

**Al Manar**  
Your Path for tomorrow

# **From School to Career**

## **Jordanian Graduates**

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## *Foreword:*

### **What Do Employers *Really* Want?**

Every employer is looking for a specific set of skills from job-seekers that match the skills necessary to perform a particular job. Employability skills are the critical tools and traits you need to succeed in the workplace -- and they are all elements that you can learn, cultivate, develop, and maintain over your lifetime. Employers find far too many entry-level job applicants deficient in employability skills, and want the schools to place more emphasis on developing these skills. Employability skills are not merely attributes that employers *desire* in prospective employees; rather, many employers now *require* applicants to have these skills in order to be seriously considered for employment. In an effort to determine what they are and what their level of importance is in the Jordanian labor market, the Al-Manar Project designed the *School-to-Career Study*, whereby providing a new approach towards addressing and accessing the status of the transition of Jordanians from the academia to the workplace. No skills equal few jobs; few job opportunities equal lower earnings, etc. One obvious way to obtain skills in an environment of rapid technological change and increased global competition is to get an education. The workplace is more competitive than ever and changes on a seemingly daily basis, and the demand for highly skilled workers continues to outweigh the supply. To adjust to this rapidly changing environment more and more workers are choosing to return to school to upgrade or improve their skills and earning capacity. We must remember that employment and employability are not the same thing. Being employed means having a job. For a youth or adult who is not adequately prepared, having a job is likely to be a

temporary condition. Being employable means possessing qualities needed to maintain employment and progress in the workplace.

## **The Executive Summary**

Unemployment, particularly of the youth, with its economic and social implications is one of the most pressing problems facing Jordanian policy makers today. Jordan has traditionally placed an emphasis on human capital development as a means to economic growth as a result of its scarcity in natural resources. Public sector employment, accounting for nearly 50% of all employment in the 1970s, has now shrunk to about 35%. Employment is primarily concentrated in three governorates: Amman, Irbid and Zarqa, with Amman accounting for over 40% alone. Although female participation rate has increased since the 1970s, it still remains low at around 12%. Women tend to cluster in public sector employment in the professional, technician and associate profession areas. Women are more likely to be employed if they have an intermediate diploma or higher. Jordan is making concerted efforts to develop a knowledge-based economy and is making good progress in developing knowledge economy infrastructure. A knowledge economy requires a mix of key basic skills as well as the essential content thereof. In essence, the School-to-Career (STC) study was designed to examine the factors that enable Jordanian university graduates to be successful in the labor market, and the effects of employment skill.

A questionnaire was designed and revised by a consultant in coordination with NCHRD technical subject-matter staff and the project director of the Al-Manar project. It was repeatedly revised and updated following meetings with these NCHRD members during November and December 2005. The questionnaire was designed in English, and translated into Arabic by experienced and qualified bilingual translators, in consultation with the consultant. Two-hundred and ten telephone interviews were conducted in Arabic, at the NCHRD, over a period of 6 days (December 31<sup>st</sup> 2005, and January 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 15<sup>th</sup> and 16<sup>th</sup> 2006), with Jordanian graduates from five different local universities. The research team put extensive efforts to finish their assignment. The result is a comprehensive report about the affective factors influencing the Jordanian graduate labor market, and an in depth evaluation of the impact that Employment Skills have on this environment.

Besides the executive summary, the report is composed of the following sections:

### **I. Introduction**

- Jordan: Employment and Labor Market Context
- The Background of the STC Survey
- The Importance of the Study
- Terms of Reference (TOR) for the STC Study
- Aims and Objectives of STC Study

### **II. Methodology of STC Survey**

- Survey Frame
- Sampling Design and Selection
- The Preparatory Stage
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  - Definitions and Classifications

- Recruitment and Training of Staff
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- 
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### **III. Findings and Analysis of STC Survey**

- General Sample Population Trends of the STC Questionnaire Survey
- Effects of Employment Skills
  - Employability Skills Ranked by their Skill Group Category: Basic, Higher-Order, and Affective
  - Effects of Employment Skills on Graduates' Labor Market Relationships
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- Overall Conclusions of Employment Skills by Skill Group Category: Basic, Higher-Order, and Affective
- Conclusions of Employment Skills and Graduates' Labor Market Relationships
- Conclusions of Employment Skills and Graduates' Employment Sectors
- Conclusions of Employment Skills and Graduates' Employment Durations
- Conclusions of Key Affective Factors and Graduates' Labor Market Relationships
- Conclusions of Key Affective Factors and Graduates' Employment Sectors
- Conclusions of Key Affective Factors and Graduates' Employment Durations
- Overall Conclusions of Key Affective Factors

The results of the analysis of the STC Study produced a vast amount of information, all of which is incredibly rich and useful. Most of the findings of the STC Study apply directly to the assessment of the effects of employment skills, as well as the identification and prioritization of the key factors influencing the Jordanian graduate labor market. The

following is a partial list of the conclusions derived from the STC Study, for further details see the “Conclusions” section of this report.

- 1) Basic employment skills were identified by the graduates as the most useful skill group category.
- 2) Basic employability skills have the highest impact on a graduate’s relationship to the labor market.
- 3) The employability skill with the highest ranking correlation to a graduate’s position in the labor market is tied between the following four different skills: job-specific skills, foreign language skills, lifelong learning skills, and leadership skills.
- 4) Both basic and affective skills have the most significant correlation with graduates’ employment sector.
- 5) Leadership skills are the highest ranking correlated employability skill with graduates’ employment sector.
- 6) There are significant differences between the usefulness ratings of public and private sector graduates: in general, publicly-employed respondents rated the usefulness of teamwork skills higher than those who worked in the private sector.
- 7) Foreign language skills were found to be the third highest ranking correlated employability skill with graduates’ employment sector.
- 8) Privately-employed graduates tend to rate the usefulness of foreign language skills higher than those that are publicly-employed.
- 9) Affective skills have the most significant correlation with graduates’ employment duration.
- 10) The affect of a mother’s employment status on graduates’ labor market relationships is positive: the status of the relationship of a graduate to the labor market significantly improves when their mother’s are employed.
- 11) The affect of attending private tawjihi schools on graduate labor market relationships is slightly more positive than the affect of attending public tawjihi schools on labor market relationships.
- 12) The affect of educational specialization on graduate labor market relationships is significant and varies according to the type of educational specialization studied.
- 13) The affect of educational specialization on graduate employment sector is highly significant: the likelihood of working in either public or private employment sectors is significantly dependent upon the type of educational specialization studied.
- 14) The affect of a mother’s employment status on graduates’ labor market relationships is positive: the status of the relationship of a graduate to the labor market significantly improves when their mother’s are employed.

- 15) Graduates whose father's are unemployed or working are more likely to work in the public sector rather than private sector; conversely, graduates whose father's are employed are more likely to working in the private sector.
- 16) The affect of attending private tawjihi schools on graduate labor market relationships is slightly more positive than the affect of attending public tawjihi schools on labor market relationships.
- 17) The likelihood of graduates who attended public universities working in the public employment sector is higher than those graduates who attended private universities; conversely, the likelihood of gradates who attended private universities working in the private employment sector is higher than those graduates who attended public universities.
- 18) The highest ranking relationship between a key factor and graduate employment duration is gender.
- 19) The affect of gender on graduate employment duration is most significant at the two extremes; those graduates with the longest employment durations were twice as likely to be female rather than male, whereas those graduates with the shortest employment durations were more than twice as likely to be male.
- 20) The STC Study data indicate the presence of a strongly moderate correlation between various educational specializations and employment sector, however further investigation and studies will be needed in order to access what exactly the affects are.
- 21) The relationship between university grades and graduate employment duration is moderate and statistically significant: in general, graduates with high university grades have longer employment durations than those with low university grades.
- 22) Further research on employment longevity (specifically addressing the issue of promotions) is necessitated to better determine what the affects of university grades have on employment durations.
- 23) All three variables: graduates' labor market relationships, graduates' employment sectors, and graduates' employment durations, are all significantly related to the key factors examined, although to varying degrees.
- 24) The STC Study has successfully identified three specific variables affecting Jordanian graduates in the labor market: graduates' labor market relationships, graduates' employment sectors, and graduates' employment durations.
- 25) The STC Study has identified nine key factors that affect Jordanian graduates in the labor market, although to varying degrees: gender, tawjihi school type, family economic status, university type, educational specialization, university grades, father's employment status, and mother's employment status.

## Introduction

### 1.1. Jordan: Employment and Labor Market Context

In most Mediterranean countries employment in the public sector has represented a sizeable percentage of total employment opportunities. In the 1990s, for example: “public sector employment in the Mediterranean region was the highest among developing countries” (Bardak, 2005: 15). The high rates of public employment have largely been connected with the expansion of social service provision (education, health, social protection) (Bardak, 2005). “In the Mediterranean region many countries . . . are underway [in the] process of privatization and/or downsizing of public sector services, and enterprises” (Bardak, 2005).

**Table 1:**  
**Sectoral Shares in Total Employment, Selected Years 1987-2003**

Year	Agric.	Manufact.	Water & electric	Construction	Trade, restaurant, hotel	Transport, storage, equipment	Insurance, financial, real estate	Public admin & social services	Unspecified
1987	7.4%	10.5%	1.7%	10.5%	9.8%	9.2%	3.3%	47.6%	0.0%
1988	7.6%	10.3%	1.8%	10.0%	10.0%	9.0%	3.4%	48.0%	0.0%
1989	7.2%	10.4%	1.4%	9.7%	10.2%	8.8%	3.1%	49.2%	0.0%
1990	7.3%	10.2%	1.3%	9.9%	10.1%	8.5%	3.2%	49.5%	0.0%
1991	7.4%	10.3%	1.3%	9.8%	10.3%	8.8%	3.2%	48.9%	0.0%
1992	7.4%	10.3%	1.1%	10.0%	10.5%	8.7%	3.3%	48.7%	0.0%
1993	6.4%	10.6%	0.7%	7.0%	15.1%	6.7%	2.9%	50.6%	0.0%
1995	6.9%	14.4%	1.4%	10.0%	16.2%	9.2%	3.8%	36.1%	2.0%
2000	4.9%	13.6%	1.7%	6.5%	19.5%	9.6%	4.9%	33.4%	5.8%
2003	3.6%	13.7%	1.7%	6.4%	20.3%	10.0%	5.3%	35.0%	4.0%

**Source:** Department of Statistics, Employment and Unemployment Surveys, cited in Kanaan and Kardoosh, 2000: 15. Data for 2003 from Al-Manar (Department of Statistics), cited in NCHRD, 2004a: 10. Percentages for public employment come from NCHRD, Al-Manar (Department of Statistics), 2003.

In Jordan, employment in the public sector accounted for 48% of total employment in 1987, but this has since declined to 35% in 2003 (Table 1) and 2004 (NCHRD, Al-Manar (Department of Statistics), as a result of a cut in public spending and the privatization of large state enterprises.<sup>1</sup>

In addition, employment in construction has almost declined by 50% between 1987 and 2003, from 10.5% of total employment to 6.4% over the period (Table 1), the majority of which (in these two sectors: agricultural and construction) are non-Jordanian workers. Meanwhile there has been an increase in service related employment. The share of trade, restaurant and hotel work as a percentage of total employment has more than doubled from 9.8% in 1987 to 20.3% in 2003 (Table 1). There have been similar, though less dramatic increases in the areas of transport, insurance and financial occupations (Table 1).

<sup>1</sup> Despite 35% of total employment being found in the public sector, it “remains a poor provider of public services” (Hassan and Al-Saci, 2004: 7).

These structural changes in the nature of employment in Jordan, and in particular the reduction in public sector employment, have far reaching implications, especially for college and university graduates. The large public sector in Jordan “has traditionally served as a source of employment for the fast-growing labor force” (Hassan and Al-Saci, 2004: 7). With public employment declining from being the provider of nearly 50% of all employment in 1987 to providing about a third of total employment in 2003 (Table 1), those entering the labor force have less chance of getting public employment. The overall labor force participation rate declined from 42% in 1979 to 39.4% in 2000 (Kanaan and Kardoosh, 2000: 12), to 37.4% in 2004 (NCHRD, 2004b: 12).<sup>2</sup>

The female labor force participation rate was 6.4% in 1979, and “continued to be sluggish through the 1980s” (Kanaan and Kardoosh, 2000: 12), but it increased since then to 12.3% in 2000 (ibid) and now currently stands at 11.6% (NCHRD, 2004b: 12). While the female labor force participation rate has increased since 1979, it still remains relatively low. The participation rate for females has not exceeded 13% over the last five years (Saif, 2005: 3). While child labor laws and compulsory schooling for boys and girls until grade ten have improved female-male school enrolment ratios, “women’s participation in economic activities and community leadership is still low, constrained by social norms and discriminatory practices” (Hassan and Al-Saci, 2004: 3).<sup>3</sup> In the MENA region, “the limited access of women to wage employment is another characteristic and the contribution of women to economic or productive life still tends to be marginal. They remain a largely untapped resource in the region, making up 49% of the population and in some countries as much as 63% of university students, but only 25% of the labor force on average.” (Bardak, 2005: 13).

Women in Jordan are disadvantaged when it comes to getting comparable salaries to men. On average, in 2002, women wage earners were paid 87% of the per hour wage compared to men with identical qualifications. The *Jordan Human Development Report 2004* estimated that, on average, women per capita income is about 20% of male per capita income: on average women earned US\$1,247 (PPP) compared to men’s annual income of US\$6,786 (PPP) (UNDP et al., 2004: 152). Since the late 1970s, men’s participation in the labor force has been moving in the opposite direction, falling from 79% in 1979, to 70.1% in 1995, to 66.1% in 2000 (Kanaan and Kardoosh, 2000: 12) and currently stands at 63.7% in 2004 (NCHRD, 2004b: 12). It can be seen that, compared to female participation rates, the male rate is high. In the 2000-2004 period, the participation rate among males has averaged 65% (Saif, 2005: 3), but has been declining (from 66.1% in 2000 to 63.7% in 2004). This decline is a result of rising rates of enrolment in education (especially the intermediate colleges and universities in Jordan and abroad) and the inability of the labor market to absorb the new comers (Kanaan and Kardoosh, 2000: 12; Saif, 2005: 3-4). The inability of the labor market to absorb all these new entrants is largely attributable to the mismatch between labor supply and demand (Saif, 2005).

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<sup>2</sup> Participation is defined as the ratio of the labor force (employed and unemployed) to the total number of the population in the working age.

<sup>3</sup> As of March 2005, only 7.9% of all seats in the Jordanian parliament were held by women (UNDP, 2005: 304). This is, however, an improvement on recent years; in 1997, no women was elected to the Chamber of Deputies (Parliament) (Hassan and Al-Saci, 2004: 3).

When looking at the distribution of employment in Jordan by gender, it can be seen that women have, over the last thirty years, maintained a consistently low percentage of total employment, hovering around the 13% mark (table 2).

**Table 2:**  
**Distribution of Employment by Gender**  
**Selected Years 1975-2004**

Year	Male	Female
1975	86.1	13.9
1995	87.9	12.1
2000	85.8	14.2
2001	86	14
2002	85	15
2003	86	14
2004	87	13

**Sources:** Kanaan and Kardoosh, 2000: 15; NCHRD, Al Manar (Department of Statistics), 2001, 2002, 2003, 2004.

In terms of occupational spread by gender, women are more predominant than men in professional occupations (41% compared to 14% respectively) and technician and associate professional occupations (28% compared to 9%). Men predominate in elementary occupations, machine operators, craft and trade work, and service (Table 3).

**Table 3:**  
**Distribution of Employed Jordanians by**  
**Occupation and Gender in 2004**

	Male	Female	Total
Legislators, Senior Officials and Managers	0%	0%	0.0%
Professionals	14%	41%	17.1%
Technicians, Associate Professionals	9%	28%	11.7%
Clerks	6%	9%	6.1%
Service, Shop and Market Sales Workers	16%	7%	14.5%
Skilled Agricultural, Fishery Workers	3%	1%	2.3%
Craft, Related Trades Worker	20%	6%	18.3%
Plant, Machine Operators, Assemblers	14%	1%	12.6%
Elementary Occupations	19%	6%	17.2%

**Source:** NCHRD, Al Manar (Department of Statistics), 2004

In 2004, the total labor force (employed and unemployed) was 1,185,390 Jordanian people, made up of 1,037,611 employed and 147,779 unemployed (Table 4). The average employment rate was 87.5%, and unemployment rate 12.5%, but this varies according to governorate. Karak and Tafileh have the highest rates of unemployment at 21.5% and 22.1% respectively (Table 4).

Developing and transition economies face significant new trends in the global environment that affect not only the shape and mode of operation but also the very purpose of tertiary education systems. Among the most critical dimensions of change are the convergent impacts of globalization, the increasing importance of knowledge as a main driver of

growth, and the information and communication revolution. Knowledge accumulation and application have become major factors in economic development and are increasingly at the core of a country's competitive advantage in the global economy...

**Table 4:**  
**Selected Employment and Unemployment Statistics by Governorate**

<i>Item</i>	<i>Area/Governorate</i>												
	<i>Jordan</i>	<i>Amman</i>	<i>Balqa</i>	<i>Zarqa</i>	<i>Madaba</i>	<i>Irbid</i>	<i>Mafraq</i>	<i>Jerash</i>	<i>Ajloun</i>	<i>Karak</i>	<i>Tafileh</i>	<i>Ma'an</i>	<i>Aqaba</i>
<b>Total Labor Force</b>	1,185,390	461,903	70,601	195,049	30,878	212,914	48,915	28,977	24,950	48,259	17,036	23,098	22,809
<b>Total Employment</b>	1,037,611	420,062	62,282	175,283	26,405	178,418	40,887	23,476	20,436	37,873	13,269	19,415	19,808
<b>Employment Rate (%)</b>	87.5	90.9	88.2	89.9	85.5	83.8	83.6	81.0	81.9	78.5	77.9	84.1	86.8
<b>Total Unemployment</b>	147,779	41,841	8,319	19,766	4,474	34,496	8,028	5,502	4,515	10,387	3,767	3,683	3,001
<b>Unemployment Rate (%)</b>	12.5	9.1	11.8	10.1	14.5	16.2	16.4	19.0	18.1	21.5	22.1	15.9	13.2

Source: NCHRD, 2004b: 9, 27

[Indeed] the role of tertiary education in the construction of knowledge economies and democratic societies is more influential than ever... [T]ertiary education is central to the creation of the intellectual capacity on which knowledge production and utilization depend and to the promotion of the lifelong-learning practices necessary to update individual knowledge and skill perceptions.

(World Bank, *Constructing Knowledge Societies: New Challenges for Tertiary Education*, 2002: xvii)

In the face of the new emerging opportunities and challenges that the construction of knowledge-based economies present, the majority of transition and developing countries are finding it difficult to respond "to long-standing problems facing their tertiary education systems" (ibid.). These problems include "the need to expand tertiary education coverage in a sustainable way, inequalities of access and outcomes, problems of educational quality and relevance, and rigid governance structures and management practices" (World Bank, 2002: xvii-xviii). The main messages of the World Bank's *Constructing Knowledge Societies: New Challenges for Tertiary Education* (World Bank, 2002: 6) were that:

- Social and economic progress is achieved principally through the advancement and application of knowledge;
- Tertiary education is necessary for the effective creation, dissemination, and application of knowledge and for building technical and professional capacity;
- Developing and transition countries are at risk of being further marginalized in a highly competitive world economy because their tertiary education systems are not adequately prepared to capitalize on the creation and use of knowledge;

- The state has a responsibility to put in place an enabling framework that encourages tertiary education institutions to be more innovative and more responsive to the needs of a globally competitive knowledge economy and to the changing labor market requirements for advanced human capital.

The construction of a global knowledge-based economy is transforming global labor markets, and presenting challenges to education systems around the world.<sup>4</sup> The World Bank argues that:

Educational systems can no longer emphasize task-specific skill perceptions but must focus instead on developing learners' decision making and problem-solving skill perceptions and teaching them how to learn on their own and with others. Lifelong learning is crucial in enabling workers to compete in the global economy.

(World Bank, 2003a: 3)

The traditional pedagogical approach is no longer relevant for knowledge-based societies and, instead, a lifelong learning pedagogy is required.<sup>5</sup> The World Bank comments that:

Traditional educational systems, in which the teacher is the sole source of knowledge, are ill suited to equip people to work and live in a knowledge economy. Some of the usefulness such a society demands—teamwork, problem solving, motivation for lifelong learning—cannot be acquired in a learning setting in which teachers dictate facts to learners who seek to learn them only in order to be able to repeat them.

(World Bank, 2003a: 28)

De la Harpe, Radloff and Wyber (2000) suggest that there is world-wide concern that existing university programs are not producing graduates with appropriate lifelong learning skill perceptions necessary for their careers. In the Middle East/North Africa (MENA) region, for example, it is acknowledged that the traditional approach to teaching and learning is prevalent throughout the education system.

In the advanced economies, the employability<sup>6</sup> of a university graduate is becoming more dependent on the acquisition of employability skill perceptions<sup>7</sup>, rather than on the type of degree pursued. Except for the more vocational areas of: medicine, dentistry, and engineering for example, employers are increasingly less concerned with the type of degree university graduates are getting since “little of the ‘knowledge’ is applied in job settings” (Harvey, 2003: 5). Instead, “employers are more concerned about a variety of personal and interpersonal skill perceptions and abilities” (ibid.).

Cotton (1993) reviews 63 documents pertaining to the topic of employability skill perceptions in America. She concludes that employers want entry-level employees to possess an array of basic, higher-order, and affective employability skill perceptions (Fig.

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<sup>4</sup> “In traditional industries most jobs require employees to learn how to perform routine functions, which, for the most part, remain constant over time. Most learning takes place when a worker starts a new job. In the knowledge economy, change is so rapid that workers constantly need to acquire new skill perceptions” (World Bank, 2003a: xviii).

<sup>5</sup> See World Bank (2003a: xix-xx) for a discussion on traditional versus lifelong learning approaches.

