I. INTRODUCTION

In world investment and trade, the telecom industry has become one of the fastest growing industries regarding consumer demand, conspicuous growth, availability of digital technologies, and infrastructure (International Telecommunication Union, 2011; Schmid and Daniel, 2009). Mobile phone subscribers across the world reached five billion in 2010 (CNet Reviews, 2010) versus 2.6 billion users in 2006 (PCWorld, 2006). The same holds true for telecom operators of the Middle East and North Africa (MENA) region that witnessed a massive growth and value chain efficiencies in the last ten years which created new markets and tangible opportunities for consumers and businesses alike (Birmik and Cormack, 2010; Madichie, 2011). Like multinational corporations (MNCS) and their internationalization initiatives (Figueira-de-Lemos, Johanson and Vahlne, 2011), MENA’s telecom operators also had to expand in their regional markets to maintain growth and expansion. No wonder the telecom industry in the MENA region became progressive and staunchly competitive in the region and beyond. Of course, this was also complemented by the process of globalization, urban growth, and opportunities that appeared in global business in the early 2000s (Anwar, 2007).

In today’s world investment and trade, telecom-related efficiencies and technologies have introduced mobile phones, digital networks, mobile Internet and other telecommunications infrastructure (Al-Mutawkkil, Heshmati and Hwang, 2009; Howard and Mazaheri, 2009; James, 2010; Kluth, 2008; Standage, 2009). New industries and intertwined value chains have clearly emerged in the telecom sector raising productivity in various sectors worldwide (see Figure 1). These technological changes have taken place in just over ten years. Same is the case with the MENA region and other emerging markets (see Table 1).
FIGURE 1. TRADITIONAL AND INTERTWINED VALUE CHAINS, INDUSTRY DYNAMICS AND DEVELOPMENTS IN THE TELECOM INDUSTRY OF THE MENA REGION (2011)

A. Traditional Value Chain:

Sector I  \rightarrow  Sector II  \rightarrow  Sector III

- Telecom Equipment Manufacturers

Major Firms:
- Alcatel-Lucent; Huawei;
- ZTE; Nortel; Siemens;
- Ericsson; Ciena; Fujitsu;
- Cisco; Avaya; Juniper;
- Motorola; Nokia.

Sector II

- Operating System & Handset Manufacturers

Major Firms:
- Nokia*; Samsung;
- SonyEricsson; Motorola*;
- Sanyo; Microsoft*;
- Alcatel; Apple*; Google;
- Sharp; Research in Motion*; LG.

Sector III

- Telecom Operators/Service Providers of MENA

Major Firms:
- Etisalat; Orascom;
- Qatar Telecom;
- Saudi Telecom;
- Zain.

B. Intertwined & Collaborative Value Chain:

Sector I  \rightarrow  Sector II  \rightarrow  Sector III

- Telecom Equipment Manufacturers

- Operating System & Handset Manufacturers

- Telecom Operators/Service Providers

- Music  - Internet  - Mobile TV  - Video Games  - Sports  - Broadcasting
- Retailing  - Debit Cards  - Publishing  - Messaging (SMS)  - Grs  - Downloads
- Portals  - Mobile Banking  - Advertising  - Publicity Areas  - Multimedia  - Travel
- Banking  - Money Transfer  - Promotional Activities  - Social Media  - Companies  - Services

C. Industry Dynamics & Developments:

Telecom Equipment Manufacturers:
- Frequent technology disruptions are present;
- R&D cost is high.
- Many small manufacturers are present.
- The market is somewhat saturated.
- Technology standards are not simple.
- Businesses are the major spenders in this sector.
- Network bandwidth problems are major constraints.

Handset Manufacturers:
- There is an established consumer electronics market in the region.
- Product life cycles are short.
- Top five handset manufacturers control the market.
- Demand in MENA countries will continue to grow.
- Competition has been heightened in the handset industry.

Telecom Operators/Service Providers:
- Competition is tough.
- Markets and technologies are changing.
- Acquisitions and alliances are common in the region.
- Mobile and wireless companies are major players in the industry.
- New technologies in mobile and wireless sectors are growing.
- Service providers are competitive.

Source: The Economist; Financial Times; The Wall Street Journal (various issues); Standard & Poor's Industry Surveys (2010).
Note: * Company selling operating systems.