

The Hashemite Kingdom of Jordan



National Center for Human Resources Development

**Human Resource
Development Issues
in the
Packaging Sector in Jordan***

Publication Series (104)

2003

* Produced by Amman Chamber of Industry with the assistance of the Government of Canada and the National Center for Human Resources Development (NCHRD) through the SETVET project (Sustaining and Extending Technical and Vocational Education and Training).

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Introduction

Packaging is an essential element of domestic and international trade in goods. The package is the first aspect of most consumer goods to be seen by the customer, and plays an important role in purchasing decisions and therefore in product competitiveness. In the case of foods, pharmaceuticals, cosmetics, and other products, packaging must meet stringent by domestic and international quality standards. Packaging quality is an increasingly important requirement for access to and competitive success in international markets.

Packages are as diverse as the goods that are put into them, and the packaging industry must contently adapt to new products, manufacturing technologies, quality standards, and consumer tastes. The industry includes producers of paper, plastic, metal, glass, and wood packaging and packing materials. Technologies and production practices also vary widely, from low-tech craft manufacture of wooden, cloth or glass containers and packing materials to high-precision and high-volume production lines.

The packaging industry in Jordan is extensive and loosely defined. The Amman Chamber of Industry lists approximately 170 member firms engaged in the manufacture of some type of packaging, employing a total of over three thousand workers. In 2001 ACI's newly-activated Packaging Subcommittee began working to identify issues and priorities of concern to its member firms. It quickly became apparent that a key issue would be the quality, availability, and adaptability of a skilled labour force.

In January, 2002, with assistance from the Canadian government through the "SETVET" project, the ACI initiated a pilot study of human resource development (HRD) issues relevant to the packaging sector. It is hoped that the present pilot will be the first of many similar Sector Studies, and that these will help bring about constructive and lasting solutions to the HRD challenges facing Jordan's various industry groupings. The ACI is committed to building its capacity as a forum, an advocate, and a supporter of industry-driven HRD research and planning. The present Sector Study will lead to collaborative work on the various HRD priorities and options identified, and will be followed by similar research and action in other industry sectors. The overall outcome should be a higher level of HRD activity within Jordanian industry, closer working relationships between industry and training providers, and greater competitiveness for Jordanian industry and workers alike.

Packaging Sector: General Overview

Economic Context:

The packaging sector consists of firms involved in the manufacture of packaging materials including paper, carton, plastic, metal, wood, glass and other materials. While it may seem more natural to group these firms with manufacturers of non-packaging products of the same materials (e.g. plastics, sheet metal, etc.), the Packaging Subcommittee of the ACI was formed by industry members themselves in recognition of specific issues they shared as producers of packaging.

The packaging sector is highly sensitive to domestic, regional, and international market factors. Orders for packaging materials depend on the demand for packaged products including consumer goods, agricultural products, and industrial supplies.

Because packaging plays an important role in the marketability of packaged products, there is pressure on packaging producers to meet rising standards in quality, design innovation, aesthetics, and, in some cases, health, safety, and environmental regulations. These demands in turn may imply the need to invest in new technologies and in new worker skills and innovative capacity.

Sector Characteristics:

Subsectors: The Packaging sector as defined by the Amman Chamber of Industry consists of approximately 170 firms in 4 subsectors:

- Plastic
- Paper & carton
- Metal
- Other, including glass and wood

The three largest subsectors, Plastic, Paper, and Metal packaging, together account for about 90% of the firms and 97% of the employment in the packaging sector.

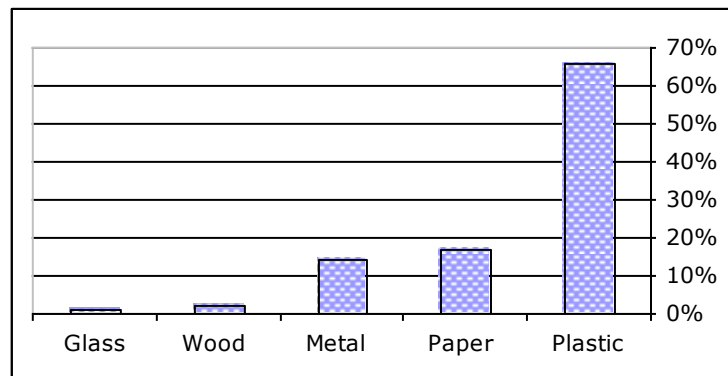
Sector Composition: In most of the packaging sector small employers outnumber large ones, yet small firms account for only a minority of total employment. For instance, in the plastic subsector, large employers account for 23% of firms but 82% of employment. In the paper subsector firms with more than 20 workers account for 38% of all firms but 86% of employment; by contrast firms with five or fewer workers account for 47% of the firms but only 7% of employment.

Plastic packaging manufacturers can be grouped as producers of plastic bags or of hard plastic containers. There are approximately equal numbers of firms in both groups, though the plastic container industry is more capital intensive and has more large employers, while the plastic bags subsector is dominated by small firms.

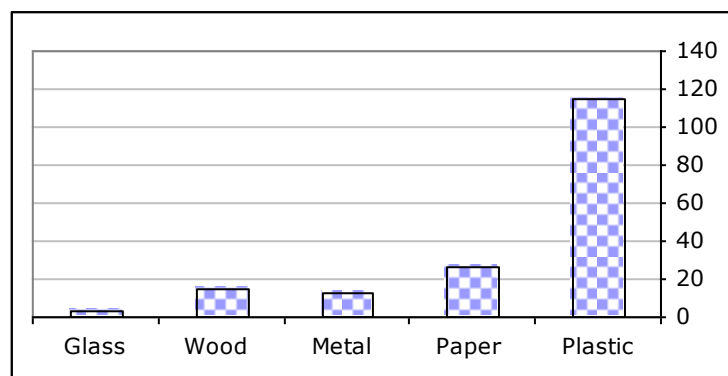
Somewhat less than 10% of plastic packaging firms produce both bags and containers. In the metal can subsector large employers account for 58% of the firms and 90% of employment. For details on subsector composition see Appendix 2.

	Firms	Workers
Plastic	115	1928
Paper	26	488
Metal	13	393
Wood	15	51
Glass	3	29
Total	172	2889

Packaging Subsectors by Employment



Packaging Subsectors by Employment



NOTES ON METHODS

Sector Study Objectives and Approach: The present study is based on the Sector Studies approach developed by Human Resources Development Canada, though greatly simplified and on a much smaller scale (and budget). In contrast with other types of research into economic and labour market issues, the sector studies approach is more strategic in its objectives, and more qualitative in its methods.

The strategic purpose is to gather information on HRD issues in a specific industry sector that will help the stakeholders of the sector – industry, government, and workers – resolve problems and improve performance in their common interest. Sector studies are driven by industry stakeholders, and generally help to inform and guide actions that are also primarily industry-led, in collaboration with government and training providers. Sector studies in Canada have often led to the improvement of communication and coordination within specific sectors, and to improved human resource development through the establishment of occupational standards and new or improved training and education programs.

With these practical objectives in mind, the sector studies approach aims primarily to capture the real concerns of industry stakeholders. The research methodology is largely qualitative, focusing on the problems perceived within the sector, and aiming to generate discussion and commitment among stakeholders themselves regarding possible solutions and actions.

Secondary research: Secondary research on the number of firms, principal products, number of workers, etc. was based on ACI membership data. These data were cross referenced where possible with information from other sources including the Department of Statistics and the Central Bank.

Primary Research: The primary research was conducted through structured interviews, based on a questionnaire. Respondents were contacted by phone to arrange interviews. Interviews were conducted by an ACI staff person, usually at the premises of the firm. Interviews ranged from one to two hours in duration.

Sample Selection: It was estimated that available time and resources would allow for a sample size of 30 firms. The number of interviews per subsector was determined as a fraction of 30 according to the number of firms in each subsector. Packaging firms range widely in size, both in respect of the number of workers employed and the value of working capital invested. To arrive at a representative sample, firms were defined as small, medium, or large, in both respects as below:

Small Size by employment		Firm size by capital	
Small	1-5 Workers	Small	Under 100.000 JD
Medium	6-19	Medium	100.000 – 500.000 JD
Large	20 and over	Large	Over 500.000 JD

Each firm was assigned a "combined size" code representing size by employment and by capital, respectively (LL, LM, LS, ML, MM, etc.). A target number of samples within each sector was determined by distributing its total sample in proportion to the number of firms of each size. Fractions were rounded to whole numbers. The actual number of interviews varied from the target number in some cases depending on respondents' ability to participate, etc. Due to the small size of the wood and glass packaging subsectors, and the limited resources and time available for interviews, these were excluded from the sample. Target and actual sample sizes are shown in Appendix 1.