<sup>6</sup> Employability might be defined “as the propensity for graduates to secure a job and progress in their career” (Harvey, 2003: 3).

<sup>7</sup> “Employability Skill perceptions are not job specific, but are skill perceptions which cut horizontally across all industries and vertically across all jobs from entry level to chief executive officer” (Sherer and Eadie, 1987: 16).

1). In the MENA region, it is recognized that there is a real gap between the skill perceptions acquired by university graduates and those skill perceptions demanded by the labor market. Employability skill perceptions, or ‘soft skill perceptions’, are seen as necessary to compete in the labor market. For example, the current UNDP representative in Jordan, Christine McNab, was recently quoted as saying “Jobs for life don’t exist anymore, which is why soft skill perceptions are so important... you really need people skill perceptions” (*Jordan Times*, 2005).

**Figure 1:**

**Employability Skill Perceptions**

<b>Basic Skills</b>	<b>Higher-Order Thinking Skills</b>	<b>Affective Skills and Traits</b>
Oral communications (speaking, listening)	Problem solving	Dependability/Responsibility
Reading, esp. understanding and following instructions	Learning skills, strategies	Positive attitude toward work
Basic arithmetic	Creative, innovative thinking	Conscientiousness, punctuality, efficiency
Writing	Decision making	Interpersonal skills, cooperation, working as a team member
		Self-confidence, positive self-image
		Adaptability, flexibility
		Enthusiasm, motivation
		Self-discipline, self-management
		Appropriate dress, grooming
		Honesty, integrity
		Ability to work without supervision

Source: Cotton, 1993

**1.2. The Background of the STC Survey**

The Youth Employment Network (YEN)<sup>8</sup> concluded that, in order to break the cycle of poor education and training, poor jobs and poverty:

All countries need to review, rethink and re-orient their education, vocational training and labor market policies to facilitate the school-to work transition and to give young women and men – particularly those who are disadvantaged because of disabilities or who face discrimination because of race, religion or ethnicity – a head start in working life. Young

<sup>8</sup> The YEN, a partnership between the United Nations, the World Bank and the ILO, was created within the framework of the Millennium Declaration to bring together leaders in industry, youth and civil society representatives, and policy-makers to explore imaginative approaches to the challenges of youth unemployment (Brewer, 2004: 31).

women and men also need a set of “core work skill perceptions” such as: communication, problem solving, and teamwork skill perceptions to develop their employability and prepare them for work in the knowledge and skill perceptions based society.<sup>9</sup>

While the school-to-career transition is relatively well documented in the OECD countries (cf. Finnie, 2004; Hannan, Raffe and Smyth, 1996; Ryan, 2004; 2001; 1999), there has been less work examining the same transition in transition (Kogan and Unt, 2003) and developing economies in which youth employment problems are typically greatest of all (ILO, 1999) (ILO, 2003b, c)<sup>10</sup>.

Nonetheless, even in the advanced economies there is still the view that the transition from university to employment is not well understood. Finnie’s (2004) study on Canadian university graduates noted that:

Graduating from college or university and moving into the labor force is an important transition at both the individual and social levels, as graduates begin to put their training into practice and thus build their labor market careers, while at the same time comprising an important element of the nation’s economic performance both today and into the future. Yet our understanding of this transition... is still quite limited.

(Finnie, 2004: 35)

Moreover, in many advanced economies, there is still a great deal of concern regarding the link between university and employment, which has become ‘longer and more tortuous’ (OECD, 1996; 1998b). Harvey notes that:

The higher-education to work interface is at the epicenter of current debates about employability in the UK. In essence the debate is about what employers want and what higher education institutions can do to enhance the employability of students.

(Harvey, 2003: 3)

Not only does the school-to-career transition differ across countries and periods (cf. Ryan, 2004; 2001), but the principal area of policy and political concern – according to the level of education – differs across countries and periods.

### 1.3. The Importance of the Study

In this changing environment it is crucial to understand exactly how young men and women in Jordan are able to navigate along different pathways to successfully gain employment. It is also crucial to find out more about the degree to which some of the ‘knowledge economy’ skill perceptions are being developed in graduates, and the extent to which they are important at finding employment in Jordan today. In order to achieve this goal, this study carefully assessed the effects of employment skill perceptions on university graduate labor market relationship, their employment sector, and their job durations. In addition, this study examined the affects of a variety of factors on university graduates including: their labor market relationship, their employment sector, and their employment duration comparing them to determine their magnitude of influence.

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<sup>9</sup> Secretary-General’s Youth Employment Network (YEN), *Finding decent and productive work for young people everywhere* (Promoting Employability by Improving Knowledge and Skill perceptions).

<sup>10</sup> However, the ILO’s Gender Promotion (GENPROM) Program, Series on Gender in the Life Cycle, has recently undertaken school-to-work transition surveys in Thailand, Vietnam and Indonesia, and in 2005/6 is working on other surveys in Jordan, Bahrain and Sri Lanka (cf. ILO, 2005; 2003a, b, c). The findings from the Jordan study were not available at the time of this report.

#### **1.4. Terms of Reference (TOR) for the STC Study**

This study was conducted for the Al-Manar Project at the National Center for Human Resource Development in Amman. The TOR states that the consultant is: 'To conduct a school to career study to determine possible reasons why people get work'. The emphasis was to be on university graduates.

#### **1.5. Aims and Objectives of STC Study**

The primary aims and objectives of the STC study are stipulated as follows:

- To identify the affect of various employment skill perceptions on university graduate labor market relationships, employment sectors, occupational statuses, and employment durations;
- To identify and compare the affects of a variety of factors on university graduate labor market relationships, employment sector, and employment durations;
- To specify the key factors that determine the successful entrance of Jordanian university graduates in the labor market.

# Methodology

## 1.1. Survey Frame

The initial intention was to take a sub-sample from the latest population and housing census that the regular national employment and unemployment surveys done by the Department of Statistics (DOS), which covers approximately 10,000 households (HHs) nationwide. However, in the interests of reducing costs, time, and increasing the study's overall efficiency, this approach was abandoned. The primary reason for abandoning the DOS method was to ensure that the target group (Jordanian university graduates) would fall within the sample. Since only 9.5% of the population in Jordan achieve a bachelor degree or above (DOS, 2005), using a household approach we would have to visit many houses before we were able to find one where a (recent) university graduate was present.

It was therefore decided to undertake telephone interviews with recent graduates contained in a database held by the Al-Manar Project at the National Center for Human Resources Development (NCHRD) on university graduates in Jordan. The database contains information on 9017 graduates from five local universities (two public: University of Jordan and the Hashemite University, and three private: Zarqa, Zatoonah and Irbid). The database held by the NCHRD provides a variety of information for each 2002/3 graduate, including: name, date of birth, governorate of residence, name of alumni university, type of degree held (ex. BA), faculty, specialization, and grade. By simply selecting a graduate's family name from this database, the telephone number of the university graduate was then obtained through using a telephone directory. Although the advantages and disadvantages of conducting a telephone survey are known<sup>11</sup>, in the interests of the efficiency, this was the optimal choice of data collection for this survey.

## 1.2. Sampling Design and Selection

As mentioned above, a database of graduate students from five universities (from the academic year 2002/3) was used to select the sample. The list of Jordanian university graduates were sorted and included as a target population for the survey. A systematic random sample was applied to select sampling units for this survey. In order to provide implicit stratification and a good distribution of the sample between universities, specializations and gender the names of Jordanian graduates were first organized by university, and then by specialization, followed by gender prior to drawing the sample.

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<sup>11</sup> **Advantages:** i) Cheaper and faster to do than face-to-face interviews; ii) potential sampling advantages (no need for geographical clustering, inclusion of more remote areas, cheaper recalls).

**Disadvantages:** i) Obstacles to selecting a representative and unbiased probability sample of the general population (only 65% of Jordanians have a household phone; ii) broken-off interviews are commoner on the telephone than face-to-face (it is easier to put the phone down than it is to refuse a request from an interviewer calling in person); iii) answers to open-ended questions tend to be shorter and the whole interview procedure tends to proceed more briskly than in the case of face-to-face interviews (the length of the telephone interview should not exceed 20 minutes); iv) there are issues concerning the reliability of information collected in this manner (telephone interviewers cannot see for themselves the situation of the respondent and therefore cannot triangulate information to cross-check, for example, socio-economic status); the inability to use multiple channels of communication (eg. body language) to build up rapport.

The estimated sample size for this survey is 210 interviews which provide 90% confidence level and 5% bound of error which is reasonable for this type of survey. It is known that not all university graduates have private telephone numbers, while others live and/or work outside of Jordan; therefore, in order to compensate for those university who fall in either or both of those categories, additional sampling units were selected to overcome the expected non response. The STC sample size consisted of 210 telephone interviews of Jordanian university graduates, all of which graduated from a total of five different Jordanian universities, during the academic year 2002/3.

### **1.3. The Preparatory Stage**

This stage included a variety of overlapping processes to prepare a work plan; time-table; timely recruitment and training of the survey staff; and distribution of tasks and work areas. This stage also included the preparation of necessary concepts and definitions; finalization of survey documents, such as: the questionnaires and other related forms; preparation of a system for manual data processing, including the editing and coding systems and manuals; preparation of electronic execution programs and implementation procedures regarding data entry, verification and debugging for cross-tabulation purposes.

#### **1.3.1. Survey Questionnaire**

The questionnaire (see Appendix Section D) was designed and revised by the consultant in coordination with NCHRD technical subject-matter staff and the project director of the Al-Manar project. It was repeatedly revised and updated following meetings with these NCHRD members during November and December 2005. The questionnaire was also piloted in-house with NCHRD staff who were themselves recent graduates and externally to graduates from the NCHRD database. This pilot exercise fed back into the design of the final questionnaire. The questionnaire was designed in English, but translated for in-house use by NCHRD staff in consultation with the consultant. The consultant then cross-checked the NCHRD translation for consistency with the original English version; this was done by using an independent Jordanian translator.

The questionnaire is divided into main topics, each containing a clear and consistent group of questions, and designed in a way that facilitates the data entry and verification. The questionnaire includes: i) information filled in by the interviewer from the Al-Manar university graduate database, described above; ii) the current economic activity status of the respondent; iii) job search strategies and skill perceptions; iv) information about Tawjihi; v) some simple indicators of socio-economic family status.

#### **1.3.2. Definitions and Classifications**

The following are the most important definitions used in the questionnaire. The questionnaire numbers are provided in each case to facilitate use of these definitions and classifications.

**Age (Q. 2):** Refers to the estimated or calculated period of time between the date of birth and the date of interview, expressed in complete years regardless of the fractions of the year.

**Governorate (Q. 3):** Refers to the place of usual residence.

**Educational Specialization (Q. 8):** It is the field of study in which the person has successfully obtained his highest educational qualification.

**Labor Market Relationship (Q. 11):**

This can be any of the following four:

**1. Employer:** Any person working in an establishment owned entirely or partially by him/her and hires one or more paid employees.

**2. Employee:** Any person working for another person or establishment and receives any kind of payments (in cash or in kind) whether it was monthly, weekly, daily, commission, piece-rate etc.

**3. Self-employed:** Any person working in an establishment owned entirely or partially by him/her, or practices a job or trade and hires no paid employees.

**Job Duration (Q. 15):** It is the cumulative amount of months worked by the graduate at their most recent employer.

**Family Economic Status (Q. 46, 47, 48):** The variable consists of three separate indicators, as described below. The family economic status was determined by merging the combined the results of all three economic status indicators. Those graduates who scored low on all three indicators were regarded as having a low family economic status. In contrast, those graduates who scored high on two or more indicators were regarded as having a high family economic status. Those graduates who scored high on at least one of the indicators were regarded as having a median or average family economic status.

**1. Number of Private Cars Owned (Q. 46):** Those graduates with families owning none or one private car were regarded as having low economic status, whereas those graduates whose families owned two or more private cars were regarded as having high economic status.

**2. Availability of Private Computer within Household (Q. 47):** Those graduates whose households had access to a private computer were regarded as having high economic status, whereas those graduates whose household didn't have access to a private computer were regarded as having low economic statuses.

**3. Availability of Internet Access within Household (Q. 48):** Those graduates whose households had access to a private internet lines were regarded as having high economic status, whereas those graduates whose household didn't have access to a private internet lines were regarded as having low economic statuses.

#### **1.4. Recruitment and Training of Staff**

Two interviewers were recruited to undertake the telephone survey, one a (male) staff member of the NCHRD and the other (a female) from outside of the NCHRD. The interviewers were selected according to their past experience and both were university graduates. The purpose and objectives of the study were explained to the interviewers and the consultant and another technical subject-matter staff (of NCHRD) went through the

questionnaire question by question so that it was fully understood. Advice on, and potential problems of, undertaking telephone interviews was discussed with the two interviewers.

### 1.5. Data Collection Stage

The telephone interviews were conducted in Arabic at the NCHRD over a period of 6 days (December 31<sup>st</sup> 2005, and January 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 15<sup>th</sup> and 16<sup>th</sup> 2006), with each interview taking approximately 15 minutes. The consultant and another technical subject-matter staff (of NCHRD) were able to periodically cross-check the completed questionnaires. In total, 520 telephone calls were made (Table 5); of these, 310 did not take part in the interview, while 210 did – making up the sample. The reasons why those called did not participate in the interview includes: wrong phone number (48%), phone number no longer in use (26%), no one responded to call (16%), working abroad (8%), and other reasons (2%).

**Table 5:**

#### **Distribution of the Response Rate and Reasons for Non-Responses**

Total number of telephone calls made		520
Total number telephoned, but were not interviewed		310
Reasons why people not interviewed	Abroad Jordan for Work	25
	Abroad Jordan for Married	6
	No one responding	48
	The phone number was not used	82
	The phone number was wrong	148
	Refused to answer the questionnaire	1

### 1.6. Data Processing Stage

The organization of questionnaires is an important step in the data processing stage. Hence, the questionnaires were ordered, labeled and stored in the NCHRD in a way that facilitates easy and quick handling for subsequent processes.

### 1.7. Office Processing

The completed questionnaires were handed to a technical subject-matter staff (of NCHRD) that was able to provide the general coding for the open-ended (descriptive) questions. For some questions, the codes were then grouped so that coding lists were not over long. In most questions, however, the coding was already in place on the questionnaire.

### 1.8. Electronic Processing

The data was then entered into a specially designed program in Access by a member of the NCHRD.

### **1.9. Tabulation and Dissemination of Results**

When all prior data processing steps were completed, the actual survey results were tabulated using an SPSS statistical package, as well as the Microsoft Excel Program. The tabulations were then thoroughly checked for consistency of data, titles, inputs, concepts, as well as the figures there in. The final report was then prepared, containing detailed tabulations as well as the methodology of the survey.



## **Findings and Analysis**

### **STC Questionnaire Survey Findings:**

The data compiled from the findings of the STC Questionnaire Survey is discussed in the following format:

1. General Sample Population Trends
2. Effects of Employment Skills
3. Comparisons of Affective Factors

Each section and associated subsections have been thoroughly analyzed, the highlights of which are discussed according to the format provided above. All values are referenced to their appropriate appendixes.

#### **1. General Sample Population Trends of the STC Questionnaire Survey**

According to the results of the STC Graduate Questionnaire Survey, the distribution of gender among the respondents was nearly equal (see Appendix A.1 Figure 1); 52% of those surveyed were female, while the remaining 48% were male. As expected for any graduate survey, the distribution of age among those surveyed was skewed, the majority of which were in their twenties (see Appendix A.1 Figure 2). 87% of the STC survey respondents were between the ages of 20-29, while 11% were aged between 30-39 years old, with the minority of which were aged 40 or more. Similarly, when examined by their governorates of residence, the distribution of STC study respondents was also skewed (see Appendix A.2 Figure 1); the governorate of Amman was overly-represented, accounting for nearly 65% of those surveyed. Zarqa accounted for the second most frequent governorate of residence of those surveyed, while the remaining ten governorates accounted for about 20% of those surveyed.

In contrast, the distribution of the Tawjihi scores of the STC survey respondents was normal, bell-shaped (Appendix A.2 Figure 2). More than 35% of those surveyed scored between 80 and 89.99 on the Tawjihi exam, while more than 30% of the STC study respondents scored between 70 and 79.99. The remaining 30% was almost equally shared between those graduates who scored either 90-100 or between 60 and 69.99. Ironically, despite the relatively normal distribution of the Tawjihi scores, the distribution of Tawjihi school type among the STC study respondents was skewed (see Appendix A.3 Figure 1); 84% of the graduates attended public schools, compared to the 16% of the respondents who attended private schools during their Tawjihi exam year. When examined by their educational streams for Tawjihi, the distribution was primarily bimodal: consisting of either scientific or artistic (see Appendix A.3 Figure 2). The majority of those surveyed (57.1%) were in the artistic educational stream for Tawjihi, while 41.4% were in the scientific educational stream; the remaining 1.5% of the STC sample population consisted of respondents from either the vocational or “other” educational streams.

In accordance with the STC research design and sampling methods, the entire sampling population consisted of graduates of five different Jordanian universities; therefore distribution of the STC study respondents when examined by the name of their alumni university consisting of a total of five different possibilities (see Appendix A.4 Figure1).

The majority, nearly 60% of the SCT study respondents surveyed, graduated from the University of Jordan; the Hashemite University accounted for the second most frequent alumni university (23%). The remaining three universities (Zaytoonah, Zarqa, and Irbid) accounted for the remaining 19% of those surveyed; 82% of those surveyed graduated from a private university, while the remaining 18% of the respondents graduated from public universities (see Appendix A.4 Figure 2).

In accordance with the STC research design and sampling methods, it was expected that the distribution of the STC survey respondents when compared by their educational levels would be skewed when compared to the national average, overly-represented by highly educated individuals (see Appendix A.5 Figure 1); in order to be a candidate for the STC survey, all of the respondents must have had a minimum of a Bachelor's degree. Nevertheless, the distribution of the STC respondents by educational level was primarily composed of those individuals with a Bachelor's degree (89%); 10% of those surveyed held a Master's degree, those with a PhD accounted for only 1% of those surveyed. When comparing the STC respondents by their education specialization, the highest ranking specialization was "education" (accounting for 23% of those surveyed), followed by "social sciences", and then "business and economics"; according to the survey, the specialization with the least percentage of respondents was "computer science and IT", which accounted for only 6% of the sample population (see Appendix A.5 Figure 2).

Another general trend of the STC survey consisted of examining the current employment status of the respondents (see Appendix A.6 Figure 1). The vast majority of the STC respondents, or 73%, were "paid employees", whereas only 2% were either "employers" or "self-employed". In contrast, 19% of those surveyed were "unemployed" at the time of the survey, while the remaining 6% of those surveyed were either not looking for work or were enrolled in higher education at the time of the survey. When those not actively-participating in the labor force were removed from the sample population, the relationship of the STC graduates' to the labor market were apparent: the vast majority (or 97%) of the STC sample population consisted of "paid employees", while the remaining 3% of the sample population were either "employers" or "self-employed" (see Appendix A.6 Figure 2). In addition, when the distribution of the STC study respondents were compared by their employment sector, the results indicated the majority of the graduates work in the private sector (or 52% of those surveyed); the public sector accounted for 45% of those surveyed, while only 3% of the graduates in the labor force work in neither public or private, "other" (see Appendix A.7 Figure 1).

Furthermore, when examining graduate employment stability in terms of the duration of their most recent employers, 33% of the graduates surveyed have been employment durations of "more than 36 months" in their most recent employment; more than half (or 53%) of the STC study respondents indicated the length of their most recent employment to have spanned for more than two years (see Appendix A.7 Figure 2). Due to the fact that the STC sample population consisted of newly-graduated students, employment durations of two years or more for the majority of those surveyed is highly significant.

## **2. Effects of Employment Skills**

The following section has been divided into four subsections:

- A. Employability Skills Ranked by their Skill Group Category: Basic, Higher-Order, and Affective.
- B. Effects of Employment Skills on Graduates' Labor Market Relationships
- C. Effects of Employment Skills on Graduates' Employment Sectors
- D. Effects of Employment Skills on Graduates' Employment Durations

In accordance with the research design of the STC Study, ten different employment skill perceptions were selected; an analysis was conducted to examine the following two issues:

- I. To identify the presence of a relationship between the graduates' employment skills and each of the associated factors (listed above) paired with it;
- II. To determine the nature and/or direction of a relationship between them, if a relationship statistically exists.

Each subsection will discuss the strength of the relationships between the ten different employment skills on their associated factor. In addition, a comparative assessment of the overall effects of each type of employment skill will also be included.

### **A. Employability Skills Ranked by their Skill Group Category: Basic, Higher-Order, and Affective**

In accordance with the design of the STC study, ten different employability skills were examined. Each of these employability skills can be categorized in one of the following three skill groups: basic skills, higher-order skills, or affective skills. The "basic skills" consisted of the following four employability skills: communication skills, job-specific skills, ICT skills, and foreign language skills. In comparison, the "higher-order skills" examined in the STC study consisted of the following four employability skills: lifelong-learning skills, problem-solving skills, analytical skills, and negotiation skills. The third skill group, "affective skills", was examined in terms of the following two employability skills: leadership skills and teamwork skills (see Appendix B.1.1 Table 1 for further reference).

When comparing the perceived usefulness of each skill group, basic skills was rated the most useful, followed by affective skills, and then higher-order skills (see Appendix B.1.1 Figure 1). Among the four basic skills, communication skills were ranked with the highest overall usefulness rating (see Appendix B.1.2 Figure 1). The higher-order skill with the highest overall usefulness rating was lifelong learning skills (see Appendix B.1.2 Figure 2). Furthermore, teamwork skills were the highest ranking affective skill in overall usefulness by those surveyed (see Appendix B.1.3 Figure 1).

