. A key issue for GoE is the extent to which the sector is ready and prepared to take on a leading role within Egypt's industrial sector to achieve strong export-led growth.

**Export Performance** Although exports have increased between 2002 and 2005 it has been from a very low base:

- Air conditioners exports increased from 84 units in 2003 to a projected full year level of 871 units in 2005.
- Refrigerator exports increased from 3,908 units in 2003 to a projected full year level of 19,430 units for 2005.
- Washing machines exports increased from 3,210 units in 2003 to a projected full year level of 35,748 units in 2005.

In 2001 Egypt's exports of white goods products were \$ 1.2 mn, compared other countries in the region: Turkey \$ 541.7 mn; Saudi Arabia \$ 94.7 mn; Jordan \$ 42.1 mn; Tunisia \$ 40.0 mn; Iran \$ 11.6 ,m; and Lebanon \$ 3.9 mn.

The improvements in export values by product area, between 2003 and the projected full year result for 2005 are indicated in the following table, with also the projected export value for 2005 presented as a percentage of this year's projected import value:

Product Area	Exports In EGP 2003	Projected Exports In EGP 2005	Exports As % Imports 2005
Fans	0.1	30.2	65.5
Kitchen equipment	0.3	10.6	31.1
Washing machines	0.9	19.4	14.8
Water heaters	0.5	1.4	8.3
Refrigerators	8.0	19.5	8.1
Air conditioners	1.2	6.9	4.9

The most significant projected improvement in export value is for fans, followed by washing machines. The highest performance of exports, compared to imports, is achieved by fans at 65.5% and kitchen equipment at 31.1%. In all of the other product areas export values are projected to be under 15% of the corresponding import values.

**Export Pricing** Through comparing average export values per unit to import values it is possible to identify the extent to which Egypt's manufacturers are under-cutting prices being applied by international competitors. There is only a small difference

for refrigerators which indicates that 2005 export sales were not achieved by offering low prices. With fans export values are 43% lower than import values, and with washing machines the difference is higher at 56%. This suggests that the improvement in export performance in fans and washing machines, the two products with the strongest increase in exports, has been achieved by offering low prices.

**Trade Balance Performance** The assessment of trade performance covered both parts and final products for each product area, with the product range wider than the assessment of the global sector.

Egypt has a significant negative trade balance in white goods, but it has decreased from EGP 636.2 mn in 2003 to a projected level of EGP 711.3 mn for 2005. Based on this rate of annual improvement it will be 11.5 years before Egypt has a trade balance in white goods products. On the basis that any sector cannot deliver export-led growth until its trade balance is at least in balance, GoE will have to wait 11.5 years before this sector starts to deliver export-led growth. There is a negative trade balance in all 15 white good product areas.

The negative trade balance in parts is projected to improve from EGP 491.9 mn in 2003 to 360.8 mn in 2005, but the negative trade balance in final white goods products is projected to worsen from EGP 344.4 to 350.6 mn over the same period. The improvement in the negative trade balance for parts is encouraging, but the worsening in final products is disturbing and supports the view of a lack of competitiveness in final products.

The product area with the most significant improvement in its negative trade balance is washing machines falling from EGP 195.7 mn in 2003 to a projected level of EGP 111.4 mn in 2005. Other product areas with improvements in their negative trade balances over the same period are: fans falling from EGP 45.7 to 15.9 mn; and dishwashers falling from 27.4 to 17.3 mn. It is disturbing that there is only a slight improvement in the negative trade balance of refrigerators from EGP 277.2 to 251.9 mn and the situation with air conditioners is static. Product areas with worsening negative trade balances are: purifiers and other parts.

Compared to the following countries: Egypt; Jordan; Turkey; Germany; Italy; South Korea; USA; and China, which are either world, or regional, strong production performers, only Egypt and USA have negative trade balances in white goods products.

**Productivity** It has been difficult to obtain meaningful information on productivity, with the only useful comparison between Egypt and Turkey, where the former uses 40,000 employees to achieve a lower level of production than the latter with 20,000 employees. This indicates that productivity in Egypt is under half the level being achieved in Turkey's white goods sector.

## White Goods Businesses In Egypt

An assessment of the views of a sample of Egypt's white goods manufacturers was obtained through a survey. The results of the survey as best summarised through a SWOT presentation:

***Strengths:***

- Size of domestic market.
- Planning systems.
- Management information systems.
- R&D support facilities and approach to area of activity.
- Operations management.
- Quality assurance.
- Future business prospects.

***Weaknesses:***

- Export marketing.
- Lack of innovation and flexibility in payment terms.
- Development of local supplier networks.
- HRD area of activity.
- Customs duties on imported materials and components.
- Poor operation of tax rebate system.

***Opportunities:***

- Continuation of import duties at 40% protects domestic WG manufacturers from the pressures of consolidation.
- Gradual increase in export sales of selected WG products into regional export markets.
- Continue to obtain technology up-dates through production license agreements.
- Regional developing economies achieve higher rates of economic growth which filter down into higher levels of household income and growing markets for Egypt's WG products.

