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IDARA (INSTITUTING WATER DEMAND MANAGEMENT IN JORDAN)

Market Survey Report for labeling of Water Using Products

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MARKET SURVEY REPORT FOR WATER USING PRODUCTS

**IDARA
INSTITUTING WATER DEMAND MANAGEMENT IN JORDAN**

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List of Acronyms

1. AGWA	Amman Governorate Water Authority
2. ASEZA	Aqaba Special Economic Zone
3. ACC	Amman Chamber of Commerce
4. ACI	Amman Chamber of Industry
5. DAI	Development Alternative Inc.
6. DOSM	Department of Statistics and Measurement
7. DSM	Demand Side Management
8. FTA	Free Trade Agreements
9. GAM	Greater Amman Municipality
10. GDP	Gross Domestic Product
11. IDARA	Instituting Water Demand Management in Jordan
12. JISM	Jordan Institute of Standards and Metrology
13. JEA	Jordan Engineers Association
14. JQM	Jordan Quality Mark
15. JUST	Jordan University of Science and Technology
16. JVA	Jordan Valley Authority
17. MEMR	Ministry of Energy and Mineral Resources
18. MOU	memorandum of understanding
19. MWI	Ministry of Water and Irrigation
20. NERC	National Energy Research Council
21. QIZ	Qualified Industrial Zones
22. RSS	Royal Scientific Society
23. TDS	Total Dissolved Solids
24. USAID	United States Agency for International Development
25. WAJ	Water Authority of Jordan
26. WDM	Water Demand Management
27. WEPIA	Water Efficiency and Public Information for Action
28. WSD	Water Saving Devices
29. WTO	World Trade Organization

1. Executive Summary

- Overall, the results of the study indicate that labeling will be positively received by consumers and will encourage the selection of water and energy efficient products. Water efficiency is clearly of interest to many consumers and is considered to be an important factor in product selection.
- Water saving is widely taken into consideration for the purchase of electric appliances but less so for plumbing products.
- There is relatively high awareness of the availability of water efficient products, particularly in respect of electric appliances.
- The majority of purchasers admitted that they were unable to recognize products which were water efficient, and it was widely agreed that labeling would help in this respect.
- A sizeable proportion of purchasers admitted that they did not read labels, more so for plumbing products than for electric appliances. Among those who did bother to read labels, recall of the country of manufacture dominated and overshadowed other aspects such as water saving.
- Ideas about where a label should be placed had varied. For electric appliances, the favored locations were on the front or top of the product. For plumbing products, the box was the favored location for customers while salespeople preferred the front.
- It was generally agreed that showing performance, water flow and consumption on the label would have most influence on purchase.
- On the whole, it was agreed that information on a label could be trusted although there were some doubters, particularly in respect of plumbing products. It was felt that the label should be issued either by the manufacturers or by a recognized Jordanian institution.

2. Introduction

2.1 Background

IDARA, the Instituting Water Demand Management Project, aims at promoting water efficient plumbing products and appliances in Jordan. The project aims at establishing a strong legislative background that supports cleaning the Jordanian market from inefficient water using products. To this effect, IDARA is working with the Ministry of Public Works and Housing to modify and update the Jordanian Plumbing Code according to the international plumbing codes. In addition IDARA is collaborating with the Jordan Institute for Standards and Metrology to modify the standards and regulation of plumbing fixtures and water using appliances.

IDARA also aims at educating consumers on water-efficient products, through the development of a labelling program work plan for products that comply with the Jordanian plumbing code. The labelling program will also identify products that exceed minimum performance standards. Product labeling will ease the ban of inefficient fixtures and help customers to select efficient fixtures and appliances.

2.2 Purpose and Objective

This study aims at investigating the purchase reactions of customers to the establishment of a recognized label for water-using appliances (clothes washing machines and dishwashers) and plumbing products (toilets, showerheads, and faucets). It also aims at assessing the behaviour of customers towards the purchase of these products, and investigates the driving forces behind their purchase decision. In addition, it aims at determining the knowledge of customers and salespeople of the presence and importance of product labels in indicating water and energy efficiency of the product.

To achieve this, a thorough desktop study was conducted that included consultation with stakeholders and data collection. In addition, two market surveys were conducted to assess the applicability and opinion of customers and salespeople towards the development of labels connoting water use and efficiency.