## B. Effects of Employment Skills on Graduates' Labor Market Relationships

According to the statistical procedure of interpreting variables at the nominal level of measurement (as in the case of the STC Study research design), the relationship between the value of Cramer's V and the strength of the relationship is interpreted in the following manner:

**Table 6:**

### **The Relationship between the Value of Nominal-Level Measures of Association and the Strength of the Relationship**

Cramer's V Value	Strength
<i>If the value is</i>	<i>The strength of the relationship is</i>
between 0.00 and 0.01	weak
between 0.11 and 0.30	moderate
greater than 0.30	strong

(Reprinted from Healey: 2005: 342)

Furthermore, “the most appropriate measures [of central tendency] for skewed distributions . . . [is] the median alone” (Healey: 2005: 79). Therefore, the average values consist of median Cramer's V values, which were used to describe and compare the general characteristics of the collective impact of the relationships of all three employment skill group perceptions on a graduate's relationship to the labor market. Having clarified the technical and theoretical background by which the STC findings and analysis were conducted, the results are the following.

Out of the ten different employability skill perceptions and graduate labor market relationships, all ten yielded moderate relationships between the paired variables (see Appendix B.2.1 Table 1). When examined by skill group, all three employment skill group perceptions and graduate labor market relationships were moderate. According to the results of the STC Study, basic skills had the highest impact on a graduate's relationship to the labor market. The employability skill with the highest ranking correlation to a graduate's position in the labor market was a tie between four different skills: job-specific skills, foreign language skills, lifelong learning skills, and leadership skills (see Appendix B.2.1 Table 1).

To illustrate the moderate relationship between a graduate's relationship to the labor market and the usefulness rating of job-specific skills, a distribution of exclusively paid employees was created (accounting for 73% of the STC Study respondents). More than 45% of the paid employee graduates surveyed rated job-specific skills as either “useful” or “very useful” (see Appendix B.2.1 Figure 1). In comparison, 74% of the paid employee respondents rated foreign language skills as either “useful” or “very useful” (see Appendix B.2.2 Figure 1). Similarly, nearly all (or 96%) of the paid employees surveyed rated lifelong learning skills as either “useful” or “very useful” (see Appendix B.2.2 Figure 2). Furthermore, 85% of the paid employee respondents surveyed rated leadership skills as either “useful” or “very useful” (see Appendix B.2.3 Figure 1).

### **C. Effects of Employment Skills on Graduates' Employment Sectors**

According to the findings of the STC Study, eight out of ten of the relationships that were tested between employment skill perceptions and graduate employment sector were found to be moderately-related to one another; the only exceptions were that of the weak relationship found between negotiation skill perceptions and teamwork skill perceptions when paired with graduate employment sector, which were found to be weakly correlated with one another when tested (see Appendix B.3.1 Table 1). When compared by skill group, all three employment skill group perceptions and employment sector relationships were found to be moderately correlated to each other, although both basic and affective skills had the most significant correlation with employment sector.

The employability skill with the highest ranking correlation with graduate employment sector was leadership skills (see Appendix B.3.1 Table 1). To illustrate the relationship between the two paired variables, a distribution of STC Study respondents by their employment sector and usefulness rating of teamwork skills was designed (see Appendix B.3.1 Figure 1). The results of the STC Study indicate significant differences between the usefulness ratings of public and private sector respondents; in general, publicly-employed respondents rated the usefulness of teamwork skills higher than those who worked in the private sector (see Appendix B.3.1 Figure 1).

The second highest ranking correlated employability skill and graduate employment sector relationship was communication skills (see Appendix B.3.1 Table 1). According to the STC Study data, the strongest relationship between communication skills and employment sector was among those respondents employed in the “other” sector (see Appendix B.3.2 Figure 1); all “other” sector employees in the STC Study rated the usefulness of communication skills as either “useful” or “very useful”. The employability skill with the third highest ranking correlation with graduate employment sector was foreign language skills (see Appendix B.3.2 Figure 2). The majority (or 80%) of the “other” sector employees rated foreign language skills as “very useful” (see Appendix B.3.2 Figure 2). Furthermore, according to the results of the STC Study, a higher proportion of those who rated the usefulness of foreign language skills as either “not useful” or “not useful at all” were from the public sector, whereas private sector employees tended to rate the usefulness of foreign language skills higher (see Appendix B.3.2 Figure 2).

### **D. Effects of Employment Skills on Graduates' Employment Durations**

According to the findings of the STC Study, when testing all ten of the relationships between employment skill perceptions and graduate employment durations, all ten were found to be moderately-correlated with one another (see Appendix B.4.1 Table 1). Similarly, when compared by their skill group categories, all three employment skill group perceptions and employment duration relationships were moderate (see Appendix B.3.1 Table 1). According to the results of the STC Study, affective skills had the most significant correlation with graduate employment duration.

The employability skill with the highest ranking correlation with graduate employment duration was a tie between lifelong learning skills and teamwork skills (see Appendix B.3.1 Table 1). The relationship between lifelong learning skills and graduate employment

duration was most significant among those respondents with employment durations of more than 36 months (see Appendix B.4.1 Figure 1); according to the results of the STC Study, among those with the longest employment durations, the usefulness ratings of lifelong learning skills were all either “useful” or “very useful” (see Appendix B.4.1 Figure 1). With respect to the nature of the moderate relationship between the other highest ranking employability skill (teamwork skills) and employment duration relationship, the most significant finding was that all of those who rated teamwork skills as “not useful at all” were those graduates with the shortest employment durations (see Appendix B.4.2 Figure 1).

### **3. Comparisons of Key Affective Factors**

The following section has been divided into four subsections:

- A. Comparisons of Key Factors Affecting Graduates’ Labor Market Relationships
- B. Comparisons of Key Factors Affecting Graduate Employment Sectors
- C. Comparisons of Key Factors Affecting Graduate Employment Durations
- D. Comparisons of the Relationships Between Key Factors and Graduates’ Labor Market Relationships, Employment Sectors, and Employment Durations

In accordance with the research design of the STC Study, a total of nine different factors were selected; an analysis was conducted to examine the following two issues:

- I. To identify the presence of a relationship between the key factor and all three of the factors paired with it (listed above);
- II. To determine the nature and/or direction of a relationship between the two paired factors, if a relationship statistically exists.

Each subsection will discuss the strength of the relationships between the nine different key factors and their paired factor. In addition, a detailed analysis of the nature of the relationship between the top three key factors and their associated paired factor will also be included.

#### **A. Comparisons of Key Factors Affecting Graduates’ Labor Market Relationships**

According to the findings of the STC Study, the strength of the relationships between graduate labor market relationship and the vast majority of the factors were moderate; based on the logic of interpreting Cramer’s V values (described earlier in Table 6), eight out of nine key factors yielded moderate or strong relationships when paired with labor market relationship, only one key factor: father’s employment status, yielded a statistically weak relationship with labor market relationship (see Appendix C.1.1 Table 1 for details). The average strength of the relationships between all nine key factors when paired with labor market relationship was combined also yielded moderate results (see Appendix C.1.1 Table 1). The top ranking key factor affecting graduates’ labor market relationship is:

mother's employment status. The remainder of this section will examine the nature of the top three ranking paired relationships between a key factor and labor market relationship.

As stated above, the top ranking key factor affecting graduates' labor market relationship is mother's employment status; the relationship between a "mother's employment status" and graduate labor market relationships is statistically strong and highly significant. Therefore, in order to understand how the relationship between the two paired variables a chart was composed examining the distribution of STC Study respondents by mother's employment status and their participation in the labor force. According to the results of the STC Study, the percentage of graduates who were either employers or self-employed with unemployed mothers was significantly lower than the percentage of graduates who were paid employees (see Appendix C.1.1 Figure 1). Consequently, based on the results of the STC Study, the affect of a mother's employment status on graduate labor market relationships is positive: the status of the relationship of a graduate to the labor market significantly improves when their mother's are employed.

The second highest ranking key factor affecting graduates' labor market participation relationship is tawjihi school type; the relationship between a "type of tawjihi school" and a graduate labor market relationship is strongly moderate and statistically significant. In order to illustrate the nature of the relationship between the two paired variables a chart was composed examining the distribution of STC Study respondents by graduates' type of tawjihi school attended and their participation in the labor force. According to the results of the STC Study, the majority of the graduates who were either employers or self-employed had attended private tawjihi schools; conversely, the majority of those graduates who were paid employees had attended either public or other types of tawjihi schools (see Appendix C.1.2 Figure 1). Consequently, based on the results of the STC Study, the affect of attending private tawjihi schools on graduate labor market relationships is slightly more positive than the affect of attending public tawjihi schools on labor market relationships.

The third highest ranking key factor affecting graduates' labor market relationship is educational specialization; the relationship between "educational specialization" and graduate labor market relationships is moderate and statistically significant. In order to understand the nature of the relationship between the two paired variables a chart was composed examining the distribution of STC Study respondents by graduates' educational specialization their participation in the labor force. According to the results of the STC Study, the following four educational specializations (in descending order) yielded the highest percentage of graduates whose labor force participation was either as employers or self-employed: natural sciences, followed by social sciences and humanities, then business and economics, and finally education (see Appendix C.1.2 Figure 2). The remaining four educational specializations, whose graduates were participating in the labor force at the time of the survey, were only participating as paid employees (see Appendix C.1.2 Figure 2).

Furthermore, when comparing the all of the STC paid employee respondents by their educational specializations, the following three specializations yielded the highest percentages of paid employees: education (accounting for 24%), social sciences and humanities (representing 16%), and business and economics (representing 15%) of the paid employees (see Appendix C.1.3 Figure 1). Conversely, the following two educational specializations yielded the lowest percentages of paid employees: shari'a and law (with 5%), followed by computer science and IT (with 7%) of the paid employee population.

Therefore, based on the results of the STC Study, the affect of educational specialization on graduate labor market relationships is significant and varies according to the type of educational specialization studied.

## **B. Comparisons of Key Factors Affecting Graduates' Employment Sectors**

According to the findings of the STC Study, the strength of the relationships between graduate employment sector and the majority of the key factors were moderate; based on the logic of interpreting Cramer's V values (described earlier in Table 6), seven out of nine key factors yielded moderate or strong relationships when paired with graduate employment sector, while two key factors: gender and mother's employment status, yielded statistically weak relationships with employment sector (see Appendix C.2.1 Table 1 for details). The average strength of the relationships between all nine key factors when paired with labor market relationship was combined also yielded moderate results. The top ranking paired relationship between a key factor and graduate employment sector is educational specialization. The remainder of this section will discuss the exact nature of the top three ranking paired relationships between a key factor and graduate employment sector.

As stated above, the top ranking key factor affecting graduates' employment sector is educational specialization; the relationship between educational specialization and graduate employment sector is statistically strong and highly significant. Therefore, in order to understand how the relationship between the two paired variables a chart was composed examining the distribution of STC Study respondents by educational specialization and their employment sector. According to the results of the STC Study, the vast majority of educational specializations (seven out of eight) showed significant differences between employment sectors; the only educational specialization which generated nearly equal public-private sector distributions was "social sciences and humanities" (see Appendix C.2.1 Figure 1). Furthermore, in decreasing order, the following three educational specializations have the majority of their graduates working in the public sector: education (84%), followed by shari'a and law ( 63% ), and then social sciences and humanities (50%); in comparison, in decreasing order, the following five educational specializations have the majority of their graduates working in the private sector: business and economics (83%), followed by engineering (80%), then computer science and IT (67%), then natural sciences (63%), and finally health studies (59%) (see Appendix C.2.1 Figure 1). Therefore, based on the results of the STC Study, the affect of educational specialization on graduate employment sector is highly significant; the likelihood of working in either public or private employment sectors is significantly dependent upon the type of educational specialization studied.

The second highest ranking key factor affecting graduates' employment sector is father's employment status; the relationship between graduates' "father's employment status" and employment sector is strong and statistically significant. In order to illustrate the nature of the relationship between the two paired variables a chart was composed examining the distribution of STC Study respondents by father's employment status and graduate employment sector. According to the results of the STC Study, the majority of the graduates whose father's were unemployed at the time of the survey was working in the public sector; whereas the majority of the graduates whose father's were unemployed at the time of the survey were working in the private sector (see Appendix C.2.2 Figure 1).

Consequently, based on the results of the STC Study, graduates whose father's are unemployed or working are more likely to work in the public sector rather than private sector; conversely, graduates whose father's are employed are more likely to working in the private sector.

The third highest ranking key factor affecting graduates' employment sector is "type of alumni university; the relationship between "type of alumni university" and graduate employment sector is moderate and statistically significant. In order to understand the nature of the relationship between the two paired variables a chart was composed examining the distribution of STC Study respondents by the type of alumni university attended by the STC graduates and their employment sector. According to the results of the STC Study, the majority of those working in the public employment sector graduated from public universities, whereas the majority of those working in the private sector graduated from private universities (see Appendix C.2.2 Figure 2). Therefore, based on the results of the STC Study, the likelihood of graduates who attended public universities working in the public employment sector is higher than those graduates who attended private universities; conversely, the likelihood of graduates who attended private universities working in the private employment sector is higher than those graduates who attended public universities.

### **C. Comparisons of Key Factors Affecting Graduates' Employment Durations**

According to the findings of the STC Study, the strength of all nine relationships between graduate employment duration and key factors were moderate; the average strength of the relationships between all nine key factors when paired with graduate employment duration were combined also yielded moderate results (see Appendix C.3.1 Table 1). The highest ranking relationship between a key factor and graduate employment duration was gender; in comparison, the lowest ranking paired relationship between graduate employment duration and a key factor was tied between the two following key factors: tawjihi school type and father's employment status. The remainder of this section will examine the nature of the relationship between the top three ranking paired key variable and graduate employment duration relationships, the first of which is gender.

According to the results of the STC Study, the relationship between gender and graduate employment duration was highly significant and strongly moderate. In order to facilitate a better understanding of how the relationship between gender and graduate employment duration top ranking paired variable relationship a chart was composed examining the distribution of STC Study respondents by their gender and duration of most recent employment. The results of the STC Study indicate that the affect of gender on graduate employment duration is most significant at the two extremes: those with employment duration of more than 36 months, and those with employment durations between 0 and 12 months (see Appendix C.3.1 Figure 1); those graduates with the longest employment durations were twice as likely to be female rather than male, whereas those graduates with the shortest employment durations were more than twice as likely to be male. However, although the results of the STC indicate that female graduates tend to have longer employment durations than their male counterparts, it is premature to assume that females are more loyal or more devoted to their work than females based on these statistics alone. Unfortunately, although the STC research design included an open-ended question (Q18 of

the questionnaire, see Appendix D.2) specifically addressing the reason for leaving their employment (via promotion or otherwise), nearly all of the STC respondents left this question blank. Therefore, there is simply not enough information regarding the reason for short employment durations able to clarify the findings of the affect of gender on graduate employment duration any further; future investigations and studies are warranted by the results of the STC Study in order to examine this relationship.

The second highest ranking key factor affecting graduate employment duration is educational specialization; the relationship between educational specialization and graduate employment duration strongly moderate and statistically significant. In order to illustrate the nature of the relationship between the two paired variables a chart was composed examining the distribution of STC Study respondents by their educational specializations and employment durations. According to the results of the STC Study, the vast majority (about 65%) graduates who specialized in engineering had short employment durations, between 0 and 12 months; in contrast, the majority (approximately 50%) of the graduates who specialized in either: shari'a and law, or education, had long employment durations, more than 36 months (see Appendix C.3.2 Figure 1). However, as discussed in earlier in this section, the STC Study data doesn't have enough information available regarding high employment turn-over's to infer more from the findings of the affect of educational specialization on employment duration. Therefore, although the results of the STC data indicate the presence of a strongly moderate correlation between various educational specializations and employment sector, further investigation and studies will be needed in order to access what exactly the affects are.

The third highest ranking key factor affecting graduate employment duration is university grades; the relationship between university grades and graduate employment duration is moderate and statistically significant. In order to understand the nature of the relationship between the two paired variables a chart was composed examining the distribution of STC Study respondents by their university grades and employment durations. According to the results of the STC Study, the general trends coincide with common sense: graduates with high university grades have longer employment durations than those with low university grades (see Appendix C.3.2 Figure 2). The majority of the graduates with the shortest employment durations (between 0 and 12 months) had the lowest university grade levels (satisfactory); furthermore, the majority of those graduates employed between 13 and 36 months had the highest university grade levels (see Appendix C.3.2 Figure 2). However, the results of the STC indicate that at the longest employment duration (more than 36 months), the majority of the graduates were at the lower end of the scale of university grades (good); this finding is most likely a result of the unavailability of data regarding the exact nature of employability turn-over's, and not an indication of meritocracy ensuring employment success (if success is being measures in terms of duration). Therefore, it is clear that further research on employment longevity is necessitated to determine what the affects of university grades have on employment durations.

#### **D. Comparisons of the Relationships Between Key Factors and Graduates' Labor Market Relationships, Employment Sectors, and Employment Durations**

According to the results of the STC Study, when comparing the three variables: graduates' labor market relationships, employment sectors, and employment durations, the variable with the highest overall association with all nine key factors examined is: employment

sector, which, when tested yielded moderate correlations on the average (see Appendix C.2.1 Table 1). The second most correlated of the three variables with the key factors is: graduate labor market relationship, which also yielded a moderate level of correlation with the key factors tested (see Appendix C.1.1 Table 1). The least associated variable with the nine key factors examined is: employment duration, which although yielded a moderate level of correlation with the key factors, was found to be the least correlated in relation to the other two variables tested in the study (see Appendix C.3.1 Table 1). Therefore, based on overall averages, graduate employment sector is the most significant variable of the three examined in the STC Study.

In accordance with the findings of the STC Study, when comparing the correlations of all nine key factors on all three variables, the most significant paired relationship is between educational specialization and employment sector (see Appendix C.2.1 Table 1). The second most significant relationship between a key factor and variable is a tie between the following two paired relationships: that between a mother's employment status and graduate labor market relationship, and father's employment status and graduate employment sector (see Appendices C.1.1 Table 1 and C.2.1 Table 1). The third most significant paired relationship between a key factor and variable is gender and employment duration (see Appendix C.3.1 Table 1).

In comparison, the result of the findings and analysis of the STC Study indicate, that the least significant paired relationship between a key factor and variable is a tie between the following two paired relationships: that between gender and employment sector, and mother's employment status and employment sector (see Appendix C.2.1 Table 1). The second least significant paired relationship between a key factor and variable is father's employment status and graduates' labor market relationship (see Appendix C.1.1 Table 1). The third least significant paired relationship between a key factor and variable is a tie between the following three paired relationships: that between university grades and graduates' labor market relationship, and that between tawjihi school type and employment duration, and father's employment status and employment duration (see Appendices C.1.1 Table 1 and C.3.1 Table 1).

In conclusion, the findings of the STC Study indicate that all three variables: graduates' labor market relationships, graduates' employment sectors, and graduates' employment durations, are all significantly related to the key factors examined, although to varying degrees. Hence, the STC Study has successfully identified three specific variables affecting Jordanian graduates in the labor market: graduate labor market relationships, employment sector, and employment duration. In addition, out of all twenty-seven paired relationships between key factors and the three variables, an overwhelming majority, twenty-five of them, yielded moderate or strong statistically-significant relationships. Therefore, it can also be concluded that the STC Study has identified nine key factors that affect Jordanian graduates in the labor market, although to varying degrees: gender, tawjihi school type, family economic status, university type, educational specialization, university grades, father's employment status, and mother's employment status.



## **Conclusions**

### **A. Overall Conclusions of Employment Skills by Skill Group Category: Basic, Higher-Order, and Affective**

- 1) Basic employment skills were identified by the graduates as the most useful skill group category.
- 2) The basic skill with the highest overall usefulness rating is communication skills.
- 3) The higher-order skill with the highest overall usefulness rating is lifelong learning skills.
- 4) The affective skill with the highest overall usefulness rating is teamwork skills.

### **B. Conclusions of Employment Skills and Graduates' Labor Market Relationships**

- 1) All ten employability skills tested are moderately-correlated with graduates' labor market relationships.
- 2) All three employability skill groups are moderately-correlated with graduates' labor market relationships.
- 3) Basic employability skills have the highest impact on a graduate's relationship to the labor market.
- 4) The employability skill with the highest ranking correlation to a graduate's position in the labor market is tied between the following four different skills: job-specific skills, foreign language skills, lifelong learning skills, and leadership skills.

### **C. Conclusions of Employment Skills and Graduates' Employment Sectors**

- 1) The majority of the relationships tested between employment skills and graduates' employment sectors were found to be moderately-related to one another.
- 2) Negotiation skills and teamwork skills were both found to be insignificantly-correlated with graduates' employment sector.
- 3) All three employment skill group categories were found to be moderately-correlated with graduates' employment sector.

- 4) Both basic and affective skills have the most significant correlation with graduates' employment sector.
- 5) Leadership skills are the highest ranking correlated employability skill with graduates' employment sector.
- 6) There are significant differences between the usefulness ratings of public and private sector graduates: in general, publicly-employed respondents rated the usefulness of teamwork skills higher than those who worked in the private sector.
- 7) Communication skills are the second highest ranking correlated employability skill with graduates' employment sector.
- 8) All "other" sector employed graduates rated the usefulness of communication skills as either "useful" or "very useful".
- 9) Foreign language skills were found to be the third highest ranking correlated employability skill with graduates' employment sector.
- 10) Privately-employed graduates tend to rate the usefulness of foreign language skills higher than those that are publicly-employed.

#### **D. Conclusions of Employment Skills and Graduates' Employment Durations**

- 1) All ten employability skills tested are moderately-correlated with graduates' employment duration.
- 2) All three employability skill groups are moderately-correlated with graduates' employment durations.
- 3) Affective skills have the most significant correlation with graduates' employment duration.
- 4) Lifelong learning skills and teamwork skills tied with having the highest ranking correlation with graduates' employment durations.
- 5) The relationship between lifelong learning skills and graduate employment duration is most significant among those respondents with employment durations of more than 36 months, whereby the usefulness ratings of lifelong learning skills were all either "useful" or "very useful".
- 6) The most significant finding regarding the relationship between teamwork skills and graduates' employment durations is that all of those who rated teamwork skills as "not useful at all" were those graduates with the shortest employment durations.

