

The Role of Universities in HR Capacity Building for Lebanon's Prospective Petroleum Industry: The Case of RHU's MBA in Oil & Gas Management

Rima M. Bizri

*Management Studies Department,
Rafik Hariri University, Mechref, Damour, Lebanon
bizrirm@rhu.edu.lb*

Jamil A. Hammoud

*Dean of the College of Business Administration,
Rafik Hariri University, Mechref, Damour, Lebanon
hammoudja@rhu.edu.lb*

Abstract — *This paper argues that higher education institutions, namely universities, can and should rise to the challenge of meeting the talent shortage in the Oil & Gas industry in Lebanon and the region by playing a significant role in actively building human resource capacity. The study uses the qualitative approach in presenting a case study of the timely initiative undertaken by the College of Business Administration at Rafik Hariri University in launching its own Oil & Gas MBA this coming fall 2015.*

Keywords-- *Oil & Gas Management, Role of Universities, HR Capacity Building, RHU, Lebanon.*

I. Introduction

The Oil & Gas industry in Lebanon is on the verge of becoming a reality. As Lebanon enters into the era of Oil & Gas, a big question begs itself: Does this country possess the required human capital needed to run an industry of such magnitude and significance? The issue here is not only related to the supply of engineers and technical labor, as important as that may be, but more specifically to that of legal, governmental, managerial and administrative personnel who will assume the responsibilities of strategic planning and implementation, and operational administration of the myriad companies expected to emerge in this industry. Amidst the rising awareness of the upcoming skill-shortage in the Oil & Gas industries around the world, advanced nations are rushing to secure talent and develop executive skill to run this sector. In Lebanon, the Oil & Gas industry is still in the embryonic stage and the availability of specialized human resources is questioned, particularly in the strategic area of executive and managerial skill. This paper argues that universities *can* and *should* play a significant role in building human resource capacity to address talent needs, not only in Lebanon, but also in the region.

II. The Looming Talent Shortage

A. Global Talent Shortage in Oil & Gas

Recent studies have reported a serious shortage of Oil & Gas professionals in most oil producing countries, like Canada (Ernst & Young, 2011), Asia Pacific, and Australia (AWPA, 2013). In their Resources Sector Skills Needs 2013 report, AWPA points to a growing skill gap from "blue collar" to

managerial levels including supervisors with combined technical and safety experience and front-line management skills. Recruitment efforts in the O&G industry are faced by challenging hurdles as the pool of expert professionals is getting smaller and smaller. "A trend is emerging within the industry where individuals with 15+ years' experience are a rare commodity and middle management roles (particularly project management) are increasingly becoming a real challenge to recruit for," (Saleh, 2014). Governments are extending years of service and pushing retirement forward in an effort to take advantage, as much as possible, of the available veteran skill and expert knowledge. The private sectors worldwide are paying heightened salaries, designing exotic benefits, and preparing soaring pension-plans for executives in this sector in an effort to extend their services as long as possible.

Specialized human capital is needed in areas like project management, financial risk management, production-facility administration and first-line management, HR management for Oil & Gas, Energy policy and economics, law & contracts negotiation and the like. Hence, it can be argued that there is dire need for adequately trained professionals who can effectively partake in the management of this industry.

B. Local & Regional Talent Shortage

Recent studies show that the global talent shortage is mirrored by a local and regional scarcity of qualified professionals in Oil & Gas. According to the most recent report by the International Labor Organization, the oil & gas sectors in developing countries require an abundance of certain professional occupations (like petroleum engineers), which many MENA countries lack in sufficient number and so need to import. (ILO Global Employment Trends, 2014). The need for specialized skill is already evident in the upstream, midstream, and downstream segments of the industry, not only in the pure sciences like geophysics, but also in the managerial skills necessary for running the sector. According to the World of Work report, the extraction and export of natural resources, in and of itself, does not necessarily engender development. The challenge lies in translating revenues from the sector into decent work opportunities through investment in new economic activities which trigger the process of productive transformation, job creation and development (ILO World of Work Report 2014), hence the significance of the purposeful

management and administration of the sector and its generated revenues.