3. Desktop study

A review of Jordanian and international water and energy efficiency standards and labelling requirements was conducted, in addition to a review of past initiatives and relevant studies (such as the experience of Daman Program, the studies conducted under the Water Efficiency and Public Information for Action (WEPIA) Project (the Survey of Home Appliances and Toilets and the Assessment of Water Saving Devices (WSDs) Sector in Jordan), and the Made in Jordan' Study. The assessment also included store visits, consultative discussions with stakeholders, and desktop research.

As a result, a detailed inventory of the manufacturers, importers, and dealers of plumbing products and electric appliances was obtained from the Chamber of Industry and Chamber of Commerce. The list provided by the Chamber of Industry was specific to the products and appliances investigated in this study, while the one provided by the Chamber of Commerce was general and classified dealers according to the type of produced goods. Both lists classified and listed manufacturers/importers/retailers in a descending order according to their capital investment.

The Department of Statistics (DOS) provided a list of imported quantities for the items investigated in this study and their origin of manufacture for year 2007. Results showed that the largest quantities of clothes washing machines and dishwashers were imported from China with imports exceeding 90,000 and 1600 units, respectively (Figure 1 and 2).

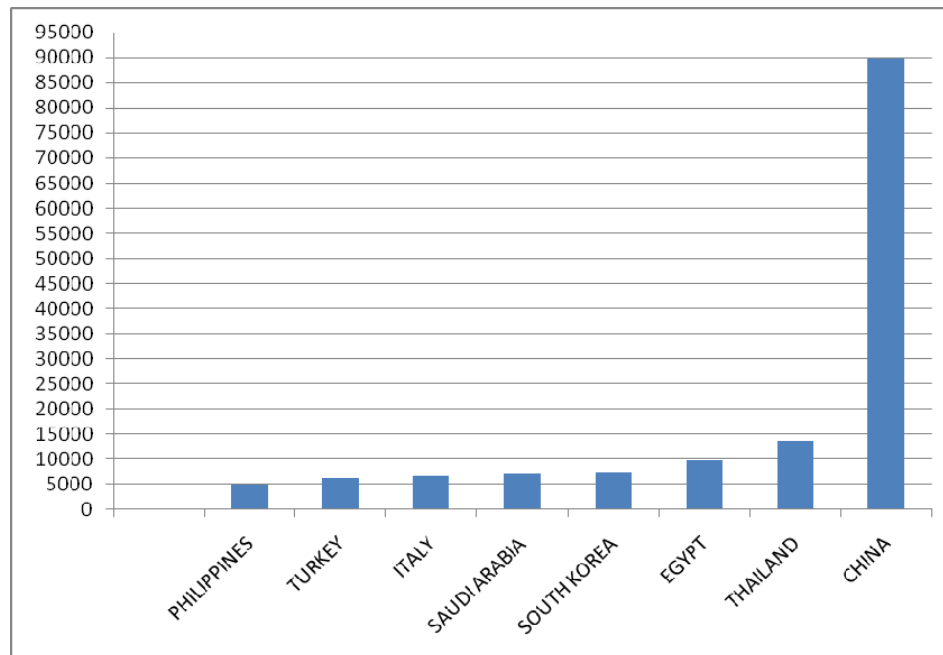


Figure 1: Quantities and Manufacture Origin of Imported Clothes Washing Machines in 2007