***Threats:***

- Reduction in import tariffs, but this is only a longer-term threat.
- One, or more, global companies open manufacturing facilities in Egypt that sell into the domestic market, as happened when Toashibe first entered the market with its domestically produced semi-automatic washing machines.
- Strengthening of global supply chains into the global WG final product manufacturers results in increases in the prices of input materials and components.

On the whole the businesses surveyed has both a positive view of their capabilities and their future prospects.

## Egypt's White Goods Sector Competitiveness

A benchmarking exercise was applied to compare the competitiveness of Egypt's white goods sector to the situation in Jordan, Turkey, Italy, Germany, USA and China. At the company level the benchmarking categories that have been used are:

- Technological assessment.
- Company operations.

- Operating costs.
- Export market access.
- Industrial infrastructure of the sector.
- Operating cost structure .

At the sector level the benchmarking categories are:

- Labour market.
- Real Estate .
- National infrastructure.
- Living conditions.
- General business conditions.
- Policy and institutional support.

The benchmarking assessment results, indicate that Egypt has a weaker level of competitiveness than all of the comparator countries, across all of the benchmarking categories, except the labour market.

## Challenges For Developing Egypt's White Goods Sector

It is significant to note the difference between the positive responses received from the white good businesses based on the company survey results and the much more pessimistic results from the benchmarking exercise on competitiveness. The reasons for these different responses are:

- The companies responded based on their protected competitive positions in the domestic market, whereas the benchmarking exercise was based on their competitiveness compared to international players.
- The lack of international exposure to the companies main result in them not having full understanding of how an internationally competitive white goods manufacturer is structured and operates.
- As there is only very limited global company manufacturing presence in Egypt the domestic companies do not view the global companies as their competitors.

***Development Issues*** There are thirteen key development issues to be addressed for Egypt's white goods sector :

1. There is strong evidence that countries which have the most successful white goods sectors have embraced the inevitability of the pressures for consolidation, and have not tried to stop the process of change, within their national white goods sectors. In fact, the evidence is sufficient to indicate that, the extent to which the rate at which the process of consolidation is adopted and applied, within a national context, is itself a key driver of the future success of a nation's white goods sector. Putting this point another way the conclusion is, that attempts to stop the inevitable consolidation are futile, and are likely to hold-up the process of turning a national white goods sector that is strong domestically, into a WG sector that is strong internationally. The key issue is the extent to which a nation reacts to,

and possibly even encourages, the implementation of the inevitable process of consolidation.

The most difficult environment in which to have to address this development issue, is the type of situation that exists in Egypt, where the strengths of its white goods sector are based on its domestic position, with its international competitiveness being weak. The challenge is the extent to which the consolidation process can be activated while avoiding negative impact on individual domestic white goods manufacturers.

2. The danger for any government that applies the process of consolidation without the involvement, and support, of its domestic white goods manufacturers is that it will be blamed for the negative outcomes on individual manufacturers. The ultimate downside of such an approach is the loss of employment amongst the manufacturers that are most strongly affected.
3. Turkey's white goods sector has benefited from a 'win-win' situation, where its strong production position is based on a combination of: a national flagship global company (Arcelik); and other global companies that manufacture within its country (BSH, Matsushita and Merloni). This represents the mix of manufacturing activities that most developing economies should now aspire to achieve. Egypt is one of the few remaining countries in the world that can still achieve this status, based on the strong domestic production position. A key development issue is how to switch from a position of strength that is based on a group of inwardly-looking white goods manufacturers to having domestic manufacturers that are successfully internationally engaged. Making this switch requires Egypt's white goods manufacturers to realise that a key feature of becoming internationally competitive, is accept having genuine and strong, competition within Egypt's domestic market.
4. The consequence of the last point is that any national white goods sector development strategy should actively encourage FDI from the global white goods companies, as this is the most direct approach to ensure a domestic market is highly dynamic and competitive.
5. The way for any national government to counteract complacency ('sitting comfortably') amongst its domestic manufacturers, is to present the downside for all parties of a 'do nothing' scenario. For Egypt, the background to doing nothing within its white goods sector is that, if it is to comply with its international obligations, the level of its import tariffs, and therefore the level of protection being provided to its white goods manufacturers, will have to fall. This may happen over a period of over ten years, with extensions possibly negotiated up to twenty years, but eventually the tariff levels will have to be reduced. The downside for all parties is that most, if not all, of Egypt's white goods manufacturers fail to become internationally competitive and eventually collapse with the consequential loss of 40,000 jobs.
6. Global companies will be hoping that a country like Egypt makes mistakes in the development of its white goods sector. The most positive outcome for the global companies is the demise of Egypt's domestic white goods manufacturers, while

meeting Egypt's market demands from their existing global manufacturing facilities.