Questionnaire and Interviews: A questionnaire was drafted and discussed with the ACI's packaging subcommittee. The draft questionnaire, in English was piloted with three firms and then revised. The revised version was translated and the remaining interviews were conducted in Arabic (See Appendix 3). Further revisions to the English and Arabic versions were made after the field research was completed. An updated version will be used for the next Sector Study.

Data Analysis: Survey results in Arabic were translated into English to accommodate the Canadian consultant. Responses to each question were tabulated and grouped by industry subsector. Employer comments were summarized and clarified where necessary by the interviewer. In the case of occupations mentioned by very few employers, or employing few workers, quantitative responses were not included in the Report, though employer comments were included where possible. The report is structured around themes or issues, and does not necessarily follow the questionnaire exactly. In some cases data from several questions are brought together in the summary of responses on a given theme.

Bulleted lists in the report always present data in order of importance, based on the number of instances of the response, and/or employers' comments on importance.

Limitations: The purpose of the primary research was to gather information on employers' views of human resources problems, practices, and options in the packaging sector. The results themselves are not considered statistically compelling, and are not intended to serve as a basis for specific solutions. Rather their value is in indicating directions for further discussion and collaboration by those involved in the sector and in training and education.

Survey Data

Summaries:

This section of the Report summarizes questionnaire responses for the following subsectors/occupations:

- 1. Plastic Containers subsector Production Occupations
- 2. Plastic Bags Subsector Production Occupations
- 3. Paper & Carton Subsector Production Occupations
Printing Occupations
- 4. Metal Packaging Subsector Production Occupations
Printing Occupations
- 5. All subsectors Maintenance Occupations
- 6. All subsectors Quality Control Occupations

Summary 1 Plastic Containers Subsector Responses: 9 (5L, 3M, 1S)

Overview

Main products:

1

- Plastic PVC and polyethylene containers and caps of different sizes including large containers, containers for pharmaceutical and cosmetics industries, detergents, etc.
- Plastic dispenser and atomizer pumps.
- Plastic drinking straws.
- Polystyrene foam insulation, blocks, packaging and packing materials.

Key business issues:

2, 3

Employers cite the following key factors affecting this subsector:

- Supply and quality of human resources.
- Export and; domestic market conditions and competition; international trade agreements; regional stability.
- Productivity and quality.

Other issues include prices of factors and raw materials; regulations & taxes; and technological change.

Firm sizes: Approximately 50 firms on the ACI list are involved in the manufacture of plastic containers. Large, medium, and small firms each account for about one third of the firms. The majority of employment is with large and medium firms.

HR Management: The majority of respondents (large & medium firms) have some HR functions in place. Most of the sample have an employee responsible for HR and a few have HR departments. Over half have written job descriptions, written HR policies, and formal pay scales.

4, 5,
stats

None of the firms reported having a formal training budget, and only 1 reported training expenditures during the last year. This was 3,000 JD for management training in HR and ISO, and computer training for other staff.

Priority occupations:

1. Production occupations (Production supervisor, production technician [injection moulding film machine, mould making,, production labourer). 6
2. Maintenance occupations: (Maintenance supervisor, technician, labourer, Electrical & mechanical & machine maintenance technician.
3. Quality Control occupations.
4. Management, Warehousing, Sales, and product design also mentioned.

1.1. Production occupations

 6

Production occupations in the plastic containers subsector include:

- production supervisors
- production technicians (injection moulding, film machine, mould making)
- production labourers , labourer-technicians, assistant-technician

Employment:

The number of employees per firm in this occupation ranges from 2 to over 40. Where firms report large numbers of production staff, the majority are generally in low-skill labourer or labourer- technician positions. 6

Most firms report plans to increase their production workforce in the next six months, usually due to planned expansion. 7

Scheduling:

 11

Work is full time, often involving shift work.

HR practices

Labour supply: It is Fairly – Very Difficult to find skilled workers in this occupation. 8

Recruitment: Workers in production positions are generally recruited from within the firm or from other firms in the sector. Advanced positions are usually filled by applicants from outside the firm with community college or polytechnic training. 12,1,3

Career progression: Unskilled labourer >assistant technician or labourer-technician> technician. Supervisors may be promoted from line technicians or hired from outside with higher qualifications.

12,13

Main recruitment strategy is word of mouth, with some use of newspaper ads.

14

Foreign workers: Recruitment of non-Jordanians accounts for a small percentage of total.

9

Retention: Most workers in this occupation remain with the firm for 5-20 years. Attrition is due to advancement and quitting. Most employers are satisfied with this rate of retention.

10

Incentives include annual salary increases; transportation to & from work; high salaries.

10

Firms reporting dissatisfaction with retention are generally those providing no or few incentives.

Selection: Employers most commonly screen and select entrants to this occupation on the basis of:

16

- verbal or written reference.
- formal or informal employment interview.
- practical aptitudes tests are common.
- advanced positions may require submission of a CV.

Unions: Membership in unions or professional associations 0%

17

New workers:

Employment requirements:

15, 18,

19, 20,

21

- Candidates must have work experience in the industry or with the firm in operation & maintenance of relevant machines (e.g. injection molding, calibration, installation & removal of moulds and machine parts).
- Only males are hired.
- Many employers seek Tawjihi vocational stream as a minimum, though this is less important than relevant experience.
- Personal acquaintance with the candidate can be a factor.

Education & training qualifications: Most employers do not require specific qualifications (e.g. college or VTC), and did not compare graduates of these programs with non-graduates.

22

Skill development: New entrants to this occupation usually take up to 3 months to become fully proficient, assuming previous experience. This is acceptable to most employers. Some indicated an unsatisfactory learning curve of up to 1-3 years.

23, 24,
25

Skill development is generally through practice only, with occasional informal on-the-job training. Some employers called for practical training on production machines in plant setting.

Existing workers: Employers reported some need for retraining/upgrading of experienced production workers, particularly in operation and routine maintenance of injection molding machines; CNC extrusion machines, and precision mould making.

26, 27,
28, 29,
33

Firms help experienced workers to develop their skills mainly through practice and some informal on-the-job training.

General HR problems

30,

(30) Employers' main concerns about production staff are:

- Difficulty finding adequately skilled workers.
- Skill deficiencies of existing workers.
- Labour turnover.

Remedies

31, 33,
25, 29

Employers' priorities for addressing these problems are:

- Develop new and/or improve existing education & training programs.
- Improved HR management practices at the firm level.
- National occupational standards.
- Better coordination on HR issue among firms in the sector.

Employers believe that the responsibility for initiating and financing these remedies rests first with the government, followed by training providers, and to a lesser extent the firm.

32

Training priorities: Most employers gave higher priority to developing or improving retraining & upgrading programs for existing workers. However, several gave higher priority to improving the quality of pre-employment training.

33

There was a wide range of views on the most appropriate training providers. The VTC was mentioned most, followed by workplace-based training, though other options were also selected.

34

There was a similar lack of consensus on preferred training options and formats. The most common choice was systematic OJT, followed by part-time programs. Over all, it would appear that employers would like to see practical, workplace-based training offered at convenient times and directed, either to upgrading experienced production

35

workers or to helping new workers make the transition from unskilled positions into production roles.

Links to training providers: None of the employers in the sample reported any regular communication with training providers in relation to production occupations.

36

Employer Comments:

37

The following comments were made by employers in large and medium sized firms.

- Well-trained technicians are more valuable than engineers.
- Training should not just cover technical competencies but should stress “employability skills” -- personal management, attitudes and problem solving skills – and industrial objectives including productivity, quality; time saving.
- Technicians must be able to perform as administrators, and apply managerial concepts. broad competencies. Should be able to move from one department to another within the firm.
- Concepts from university management courses should be included in VTC and college courses for technicians.
- VTC does not follow-up on graduates’ performance on the job. Poor quality of VTC grads.
- Jordanian workers have no commitment to work; not loyal to employer/firm.
- VTC graduates are well qualified for entry positions and receive additional training in the plant.
- Entry level laborer positions are unskilled and require no previous training.

VTC staffs are unqualified to provide training on their own CNC machines.