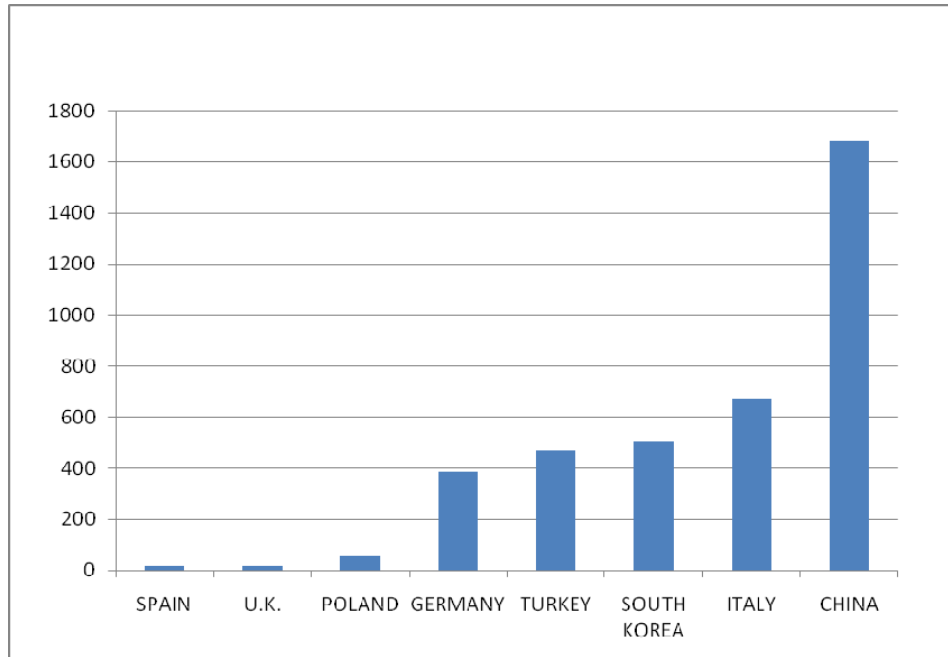


Figure 2: Quantities and Manufacture Origin of Imported Dishwashers in 2007

3.1 Research Findings

3.1.1 Legislative Background

The Jordan Institution for Standards and Metrology (JISM), an administratively and financially independent entity, is responsible, according to the Standards and Metrology Law No. 22 passed in 2000, to ensure that products available in the market are in compliance with the adopted technical regulations. For this to be fulfilled, JISM is tasked with the development, revision, amendment, and monitoring of the implementation of standards and technical regulations with regard to most services and products. JISM is also responsible for adopting international regulations, standards and guidelines where appropriate and possible. In addition, JISM is responsible for accreditation of testing and calibration laboratories and certification bodies and granting of conformity certificates for the Jordanian Quality Mark. The Institution carries out its tasks in consultation with relevant ministries, governmental and non-governmental bodies.

The compliance of imported and locally manufactured products to national regulations is carried out by the Control Department at the JISM, through its deputies at the Customs Centres, where representative samples are randomly selected from each consignment for inspection and testing. As for locally manufactured products, conformity is assured by carrying out inspections on factories and products and by selecting representative and random samples from those products for inspection and testing.

In particular, the inspection is carried out on three phases:

1. Inspection on consignment: this is conducted by the Customs Department, where inspection is basically carried out on the following:

- a. Labelling: Products are checked for the presence of labels and their conformity with product specifications,
 - b. Compliance of product specifications to the technical regulations adopted by JISM; and
 - c. Identify counterfeit products
2. Market surveillance: an inspection of the products available in the market takes place. Products proven to be non-compliant with the adopted regulations are destroyed.
 3. Monitoring of local manufacturers: periodic inspections of factories are carried out by representatives of JISM. If the products are not compliant with the adopted regulations, a warning letter will be issued to the manufacturer. If no corrective actions are taken, the factory will be shut down for a month, and if the factory persists on producing non-compliant products, it will be shut down for a year and will be subject to legal actions.

The following table lists the standards issues by JISM for plumbing products and water-using electric appliances.

Table 1: Water Using Products Standards/Regulations Issued by JISM

Standard/Regulation Title	Issuing Body	Reference Standards	Content	Status of update
<ul style="list-style-type: none"> • JS 1132/1996 Sanitary ware Part four: Wall hung WC pan with 7.5 L maximum flush capacity cistern • JS 1223/2001 Part three: specification for WC pans with horizontal outlet for use with 7.5 L maximum flush capacity cistern 	Jordan Institution for Standards and Metrology	<ul style="list-style-type: none"> • EN 5504 superseded by EN 997:2003 • EN 5503 superseded by EN 997:2003 	<ol style="list-style-type: none"> 1. Main requirements of wall hung WC pan with 7.5 L maximum flush capacity cistern that includes: <ol style="list-style-type: none"> a. Dimensions b. Flushing c. Functional dimensions 2. Methods of measuring performance as per EN 5504. 3. Label to include the following: <ol style="list-style-type: none"> a. Name of product and trade mark b. Name and address of manufacturer c. Country of origin 	Plumbing products technical committee is presently studying comments proposed by IDARA project with respect to flushing volumes and testing.
JS 1598:2004 Sanitary taps - General specifications for flow rate regulators	Jordan Institution for Standards and Metrology	<ul style="list-style-type: none"> • EN 200/1989 • EN 246/1990 • BS 3643-1/1981 	Flow rate regulators are categorized according to the following: <ul style="list-style-type: none"> • names • dimensions • flow rate <p>Content:</p> <ol style="list-style-type: none"> 1. Chemical and health related characterises of the material of flow rate regulators <ul style="list-style-type: none"> • Exposed surfaces are to follow the requirements of EN 248 2. Dimensions 3. Hydraulic characteristics: <ul style="list-style-type: none"> • Conditions and performance measurement methods of flow rate regulators • Water flow data 4. Acoustic characteristics Regulators should be engraved permanently on their outer surface and should include the following:	An update for this standard was proposed by IDARA project with regards to flow rates of flow rate regulators. Plumbing products technical committee approved the amendments. Standard is now to be studied by JISM board.