Unfortunately, the unforeseen lack of qualified human capital in Oil & Gas management will soon strike like a rude awakening when qualified people are sought but not found except as highly priced foreign expatriates who “*are heading abroad to earn even higher wages with the ever growing demand for qualified expats globally,*” (Saleh, 2014). By then, it would be too late to take remedial action, and the only plausible thing to do would be to pay the hefty bill (averaging \$163,000 annually for the petroleum engineer according to the US Bureau of Labor Statistics, 2014). Importing foreign expatriate skill would place unnecessary costs on the local infant industry – costs that could have been incurred in the development of other more useful economic activities. The World of Work report states that income and export earnings from oil & gas extraction can be crucial at the initial stages of development (ILO World of Work Report, 2014), in building a strong economy for developing nations like Lebanon. Such costs can still be avoided if the qualified talent is developed in time. This is where universities should come in.

III. The Role of Universities in HR Capacity Building

Capacity-building in the education sector is vital for supporting effective and sustainable development. Curriculum reforms should be aimed at aligning academics with the realities of today (Leautier, 2011) for the purpose of meeting emerging national needs. Capacity building is already being endeavored in various areas and levels; however, we argue that HR capacity building specifically for Oil & Gas management represents a challenge as well as an opportunity for universities and the economies in which they operate. Universities need to pick up on this challenge since they are the institutions with the best fit to do so, considering their academic structure, cost-structure, and impact. It is therefore recommended that universities initiate graduate and undergraduate programs that are specialized in Oil & Gas Management to address the expected talent shortage in this field.

A. Why Universities?

Universities can play a significant role in integrating developing nations into the global economy; universities are able to develop the leadership they need to manage in this modern era, to build skills in networking across professional groups and build partnerships with the private sector and civil society (Leautier, 2011). Capacity-building university programs can be designed to develop public administrators that are responsive and accountable (Poelzer, 2013) and knowledgeable in an industry that badly needs them. In recognition of the pivotal role that universities play in economic development, UNESCO organized a conference in 2013, fully dedicated to the exploration of the key role that universities can play in meeting the emerging industrial and socio-economic needs of their countries of operation. It is argued that universities are the institutions that are best fit to undertake this mission for the following reasons:

Efficiency

- Economies of scale: Universities will be using campus facilities to support the delivery of its O&G MBA. Though specialized faculty are needed for the O&G-emphasis component of the program, existing competent faculty will be delivering the business requirements courses which are common to other business programs. Universities will be capitalizing on the already established capabilities of its staff, labs, and campus facilities, in addition to deriving economies of scale from its existing support departments like recruitment, admissions, finance, and student affairs.

Effectiveness

- Effective routing channel: Universities will act as routing channels that receive students, prepare them possibly at the undergraduate level, and redirect them to careers in the Oil & Gas industry at the graduate level.
- Customized Capacity Building: University O&G programs will equip students with up-to-date skills that are customized for local and regional employment. Participants in the program will learn about the legal framework, methods, and requirements applicable to the region in which they operate.
- Ensured Inclusiveness: University admission policies support equal opportunity recruitment, which in turn ensures practices of inclusiveness in the sector. Participants in the program will be admitted based on merit thus ensuring the inclusion of women, the disabled, minorities and fragile participants.
- Research & Innovation Capacity-Building: Making education institutions the center for innovation and generation of ideas is critical for national and industry development (Leautier, 2011). Regions that have access to higher education and research institutions do far better than those that do not (Poelzer, 2013).

B. Opportunity Cost

The cost of failing to respond to market and economic needs represents a wasted opportunity with a multiplied effect. Failing to capitalize on this once-in-a-lifetime opportunity is translated into regrettable waste: wasted economic breakthroughs, industrial development, technological advancement, skill enhancement, trade alliances and agreements, GDP expansions, and wasted chances at multiplying national potential. This waste would be over and above the hefty bill that will have to be paid for skilled labor imported from foreign countries, if the needed labor pool is not developed locally in good time.

VI. RHU's Oil & Gas MBA Program

This paper uses the qualitative approach in presenting a case study of the timely initiative undertaken by Rafik Hariri University in starting its own Oil & Gas MBA this coming fall 2015. The Oil & Gas MBA is a direct response to the emerging need for specialized professionals in this field. The

program is also a reflection of RHU's flexibility and responsiveness in providing needed programs of study to address changes in the economic sectors of Lebanon and the region. This study presents an analysis of the program, its objectives, structure, and expected outcomes, and an assessment of its predicted effectiveness in developing Oil & Gas management professionals.