## **E. Conclusions of Key Affective Factors and Graduates' Labor Market Relationships**

- 1) The majority of the relationships tested between the nine key factors and graduates' labor market relationships were found to be moderately-correlated to one another.
- 2) Father's employment status is the only key factor that wasn't found to be statistically-correlated with graduates' labor market relationships.
- 3) The top ranking key factor affecting graduates' labor market relationship is mother's employment status.
- 4) The affect of a mother's employment status on graduates' labor market relationships is positive: the status of the relationship of a graduate to the labor market significantly improves when their mother's are employed.
- 5) Tawjihi school type is the second highest ranking key factor affecting graduates' labor market relationships.
- 6) The affect of attending private tawjihi schools on graduate labor market relationships is slightly more positive than the affect of attending public tawjihi schools on labor market relationships.
- 7) Educational specialization is the third highest ranking key factor affecting graduates' labor market relationships.
- 8) The affect of educational specialization on graduate labor market relationships is significant and varies according to the type of educational specialization studied.

## **F. Conclusions of Key Affective Factors and Graduates' Employment Sectors**

- 1) The majority of the relationships tested between the nine key factors and graduates' employment sectors were found to be moderately-correlated to one another.
- 2) Gender and mother's employment status are the only key two factors that weren't found to be statistically-correlated with graduates' employment sectors.
- 3) The top ranking key factor affecting graduates' employment sectors is educational specialization.
- 4) The affect of educational specialization on graduate employment sector is highly significant: the likelihood of working in either public or private employment sectors is significantly dependent upon the type of educational specialization studied.

- 5) The affect of a mother's employment status on graduates' labor market relationships is positive: the status of the relationship of a graduate to the labor market significantly improves when their mother's are employed.
- 6) Father's employment status is the second highest ranking key factor affecting graduates' employment sector.
- 7) Graduates whose father's are unemployed or working are more likely to work in the public sector rather than private sector; conversely, graduates whose father's are employed are more likely to working in the private sector.
- 8) The affect of attending private tawjihi schools on graduate labor market relationships is slightly more positive than the affect of attending public tawjihi schools on labor market relationships.
- 9) Type of alumni university is the third highest ranking key factor affecting graduates' employment sector.
- 10) The likelihood of graduates who attended public universities working in the public employment sector is higher than those graduates who attended private universities; conversely, the likelihood of gradates who attended private universities working in the private employment sector is higher than those graduates who attended public universities.

### **G. Conclusions of Key Affective Factors and Graduates' Employment Durations**

- 1) All of the relationships tested between the nine key factors and graduates' employment durations were found to be moderately-correlated to one another.
- 2) The highest ranking relationship between a key factor and graduate employment duration is gender.
- 3) The affect of gender on graduate employment duration is most significant at the two extremes; those graduates with the longest employment durations were twice as likely to be female rather than male, whereas those graduates with the shortest employment durations were more than twice as likely to be male.
- 4) The lowest ranking paired relationship between graduate employment duration and a key factor was tied between the two following key factors: tawjihi school type and father's employment status.
- 5) Educational specialization is the second highest ranking key factor affecting graduates' employment durations.

- 6) The STC Study data indicate the presence of a strongly moderate correlation between various educational specializations and employment sector, however further investigation and studies will be needed in order to access what exactly the affects are.
- 7) A university grade is the third highest ranking key factor affecting graduates' employment durations.
- 8) The relationship between university grades and graduate employment duration is moderate and statistically significant: in general, graduates with high university grades have longer employment durations than those with low university grades.
- 9) Further research on employment longevity (specifically addressing the issue of promotions) is necessitated to better determine what the affects of university grades have on employment durations.

## **H. Overall Conclusions of Key Affective Factors**

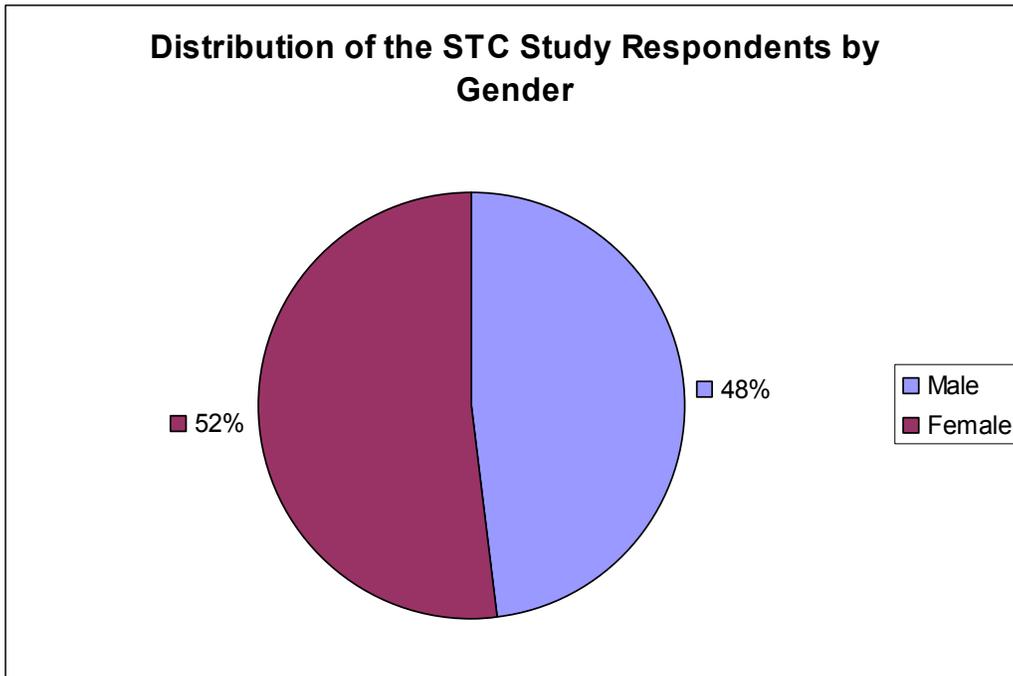
- 1) All three variables: graduates' labor market relationships, graduates' employment sectors, and graduates' employment durations, are all significantly related to the key factors examined, although to varying degrees.
- 2) Graduates' employment sector is the highest correlated of all three variables when paired with all nine of the key factors tested in this study.
- 3) In accordance with the findings of the STC Study, when comparing the correlations of all nine key factors on all three variables, the most significant paired relationship is between educational specialization and employment sector.
- 4) The second most significant relationship between a key factor and variable is a tie between the following two paired relationships: that between a mother's employment status and graduate labor market relationship, and father's employment status and graduate employment sector.
- 5) The third least significant paired relationship between a key factor and variable is a tie between the following three paired relationships: that between university grades and graduates' labor market relationship, and that between tawjihi school type and employment duration, and father's employment status and employment duration.
- 6) The result of the findings and analysis of the STC Study indicate that the least significant paired relationship between a key factor and variable is a tie between the following two paired relationships: that between gender and employment sector, and mother's employment status and employment sector.
- 7) The second least significant paired relationship between a key factor and variable is father's employment status and graduates' labor market relationship.

- 8) The vast majority of the twenty-seven paired relationships, between key factors and the three variables, yielded moderate or strong statistically-significant relationships.
- 9) The STC Study has successfully identified three specific variables affecting Jordanian graduates in the labor market: graduates' labor market relationships, graduates' employment sectors, and graduates' employment durations.
- 10) The STC Study has identified nine key factors that affect Jordanian graduates in the labor market, although to varying degrees: gender, tawjihi school type, family economic status, university type, educational specialization, university grades, father's employment status, and mother's employment status.

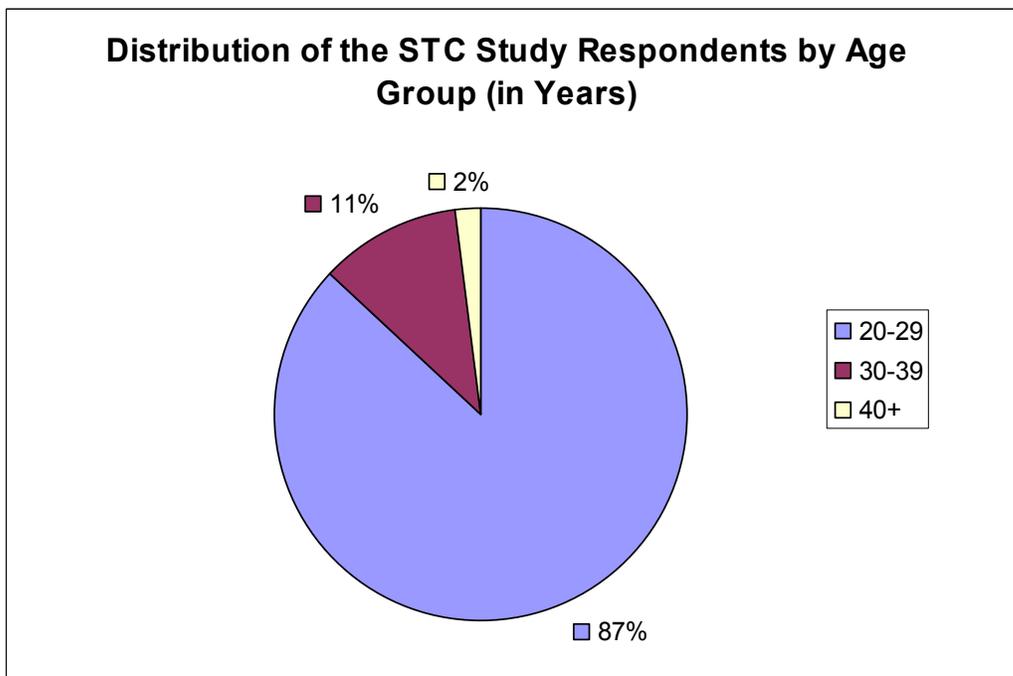
**Appendix Section A : The General Trends of the STC Study Respondents**



## Appendix A.1



**Figure 1:** The values represent valid percents.



**Figure 2:** The values represent valid percents.

## Appendix A.2

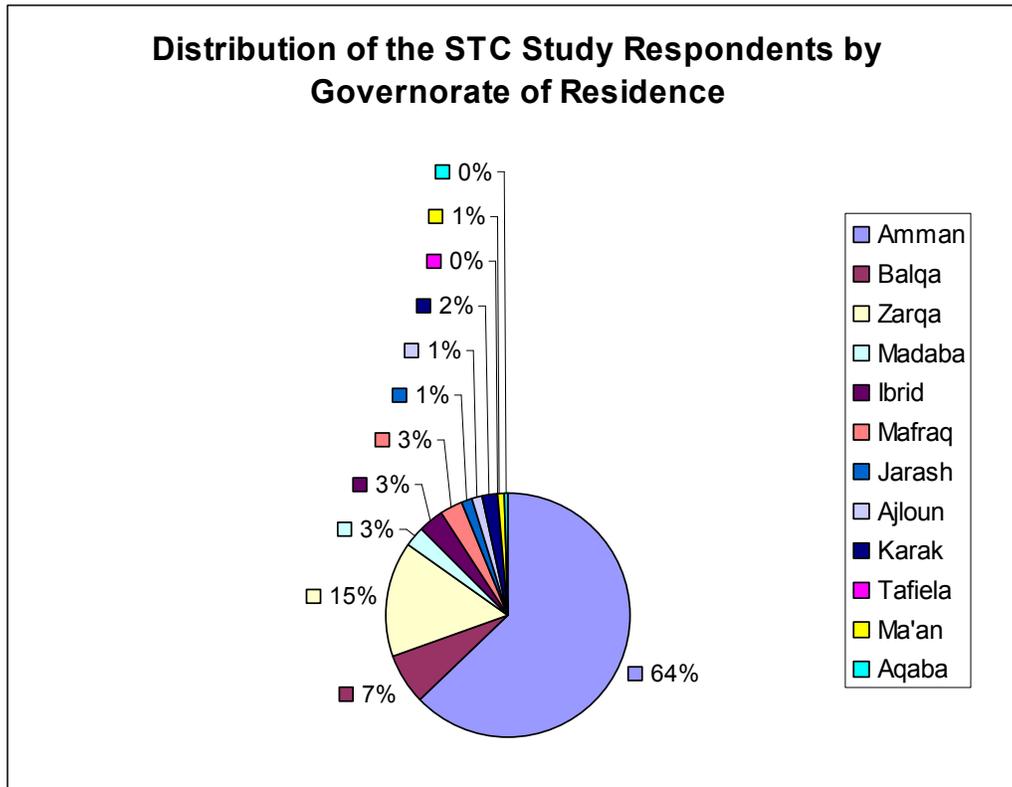


Figure 1: The values represent valid percents.

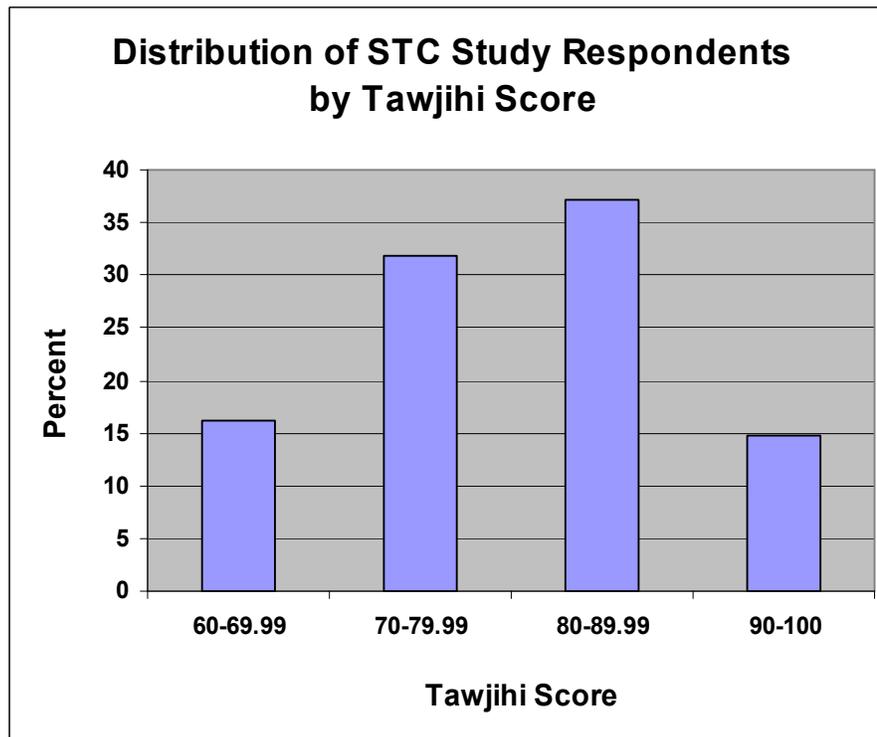
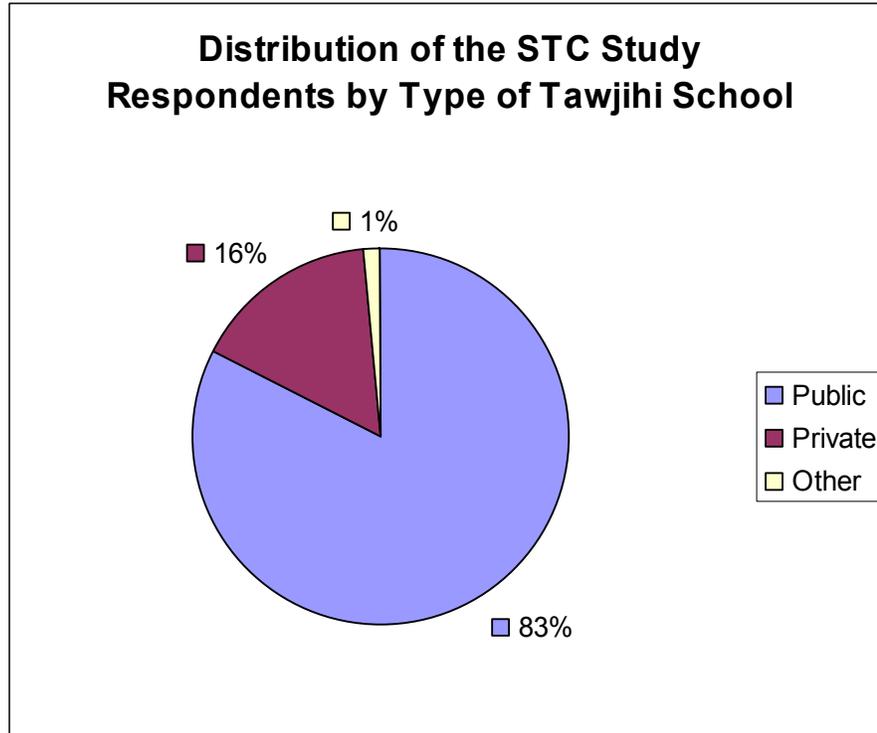
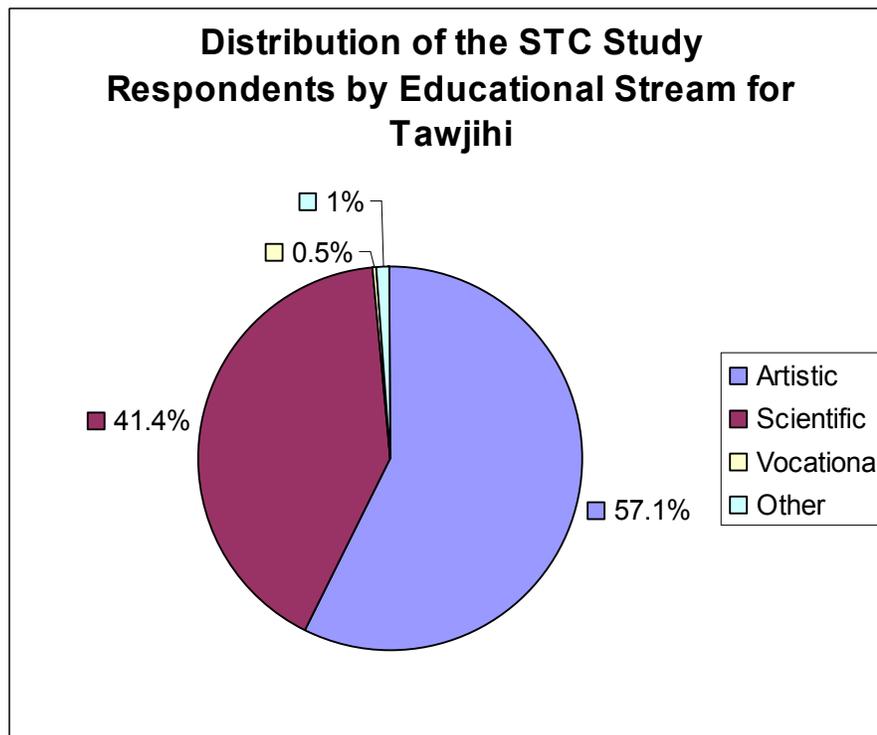


Figure 2: The values represent valid percents.

### Appendix A.3



**Figure 1:** The values represent valid percents.



**Figure 2:** The values represent valid percents.

## Appendix A.4

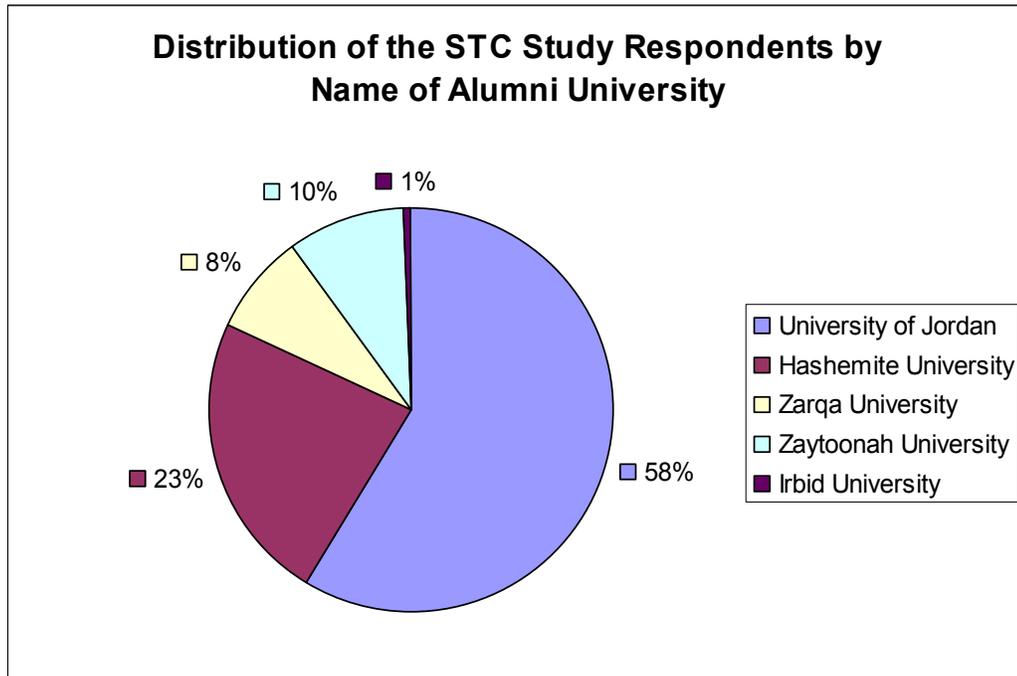


Figure 1: The values represent valid percents.