Standard/Regulation Title	Issuing Body	Reference Standards	Content	Status of update
			<ul style="list-style-type: none"> • name or brand name of manufacturer • sign that reflect the category of flow regulator <p>For flow regulators that do not let the air in, an 'X' should be engraved on it to differentiate them from the other type (regulators that let air in)</p> <p>In case of swivel flow rate regulators, both parts should be engraved with the required information.</p>	
<p>Jordanian Standard 1717/2006 adopted as a technical regulation (mandatory document) Clothes washing machines for household use- Methods for measuring the performance- Energy efficiency label</p>	<p>Jordan Institution for Standards and Metrology (in 2006)</p>	<p>EN 12127 EN 60704-2-4 EN 60704-3 EN 60734 EN 62053-21 ISO 2060 ISO 2061 ISO 3801 ISO 7211-2</p>	<p>Deals with methods for measuring the performance of clothes washing machines for household use, with or without heating devices and for cold and/or hot water supply. This includes washing performance and rinsing performance, spin extraction performance, water and energy consumption and program time, and shrinkage during the wool wash program.</p> <p><u>Data to be reported for the reference washing machine and the washing machine in a special form for reporting:</u></p> <ol style="list-style-type: none"> 1. Determination of the maximum spin speed: the maximum spin speed shall be determined for the 60C cotton cycle during the highest spin speed variation which is continuously reached during a period of 60s. The maximum spin speed is the lowest speed measured during this period. 2. Determination of airborne acoustical noise: For the purpose of energy labeling as required according to the Commission Directive, the noise emission shall be measured separately for washing and spinning cycle. 3. Tolerances and control procedures: <ul style="list-style-type: none"> • <u>Energy consumption</u>: energy consumption shall not be greater than the value declared by the manufacturer plus 15%. 	

Standard/Regulation Title	Issuing Body	Reference Standards	Content	Status of update
			<p>The arithmetic mean of the values of three randomly selected appliances shall not be greater than the declared value plus 10%.</p> <ul style="list-style-type: none"> • <u>Water consumption</u>: same as energy consumption. • <u>Spin speed</u>: the maximum spin speed shall not be less than the value declared by the manufacturer minus 10% or minus 100 rpm, whichever is the smaller value. • <u>Spin extraction</u>: same as in energy and water consumption. • <u>Washing performance</u>: the washing performance should not be less than the value declared by the manufacturer minus 0.03. Arithmetic mean for three randomly selected appliances should not be less than the declared value minus 0.02. • <u>Program duration</u>: shall not be longer than the value declared by the manufacturer plus 15%. The arithmetic mean of three randomly selected appliances shall not be longer than the declared value plus 10% <p>Maximum electrical energy consumption for automatic clothes washing machines = 0.26 KWh/kg of clothes.</p> <p>Energy efficiency label: A sticker shall be affixed to automatic clothes washing machines by the manufacturers of the importers on a clearly identifiable place on the washer's front panel. Language: Arabic, English or both and shall carry the following information:</p> <ul style="list-style-type: none"> • Manufacturer's name • Brand name 	

Standard/Regulation Title	Issuing Body	Reference Standards	Content	Status of update
			<ul style="list-style-type: none"> • Model • Capacity in kilograms • Maximum specific energy consumption allowed for this product • Monthly energy consumption (KWh)= (measured consumption/cycle * 20 washing cycle/month) <p>The energy efficiency label should be issued for those washing machines that have been tested.</p> <p>The manufacturer or the importer shall affix this energy efficiency label on each washer of the same model in the local market. The manufacturer shall test every washing machine to determine the rating grade of the model according to the test results.</p>	

3.1.2 Daman Program

In 2003, JISM initiated the implementation of an International Product Conformity Certification Program (IPCCP). The program was intended to ensure that certain products available in the Jordanian market conform to Jordanian or internationally recognized standards. Locally manufactured products were tested and certified on-site of manufacture, while imported goods were inspected in the country of origin.