A. Assessment of industry status

Internationally, numerous prominent European and American colleges do offer quality graduate and undergraduate degrees in O&G Management, but those are relatively expensive and hard to get admitted to (e.g. Dundee University, University of Aberdeen). Further, there are online degrees in O&G Management which offer rich course content but lack the practical component which is badly needed (e.g. Thunderbird online degree).

Regionally, though numerous university programs currently exist and annually graduate many O&G technical professionals such as petroleum engineers, geophysicists, chemical engineers, etc., few degree programs were found to be related to the executive training for this industry. To our knowledge, the O&G Management programs in the region are mostly in the form of training courses offered by training institutes where the participants receive a certificate of successful completion at the end of the course. However, those courses do not mount up to be a college degree thus limiting their holders' chances for career and location mobility.

Locally, higher education in Lebanon is generally highly esteemed in the region, and an O&G graduate program would be welcomed especially if it conforms to international quality standards. A review of Lebanese O&G management programs reported the following results:

- a) USJ has developed a masters program in oil and gas made of two components, one focusing on exploration and production for the upstream segment, and the other focusing on operations management for the downstream segment.
- b) AUB launched its own "Master of Energy Studies" last year, a two-year interdisciplinary program that integrates the study of engineering sciences with policy, economics and social sciences.
- c) Lebanese University, Beirut Arab University, University of Balamand, Notre Dame University, and Holy Spirit University of Kaslik are all offering or planning to offer various engineering degrees for the O&G sector, but none of these have O&G *management* programs.

B. Program Objectives of RHU's O&G MBA

The RHU Oil & Gas MBA is designed to build capacity of local and regional human resources intending to participate in the industry. It combines advanced business management and leadership skills with oil and gas knowledge needed to seek and succeed in middle and senior level management careers in the O&G industry nationally, regionally or worldwide.

The pedagogical approach of the program is carefully designed to balance theory and practice by using real world cases, applications, and projects. It also integrates the necessary knowledge elements from various fields in order to formulate a strategic perspective suitable for effective decision making on energy, oil and gas issues.

The program targets three student profiles:

- a) O&G professionals looking for advanced skills needed to formalize existing experience and step up to a more senior role in the O&G sector.
- b) Engineers and technicians seeking advanced business, management, and leadership skills needed for executive careers in the O&G industry.
- c) Business graduates looking for specialized O&G knowledge and skills needed to seek careers in the industry.

C. Program Structure

This program is designed to build human resource capacity needed for the day-to-day management of the sector. Its primary focus is on building and enhancing managerial capabilities of the participants so that they may be immediately effective upon assuming managerial responsibilities in the sector.

The RHU Oil & Gas MBA program is structured around 39 credits, distributed equally in two blocks: 18 cr. in O&G specialty course requirements and 18 cr. in advanced business requirements. The program concludes with 1-2 months' practicum experience in government or industry organizations.

Business Requirements (18 cr.)	Credits
Quantitative Analysis and Business Research	3
Entrepreneurship and Investment Capital	3
Advanced Financial Management & Risk Analysis	3
Consumer Driven Marketing	3
Business and Managerial Economics	3
Strategic Management	3

Specialization Requirements (15 cr.)	Credits
Financial Accounting for Oil and Gas	3
Overview of the Global Oil and Gas Industry	3
Energy Policy and Energy Economics	3
Oil and Gas Law, Contracts & Negotiations	3
Advanced Project Management	3
Capstone Requirement (3 cr.)	
Oil and Gas Applied Project	3
Practicum Requirement (0 cr.)	
1-2 month Practical Training in government or the oil/gas sector	0

D. Program's Distinctive Advantage:

RHU's O&G MBA is distinct in three ways: First, although a background in science or engineering is a plus, it is not required for admission to the program. Unlike other programs in O&G, participants in this program may come from any discipline since the program focuses on developing the managerial and administrative potential needed for the industry. Second, RHU's O&G MBA addresses the availability of a large labor pool, consisting mostly of business and social science graduates. The program aims at training and later redirecting them toward the O&G industry that would benefit from their participation. This would boost the diversity of the human capital employed in the industry. Third, unlike other programs that focus more on upstream and midstream segments, emphasizing such aspects as research, science & engineering, and public policy, the RHU MBA O&G program focuses relatively more on the midstream to downstream segments of the industry, with greater orientation toward applied business management and decision making, thus filling a gap in the market.