Summary 2: Plastic Bag Subsector

Responses: 10 (3 L, 4 M, 3 S)

Overview

Main products:

- Polyethylene bags and sacks, low and high density, printed and unprinted.
- Plastic film in strips and rolls; adhesive tapes.
- Polypropylene threads, yarns, woven fabrics, sacks.

1

Key business issues

2, 3

Employers cite the following key factors affecting this subsector:

- Export market conditions and competition; international trade agreements.
- Supply and quality of human resources.
- Domestic market conditions.

Other issues include factor prices and technological change.

Firm sizes: Approximately 50 firms on the ACI list are involved in the manufacture of plastic bags. Of these, about 50% are small, 35-40% medium and 10-15% large.

4, 5,
stats

HR Management: Comprehensive HR management functions are not widespread. No respondents reported having HR departments, and only 2 had HR officers. . One third had written job descriptions and/or HR policies, and half have formal pay scales.

None of the firms reported a formal training budget. Only one firm reported training expenditures during the last year, (200 JD for hydraulics training for maintenance personnel and quality training for production staff).

Priority occupations:

- Production occupations (Production supervisor, production technician [bag printing Flex printing, film machine, cutter, plastic textile spinning, plastic weaving], production labourer)
- Maintenance occupations: (Maintenance supervisor, technician, labourer, Electrical & mechanical & machine maintenance technician.
- Quality Control occupations.

2.1 Production occupations:

Production occupations in the plastic bags subsector include:

- Production supervisor,
- Production technician (bag printing Flexoprinting, film machine, cutter, plastic textile spinning, plastic weaving)
- production labourers , labourer-technicians, assistant-technician

Employment: The number of employees per firm in production occupations ranges from 3 to over 40. Where firms report large numbers of production staff, the majority are generally in low-skill labourer or labourer- technician positions.

Hiring predictions were mixed. Some firms expect to hire due to expansion or to replace existing workers. Others predict reductions due to weak markets.

Scheduling: Work is full time and shift work.

HR practices

Labour supply

It is Fairly – Very Difficult to find skilled workers in this occupation

Recruitment: Workers in production positions are generally recruited from within the firm or from other firms in the sector. Polytechnic graduates are hired for some positions such as Flex printing technician.

Career progression: Unskilled labourer >assistant technician or labourer-technician> technician. Supervisors may be promoted from line technicians or hired from outside with higher qualifications.

Main recruitment strategy is word of mouth, with a few using newspaper ads.

Foreign workers: Use of foreign workers was reported only by small and medium firms, and ranged from 10-100%. The largest employer using foreign workers had a total workforce of 9 persons.

Reasons give for hiring non-Jordanians are:

- Jordanians not available
- non-Jordanians more skilled, better performance
- better work habits/attitudes

Retention: Most workers in this occupation remain with the firm for 2-16 years, and employers are generally satisfied with this rate of retention Attrition is due to advancement and quitting.

10

Incentives include annual salary increases; transportation to & from work, and foreign workers' dependency on employment. Worker retention appears to correlate with incentives. Firms reporting high percentages of foreign workers appear to provide few incentives and rely on foreign workers' dependency on the job.

10

Selection: Employers most commonly screen and select entrants to this occupation on the basis of:

16

- verbal or written reference
- formal or informal employment interview
- practical aptitudes tests are common

Unions: Membership in unions or professional associations is almost nil. One firm reports that 10% of its workers in this occupation belong to the chemical workers' association.

17

New workers:

Employment requirements:

- Candidates must have work experience (+-2yrs) operating the relevant machines
- There is a strong preference for males.
- Over half the respondents give some consideration to Tawjihi or technical qualifications, though experience is the most important factor. Production supervisors and production engineers in some large firms are university grads.
- Personal acquaintance with the candidate can be a factor.

15,

18,

19,

20,

21

Education & training qualifications: Most employers do not require specific qualifications (e.g. college or VTC), and did not compare graduates of these programs with non-graduates. One indicated that VTC grads perform better in all respects than non-grads.

22

Skill development: New entrants to this occupation usually take up to 3 months to become fully proficient, assuming previous experience. This is acceptable to most employers. 23, 24, 25

Skill development is generally through practice only, with some informal on-the-job training. Several employers called for practical training on production machines in plant setting.

Existing workers: 6 of the 10 respondents reported some need or urgent need for retraining/upgrading of experienced production workers. Training topics included: 26, 27, 28, 29,

- training on new film machines, CNC machines, PLCs, inverters, and new printing technologies 33
- quality control and production optimization; waste control
- constant reminders re: procedures
- basic occupational health & safety & basic work principles for entry level positions

Experienced workers develop their skills through practice with some informal on-the-job training.

General HR problems: 30,

Employers' main concerns about production staff are:

- difficulty finding adequately skilled workers
- skill deficiencies of existing workers (equal priority to #1)
- labour turnover

Remedies: 31,

Employers' priorities for addressing these problems are: 33, 25,

- better coordination on HR issue among firms in the sector 29
- develop new education & training programs
- improved HR management practices at the firm level
- improve existing education & training programs

Employers believe that the responsibility for initiating and financing these remedies rests first with the government, a few also mentioned firms and training providers. 32

Training priorities: Employers are divided as to whether the priority should be on retraining & upgrading programs for existing workers or on improving the quality of pre-employment training. 33

They were also undecided on the most appropriate training providers. There was some interest in VTC and employers at their own workplaces.

34

Most respondents did not indicate a preference for training options. Of those who did, most preferred on-the-job training and part-time programs.

Links to training providers:

36

None of the employers in the sample reported any regular communication with training providers in relation to production occupations.

Employer comments: The following comments were made by employers in large and medium sized firms.

- Production workers in one firm are designated as “production technician/labourers”. Employer wants every labourer in the plant to have technician skills.
- The most difficult technician position in the plastics industry is injection molding. Film technician is relatively simple and requires minimal training.
- No connection with VTC as it has not met our needs for skilled graduates.
- In-house training is the only option at present, as there are no training centers for plastic spinning & weaving occupations. Future training programs must be 100% practical, with training directly on the machines.
- One small employer was opposed to training, fearing that workers who learn the business may go into competition against the firm.
- One firm within the sector should be designated as a training workshop. Every firm should be obliged to hire a number of VTC graduates and train them up to standards. Wage costs should be cost shared with government. VTC does not provide training in manufacturing industry occupations (but should). A formal body should exist that would control worker turnover, e.g. through national database showing work record of individual workers. Ministry of Industry should not grant any further licenses to plastics mfg plants as market has excess capacity now.
- One firm should serve as a training site for the sector.
- The VTC should establish an office or contact as the contact point for this industry sector

Summary 3: Paper & Carton Subsector Responses: 7 (4 L; 1 M; 2 S)

Overview:

Main products:

1

- Cardboard cartons, boxes and sheets, printed & unprinted
- Paper sacks, printed & unprinted
- Stationery school & office supplies; file folders; plastic stationery (e.g. plastic-bound booklets)
- Specialty paper and paperboard items (plates, bobbins, spools, etc).

Key business issues

2, 3

Employers cite the following key factors affecting this subsector:

- Supply and quality of human resources
- Export market conditions and competition; international trade agreements
- General economic conditions

HR Management: No respondents reported having HR departments. 3 had HR officers and written job descriptions. All reported having formal pay scales.

4,
5,
stat
s

3 large firms reported that they have formal training budgets, and spent between 400 and 2,000 JD on training in the last year. Training topics included:

- Management & sales staff training in HR, production mgt. and international marketing.
- Machine operator technicians in production techniques.
- Office staff and production mgrs in English language and computer skills.

Priority Occupations:

6

- Production occupations (Production supervisor, production technician [bag printing Flexoprinting, film machine, cutter, plastic textile spinning, plastic weaving], production labourer).
- Maintenance occupations: (Maintenance supervisor, technician, labourer, Electrical & mechanical & machine maintenance technician).
- Quality Control occupations.

3.1 Production occupations

6

Production occupations in the paper and carton subsector include:

- Carton production / cutting technicians
- production labourers and production assistants

Employment:

6

The number of employees per firm in production occupations ranges from 3 to 20.

7

Some firms predict some hiring due to expansion plans and/or short staffing at present..

Scheduling: Work is full time and usually shift work, depending on market conditions.

11

HR practices

Labour supply:

8

Almost all respondents said it was Fairly Difficult to find skilled workers in this occupation

Recruitment:

12,

13

Workers in production positions are generally recruited from within the firm or from other firms in the sector.