IPCCP was implemented by Bureau Veritas, a global company specialized in QHSE management (Quality, Health, Safety, and Environment), which issued, on behalf of JISM, conformity certificates attesting that goods/products were in accordance with relevant Jordanian or internationally-recognized standards.

IPCCP targeted the following products:

- Toys
- Electrical and electronic products
- Vehicles, and
- Personal safety devices,

To ensure accuracy and transparency of results, inspection of products was carried out according to the following steps that were conducted in the country of supply and Jordan:

Jordan	↓ Importers contact Bureau Veritas (BV) Liaison Office in Amman.
Country of Supply	↓ Exporter contacts BV Office in his country, and provide them with technical details, and the available quality documentary evidence, such as: <ol style="list-style-type: none">1. Conformity certification to an internationally recognized standard2. Manufacturer's quality process certification3. Certificate of analysis4. In-house testing certificates5. Certificate of origin
	↓ Documentary check: an evaluation of all information provided by the exporter to verify compliance of products to relevant Jordanian standards and regulations will be carried out. Where insufficient information is available, the seller is requested to submit a sample for testing by a laboratory accredited by JISM.
	↓ Physical inspection: is carried out when there are doubts related to the investigated product. In case of discrepancies, the seller is requested to correct them prior to issuance of certificates. If irregularities are not corrected, a discrepancy report will be issued and importer will be informed accordingly.
	↓ Compliance certification: Upon issuance of satisfactory inspection report, a certificate of conformity will be issued by Bureau Veritas office in the country of supply.
	↓

Jordan Certificate delivery: when the Liaison Office in Amman receives the certificate data, the office will deliver the Certificate of Conformity to the importer. The certificate identifies the goods and the applicable Jordanian Standard.

The program succeeded in meeting the following objectives:

- Providing capacity building for around 250 employees in JISM and concerned institutions.
- Developing equipped laboratories for testing of products.
- Minimizing the risk of re-exporting products due to their incompliance with local and international standards. This is achieved by testing the imported products by laboratories accredited by JISM in the country of supply.

However, implementation of the program faced certain challenges due to the following:

- There was no strict monitoring of the testing process,
- The local cadre responsible for conducting on-site inspection were not qualified and well-trained on testing,
- There was no focus on inspecting and including the country of origin on the label, which will to a certain extent give the customer an indication on product quality.
- There was no proper inspection on trademark infringement.

Daman program ended with the end of the contract with Bureau Veritas in August 2007. JISM has then implemented a sustainable internal system to monitor product standards through post-market surveillance and other means that do not pose technical barriers on trade. JISM is now responsible for inspecting all the products that were included in Daman Program except the vehicles, which are monitored by the Traffic Department in Jordan.

It is worth mentioning here that in 2005, Bureau Veritas and the Royal Scientific Society established the Middle East Laboratory Testing & Technical Services (MELTTS) that provides electrical and electronic testing services, training and technical studies for factories in Jordan and the region. The company's laboratories are the successor of the testing and quality control laboratory in the Electronic Services and Training Center, which was established in 1981.

The Centre is accredited by JISM according to ISO/IEC 17025: 2005. However, the Centre is only equipped with machines and tools for testing the safety measures of products that fall within the following categories: household appliances, IT equipment, audio and video equipment, toys, luminaries and electrical components and accessories. The Centre provides studies in design and establishment of new electrical testing laboratories, in addition to pre-purchase and technical evaluation and tendering of electrical test equipment.

3.1.3 Made in Jordan Study

'Made in Jordan' is a study conducted in November 2001 by Amman Chamber of Commerce that tackled the opinion and consideration of Jordanian customers towards locally manufactured products and assessed the status of these products in the Jordanian market. The study was carried out by the Management Consultants Group International in cooperation with the Chamber of Industry.

Around 600 questionnaires were filled out for the purposes of the study. Below is a table that highlights the main findings related to the purchase behaviour of customers:

Table 2: Customers' Purchasing Behavior

	Always (%)	Sometimes (%)	Never (%)
Planning ahead before buying a product	40	47	13
Compromise on the quality for a lower price product	10	39	51
Impact of opinion of friends and relatives on purchase decision	32	44	24
Impact of advertisements of the purchase decision	13	36	51

The study categorized interviewees according to their income as follows:

Higher-income: more than 600 JDs/month

Middle-income: 300-600 JDs/month

Lower-income: less than 300 JDs/month

Unlike the majority of middle and low-income people, interviewees from the higher income stratum plan ahead prior to purchasing a product and are less dependent on the opinion of family and friends. This stratum is usually affected by advertisements, and is convinced that products of expensive brands are of a better quality than products of cheap brands.

