Workforce Assessment in the Jordanian ICT Industry

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ABSTRACT

This paper provides an assessment of workforce need in the Jordanian ICT industry. The results have shown that there is a growing workforce gap in the ICT sector. The technical skills of graduates are not satisfactory, and there is an increasing demand for skilled graduates. In addition to the technical skills required, communication skills, creative thinking, and English language skills were seen as important “soft skill elements” across all job categories and are missing in the current ICT workforce. The skills and competencies identified in this study can be used to motivate a design of an effective, flexible and relevant ICT program that can contribute to building a skillful workforce focusing on specialized and hands-on practices in ICT domains.

Keywords: Competency Evaluation, Job Market Requirements, Jordanian ICT Industry, Soft Skills, Technical Skills, Workforce Assessment

1. INTRODUCTION

Emerging global knowledge economies have created a demand for highly skilled ICT workforce in all industries. As a result, ICT labor markets have become highly competitive. With the tremendous wealth recently generated in the Gulf States and subsequent industrial booms, such markets in the region became highly attractive to many Jordanian ICT workers. A large number of experienced ICT professionals leave the country every year. Faced with such conditions, the demand for a highly skilled ICT workforce has increased tremendously. As the result of workforce migration, the ICT workforce in Jordan comprise of graduates who are young and possess little experiences and knowledge.

In Jordan, current trends indicate that the skill set composition of the ICT workforce is changing. With a growing pool of 19,000 ICT related labor force and steadily inflowing 6,000 ICT graduates yearly, Jordan has a potential to become a regional leader in the ICT sector (JIB, 2006). Jordan ranked 14th out of 110 countries for the number of engineers and scientists according to the Global Competitiveness Report 2004-2005 (Porter et al., 2005).

In spite of the growing importance of ICT workforce, very little empirical research has been done to assess quality and relevance in Jordan ICT education. The need for better quality and relevance of workforce skills has been identified by the Information Technology Association - Jordan as one of the challenges facing the ICT sector and affecting its growth, development and effectiveness.

While considerable effort has been made to achieve remarkable growth in the Jorda-
nian ICT sector and to devise improvement
directions, the only information available for
the ICT industry in Jordan are the statistics
of Jordanian IT industry (Int@J, 2007). The
available evidence confirms that the current
quality of ICT education cannot meet the labor
market requirements, neither can it cope with
the evolution of ICT technologies. However,
in-depth analysis of the sector and scientific
evaluation of the workforce gap in Jordan have
not yet been adequately dealt with. Meanwhile,
available studies on workforce assessment exist
for ICT industries elsewhere. Of these studies,
reference (Sri Lanka ICT Association, 2007)
gives in depth analysis of the IT workforce in
Sri Lanka. Reference (Hu et al., 2007) provides
an evaluation of issues relating to ICT workforce
in Taiwan with focus on planning, supply, and
recruitment and retention of ICT skills among
multinational companies. In reference by (Holm
et al., 2002), the authors present best practices
of ICT workforce management in Finland. A
framework for Queensland government ICT
skills are given in Queensland government of-
lice (2009). Reference (Stephen et al., 2009)
gives analysis on the ICT skills readiness for the
emerging global digital economy in Botswana.
These references provide assessment models
for ICT workforce skills and productivity under
different sets of assumptions and issues. This
study uses the references as a guideline for the
articulation of ICT curricula design and skill
development to enable young Jordanian gradu-
ates to compete internationally.

The Jordanian ICT educational institutions
fall short of providing levels of the ICT skills
required in the job market. Large numbers of
ICT graduates have no immediate employment,
and would need intensive professional training,
only 1-2 years on-job training to successfully
compete for jobs. The gap is growing between
the ability of the ICT educational systems in
Jordan to provide skillful graduates and the
requirements of the ICT sector. This gap has
grown even wider than ever, and calls for rapid
adjustments and improvements in relevant ICT
programs offered.

This study has been conducted in collab-
oration with the USAID/Jordan Economic
Growth Program (SABEQ) and European (EU)
Commission/TEMPUS with EU funding. The
study sought to (1) assess the workforce gap on
the basis of competencies required by the Job
market; (2) provide a significant contribution to
the development of a new vision for ICT educa-
tion, which is centered, first and foremost, on a
commitment to build ICT workforce qualified
for the local and regional ICT and knowledge
intensive industries; and (3) provide a frame-
work for ICT skills development strategies at
the government level that can enable Jordan
to participate competitively in the emerging
digital economy.

The results of the study which covered 53
ICT companies in Jordan have shown that the
dominant educational level of employees (81%)
in the ICT sector is university education. Their
technical skills, however, are not satisfactory
and there seems to be a huge demand for skillful
graduates. The technical competencies and skills
mostly needed are on Oracle and MS-SQL in the
domain of database systems; creative thinking
skills and graphic design in the domain of digital
media and animations; Microsoft Engineering
in the domain of system administration; system
analysis and business analysis in the domain
of systems integration; network design and
internet security in the domain of system and
network administration; .NET programming,
C++, system design, and team work skills in
the domain of programming and software engi-
neering; project management, communication
skills, and writing skills in the project/program
management domain. In addition to the technical
skills required, communication skills, creative
thinking, and English language skills were seen
as important “soft skill elements” across all job
categories and are missing in the current ICT
workforce.

The skills and competencies identified in
this study can be used to motivate a design of
a new ICT educational model, which accom-
modes flexible curricula, enhances student
internship mobility, and fosters student tech-
Economic vs. Non-Economic Determinants of Diversification and Specialisation in Agriculture
[www.igi-global.com/article/economic-non-economic-determinants-diversification/62266?camid=4v1a](www.igi-global.com/article/economic-non-economic-determinants-diversification/62266?camid=4v1a)

Strategic Uncertainty in the Guessing Game and the Role and Effects of a Public Common Noise Player