7. The potential 'lose-lose' situation for Egypt, that needs to be compared to Turkey's 'win-win', is the collapse of the domestic white goods manufacturers with domestic market requirements met by imported final products.
8. It needs to be recognised that if the last point applies it will really be a 'lose-lose-lose' situation for Egypt, for the following reasons:
  - a. It will lose its domestic white goods manufacturers and their associated employment.
  - b. It will lose the opportunity for FDI from the global companies to create employment.
  - c. It will lose the potential to have a white goods sector that has strong production performance internationally and generates a positive trade balance in white goods products.
9. The most immediate downside of maintaining the 'status quo,' for the Government of Egypt, is that the opportunity to turn a strong domestic production position into a strong international production position is lost. If this is not achieved the objective of using Egypt's white goods sector as one of the industrial sectors that will deliver export-led growth will not be realised.
10. The Government of Egypt cannot wait 11.5 years to determine whether Egypt's white goods sector can deliver export-led results. More importantly, Egypt's white goods manufacturers, also cannot wait 11.5 years to determine if they can become truly internationally competitive.
11. The recommended common ground to bring together the Government of Egypt and Egypt's white goods manufacturers, is the international competitiveness of individual white good manufacturers. This is the area that needs to be addressed if export-led growth from the sector is to become a reality and for the Egypt's white goods manufacturers to be ready to survive further reductions in the level of import tariffs, and their associated protectionism, whenever this happens.
12. Addressing the above development issues will inevitably require consolidation within Egypt's white goods manufacturers, but the associated process of change should be driven by the need to become internationally competitive in export markets, rather than the need to become internationally competitive to defend domestic sales.
13. The Government of Egypt should not be involved in determining how the process of consolidation will impact on individual white goods manufacturers, with these deliberations left to the commercial decision-making processes of the individual businesses. The role of the government should be restricted to: agreeing the parameters of becoming internationally competitive; monitoring that the process is happening according to a sector-wide action plan; assessing that the potential of the sector to deliver export-led growth is happening, with continuous reductions

in the level of the sector's negative trade balance; and supporting individual cases of consolidation, once these have been agreed between Egypt's white goods manufacturers.

## Egypt's White Goods Sector Development Strategy

**Key Elements** The key elements of the recommended sector development strategy are:

- Agreement between the Government of Egypt and Egypt's white good manufacturing businesses on the conclusions and recommendations in this report.
- The measure of international competitiveness is to be production unit costs.
- Annual targets of 5 – 10% reductions in production unit costs are to be set with an overall target of a 30% reduction to be achieved over a 3 – 5 year period.
- A mechanism is required to keep production unit costs under review in each manufacturer to ensure the annual target reductions are being achieved.
- The 13 development issues described above are to be accepted as key drivers for the implementation of the sector development strategy.
- A programme of assistance is to be made available to the white goods manufacturers, including:
  - Assistance with reducing production unit costs.
  - Assistance with opening-up new markets.
  - Support to develop new brands which are suitable for international markets.
  - Assistance for manufacturers to meet the requirements of target export markets, such as minimum energy efficiency levels.
  - Delivery of the National Supplier Development Programme into white goods "mother" companies to accelerate the improvements in the negative trade balance in parts that have already been reported.
  - Facilitation of the consolidation process based on requests made by Egypt's white goods manufacturers.
- The delivery of the above areas of assistance should be dependent on Egypt's white goods manufacturers agreeing to annual targets, and achieving these targets, for reductions in production unit costs.

**Levels Of Strategic Development** Four levels of strategic development are proposed:

- The producers of relatively low tech products, such as manual and semi-automatic washing machines, butagas cookers and basic gas and electric water heaters.
- The producers of higher tech white goods products that compete with the product portfolios of the global companies, including: air conditioners; refrigerators; automatic washing machines; and dishwashers.
- Strategic alliances with regional players that result in mutual benefits to: fund R&D; develop and new technology; develop new products; or open new markets.
- Strategic alliances with global companies that do not result in restrictions on export markets.

***New Business Models*** Assess new business models which may be appropriate to structure the next stage of development of Egypt's white goods sector, which can support the required improvements in international competitiveness, while at the same time avoiding the downside of significant consolidation.

***Indigenous Business Development***

- Technology, with options including: developing the existing approaches to incremental product development; enter into strategic alliances with existing global companies; establish a new White Goods Technology Centre; buy existing technology development programmes and expertise, see bold approach, below.
- Market Development, alongside technology development, investment in market development, in particular branding, is of equal, if not more importance.
- Production Licenses, which may restrict the exporting activities to avoid competing with the licensor of the technology.

***Risks Of Relying On Indigenous Development*** There is no certainty that the indigenous business development activities will succeed to deliver export-led growth. If indigenous white goods businesses are not capable of delivering export-led growth the government will have to turn to other alternatives.

***FDI*** The main alternative to the development of indigenous manufacturing businesses is to attract FDI, in particular from the global companies. It is recommended that a FDI promotion initiative is implemented as a key element of the development strategy for the sector.

***Bold Approach*** A bold approach would be to form an investment vehicle, possibly using Gulf investment funds, to initiate a buy-out of one of the global companies. One of the most promising targets for such an approach would be Merloni.