Interviewees were also asked about the main criteria considered when buying a product. Below are the results divided by each income category.

Table 3: Customers' Purchasing Criteria

Income (JD)	Reputation (%)	Varieties (%)	Availability of product (%)	Quality (%)	Origin (%)	Brand name (%)	Price (%)	No answer (%)
> 600	4	–	–	35	5	5	18	33
300-600	6	1	3	37	14	13	10	17
< 300	5	1	2	38	14	15	16	9
Total	5	1	2	37	12	13	15	16

4. Labeling Survey Targeting Consumers

4.1 Methodology

This survey was conducted by IDARA Project in collaboration with the Market Research Organization, and addressed the following:

- Factors taken into consideration in the purchase of electric appliances and plumbing products and the relative importance of such factors,
- Awareness of customers on the availability of water saving products and whether water consumption is taken into consideration in the purchase decision,
- Ability to recognize whether a product is water efficient and whether a label would assist in this respect,
- (Electrical appliances only) Awareness of the availability of energy saving products and whether energy saving is taken into consideration in the purchase decision,
- (Electrical appliances only) Ability to recognize whether a product is energy saving and whether a label would help in this respect,
- Incidence of reading product labels and recall of content,
- Whether a label noticed on product under purchase consideration and reasons for not noticing,
- The preferred positioning of a label,
- Information that the label should provide and whether it could be trusted,
- Which entity should issue such a label?
- Preferred means of presenting the label information and the time willing to spend reading such information.

Selection of the Market Survey Sample

The selected sample was focused on the leading manufacturers, importers and major retailers and representatives of small and medium-size stores in Amman. To obtain a better reflection of the market, the sample included stores selling both high and low quality products in east and west Amman.

In addition, several visits to local manufacturers were carried out to identify locally manufactured products and labeling procedures (design and placement).

In summary, the survey identified a total of 7 eligible areas (4 in West Amman and 3 in East Amman) which were broadly representative of the universe of such outlets in terms of type and size.

Interviewers were stationed simultaneously at each store and approached every third customer who was observed to be inspecting one of the specified products.

Research Methodology of Customers Survey

Respondents were contacted and interviewed at retail points using a structured questionnaire (see Appendices 2 and 3).

Survey universe

Population - Adults (18 + years) males and females planning to purchase one or more of the specified electrical appliances or plumbing products

Geographic - East and West Amman

Structure of the achieved sample

A total of N=200 purchasers of the specified items was achieved. However, some respondents were buying more than one plumbing product. The actual number of purchasers of each item interviewed was:

Showerheads	51
Faucets	58
Toilets	47
Automatic clothes washing machines	45
Dishwashing machines	20

It is worth mentioning here that no quotas were imposed on the demographic profiles of the sample which was as illustrated in Table 4 below.

Table 4: Demographic profile of interviewed customers

Base: all purchasers of each category					
		Electrical appliances (65)		Plumbing appliances (135)	
		No.	%	No.	%
Gender	Male	50	(77)	125	(93)
	Female	15	(23)	10	(7)
Ages	21-35	30	(46)	66	(49)
	36 +	35	(54)	65	(48)
	Refused	-	(-)	4	(3)
Area ¹	West Amman	4	(6)	90	(67)
	East Amman	61	(94)	45	(33)

It is worth mentioning here that 42% of respondents buying electrical appliances were purchasing them for a new home, while 59% were looking for a replacement for an older product. Those buying for a new home were all buying for personal use.

¹ Analysis of data according to geographic area will be misleading since area of purchase does not necessarily reflect area of residence i.e. those shopping in East Amman may be residents of West Amman, and vice versa.

A similar result was achieved for plumbing products whereby 44% of respondents buying plumbing products were purchasing these products for a new home, while 56% were looking for a replacement for an older product. 90% of those buying for a new home were buying for personal use.