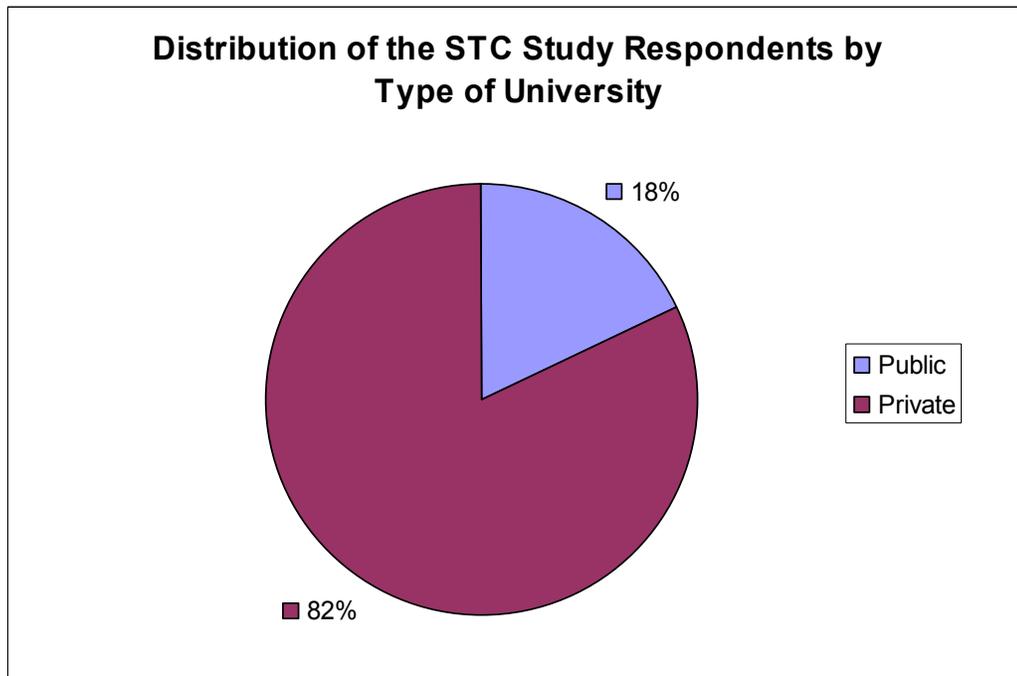


Figure 2: The values represent valid percents.

## Appendix A.5

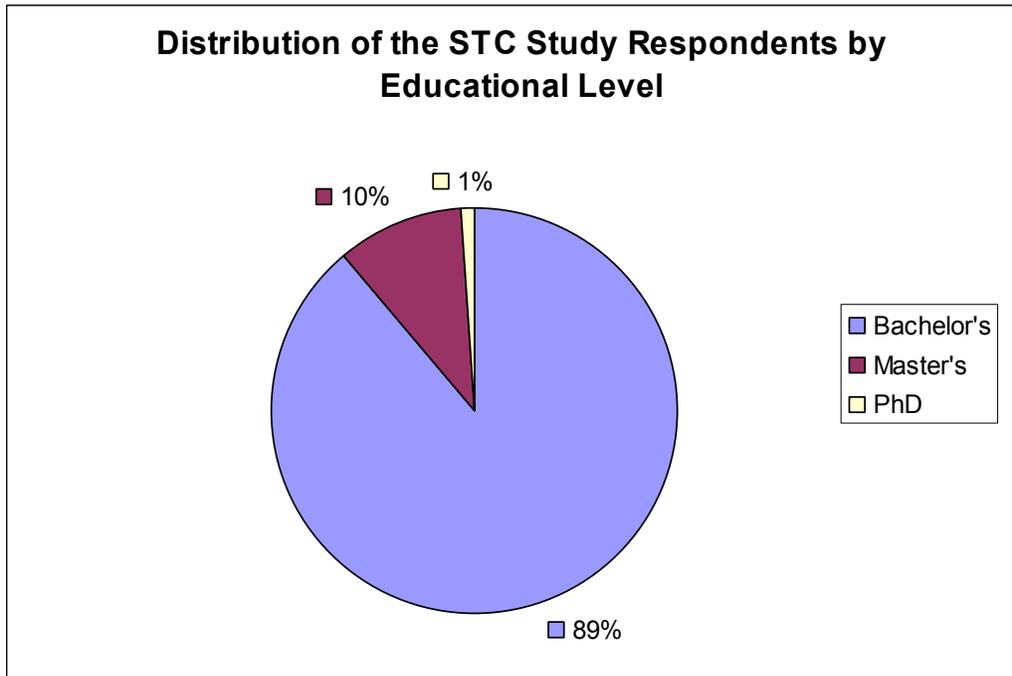


Figure 1: The values represent valid percents.

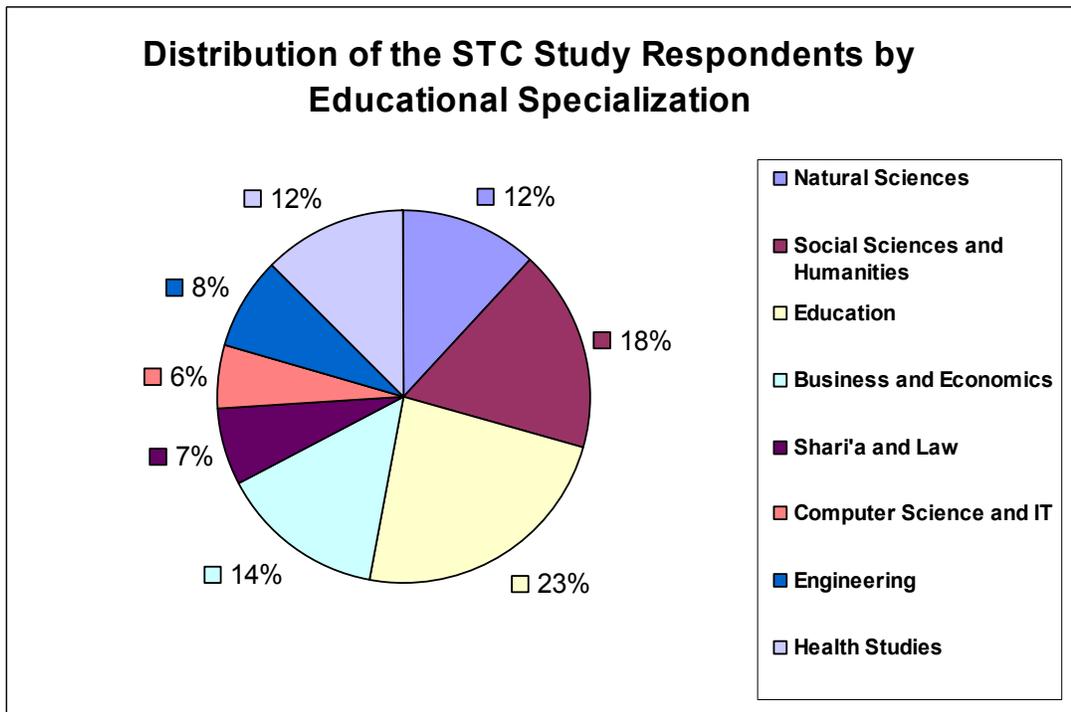
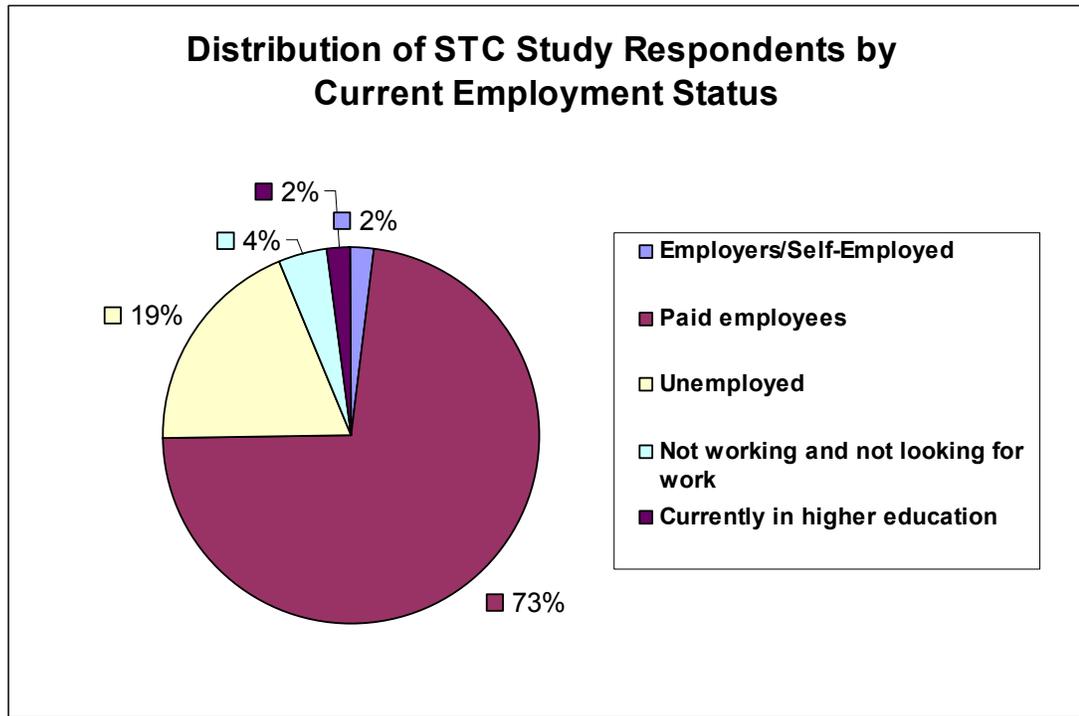
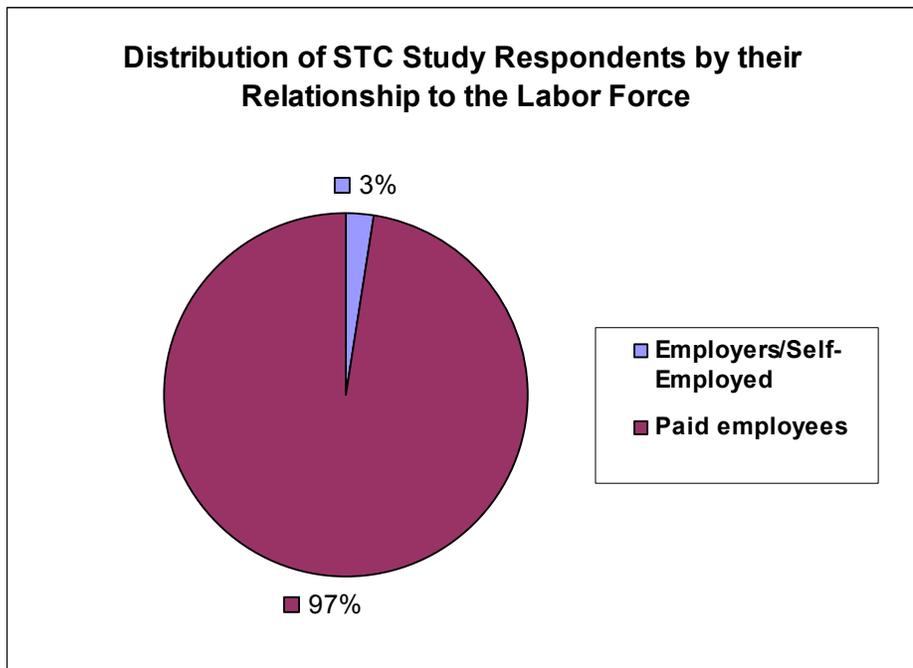


Figure 2: The values represent valid percents.

## Appendix A.6

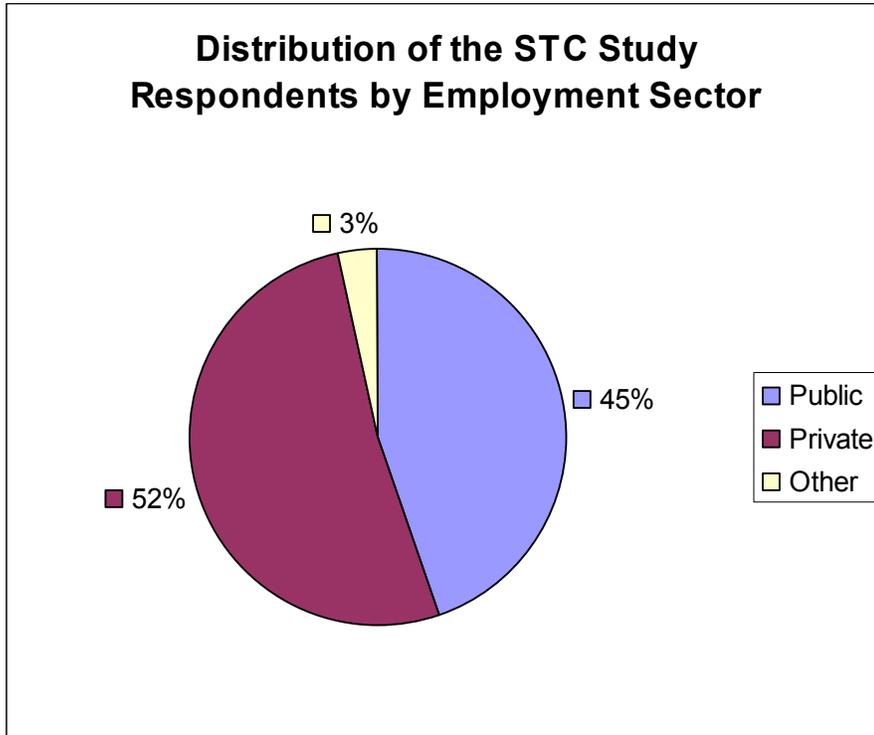


**Figure 1:** The values represent valid percents.

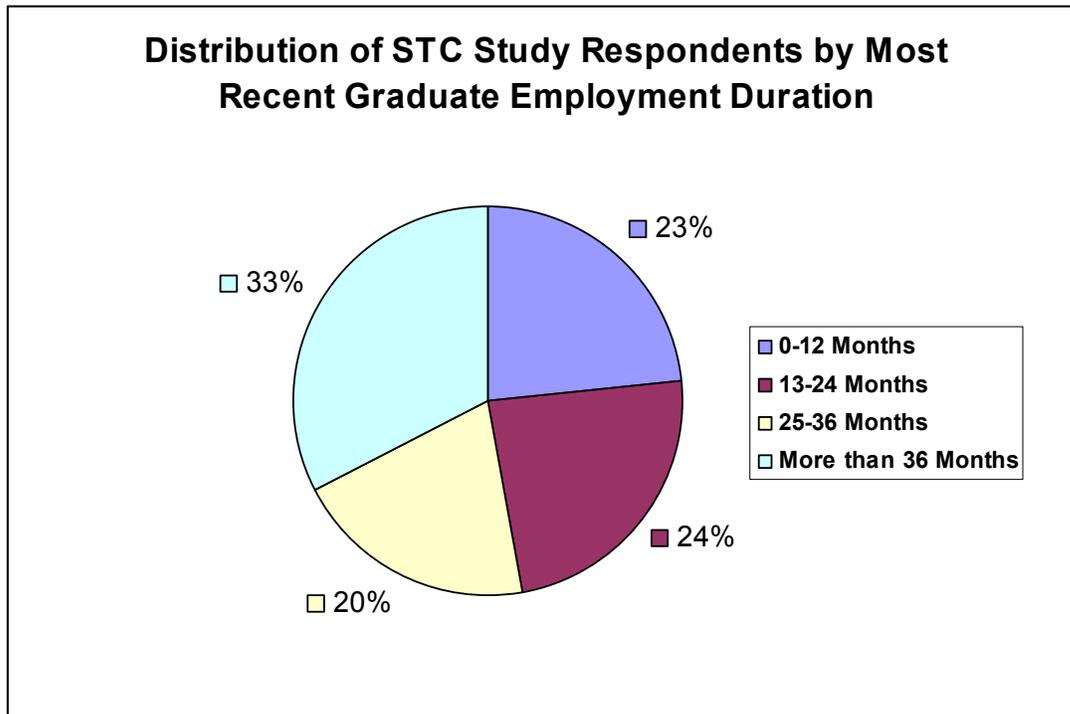


**Figure 2:** The values represent valid percents.

## Appendix A.7



**Figure 1:** The values represent valid percents.



**Figure 2:** The values represent valid percents.



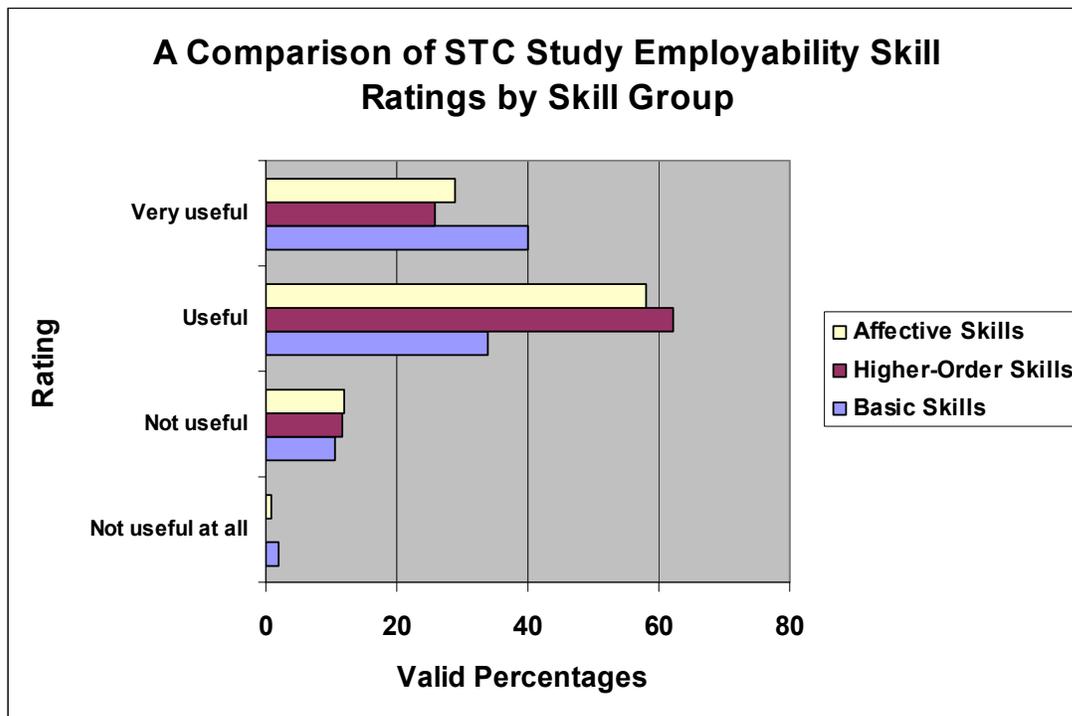
**Appendix Section B : The Effects of Employment Skills**



## Appendix B.1.1

<b>STC Study Employability Skills According to Their Skill Group</b>			
<b>Skill Groups</b>			
#	<b>Basic Skills [A]</b>	<b>Higher-Order Skills [B]</b>	<b>Affective Skills [C]</b>
1	Communication skills	Lifelong learning skills	Leadership skills
2	Job-specific skills	Problem-solving skills	Teamwork skills
3	ICT skills	Analytical skills	
4	Foreign language skills	Negotiation skills	

**Table 1:** The table represents all of the STC Study employability skills measured according to their skill group category.



**Figure 1:** The values represent valid percents.

## Appendix B.1.2

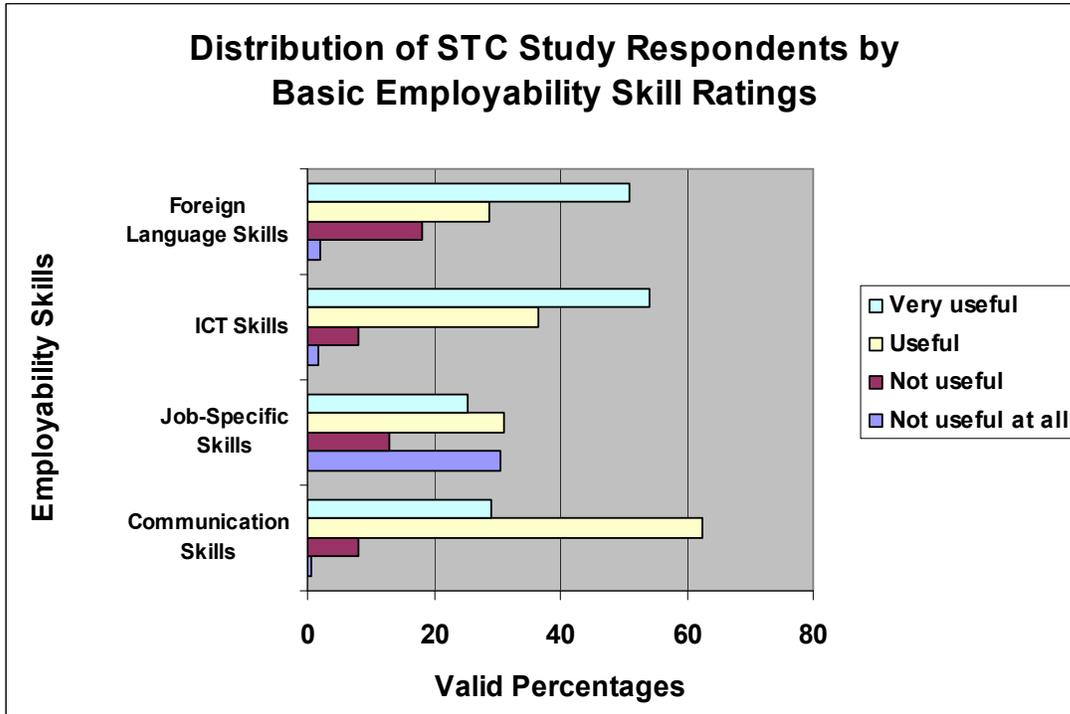


Figure 1: The values represent valid percents.