12,

13

Career progression: Unskilled laborer >assistant technician or laborer-technician> technician. Supervisors may be promoted from line technicians or hired from outside with higher qualifications.

Main recruitment strategy is word of mouth, with some hiring of walk-ins.

14

Foreign workers: Employment of foreign workers is generally low, though individual firms reported 5-100%. High percentages were reported only by small firms.

9

Reasons given for hiring non-Jordanians are:

- Jordanians not available
- non-Jordanians cheaper
- better work habits/attitudes

Retention: Most workers in this occupation remain with the firm for 2-15 years, and employers are generally satisfied with this rate of retention.

10

Incentives include annual salary increases, advancement, good management-staff relationships social security; and health care insurance. Some small firms reported problems with retention of Jordanian workers.

10

Selection: Employers most commonly screen and select entrants to this occupation on the basis of:

16

- verbal or written reference.
- formal or informal employment interview.
- practical aptitudes tests.

Unions: Membership in unions or professional associations is low, with some workers belonging to the Jordanian Federation of Labour.

17

New Workers:

Employment requirements:

15,

- The most valued prerequisite is previous experience. Inexperienced workers begin as labourers.
- Some respondents give consideration to Tawjihi or technical qualifications, though experience is the most important factor. Production supervisors and production engineers in some large firms are university grads.
- Personal acquaintance with the candidate can be a factor.
- There is a strong preference for males.

18,

19,

20,

21

Education & training qualifications:

22

Most employers do not require specific qualifications (e.g. college or VTC). Those who commented on trained workers did not specify programs, but rated graduates better than non-graduates in all respects with the possible exception of attitudes and pay expectations (however, see next point).

Skill development:

23,

24,

25

New entrants to this occupation usually take 1 to 12 months to become fully proficient, assuming previous experience. Several respondents were dissatisfied with the long OJT period required. Some complained that VTC graduates are not properly prepared.

Skill development is generally through practice only, with some informal on-the-job training.

Existing workers:

26,

27,

No need for retraining/upgrading of experienced production workers was specified.

28,

29,

33

General HR problems:

30,

Employers' main concerns about production staff are:

- difficulty finding adequately skilled workers
- skill deficiencies of existing workers (equal priority to #1)
- labour turnover

Remedies: Employers' priorities for addressing these problems are:

31,

33,

25,

29

- develop new education & training programs
- improve existing education & training programs
- improve firm-level HR management practices sectoral coordination on HR issues

Employers believe that the responsibility for initiating and financing these remedies rests first with the government, a few also mentioned firms and training providers.

32

Training priorities: Improving the quality of pre-employment training was cited twice as often as on retraining & upgrading programs for existing workers.

33

There was no clear preference for training providers, with almost all options being selected.

34

Regarding training formats, most preferred on-the-job training and part-time programs.

35

Links to training providers: 3 respondents reported regular contact with training providers through the hiring of apprentices and students, participation in the ACI sector committee, and, in one case, by providing OJT to instructors. 36

Employer comments: The following comments were made by employers in large and medium sized firms: 37

- VTC grads hired are better qualified than untrained entrants, but are still not adequately skilled. At present the VTC grads still require 1 year's training on the job; ideally they should require 1 month's orientation, but not comprehensive training.
- Before attempting to improve vocational training it is essential to raise the general level of performance in school (2 responses).
- Vocational training and technical work should not be options of last resort for those who do poorly in school.

3.2 Printing occupations: 6

Printing occupations in the paper and carton subsector include:

- Printing press operators, technicians, assistants, supervisors (silkscreen, Flex printing, Rotograph)

Employment: The number of employees reported per firm in printing occupations ranges from 1 to 4. 6

2 of the 4 respondents for this occupation predicted they would be hiring more printing workers in the next 6 months due either to planned production increases or to remedy short staffing or replace inadequate existing workers. 7

Scheduling: Work is full time and shift work. 11

HR Practices 8

Labour Supply: Almost all respondents said it was Fairly Difficult to find skilled workers in this occupation.

Recruitment: Workers in printing positions are generally recruited from within the firm or from other firms in the sector. 12, 13

Career progression: Unskilled labourer > assistant printer > printing technician. Supervisors may be promoted from line technicians or hired from outside with higher qualifications. 12, 13

Word of mouth is the standard recruitment strategy. One firm hires foreign workers through Ministry of Labour registry. 14

Foreign workers: Employment of foreign workers is generally low, though individual firms reported 5-75%. High percentages were reported only by small firms. 9

Reasons given for hiring non-Jordanians are:

- Jordanians not available
- non-Jordanians more skilled, better performance
- better work habits/attitudes

Retention: Most workers in this occupation remain with the firm for over 5 years, and employers are generally satisfied with this rate of retention. 10

Incentives include annual salary increases, advancement, good management-staff relationships social security; and health care, and foreign workers' keenness to remain employed. 10

Selection: Employers most commonly screen and select entrants to this occupation on the basis of: 16

- verbal or written reference.
- formal or informal employment interview.
- practical aptitudes tests.

Unions: Membership in unions or professional associations is low, with some workers belonging to the Jordanian Federation of Labour. 17

New Workers:

Employment requirements:

- The most valued prerequisite is previous experience, especially in carton printing and colour mixing. 15, 18, 19, 20
- Some respondents give consideration to Tawjihi or technical qualifications from college or polytechnic. 20
- Personal acquaintance with the candidate can be a factor. 21
- There is a strong preference for males. 21

Education & training qualifications: Most employers do not require specific qualifications and did not compare the performance of graduates and non-graduates. 22

Skill development: New entrants to this occupation usually take 1 to 12 months to become fully proficient, assuming previous experience. Some respondents were dissatisfied with the long OJT period required and complained that training providers do not prepare their graduates properly for this occupation. 23, 24, 25

Skill development is generally through practice only, with some informal on-the-job training. 26, 27, 28, 29, 33

Existing Workers: Most respondents did not specify a need for upgrading of existing workers. One respondent indicated some need for training in new printing technologies and colour mixing. One indicated a future need for formal OJT for printing supervisors. 30, 31, 33

General HR problems:

- all 4 respondents noted skill deficiencies of existing workers
- 2 indicated difficulty finding adequately skilled workers
- 1 indicated cost of labour

Remedies: Employers' priorities for addressing these problems are: 31, 33, 25, 29

- develop new education & training programs 25, 29
- improve existing education & training programs 29
- national skill standards, better sectoral coordination on HR; and improved HR management practices at the firm level 32

Employers believe that the responsibility for initiating and financing these remedies rests first with the government and to a lesser extent with firms and training providers.

Training priorities: Improving the quality of pre-employment training is a higher priority than providing upgrading for existing workers. 33

Views were unclear on the most appropriate training providers, with some preference for VTC and workplace-based training. 34

Most respondents indicated a preference for systematic on-the-job training and part-time programs. 35

Links to training providers: Several respondents indicated that they maintain contact with training providers by hiring apprentices and students, and participating in the ACI sector committee. 36

Employer comments: Comments from employers in the paper and carton sector are listed in sec. 3.1. 37

None of the employers in the sample reported any regular communication with training providers in relation to production occupations. 36

Summary 4: Metal Subsector

Responses: 4 (3 L; 1 M)

Overview

Main products:

- Metal containers of different kinds including cans for foods and chemicals;
- Lacquered and lithographed tinplate.

1

Key business issues:

2, 3

Employers cite the following key factors affecting this subsector:

- Human Resources, labour supply & skill levels
- Domestic market conditions; domestic competition; regional stability
- Export markets and international trade agreements

HR Management: One firm reported having an HR department and officer. Most have formal pay scales.

4, 5,
stats

Most firms responding do not have formal training budgets and did not spend on training in the past year.

One firm spent 700 JD last year. Training topics included:

- Quality manager training in production quality;
- HR officer training in occupational health & safety

Priority Occupations:

- Production occupations.
- Printing occupations (Sheet metal printing/offset press technicians).
- Maintenance occupations: (Maintenance supervisor, technician, labourer, Electrical & mechanical & machine maintenance technician).
- Warehouse occupations (warehouse manager; supervisor, forklift operator, truck driver, labourer).
- Quality Control occupations.