4.2 Data Analysis and Results

Q1. Factors taken into consideration when purchasing these products

Q1.1. Electrical appliances

a) Spontaneous mentions (multiple response possible)

Price (mentioned by 63% of purchasers) and product quality (48%) were the most widely mentioned factors for consideration. Water saving (35%) was the next most widely mentioned item, followed by the brand name (29%).

b) Prompted mentions

Once prompted by a list of items, product quality (88%) and price (85%) were equally mentioned. Water saving (69%) and energy saving (62%) were among the top five aspects, along with brand name/place of purchase (65%).

Although the cost of electricity is higher than that of water it should be remembered that electricity supply is abundant while supply of water is severely restricted. Hence, water saving is more likely to be taken into consideration than energy saving.

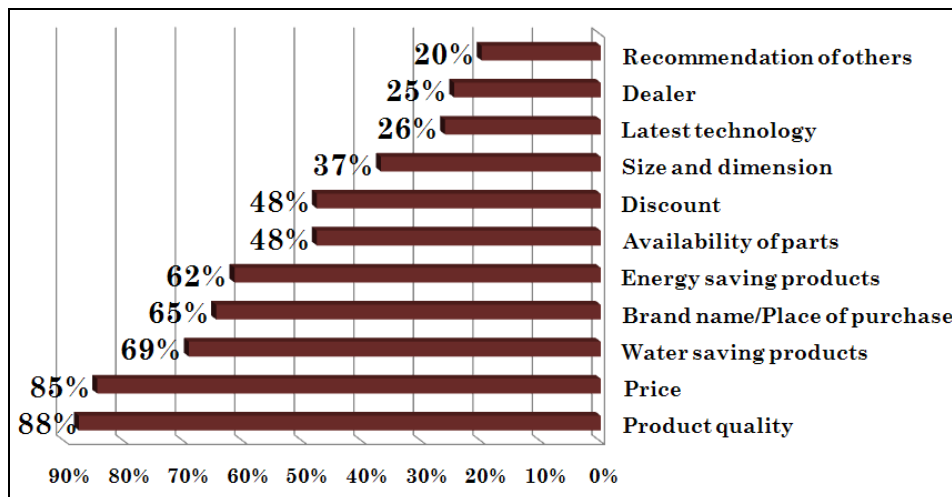


Figure 3: Factors taken into consideration when purchasing electric appliances

Q1.2. Plumbing products

a) Spontaneous mentions

As for electrical appliances, price (72% of respondents) and product quality (49%) are the most widely considered factors. Water efficiency and use (32%) was the next most widely mentioned aspect.

b) Prompted mentions

Once prompted by a list of factors, price (90%) and product quality (80%) remain the two most widely considered aspects. Water efficiency and use (55%) was the next most widely mentioned aspect, followed closely by size and dimension (50%).

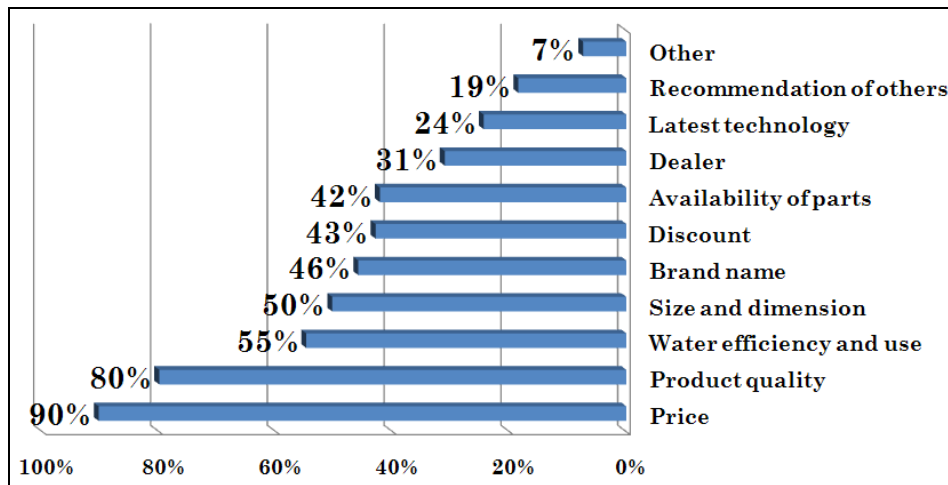


Figure 4: Factors taken into consideration when purchasing plumbing products

Q1.3. Comparison between electrical appliances and plumbing products

Price and product quality are widely considered in respect of both categories while brand name is more likely to be thought about for electrical appliances (Table 5). This perhaps suggests a lack of awareness of branding in respect of plumbing products.