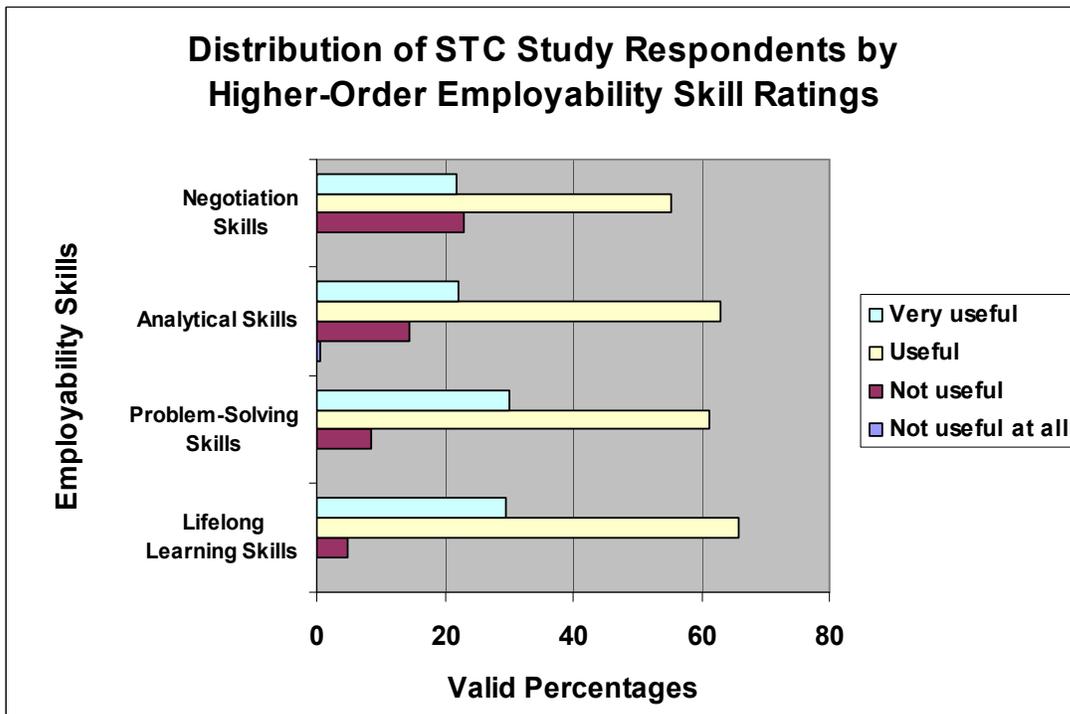
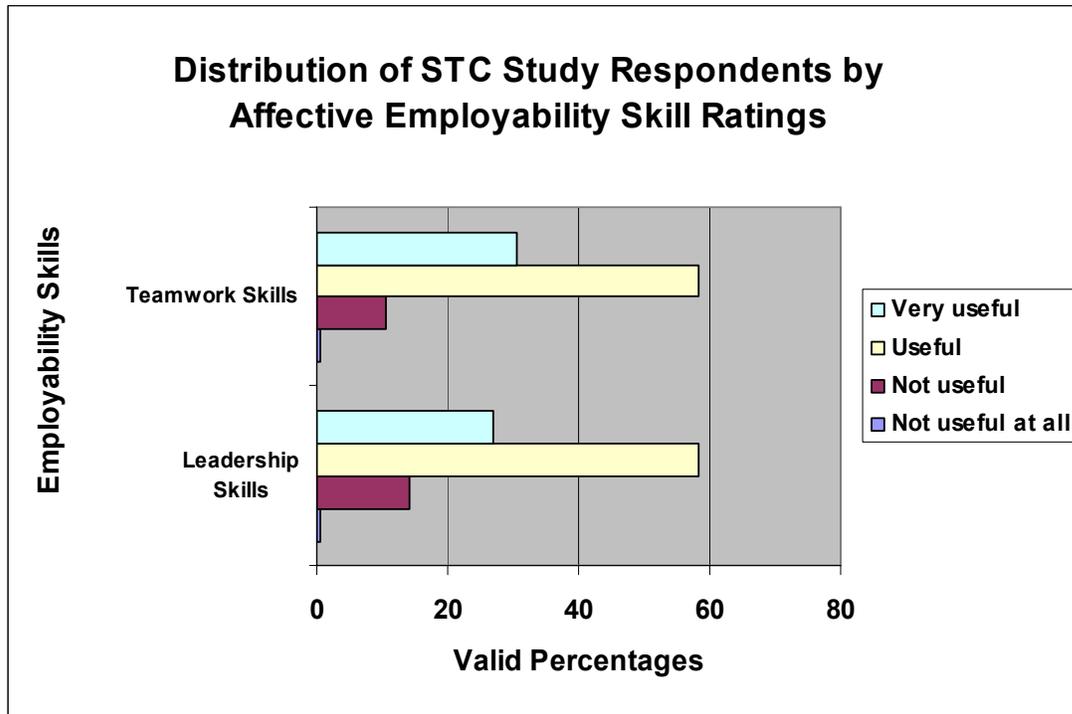


Figure 2: The values represent valid percents.

## Appendix B.1.3



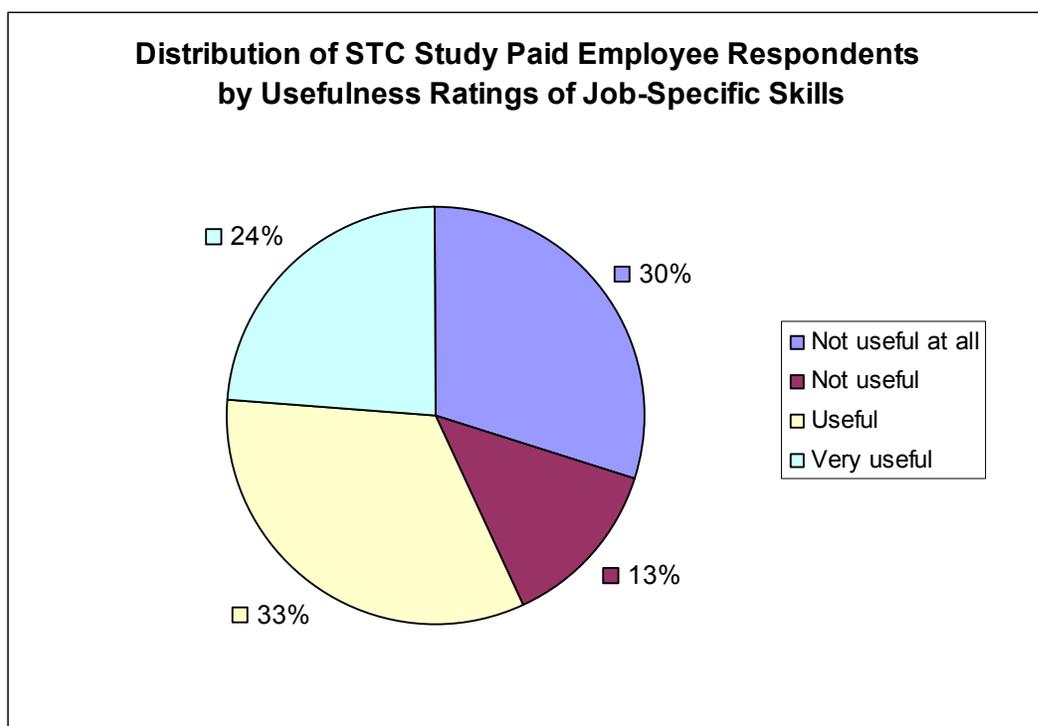
**Figure 1:** The values represent valid percents.

## Appendix B.2.1

**Comparisons of Associations between Employability Skills and Graduates' Relationship to the Labor Market by Skill Group**

#	<u>Skill Groups</u>		
	<i>Basic Skills</i>	<i>Higher-Order Skills</i>	<i>Affective Skills</i>
	<b>[A]</b>	<b>[B]</b>	<b>[C]</b>
1	0.15	0.16	0.16
2	0.16	0.12	0.14
3	0.12	0.15	
4	0.16	0.14	
<b>Average</b>	<b>0.16</b>	<b>0.15</b>	<b>0.15</b>

**Table 1:** The values represent Cramer's V values, which were used to measure of the association between each type of employability skill perception and the relationship of the graduate to the labor market as calculated independently of one another. "Average" values refer to the median of the median Cramer's V value per skill group, which were used to compare the relative associations between graduates' relationship to the labor market and each of the three employability skill groups independently of one another.



**Figure 1:** The values represent valid percents.

## Appendix B.2.2

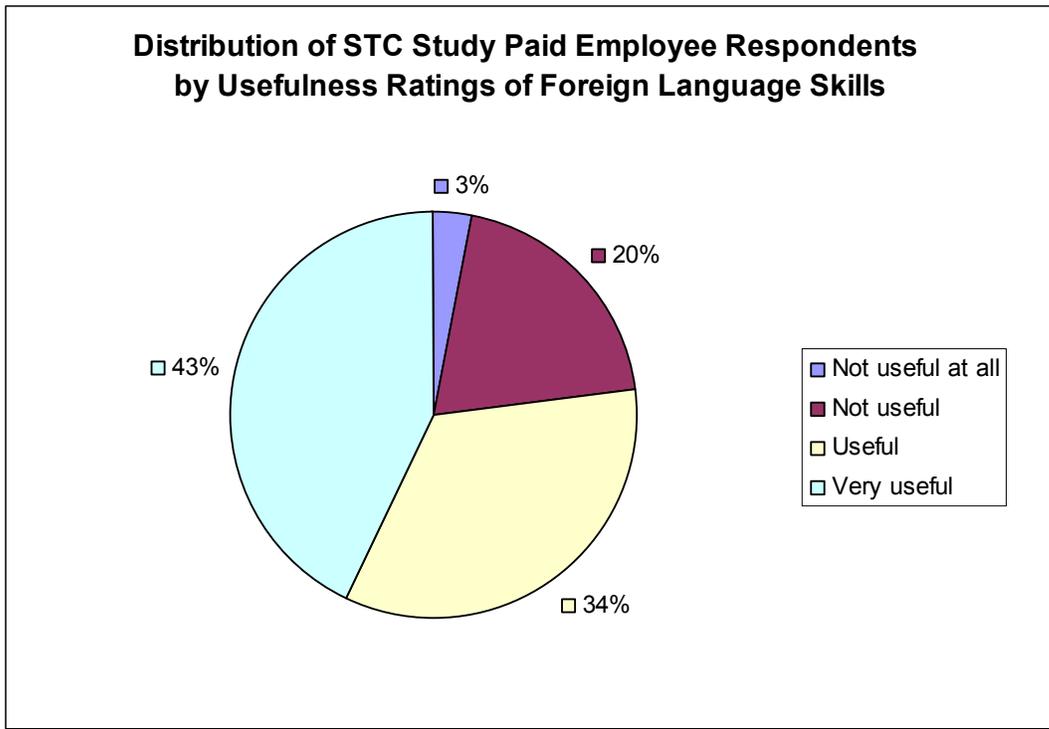


Figure 1: The values represent valid percents.

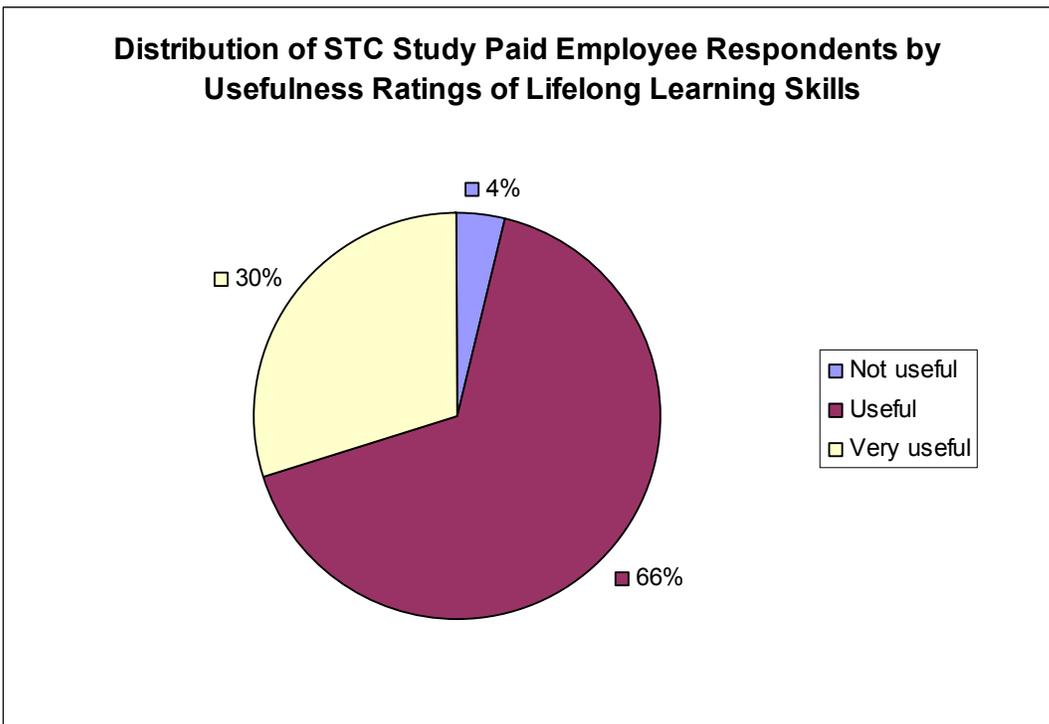
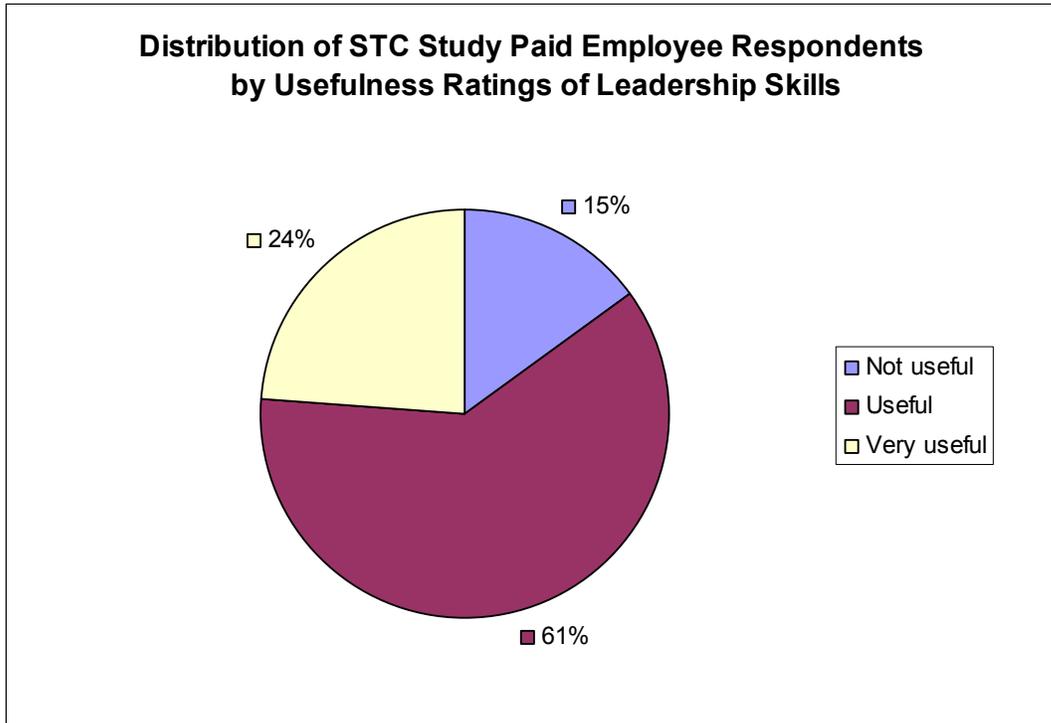


Figure 2: The values represent valid percents.

## Appendix B.2.3

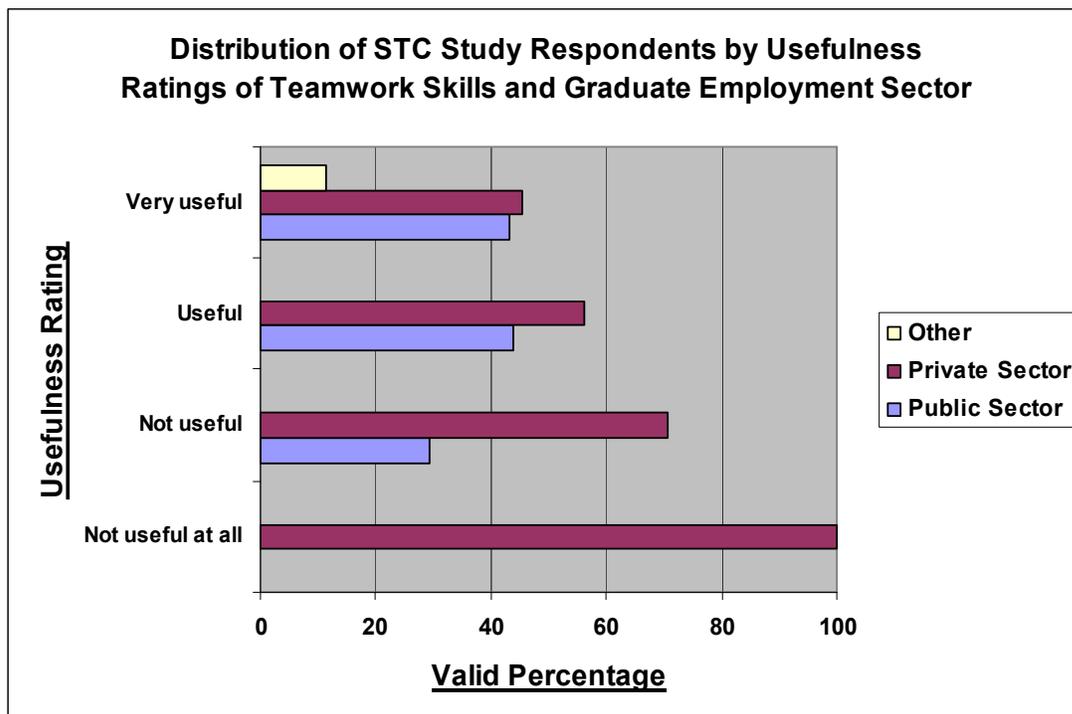


**Figure 1:** The values represent valid percents.

## Appendix B.3.1

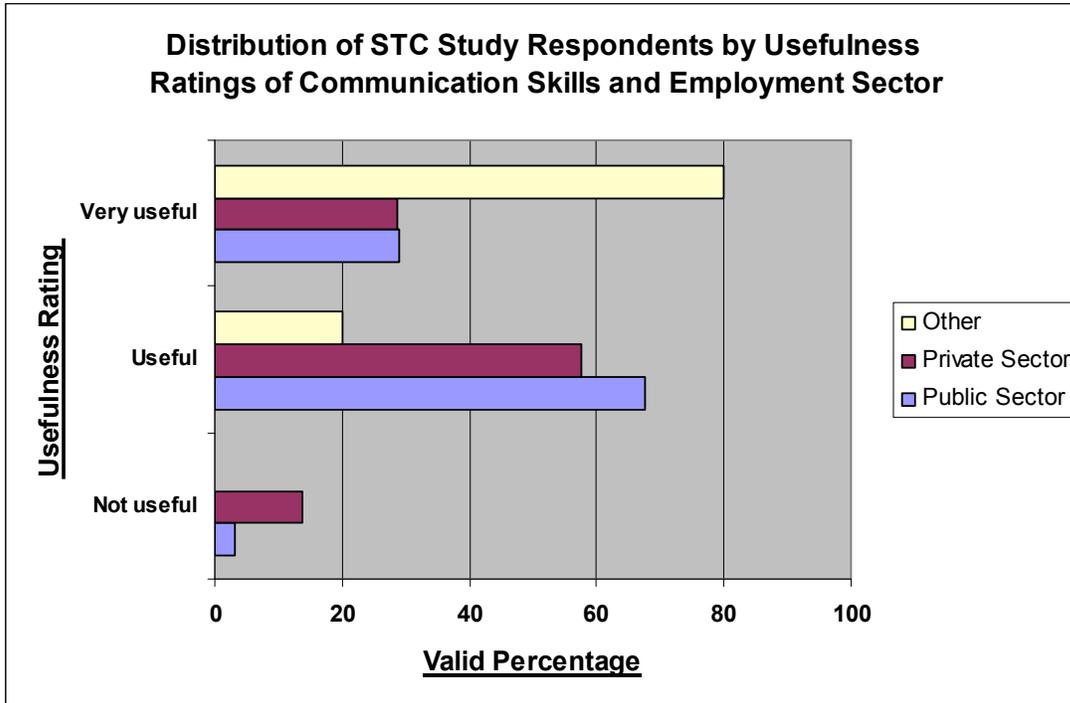
<b>Comparisons of Associations between Employability Skills and Graduate Employment Sector by Skill Group</b>			
#	<u>Skill Groups</u>		
	Basic Skills [A]	Higher-Order Skills [B]	Affective Skills [C]
1	0.19	0.12	0.22
2	0.14	0.14	0.10
3	0.13	0.11	
4	0.18	0.10	
<b>Average</b>	<b>0.16</b>	<b>0.12</b>	<b>0.16</b>

**Table 1:** The values represent Cramer’s V values, which were used to measure of the association between each type of employability skill perception and employment sector of the graduate as calculated independently of one another. “Average” values refer to the median of the median Cramer’s V value per skill group, which were used to compare the relative associations between graduate employment sector and each of the three employability skill groups independently of one another.