6

4.1 Production Occupations:

6

Production occupations in the metal can subsector include:

- Metal sheet cutting technician
- Press operator
- Welder
- Seam technician
- Flange technician

Employment: The number of employees reported per firm in printing occupations ranges from 1 to 11. 6

Respondents did not report plans to adjust employment in this occupation. 7

Scheduling: Work is full time and shift work. 11

HR practices

Labour supply: Finding appropriately skilled workers in this occupation ranged from Fairly Difficult to Fairly Easy. 8

Recruitment: Workers in printing positions are generally recruited from within the firm or from other firms in the sector. 12,1
3

Career progression: Unskilled laborer>laborer-technician or assistant technician > technician. Supervisors may be promoted from line technicians or hired from outside with higher qualifications. 12,
13

Word of mouth is the standard recruitment strategy, with some newspaper ads and walk-ins. 14

Foreign workers: Half the respondents reported some employment of foreign workers (10-60%) in this occupation. 9

Reasons given for hiring non-Jordanians are:

- Jordanians not available
- non-Jordanians more skilled, better performance
- better work habits/attitudes

Retention: Established workers in this occupation remain with the firm for 2-7 years, and employers are generally satisfied with this rate of retention. Employers complained of high turnover in labourer positions, especially among Jordanian workers. Retention seems to correlate with incentives. 10

Incentives include annual salary increases, advancement, transportation to and from work. 10

Selection: Employers most commonly screen and select entrants to this occupation on the basis of: 16

- verbal or written reference.
- formal or informal employment interview.
- practical aptitudes tests.

Unions: Workers in this occupation are not unionized. 17

New Workers

Employment requirements:

- The most valued prerequisite is previous experience in metal can manufacturing. 15,
- Training qualifications are not generally required. Some employers mentioned VTC training and Tawjihi. Some production positions may require college or polytechnic training and some knowledge of English. 18, 19, 20, 21
- Personal acquaintance with the candidate can be a factor.
- There is a strong preference for males. 22

Education & training qualifications: Most employers do not require specific qualifications and did not compare the performance of graduates and non-graduates. 22

Skill development: New entrants to this occupation usually take up to 3 months to become fully proficient, assuming previous experience. Employers seemed more concerned with turnover of entry-level workers than with time needed for skill development. Skill development is generally through practice only, with some informal on-the-job training. 23, 24, 25

Existing workers: Several respondents cited some need or urgent need for upgrading of existing workers. Topics include: 26,

- meat can manufacturing; metal forming for food packing industries 27, 28, 29, 33
- occupational health & safety for press technicians
- quality control and machine calibration
- quality control and new production methods for welders & seamers.
- General HR Problems: 30,
- Priority HR problems:
- Skill deficiencies of existing workers
- Labour turnover
- Difficulty finding adequately skilled workers.

Remedies: Employers' priorities for addressing these problems are:

- Improve existing education & training programs 31,
- Develop national skills standards 33,25,
- Develop new education & training programs; and improved HR management practices at the firm level; better Sectoral HR coordination. 29

Responsibility for remedies rests first with the government and to a lesser extent with training providers and firms. 32

Training priorities: Employers are interested in both pre-employment training and upgrading for existing workers. 33

Views were unclear on the most appropriate training providers, with some preference for VTC and workplace-based training. 34

Most respondents indicated a preference for systematic on-the-job training and part-time programs. 35

Links to training providers: Respondents reported no regular contact with training providers. 36

Employer comments: Comments from employers in the metal can sector are listed in sec. 4.1. 37

4.2 Printing occupations: Sheet metal printing/offset press technicians. 6

Employment: The number of employees per firm in production occupations ranges from 1 to 6 in printing occupations and 1 to 18 in other production occupations. 6

Some firms predict some hiring due short staffing, to reduce dependency on existing workers, and/or to add to capacity if highly skilled candidates were available. 7

Scheduling: Work is full time and may be shift work. 11

HR practices

Labour supply: Finding appropriately skilled workers for metal printing occupations is Very or Fairly Difficult. 8

Recruitment: Workers in printing positions are generally recruited from within the firm or from other firms in the sector. Some workers are hired from abroad. 12,1
3

Career progression: Unskilled labourer >assistant technician or labourer-technician> technician. 12,
13

Main recruitment strategy is word of mouth, with some use of newspaper ads and some hiring of walk-ins. 14

Foreign workers: 3 of the 4 responding firms indicated they have non-Jordanian workers in this occupation. 9

Reasons given for hiring non-Jordanians are:

- Jordanians not available
- non-Jordanians cheaper
- better work habits/attitudes
- lower turnover of non-Jordanians

Retention: Most workers in this occupation remain with the firm for 2-15 years, and employers are generally satisfied with this rate of retention. There is some concern with retention of Jordanians. 10

Incentives include annual salary increases, transportation to and from work, and good salaries. 10

Selection: Employers most commonly screen and select entrants to this occupation on the basis of: 16

- practical aptitudes tests.
- verbal or written reference.
- informal employment interview.

Unions: Workers in this occupation are not unionized. 17

New workers:

Employment requirements: 15,

- The most valued prerequisite is previous experience. Inexperienced workers begin as labourers. 18,
- Half of respondents give consideration to Tawjihi or technical qualifications. 19,
- Personal acquaintance with the candidate can be a factor. 20,
- There is a strong preference for males. 21

Education & training qualifications: Most employers do not require specific qualifications (e.g. college or VTC). A high school in Marka offers a printing course. Some workers have taken training in the use of meat release lacquers. 22

Skill development: Skill development for new hires can take from one week to 2 years depending on the position and amount of previous experience. Some respondents suggested developing a pre-employment printing program to shorten the OJT period required. 23, 24, 25

Skill development is generally through practice only, with some informal on-the-job training.

Existing workers: Half of the respondents cited some or urgent need for upgrading of existing workers. Priority topics:	26,
• meat release lacquer printing	27,
• calibration of printing machines and inks	28,
• colour mixing	29,
• daily maintenance of printing machines	30,
General HR problems	30,
Employers' main concerns about production staff are:	
• skill deficiencies of existing workers	
• difficulty finding adequately skilled workers	
• labour turnover	
Remedies:	31,
Employers' priorities for addressing these problems are:	33,
• improve existing education & training programs	25,
• develop new education & training programs	29
• improve firm-level HR management practices	
Employers believe that the responsibility for initiating and financing these remedies rests first with the government, then training providers, then firms and workers.	32
Training priorities: Improving the quality of pre-employment training was cited somewhat more often than retraining & upgrading programs for existing workers.	33
The training providers recommended are the VTC, employers, and outside trainers brought in to the workplace.	34
There was little agreement as to the preferred lengths, times or formats for training.	35
Links to training providers: Respondents reported no regular contact with training providers.	36

Employer comments: The following comments were made by employers in large and medium sized firms.

- VTC grads hired are better qualified than untrained entrants, but are still not adequately skilled. At present the VTC grads still require 1 year's training on the job; ideally they should require 1 month's orientation, but not comprehensive training.
- Before attempting to improve vocational training it is essential to raise the general level of performance in school (2 responses)
- Vocational training and technical work should not be options of last resort for those who do poorly in school.

Summary 5: Maintenance Occupations (all subsectors)

Responses: 12 (6 L; 5 M, 1S)

Overview: All responses on Maintenance Occupations are summarized here rather than in their respective subsectors. These occupations are essentially similar regardless of subsector, and summarizing them together produces a more meaningful sample.

4.1 Maintenance occupations: Maintenance occupations in the packaging sector include:

- Maintenance supervisor
- Maintenance technician, labourer
- Electrical maintenance technician
- Mechanical maintenance technician

Electrical, mechanical and electronic maintenance roles are found in different combinations. Maintenance occupations may be combined with production positions in some firms.

Respondents usually ranked maintenance positions as 2nd or 3rd in order of concern.

Employment: The number of employees reported per firm in maintenance occupations ranges from 1 to 10, with most firms reporting 1 or 2 per plant.

75% of respondents indicated plans to increase maintenance positions in the next 6 months, due to production expansion, to remedy short-staffing, or to back up existing staff.

Scheduling: Work is full time and shift work.

