

Chapter 4.16

Offshoring in the Pharmaceutical Industry

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ABSTRACT

Offshoring has been adopted as a tool for reducing costs and for gaining strategic advantages by financial services, software development, and other competitive industries. For a variety of reasons, the pharmaceutical industry has been slow to take advantage of the benefits that offshoring can provide. The purpose of this article is to explore the internal and exogenous factors motivating global pharmaceutical firms to increase and expand their sourcing activities. And, instead of discussing global sourcing in general, India has been analyzed as a unique and explanatory case study for this new, emerging trend. The reasons behind this decision include India's position as a renowned global IT hub, the country's "home grown" biotechnology and biopharmaceutical industries, the numerous strategic partnerships and offshoring relationships between global and

Indian firms, as well as its significant advances in IT and information management.

GLOBAL PHARMACEUTICAL OVERVIEW

The global pharmaceutical industry broke historical records with revenues of approximately U.S. \$600 billion in 2006 (Pharmaceutical Research and Manufacturers of America [PhRMA], 2006). This is particularly striking as the growth slowed somewhat in North America and Europe; however, China, India, Mexico, Russia, South Korea, and other emerging markets outstripped established markets, growing collectively at an astounding rate of 81% (Herper & Kang, 2006). The lifeblood of the industry flows from its research and development (R&D) efforts with an annual investment of U.S. \$49.3 billion, or between 10

to 15% of total revenues (Herper & Kang, 2006). As the world becomes increasingly globalized, the pharmaceutical industry must respond to emerging challenges and opportunities, especially in developing countries. Currently, the industry faces issues related to expiring patents, drying pipelines, decreasing returns on investment, growing urgency to introduce new drugs in a timely manner, and an increasing need to access broad patient populations. This reality has prompted a wave of offshoring by top multinational firms. Offshoring was originally adopted as a tool for reducing costs and for gaining strategic advantages (Gupta, Seshasai, Mukherji, & Ganguly, 2007), yet the pharmaceutical industry has been slow to take advantage of the benefits that offshoring can offer. This section examines the current levels of global pharmaceutical employment and offshoring.

Global Pharmaceutical Employment

The pharmaceutical industry employed approximately 1.76 million individuals worldwide in 2006 (U.S. Department of Commerce, 2003). This number is expected to grow by 2.8% annually, resulting in an estimated 2 million jobs by 2010 (U.S. Department of Commerce, 2003). Structurally, the pharmaceutical industry is becoming increasingly consolidated with relatively few, but large, employers. The top 20 pharmaceutical companies constituted 59% of global employment in 2005 (U.S. Department of Commerce, 2006). The United States leads in employment (41%), followed by Europe (25%) and Japan (13%) (Farrell, 2005). Consequently, only 21% of industry employment is located in less developed nations. Employment is concentrated in three main areas: commercial (40%), manufacturing (31%), and research and development (15%). Sales agents represent the largest percentage of the workforce (35% total; 88% of commercial). The remaining 14% of employment is involved with back office services such as general and administrative func-

tions (G&A) (6%), IT (3%), procurement (3%), and supply chain management (2%) (Ernest & Young, 2004). Employment by occupation is skewed towards the commercial and manufacturing sectors with generalists (37%) and support staff (30%) dominating the industry. Increased offshoring is predicated on the ability to fundamentally alter the make-up of occupational employment to take better advantage of highly skilled-labor in low-wage countries (Ernest & Young, 2004).

Current Levels of Global Sourcing

At the forefront of the offshoring wave are the large multinational corporations based in the United States, Western Europe, and Japan. In 2005, an estimated 13,000 jobs were offshored (Pascal, Robert & Rosenfeld, 2006). This number will increase to 21,200 jobs by 2008 (Pascal & Rosenfeld, 2006).

Unlike many other competitive industries, the pharmaceutical sector is uniquely positioned to remotely execute one of its core competencies—R&D, which represents 74% of offshored employment (Pascal & Rosenfeld, 2006). The R&D activities currently performed in less developed nations include clinical trials, clinical statistics, data management, medical writing, and discovery. The pharmaceutical industry has recognized clinical trials as an area with the greatest potential for cost-savings and expansion. For example, Quintiles, a provider of clinical trials, has hired 850 employees in India, or 5% of its total employees, and plans to expand its data management center in Bangalore (“Quintiles Moves Data,” 2005). Although globally sourcing a core function such as R&D is inherently risky, pharmaceutical companies are now willing to follow in the footsteps of industries that have successfully utilized offshoring.

IT is the next largest offshored function, with 22% of employment performed abroad by pharmaceutical companies, although it constitutes only 3% of total employees (Farrell, 2005). In

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