E. Program Outcomes: Skill-Transference

Developing an industry-driven workforce is essential for meeting industry growth needs. The O&G MBA program is expected to play a significant role in shaping the local and regional workforce by providing a venue for diverse skill-transference.

Transferable skills are imperative for dealing with the labor shortage in the O&G industry which is currently seeking to recruit professionals from various domains (Dupre, 2014). Hence, the O&G industry could benefit from the recruitment of skilled professionals in the fields of supply chain management, statistics, quality management, operations management, legal enforcement, in addition to technically skilled experts who are needed in front-line managerial roles and supervisory capacity. Here, skills in engineering, management, legal, government, and trades (skilled manual labor) sectors can be prepared for transfer into the O&G industry in an organized and purposeful manner such that skilled professionals do not have to be confined to their specializations, but rather be able to move from one domain to the other by means of a short-term, focused training program that hones and redirects their skills to suit industry trends. The

program therefore fosters the smooth transference of skills among sectors, thus widening the labor pool for the O&G industry.

F. Predicted Effectiveness of the RHU Initiative

Universities can help the region's youth acquire the proficiency and know-how to manage *across* sectors, geographies, and generations (Leautier, 2011). Universities can teach them the skills, competences and decision making techniques that help make informed decisions, decisions which guide the deployment of financial and material resources in various economically rewarding activities. If properly managed and led, the extraction of natural resources can create forward and backward linkages with the rest of the economy, thus becoming an engine of broader-based growth (ILO World of Work Report 2014). RHU's O&G MBA program aims at developing executive professionals not only for the O&G exploration and production facilities, but also for the numerous organizations that will proliferate and thrive in the midstream and downstream segments of the industry, thus directly contributing to the growth of the sector and the economy at large.

Conclusion

This paper presents the case of the RHU Oil & Gas MBA program as a timely initiative that addresses Lebanon's urgent need for O&G management professionals to lead its present and future O&G industry. This program demonstrates the importance of university involvement in shaping the constituents of the O&G industry by following a flexible and responsive approach. It is clear that individual efforts will not be sufficient to provide the industry with the skills needed for its projected growth. Hence, industry, government, and educational institutions will have to collaborate in developing the skilled workforce required for the near future.

References

- [1] AWP, Australian Workforce and Productivity Agency, "Resources sector skills needs 2013 report," December 2013, <http://www.awpa.gov.au/our-work/sector-specific-skill-needs/resource-sector-skills/Pages/default.aspx> Accessed on February 12th, 2015.
- [2] Deloitte, "Talent Edge 2020: Redrafting talent strategies for the uneven recovery," <http://www2.deloitte.com/content/dam/Deloitte/cn/Documents/human-capital/deloitte-cn-hc-2020talentedge-en-300512.pdf>
- [3] R. Dupre, "Transferable Skills Are A Must in Oil, Gas Industry's Labor Shortages, March 2014, http://www.rigzone.com/news/article.asp?a_id=132242#sthash.CkjO7tmV.dpuf Accessed on February 20, 2015.
- [4] Ernst & Young, "Human resources in Canada's oil and gas sector, A snapshot of challenges and directions," 2011.
- [5] F. Leautier, "Academic Capacity Building as a corner stone to Africa's Development," Keynote Address to NUFU-NOMA Conference, Dar es Salaam, Tanzania, 2011. ACBF website: www.acbf-pact.org Accessed Feb. 9, 2015.
- [6] G. Poelzer, "Capacity Building and Sustainable Development: Comparative Lessons and the Russian North," Arctic Urban Sustainability Conference, May 2013. <http://www.gwu.edu/~ieresgwu/programs/conference.cfm#> (Accessed on Feb 6, 2015).
- [7] D. Saleh, "Action Needed on Growing Skills Shortage in Oil and Gas Industry," WRS, February 2014 <http://www.worldwide-rs.com/Action-Needed-on-Growing-Skills-Shortage-in-Oil-and-Gas-Industry> (Accessed on January 9th, 2015).