HR practices

Labour supply: Most respondents said finding appropriately skilled maintenance staff is Fairly Difficult, with some Very Difficult. 8

Recruitment: Recruitment in most firms is internal, at least for junior maintenance positions. Some firms seek graduates from university engineering or college/polytechnic programs. 12,13

Career progression: Unskilled labourer > assistant technician > technician. Senior maintenance positions in large firms are often hired from outside with higher qualifications. 12, 13

Word of mouth is the most common recruitment strategy, with some firms using newspaper ads and Ministry of Labour employment registry. 14

Foreign workers: Half the respondents reported some employment of foreign workers (5%-100%) in this occupation. The highest percentages are in medium and small firms. 9

Reasons given for hiring non-Jordanians are:

- Jordanians not available
- non-Jordanians more skilled, better performance
- better work habits/attitudes

Retention: Most workers in this occupation remain with the firm for over 5 years, with some 1-2 years and a small minority under 1 year. Employers are generally satisfied with retention. One respondent complained of high turnover among university-educated engineers. 10

Incentives include annual salary increases, advancement, transportation to and from work. 10

Selection: Employers most commonly screen and select entrants to this occupation on the basis of: 16

- formal or informal employment interview.
- practical aptitudes tests.
- verbal or written reference or CV.

Unions: Most workers in this occupation are not unionized. Some may belong to the Engineers Association. 17

New workers

Employment requirements:

- The most valued prerequisite is previous experience in the firm or in industrial maintenance.
- Most employers require the Tawjihi as a minimum qualification, with some college or polytechnic training required in some cases.
- Personal acquaintance with the candidate can be a factor.
- There is a strong preference for males.

15,
18,
19,
20, 21

Education & training qualifications: Most respondents did not compare the performance of graduates and non-graduates of specific programs. Those who responded indicated that trained candidates perform better in most categories, but did not specify a training source.

22

Skill development: New entrants to this occupation usually take up to 3 months to become fully proficient, assuming previous experience. Some complain of a skill development period of 1-3 years. Skill development is generally through practice only, with some informal on-the-job training.

23,
24, 25

Existing workers:

Two thirds of respondents cited some need or urgent need for for upgrading of existing workers. Maintenance topics include:

- PLCs, hydraulic & pneumatic systems; general electrical training;
- CNC extrusion machines; injection machines; molding machines
- information finding from manuals
- maintenance in new printing technologies
- electrical boards in manufacturing machines
- new technologies in machine maintenance
- corrective & preventive maintenance and machine overhauls

Most skill development for existing workers is through practice.

General HR problems:

Priority HR problems:

- Difficulty finding adequately skilled workers.
- Skill deficiencies of existing workers.
- Labour turnover and labour cost.

Remedies:

Employers' priorities for addressing these problems are:

- Develop new & improve existing education & training programs.
- Better firm-level HR management practices and sectoral HR coordination.
- Develop national skill standards.

Responsibility for remedies is with the government, followed by firms and training providers.

Training priorities: Two thirds of respondents indicated that improved pre-employment training should be the priority, while the others chose upgrading for existing workers.

Views were unclear on the most appropriate training providers, with some preference for VTC or universities, and considerable interest in employer-driven workplace-based training.

Most respondents indicated a preference for systematic on-the-job training and part-time programs. There was strong preference for practical training, preferably in the workplace.

Links to training providers: The majority of respondents reported no regular contact with training providers in relation to this occupation. However, a minority reported contact of one kind or another.

Summary 6: Quality Control Occupations (all subsectors)

Responses: 5 (4 L; 1 M)

Overview:

All responses on Quality Control occupations are summarized here rather than in their respective subsectors. These occupations are essentially similar regardless of subsector, and summarizing them together produces a more meaningful sample.

6.1 Quality Control occupations.

Quality control occupations in the packaging sector include:

- Production line quality control technician
- Quality control lab technician
- Quality control person (senior to technician)
- Quality control supervisor

Quality control was ranked as a middle priority occupation.

Employment: Most firms employ about 2, though one large plastic containers firm has 15, perhaps by assigning QC responsibilities to some production workers.

3 of 5 of respondents indicated plans to increase QC positions in the next 6 months, due to production expansion, to remedy short-staffing, or to back up existing staff.

Scheduling: Work is full time, often with shift work.

HR practices

Labour supply: Most respondents said finding appropriately skilled maintenance staff is Fairly Difficult to Fairly Easy.

Recruitment: Recruitment in most firms is internal, though college graduates are hired into QC positions.

Career progression: Production technician > production line QC tech > lab QC tech.

Senior QC positions in large firms may be hired from outside with higher qualifications.

Word of mouth is the most common recruitment strategy, with some firms using newspaper ads and Ministry of Labour employment registry.

Foreign workers: None of the respondents reported employment of foreign workers in QC occupations.

Retention: Most workers in this occupation remain with the firm for over 5 years, and employers are generally satisfied with retention.

10

Incentives include annual salary increases, advancement, transportation to and from work, social security.

10

Selection: Employers most commonly screen and select entrants to this occupation on the basis of:

16

- Verbal or written reference or CV.
- Formal or informal employment interview.
- Practical aptitude test.

Unions: Workers in this occupation are not unionized.

17

New workers

Employment requirements:

15,

- Previous experience in the firm or industry is usually required.
- Most employers indicate some qualification: university degree or polytechnic/college diploma or certificate in an engineering related field, lab science, etc. Tawjihi is commonly required as a minimum. Some require previous experience as QC only.
- Males are preferred, though female QCs are sometimes employed.

18,

19,

20,

21

Candidates for QC positions should have lab experience, knowledge of testing procedures and standards for given products. Candidates for supervisor must also be familiar with plant operations.

Education & training qualifications: Two respondents indicated that VTC and college/polytechnic graduates perform better in most categories than non-graduates, but not necessarily in initiative, work habits/attitudes, or communication skills.

22

Skill development: New entrants to QC positions usually take 3 to 6 months to become fully proficient, assuming previous experience. This causes no concern. Skill development is generally through practice and informal on-the-job training, and may include formal training.

23,

24,

25

Existing workers:	26,
	27,
Over half of respondents cited some need or urgent need for upgrading of existing QC workers. Topics include:	28,
<ul style="list-style-type: none"> • QC test methods for metal food containers and lacquers • New QC test methods in paper/carton products manufacturing. • QC lab techniques; ISO. 	29, 33
Most skill development for existing workers is through practice.	
General HR problems	30,
Priority HR problems (all approx. equal):	
<ul style="list-style-type: none"> • skill deficiencies of existing workers. • difficulty finding adequately skilled workers. • labour turnover (including female QC staff). 	
Remedies: Responses on preferred remedies were too few and too widespread to give a clear indication of priorities.	31, 33, 25, 29
Responsibility for remedies is with the government and firms, followed by training providers.	32
Training priorities: Respondents were equally divided as to whether the priority should be on pre-employment training or upgrading for existing workers.	33
Views on preferred training providers were mixed, with some preference for universities and colleges/polytechnics, and some interest in workplace-based training.	34
Most respondents indicated a preference for systematic on-the-job training and part-time programs, though there was some interest in full-time programs.	35
Links to training providers: Only one firm reported contact with training providers, through hiring of graduates.	36

Observations

The following general observations on the data are offered as a basis for constructive discussion among packaging sector stakeholders including member firms, the ACI, training providers and government.

Human resources issues:

- Human resources issues are cited as the highest or near-highest concern affecting business prospects in every subsector of the packaging industry.
- Markets and technological change demand better quality, productivity, and worker skill levels.
- Priority occupations are in production, maintenance, and quality control.
- These are the occupations employing majority of packaging industry workers.
- It is fairly or very difficult to find adequately skilled labour in most key occupations.
- The most urgent need for skill upgrading is in senior technical positions.
- The most important source of skill development in the key occupations is practical experience.

Workers who advance on the basis of experience alone may lack the foundations for advanced technical skills.

HR practices:

- Very few firms have HR departments or staff; very few invest in training; few have well-established HR policies.
- Occupational titles and job descriptions differ considerably within the sector.
- Recruitment is most often by word of mouth.
- Practice is the only avenue of skill development for most workers after being hired.

Turnover and reliance on foreign labour may relate to HR management practices.

Skill requirements:

- Employers have well-defined skill development needs in some occupations.
- Employers are much less clear on preferred training providers and approaches.
- Practical skills are highly valued (but poorly assessed).
- Broad competencies and employability skills for technical workers are increasingly important.
- Employers prefer workplace-based, practical training and short programs.

concern about quality of current technical graduates is widespread

Roles & responsibilities:

- HRD is seen as the responsibility of government and training providers.
- Most firms have no regular contact with training providers.
- There is interest in improving HRD practices at the firm and sector levels.

Recommendations:

The most important recommendation at this point is that these observations and the supporting data be considered, critiqued, elaborated, and discussed by all parties interested in improving the human resources performance of the packaging sector.