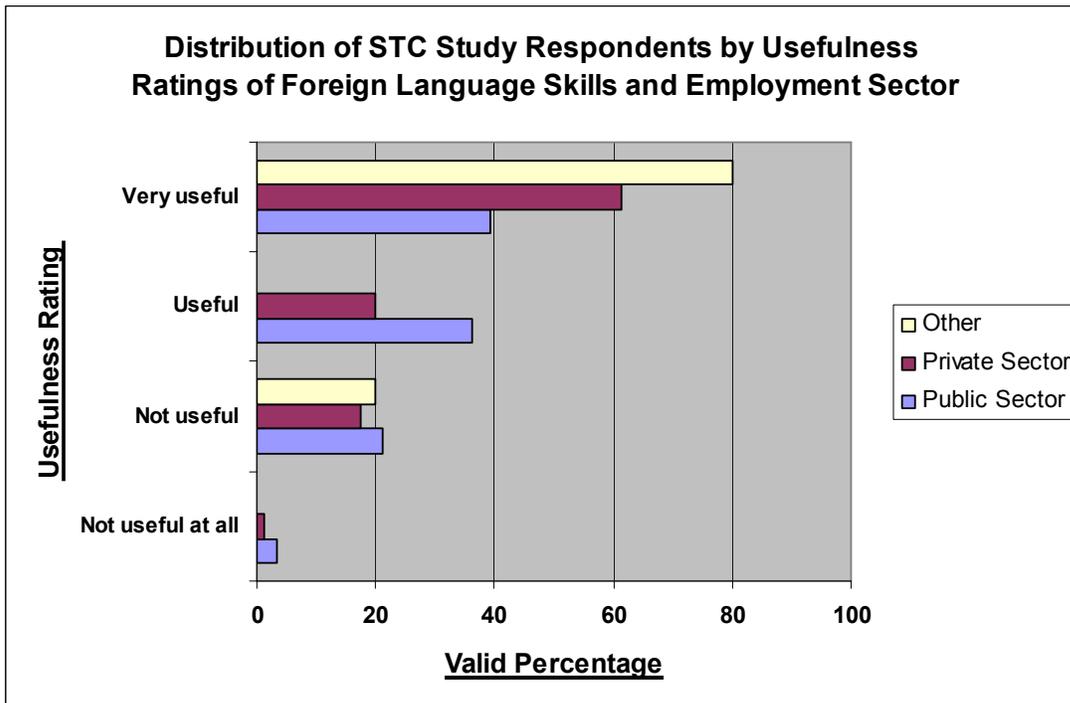


**Figure 1:** The values represent valid percents.

## Appendix B.3.2



**Figure 1:** The values represent valid percents.

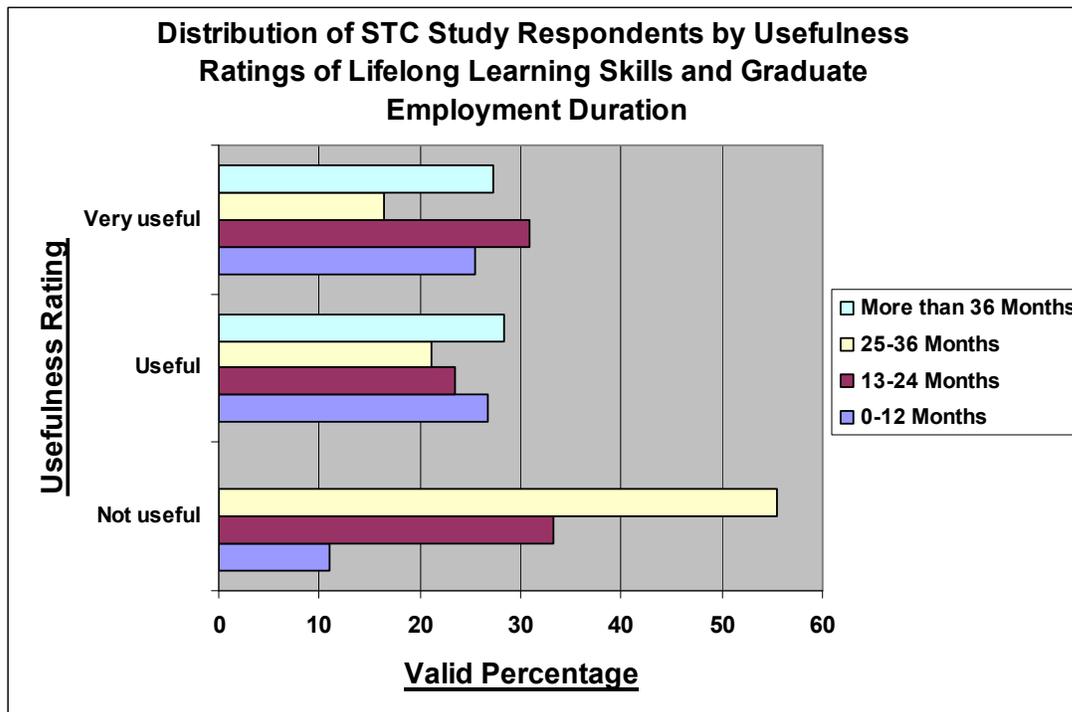


**Figure 2:** The values represent valid percents.

## Appendix B.4.1

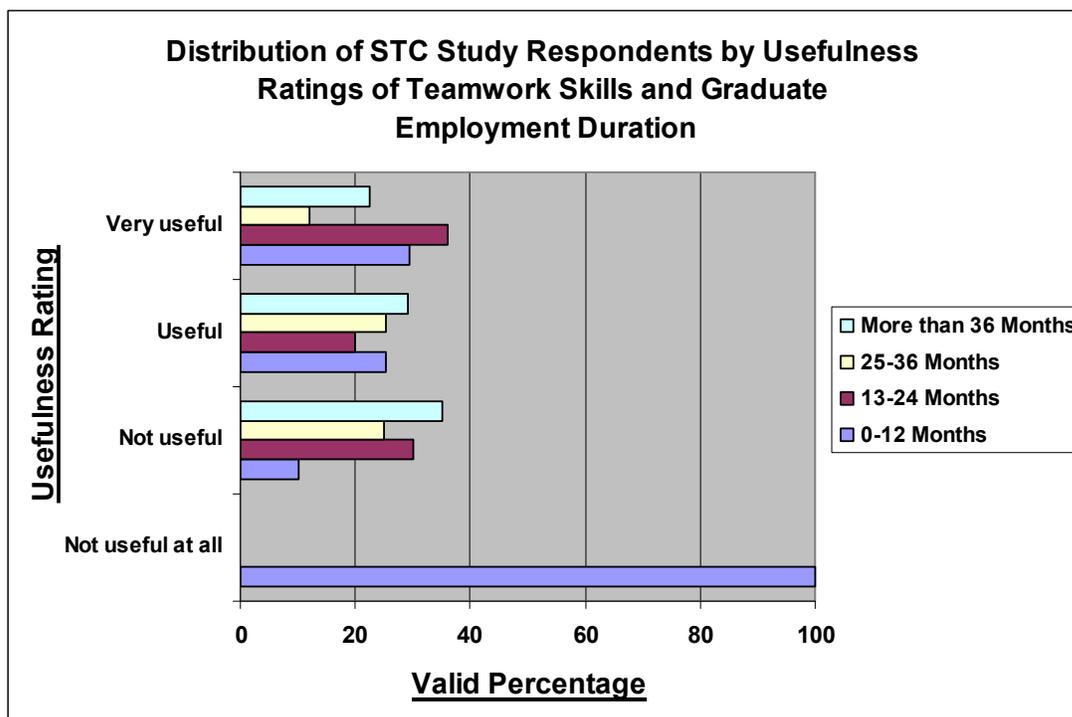
<b>Comparisons of Associations between Employability Skills and Graduate Employment Duration by Skill Group</b>			
#	<u>Skill Groups</u>		
	Basic Skills [A]	Higher-Order Skills [B]	Affective Skills [C]
1	0.13	0.16	0.13
2	0.15	0.12	0.16
3	0.14	0.12	
4	0.13	0.13	
<b>Average</b>	<b>0.14</b>	<b>0.13</b>	<b>0.15</b>

**Table 1:** The values represent Cramer’s V values, which were used to measure of the association between each type of employability skill perception and employment durations of the graduate as calculated independently of one another. “Average” values refer to the median of the median Cramer’s V value per skill group, which were used to compare the relative associations between graduate employment duration and each of the three employability skill groups independently of one another.



**Figure 1:** The values represent valid percents. “Employment Durations” were determined by the duration of the graduates’ most recent employment, ranging from 0 to more than 36 months.

## Appendix B.4.2



**Figure 1:** The values represent valid percents. “Employment Durations” were determined by the duration of the graduates’ most recent employment, ranging from 0 to more than 36 months.

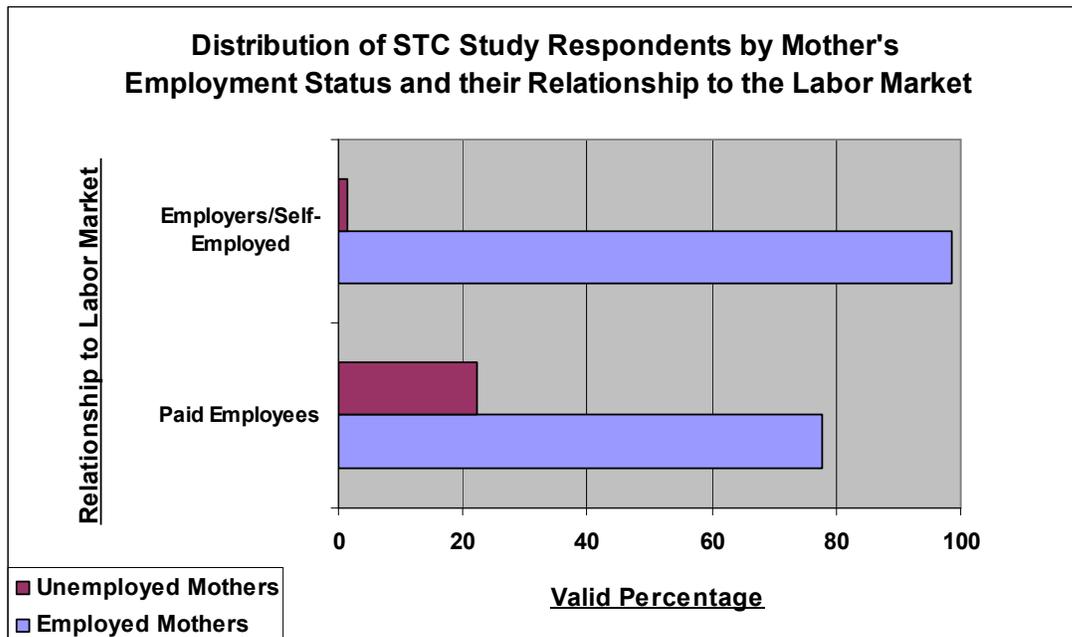
**Appendix Section C : Comparisons of Key Affective Factors**



## Appendix C.1.1

<b><i>A Comparison of Key Factors Affecting Graduates' Relationship to the Labor Market</i></b>		
<b>#</b>	<b>Key Factors</b>	<b>Cramer's V Values</b>
1	Gender	0.16
2	Tawjihi School Type	0.21
3	Family Economic Status	0.13
4	University Type	0.17
6	Educational Specialization	0.18
7	University Grades	0.11
8	Father's Employment Status	0.08
9	Mother's Employment Status	0.31
<b>Average</b>		<b>0.17</b>

**Table 1:** The values represent Cramer's V values, which were used to measure of the association between each of the key factors and the relationship of the graduate to the labor market as calculated independently of one another. The "average" values refer to the median Cramer's V values as calculated for the relationships between each of the paired factors are combined.



**Figure 1:** The values represent valid percents.

## Appendix C.1.2

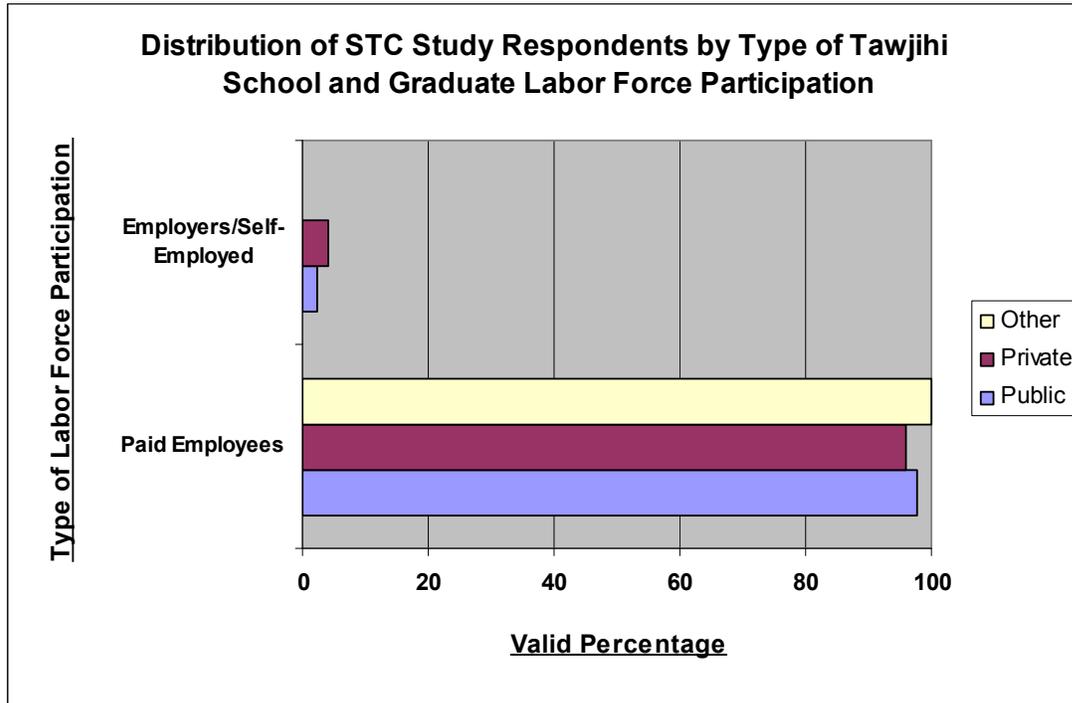


Figure 1: The values represent valid percents.

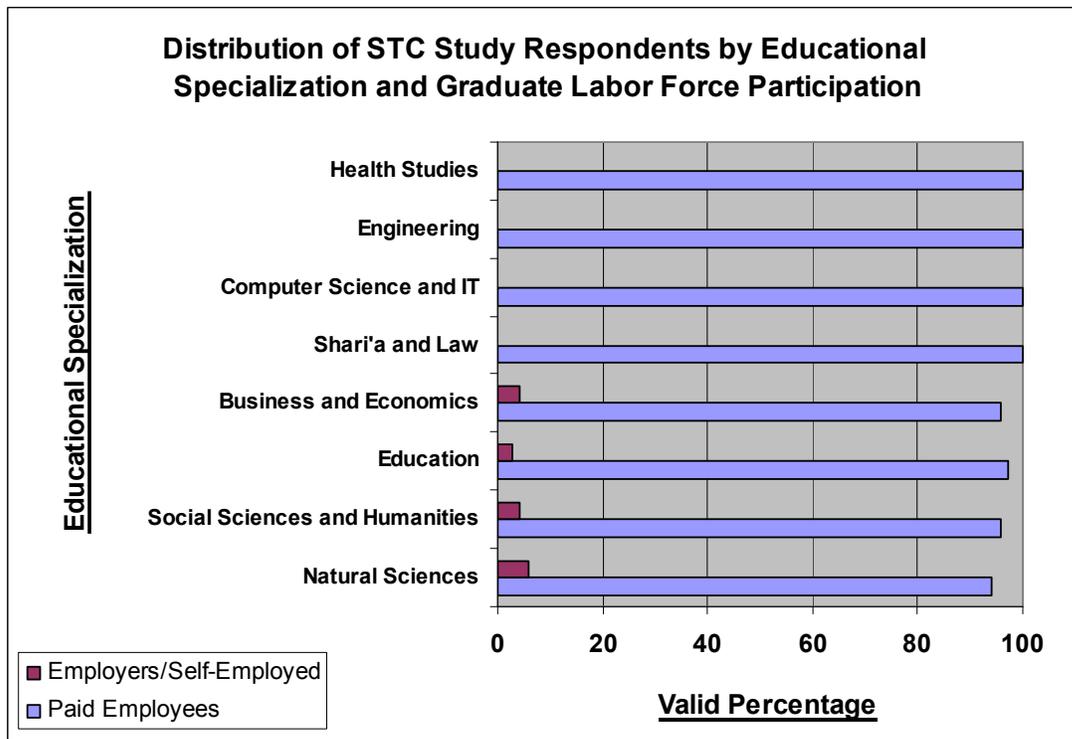
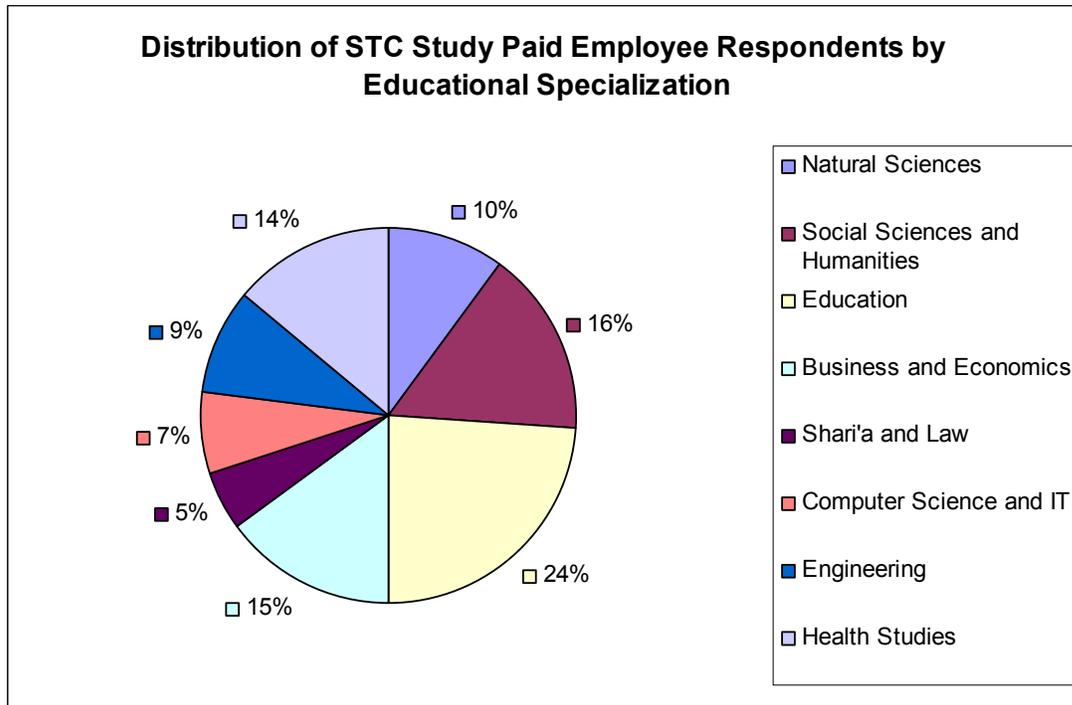


Figure 2: The values represent valid percents.

## Appendix C.1.3

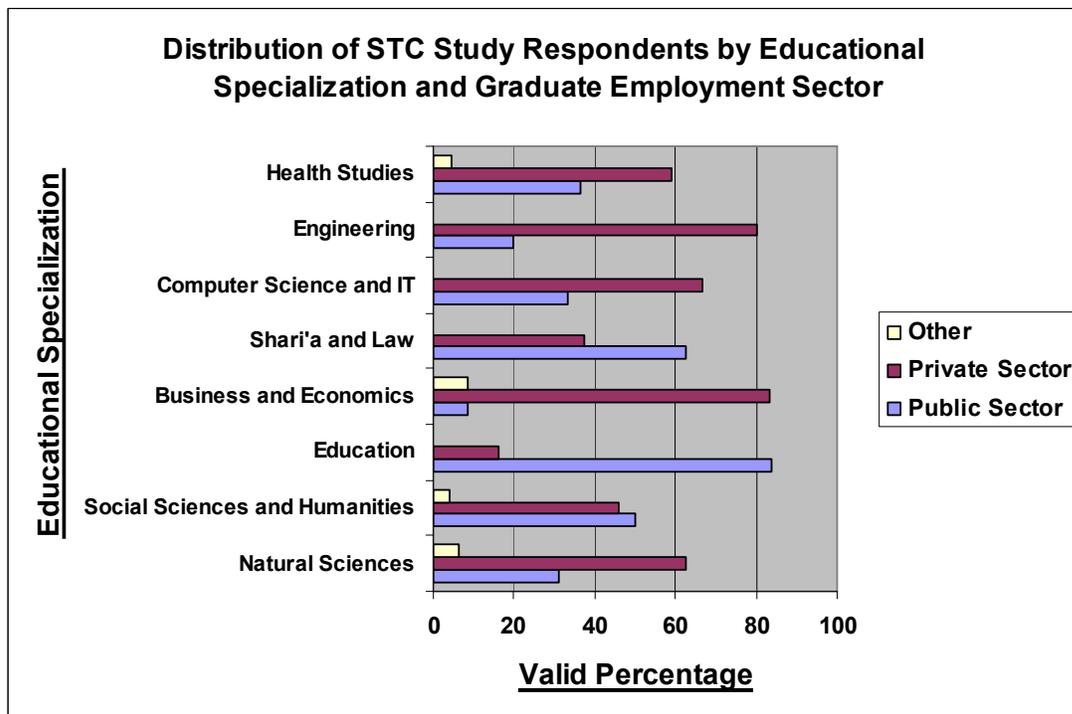


**Figure 1:** The values represent valid percents.

## Appendix C.2.1

<b><i>A Comparison of Key Factors Affecting Graduate Employment Sector</i></b>		
<b>#</b>	<b>Key Factors</b>	<b>Cramer's V Values</b>
1	Gender	0.06
2	Tawjihi School Type	0.19
3	Family Economic Status	0.19
4	University Type	0.22
6	Educational Specialization	0.38
7	University Grades	0.16
8	Father's Employment Status	0.31
9	Mother's Employment Status	0.06
<b>Average</b>		<b>0.19</b>

**Table 1:** The values represent Cramer's V values which were used to measure the association between each of the key factors and the employment sector of the graduate as calculated independently of one another. The "average" values refer to the median Cramer's V values as calculated for the relationships between each of the paired factors are combined.