In order to lead to effective and sustainable action, specific recommendations must come from the stakeholders themselves. The Amman Chamber of Commerce and the SETVET project will aim to facilitate that process.

Appendices

Appendix 1 Determination of Sample Sizes

Plastic Packaging Firms

Size Code	# Firms	% of Firms	# Workers	% of Workers	Target sample based on % of firms	Target sample based on % of Employment	Actual sample size
LL	9	8.9%	721	37.36%	1	7	4
LM	11	10.9%	533	27.62%	3	5	3
LS	3	3.0%	126	6.53%	0	1	1
ML	2	2.0%	26	1.35%	0	0	0
MM	9	8.9%	130	6.74%	3	1	1
MS	4	4.0%	52	2.69%	1	0	6
SL	0	0.0%	0	0.00%	0	0	0
SM	6	5.9%	28	1.45%	2	0	1
SS	57	56.4%	314	16.27%	8	3	3
total	101	100.0%	1930	100.00%	18	18	19

Paper & Carton Packaging Firms

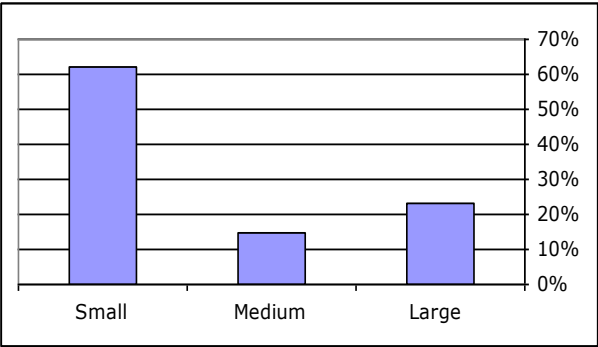
Size Code	# Firms	% of firms	# Workers	% of Workers	Target sample based on % of firms	Target sample based on % of Employment	Actual sample size
LL	4	15.4%	346	52.74%	1	4	2
LM	3	11.5%	108	16.46%	1	1	1
LS	3	11.5%	110	16.77%	1	1	1
ML	0	0.0%	0	0.00%	0	0	0
MM	1	3.8%	49	7.47%	0	0	1
MS	3	11.5%		0.00%	1	1	0
SL	0	0.0%	0	0.00%	0	0	0
SM	1	3.8%	6	0.91%	0	0	0
SS	11	42.3%	37	5.64%	3	0	2
total	26		656	100.00%	7		7

Metal Packaging Firms

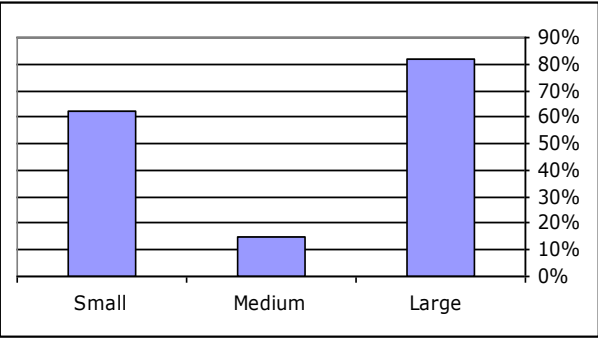
Size Code	# Firms	% of Firms	# Workers	% of Workers	Target sample based on % of firms	Target sample based on % of Employment	Actual sample size
LL	3	21.4%	262	54.47%	1	3	0
LM	3	21.4%	88	18.30%	1	1	2
LS	2	14.3%	80	16.63%	1	1	1
ML	1	7.1%	12	2.49%	0		0
MM	1	7.1%	18	3.74%	1		0
MS	1	7.1%	10	2.08%	0	0	1
SL	0	0.0%	0	0.00%	0		0
SM	1	7.1%	6	1.25%	0		0
SS	2	14.3%	5	1.04%	1		0
total	14	100.0%	481	100.00%	5	5	4

Appendix 2: Subsector Composition

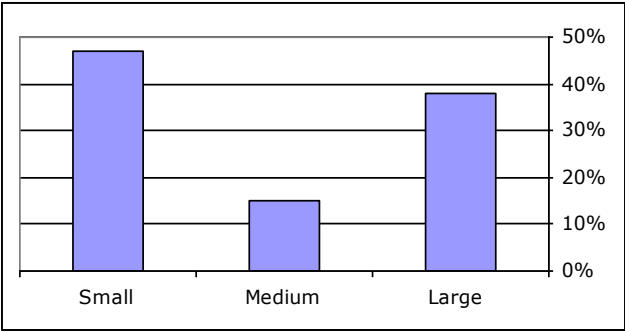
Plastic Packing Firms by Size

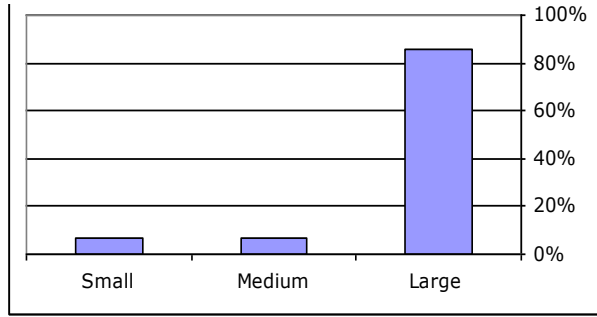
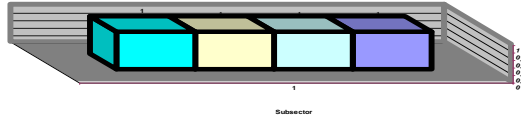


Plastic Packaging Employment by Firm Size

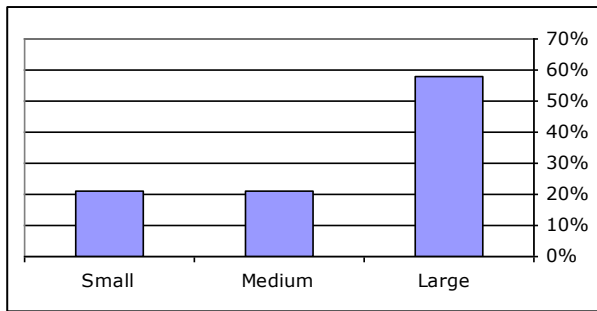


Paper Packaging Firms by Size

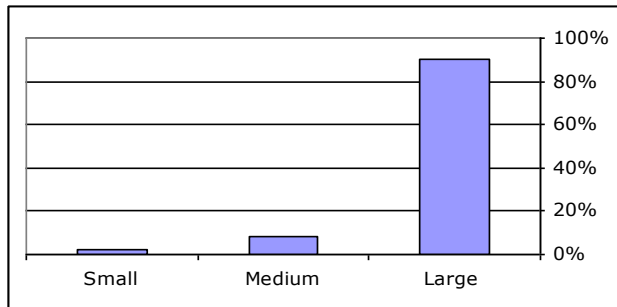




Metal Packaging Firms by Size



Metal Packaging Employment by Firm



Amman Chamber of Industry

Sector HRD Profile Questionnaire

Company name	
Contact person	Phone
Interview date	Time
Interviewer	
Business Environment	
1.	Main products
2.	What are the 3 most important factors shaping the future success and profitability of this firm, in order of importance? 1. 2. 3.
3.	As far as you are aware, are other firms in your industry affected by the same issues? YES NO
Human Resources Management	
4.	Indicate which HR functions are in place: <ul style="list-style-type: none"> ▪ Human Resources department ▪ Human Resources officer ▪ Written HR policy & procedures ▪ Orientation manual for new hires ▪ Written job descriptions ▪ Formal performance evaluation system ▪ Formal system of pay scales, benefits, advancement processes? ▪ Others (list)
5.	Does the firm have a formal training budget? YES / NO How much did the firm spend on training last year? _____ Which occupations received training, and in what topics?
	Occupation
	Topic(s)

I. Employment Profile

6. Occupation	#FT Male	#FT Female	#PT Male	#PT Female	NOC#	Importance
a)						
b)						
c)						
d)						
e)						
f)						
g)						
h)						
i)						
j)						
k)						
l)						
m)						
n)						
o)						
<p>Priority occupations</p> <p>Identify the occupations that cause you the most concern at the present time. Rank them in order of importance to the success of the firm. Concerns might relate to issues such as availability, quality, turnover, etc.</p>						

II. Occupational Profile			
	Occupation:	# ____ of ____	Priority ranking:
7.	Do you plan to adjust your workforce in this occupation in the next 6 months?	YES	NO
	How many more/fewer?		
	What is the principal reason for the change?		
8.	How easy/difficult is it to find appropriately skilled workers in this occupation for your firm?		
	<ul style="list-style-type: none"> ▪ very easy ▪ fairly easy ▪ fairly difficult ▪ very difficult 		
9.	What percentage of your employees in this occupation are non-Jordanian? _____		
	If you hire non-Jordanians for this occupation, what is the main reason?		
	<ul style="list-style-type: none"> ▪ Jordanians not available ▪ non-Jordanians more skilled, better performance ▪ non-Jordanians cheaper ▪ better work habits/attitudes ▪ other (list) 		
10.	How long do workers in this occupation typically remain employed by your firm?		
	Are you satisfied with this rate of retention?		
	What are the reasons for attrition? (advancement, quitting, layoff due to lack of work, etc.)		
	What incentives or practices are in place to promote retention? (job guarantees; seniority, etc.)		
11.	How is work scheduled for workers in this occupation?		
	<ul style="list-style-type: none"> ▪ part-time ▪ full-time ▪ shift work ▪ seasonal work ▪ other 		
12.	Are workers in this occupation promoted into it internally?	YES	NO
	If so, what position(s) do they come from?		
	If workers are promoted from this position into another, what position are they usually promoted to?		

Occupational profile

13.	<p>What is the pool from which your firm draws workers for this position?</p> <ul style="list-style-type: none"> ▪ persons already working in the firm ▪ persons working in the occupation in another firm ▪ recent graduates of specific programs (specify) _____ ▪ recent school graduates ▪ no particular pool ▪ other
14.	<p>What recruitment strategies does your firm use to find workers in this occupation?</p> <ul style="list-style-type: none"> ▪ word of mouth ▪ newspaper ads ▪ internet ▪ job fairs ▪ company recruitment campaigns ▪ other _____
15.	<p>What are the most important characteristics your firm looks for in candidates for this position? (rank in importance with 1 most important)</p> <ul style="list-style-type: none"> ▪ work experience in the industry or with the firm ▪ technical qualifications ▪ general education (e.g. Tawjihi score; years of schooling) ▪ personal acquaintance with the candidate ▪ attitude (how is this assessed?) ▪ gender ▪ other
16.	<p>What is your firm's screening and assessment process for candidates for this occupation? How much weight is given to each? (explain)</p> <ul style="list-style-type: none"> ▪ candidate's résumé or CV ▪ verbal or written reference ▪ informal employment interview ▪ formal employment interview ▪ aptitude test (written / practical) ▪ other
17.	<p>Do workers in this occupation in your firm belong to a union or professional association? Yes No</p> <p>What percentage of workers?</p> <p>Which organization?</p>
18.	<p>Are workers in this occupation required or expected to have a certain amount of work experience before entering this position?</p> <p>Specify:</p>

Occupational profile

19.	At the present time, does your firm require or expect workers in this occupation to hold any particular educational or training qualifications? <p style="text-align: center;">YES Please go to # 20 NO Please go to #23</p>																																										
20.	What education or training qualifications are expected or required for this occupation? 																																										
New Hires																																											
21.	Where do new workers in this occupation typically receive their training? <ul style="list-style-type: none"> ▪ school ▪ on-the-job training ▪ vocational training/apprenticeship ▪ community college ▪ university ▪ other 																																										
22.	If you hire graduates of specific institutions or programs for this occupation, a) Indicate which institution or program _____ b) How do these graduates compare with other workers in the same occupation who have not attended this institution or program: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;"></th> <th style="width: 15%; text-align: center;">Better</th> <th style="width: 10%; text-align: center;">Equal</th> <th style="width: 5%; text-align: center;">Worse</th> </tr> </thead> <tbody> <tr><td>Theoretical knowledge</td><td></td><td></td><td></td></tr> <tr><td>Practical skills</td><td></td><td></td><td></td></tr> <tr><td>Initiative</td><td></td><td></td><td></td></tr> <tr><td>Productivity</td><td></td><td></td><td></td></tr> <tr><td>Attention to quality</td><td></td><td></td><td></td></tr> <tr><td>Attitude & work habits</td><td></td><td></td><td></td></tr> <tr><td>Ability to learn new skills</td><td></td><td></td><td></td></tr> <tr><td>Communication skills</td><td></td><td></td><td></td></tr> <tr><td>Salary expectations</td><td></td><td></td><td></td></tr> </tbody> </table>				Better	Equal	Worse	Theoretical knowledge				Practical skills				Initiative				Productivity				Attention to quality				Attitude & work habits				Ability to learn new skills				Communication skills				Salary expectations			
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23.	After a person with the basic qualifications is hired, how long does it typically take before they can perform fully effectively? <p style="text-align: center;">Does this amount of time cause concern to the firm? YES (explain) NO</p>																																										

Occupational profile

24.	<p>After being hired, how do workers in this occupation learn to perform their jobs?</p> <ul style="list-style-type: none"> ▪ practice ▪ informal on-job training ▪ formal on-job training ▪ formal off-site training ▪ independent study ▪ other
25.	<p>What sort of training (if any) would better prepare new workers to enter this occupation?</p>
<p>Experienced Workers</p>	
26.	<p>Do your experienced workers in this occupation require retraining or upgrading? How important is this?</p> <ul style="list-style-type: none"> ▪ urgent need for upgrading/retraining Topic(s) <hr/> <ul style="list-style-type: none"> ▪ some need for upgrading/retraining Topic(s) <hr/> <ul style="list-style-type: none"> ▪ no need for upgrading/retraining <p>Comments</p>
27.	<p>How does your firm help experienced workers in this occupation improve their skills and performance?</p> <ul style="list-style-type: none"> ▪ practice ▪ informal on-job training ▪ formal on-job training ▪ formal off-site training ▪ independent study ▪ other
28.	<p>If existing workers receive upgrading or other training, who arranges and pays for it?</p> <ul style="list-style-type: none"> ▪ the worker ▪ the firm ▪ union ▪ government ▪ other

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29.	What sort of training or other remedy would be most useful in improving the performance of existing workers?
HRD Problems & Remedies	
30.	What are the main HRD issues of concern to the firm in relation to this occupation? (new hires or existing workers) <ul style="list-style-type: none">▪ difficulty in finding adequately skilled workers▪ labour turnover▪ labour cost▪ workers are not adequately skilled▪ others
31.	What are the main remedies required to address the HRD problems faced by your firm in relation to this occupation? <ul style="list-style-type: none">▪ national occupational standards (to define the competencies required by workers in this occupation)▪ improved HR management practices at the firm level▪ better coordination on HR issue among firms in the sector▪ develop new training programs▪ improve quality of existing education & training programs▪ change to regulations (specify)▪ others (specify)
32.	Whose responsibility is it to initiate and finance these remedies? <ul style="list-style-type: none">▪ workers▪ the firm▪ government▪ business organizations▪ training providers

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33.	<p>Which is the higher priority</p> <ul style="list-style-type: none"> ▪ improving the quality of pre-employment training ▪ developing or improving retraining & upgrading programs for existing workers
34.	<p>Training options</p> <p>If training is required, what are the most appropriate providers?</p> <ul style="list-style-type: none"> ▪ schools ▪ vocational training corp ▪ community colleges ▪ universities ▪ employers at their own workplaces ▪ outside trainers, at the work place ▪ employers, through an employer-operated training system ▪ private training providers
35.	<p>If training is required, what are the most appropriate mechanisms and formats?</p> <ul style="list-style-type: none"> ▪ full-time programs ▪ part-time programs in evenings & weekends ▪ short programs during daytime 1-2 days 3-5 days 6-10 days more than 10 days ▪ systematic on-the-job training ▪ internet-based training ▪ others
36.	<p>Does your firm maintain regular communication with training providers in relation to this occupation?</p> <ul style="list-style-type: none"> ▪ firm participates in program advisory committees ▪ firm and TVET institutions co-develop specialized training ▪ firm staff teach in the training institutions ▪ TVET instructors receive upgrading opportunities at firm ▪ firm has contact with educational institutions through employment of apprentices, co-op students ▪ firm communicates through advocacy organizations (e.g. ACI)

Additional Information

37. Please provide any additional comments related to Human Resources Development issues. (Attach more paper if needed).