**Figure 1:** The values represent valid percents.

## Appendix C.2.2

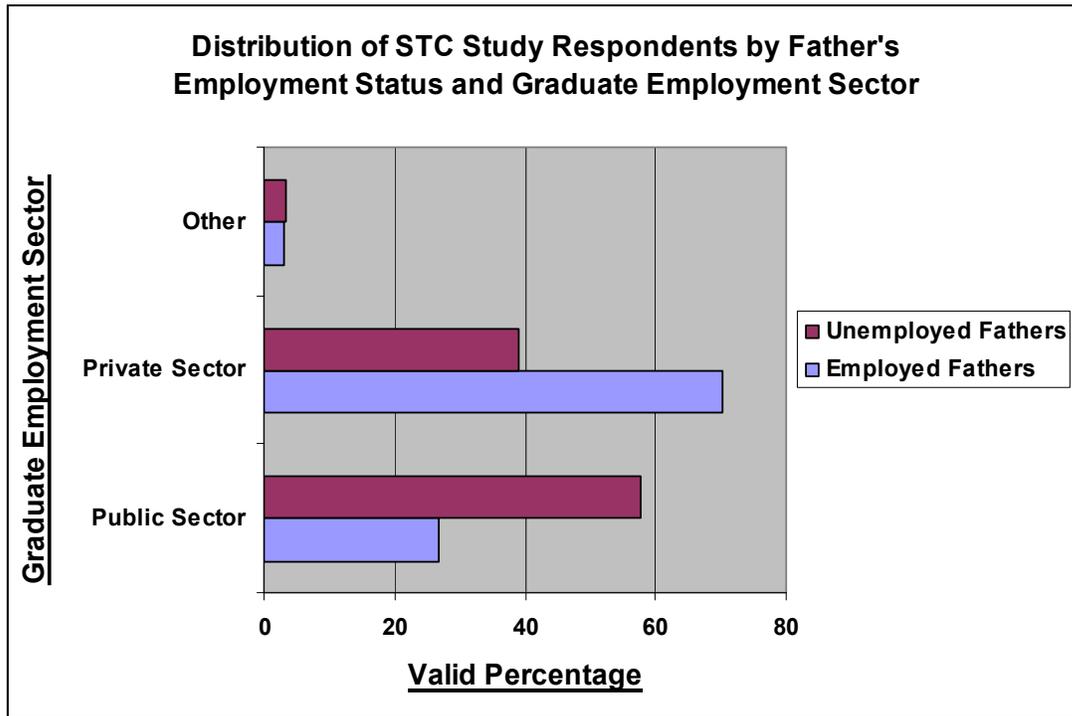


Figure 1: The values represent valid percents.

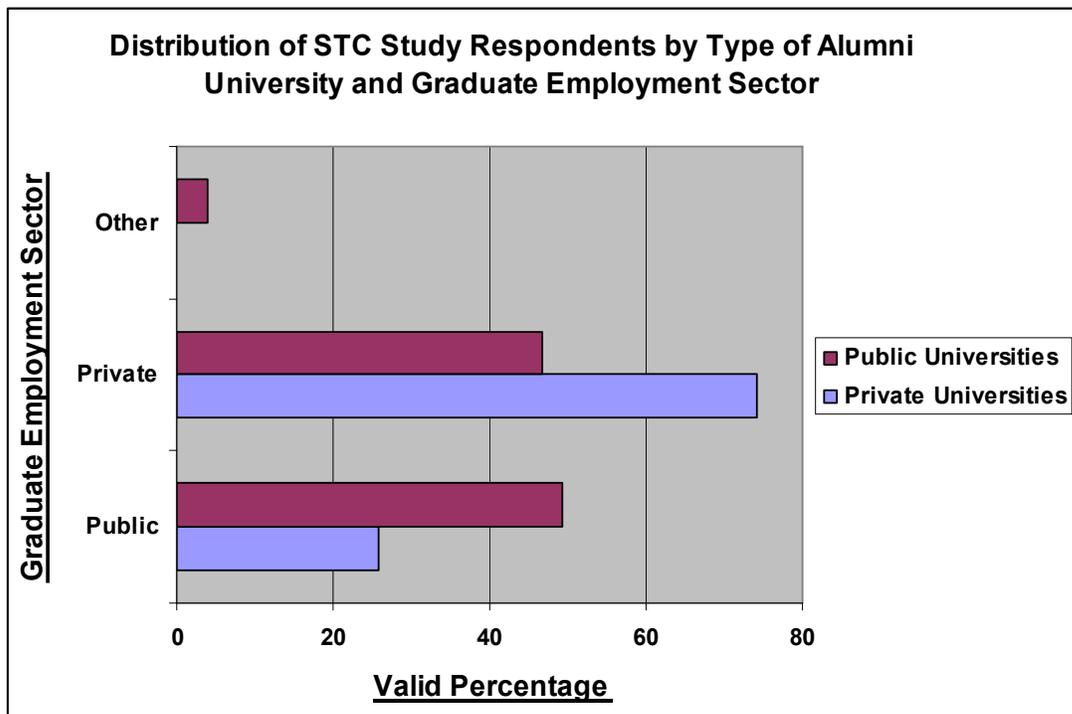
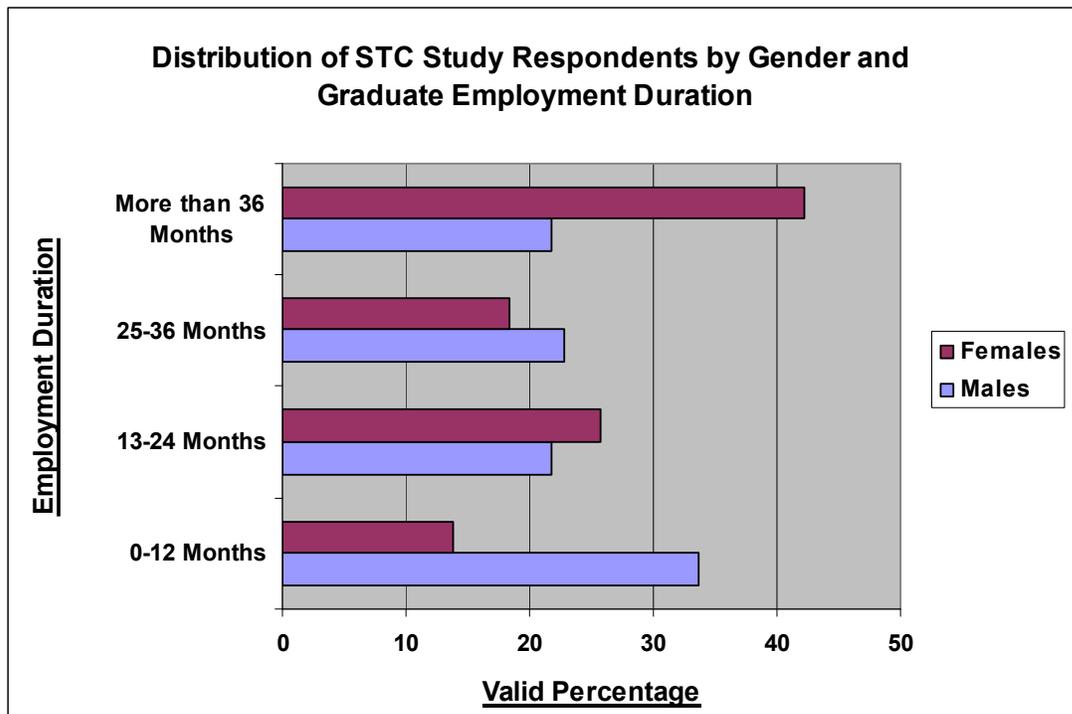


Figure 2: The values represent valid percents.

## Appendix C.3.1

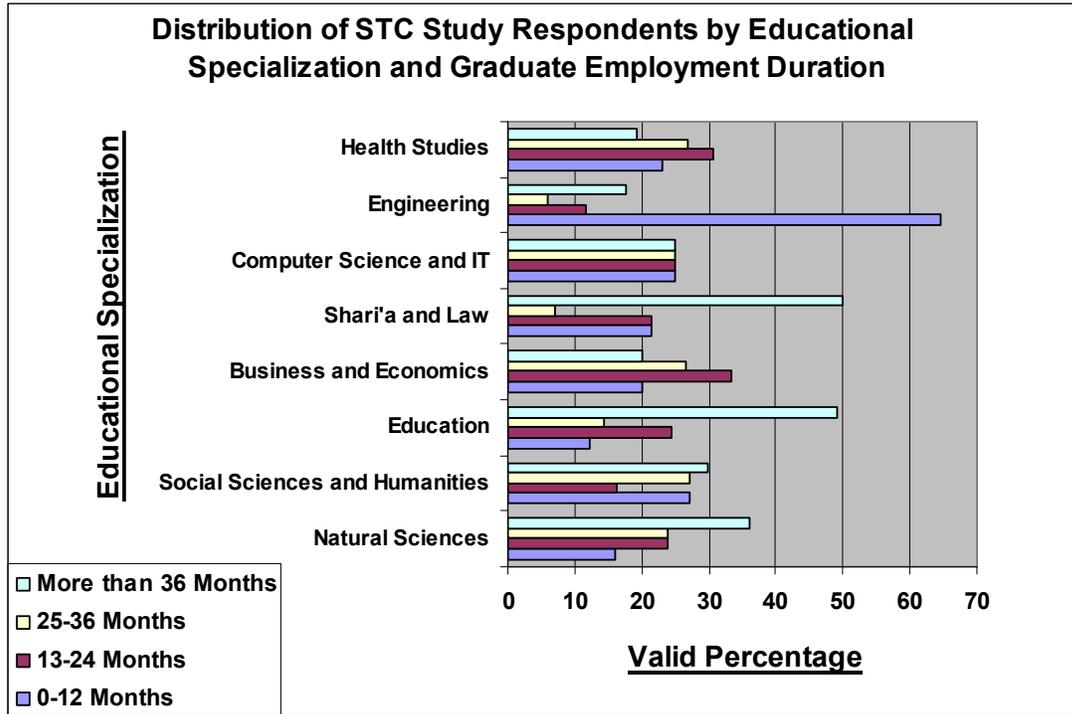
A Comparison of Key Factors Affecting Graduate Employment Duration		
#	Key Factors	Cramer's V Values
1	Gender	0.28
2	Tawjihi School Type	0.11
3	Family Economic Status	0.13
4	University Type	0.15
6	Educational Specialization	0.24
7	University Grades	0.16
8	Father's Employment Status	0.11
9	Mother's Employment Status	0.12
	Average	0.15

**Table 1:** The values represent Cramer’s V values which were used to measure the association between each of the key factors and the most recent employment duration of the graduate as calculated independently of one another. The “average” values refer to the median Cramer’s V values as calculated for the relationships between each of the paired factors are combined.

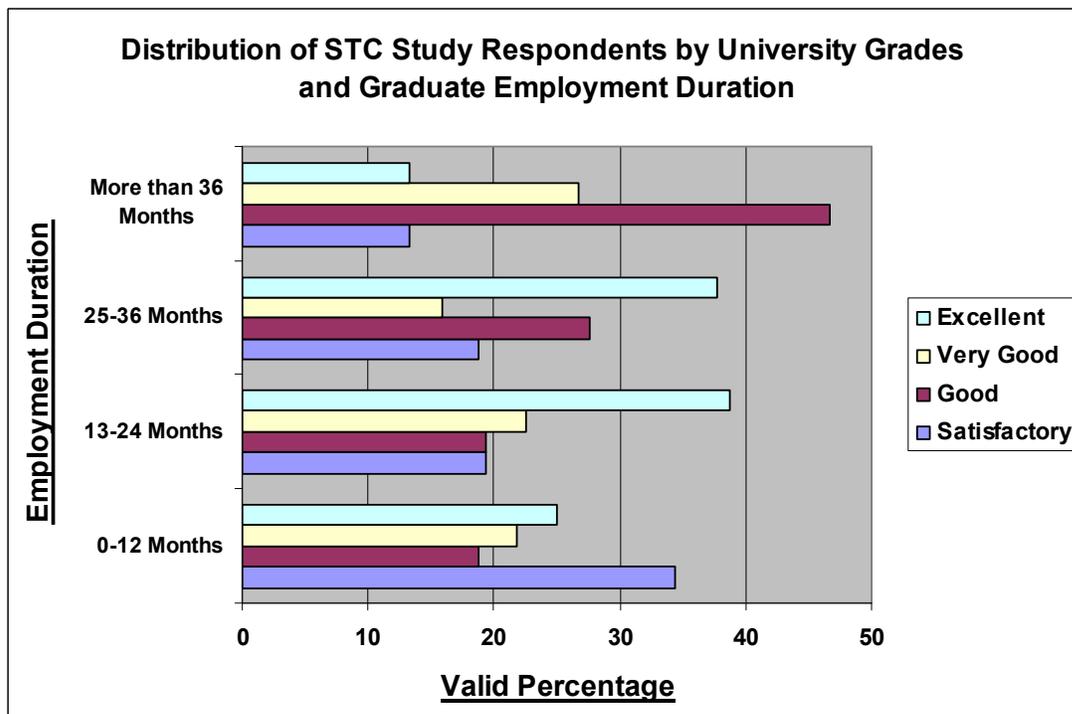


**Figure 1:** The values represent valid percents. “Employment Durations” were determined by the duration of the graduates’ most recent employment, ranging from 0 to more than 36 months.

## Appendix C.3.2



**Figure 1:** The values represent valid percents. “Employment Durations” were determined by the duration of the graduates’ most recent employment, ranging from 0 to more than 36 months.



**Figure 2:** The values represent valid percents. “Employment Durations” were determined by the duration of the most recent employment, ranging from 0 to more than 36 months.



**Appendix Section D : The STC Questionnaire**



## Appendix D.1

### Pathways to Employment: Questionnaire for a School-to-Career Study in the Hashemite Kingdom of Jordan – 2002/3 University Cohort

Date of interview:

Questionnaire no:

Interviewer's name:

#### PERSONAL INFORMATION

Name \_\_\_\_\_

Telephone number \_\_\_\_\_

1. Sex            Male  1.                      Female  2.

2. Age \_\_\_\_\_

#### 3. Governorate

Amman	<input type="checkbox"/> 1.	Irbid	<input type="checkbox"/> 5.	Karak	<input type="checkbox"/> 9.
Balqa	<input type="checkbox"/> 2.	Mafraq	<input type="checkbox"/> 6.	Tafiela	<input type="checkbox"/> 10.
Zarqa	<input type="checkbox"/> 3.	Jarash	<input type="checkbox"/> 7.	Ma'an	<input type="checkbox"/> 11.
Madaba	<input type="checkbox"/> 4.	Ajloun	<input type="checkbox"/> 8.	Aqaba	<input type="checkbox"/> 12.

#### 4. Name of the university degree obtained from

University of Jordan	<input type="checkbox"/> 1.	Zatoonah University	<input type="checkbox"/> 4.
Hashemite University	<input type="checkbox"/> 2.	Irbid Private University	<input type="checkbox"/> 5.
Zarqa Private University	<input type="checkbox"/> 3.		

#### 5. Public or private university

Private  1.                      Public  2.

#### 6. The type of degree

Bachelor's	<input type="checkbox"/> 1.	PhD	<input type="checkbox"/> 3.
Master's	<input type="checkbox"/> 2.	Other	<input type="checkbox"/> 4. _____

#### 7. Faculty

\_\_\_\_\_

#### 8. Specialisation

\_\_\_\_\_

#### 9. Grade

Satisfactory	<input type="checkbox"/> 1.	Very good	<input type="checkbox"/> 3.
Good	<input type="checkbox"/> 2.	Excellent	<input type="checkbox"/> 4.

#### 10. Nationality

Jordanian  1.                      Other  2. \_\_\_\_\_

## Appendix D.2

### II. CURRENT ECONOMIC ACTIVITY STATUS

11. What is your current employment or unemployment status?

- Paid employee  1. **GO TO Q.12**  
Employer  2. **GO TO Q.12**  
Own-account worker  3. **GO TO Q.12**  
Not working, but looking for work  4. **GO TO Q.21**  
Not working and not looking for work  5. **GO TO Q.25**  
Currently in higher education (student)  6. **GO TO Q.25**

---

#### A.1 --- FOR THE EMPLOYED ---

12. What is your current occupation?

\_\_\_\_\_

13. Which sector do you work in? Public  1. Private  2. Other  3.

14. Why did you choose to work in this sector?

\_\_\_\_\_

\_\_\_\_\_

15. How many months have you been working at your most recent job?

\_\_\_\_\_ months

16. How many months passed between graduating and finding permanent employment?

\_\_\_\_\_ months

17. Is this your first full time job since graduating?

Yes  1. **GO TO Q.19** No  2. **GO TO Q.18**

18. What previous full time jobs have you had, what duration were you employed for, and what was the reason for leaving that job?

Job Description	Duration of employment (months)	Reason for leaving
a) _____	_____	_____
b) _____	_____	_____

## Appendix D.3

19. Do you currently have a secondary or part-time job or other source of income?

Yes  1.                      No  2. **GO TO Q.25**

20. If yes, could you please describe your current secondary job or other source of income?

---

**GO TO Q.25**

---

### A.2 --- FOR THE UNEMPLOYED ---

21. Have you been employed in the past?

Yes  1.  
No  2.

22. Since you started searching for work, how many months have you been unemployed for?

---

23. Which sector do you want to work in?

Public  1.    Private  2.    Other  3. \_\_\_\_\_

Any sector, I just want a job  4.

24. Why do you want to work in this sector?

---

---

### B. JOB SEARCH STRATEGIES & SKILLS

25. How useful do you think your specialisation is at helping you to find a job?

\_\_\_\_\_→

Not useful at all	Not useful	Useful	Very useful	Don't know
<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.

## Appendix D.4

**26. How useful do you think these general skills acquired at university are/were for helping you to get a good job?**

	Not useful at all	Not useful	Useful	Very useful	Don't know
26.1) Communication skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.2) Lifelong learning skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.3) Leadership skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.4) Job-specific skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.5) ICT skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.6) Foreign language skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.7) Problem-solving skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.8) Analytical skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.9) Negotiation skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.10) Teamwork skills	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.
26.11) Other skills (please explain)	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.	<input type="checkbox"/> 9.

**27. What specific problems did/do you have in searching for a job?**

	Problem	Not a problem
27.1) There aren't enough jobs where I live	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.2) There aren't enough jobs for people with (or relevant to) my specialisation	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.3) Employers refuse to hire me because of my gender	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.4) Employers refuse to hire me because of my dress/apparel ( <i>hijab</i> )	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.5) Religious factors prohibit me from getting the kind of job I'm qualified for (or want)	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.6) I'm too restricted by social and cultural perceptions and expectations regarding paid work (eg gender roles)	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.7) My family/spouse doesn't want me to accept a job I was offered	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.8) My family/spouse doesn't want me to accept a job abroad	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.9) My family/spouse prefers not to help me to search for a job because of my gender	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.10) I couldn't get a public sector job and my family/spouse didn't want me to get a private sector job	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
27.11) I don't have enough work experience	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.

## Appendix D.5

**28. What methods did/do you use to search for a job?**

	<b>Yes</b>	<b>No</b>
28.1) Responded to an advertisement (please indicate what type, eg. newspaper, magazine, TV, radio, internet, other) _____	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.2) Visited private employment agencies	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.3) Visited establishments and work sites	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.4) Sought the assistance of relatives ( <i>wastah</i> )	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.5) Sought the assistance of friends ( <i>wastah</i> )	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.6) Sought the assistance current/previous officials ( <i>wastah</i> )	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.7) Sought the assistance of company I did part-time work for while I was studying	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.8) Visited apply-for-work offices of the Ministry of Labour	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.9) Applied to the Civil Services Bureau	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.10) Attended job fairs	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.11) Volunteering	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.12) Applied for jobs abroad	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.
28.13) Other (Please specify) _____	<input type="checkbox"/> 1.	<input type="checkbox"/> 2.

**29. If you are employed, which of the above job search methods you used secured your most recent job?**

\_\_\_\_\_ Not applicable

**30. Did you receive any kind of (formal or informal) careers guidance/assistance while still at university?**

Yes  1.                      No  2. **GO TO Q.33**

**31. What kind of careers guidance/assistance did you receive?**

---



---



---

**32. How useful do you think this careers guidance/assistance was that you received while still at university?**

## Appendix D.6

→			
Not useful at all	Not useful	Useful	Very useful
<input type="checkbox"/> 1.	<input type="checkbox"/> 2.	<input type="checkbox"/> 3.	<input type="checkbox"/> 4.

**33. Was formal careers guidance/assistance offered at your university?**

Yes  1.                      No  2.                      Don't know  3.

**34. When did you begin to search for a job?**

Before graduating  1.  
After graduation and receiving my degree  2.  
Haven't started yet  3.

**35. What was your score in Tawjihi? \_\_\_\_\_**

**36. During Tawjihi you went to a:**

Public school  1.                      Private school  2.                      Other  3. (specify) \_\_\_\_\_

**37. Which educational stream were you a member of during Tawjihi?**

Scientific  1.                      Artistic  2.                      Vocational  3.

Other (specify)  4. \_\_\_\_\_

**38. What is the highest level of education achieved by your father and your mother?**

a) Father \_\_\_\_\_

b) Mother \_\_\_\_\_

**39. Is your father currently employed?**

YES, employed  1.    NO, unemployed  2. GO TO Q. 42

**40. If employed, what is his occupation?**

\_\_\_\_\_

## Appendix D.7

**41. What sector does your father work in?**

Public  1.                  Private  2.                  Other  3.

**42. Is your mother currently employed?**

YES, employed  1.    NO, unemployed  2. GO TO Q. 45

**43. If employed, what is her occupation?**

\_\_\_\_\_

**44. What sector does your mother work in?**

Public  1.                  Private  2.                  Other  3.

**45. How many brothers and sisters do you have who have graduated?**

a) Number of brothers \_\_\_\_\_

b) Number of sisters \_\_\_\_\_

**46. How many private cars do your parents own?**

None  1.    One  2.    Two  3.    Three or more  4.

**47. Do you or your parents have a private computer/PC in their household?**

Yes  1.    No  2. **If NO, End questionnaire.**

**48. Do you or your parents have private internet access in their household?**

Yes  1.    No  2.

**END OF QUESTIONNAIRE  
THANK YOU FOR YOUR TIME**



**Appendix Section E : The References**



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