Table 5: Most considered factors in purchase of products

	Electrical appliances		Plumbing products	
	Spontaneous (%)	Prompted (%)	Spontaneous (%)	Prompted (%)
Base²:	(65)	(65)	(135)	(135)
Water saving/ efficiency	35	69	32	55
Energy saving	14	62	-	-
Price	63	85	72	90
Product quality	48	88	49	80
Brand name	29	65	13	46

² Base: all purchasers in each category

	Electrical appliances		Plumbing products	
	Spontaneous (%)	Prompted (%)	Spontaneous (%)	Prompted (%)
Discounts	17	48	12	43
Availability of parts	12	48	13	42
Latest technology	9	26	1	24
Size and dimension	8	37	8	50
Dealer/place of purchase	8	25	4	31
Recommendation of others	6	20	4	19

Comparison between results obtained from customers of electric appliances vs. plumbing products regarding the top 3 most mentioned factors

Price and product quality are widely considered in respect of both categories. While brand name is more likely to be thought about in case of electric appliances customers compared to plumbing products.

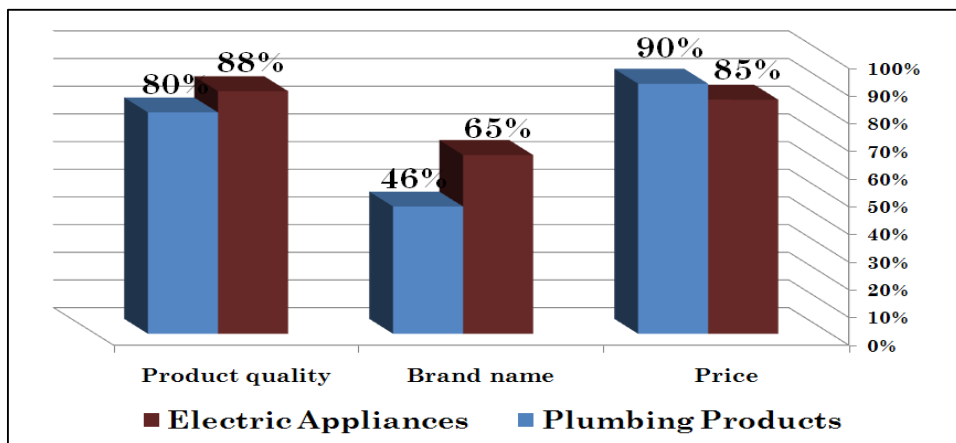


Figure 5: Comparison between electric appliances and plumbing products regarding the Water saving factor
Comparison between results obtained from customers of electric appliances vs. plumbing products regarding the Water saving factor

Customers of electric appliances are more concerned about water saving than customers of plumbing products.

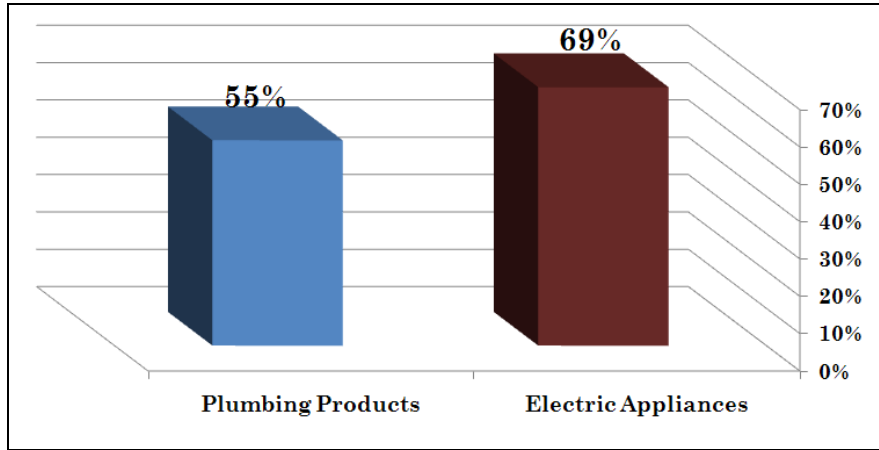


Figure 6: Comparison between electric appliances and plumbing products on water saving factor

Q2. The relative importance of these aspects

Q2.1. Electrical appliances

Price and product quality are clearly considered to be the most important factors in buying the specified electrical appliances. Water saving and efficiency is ranked as the third most important factor.

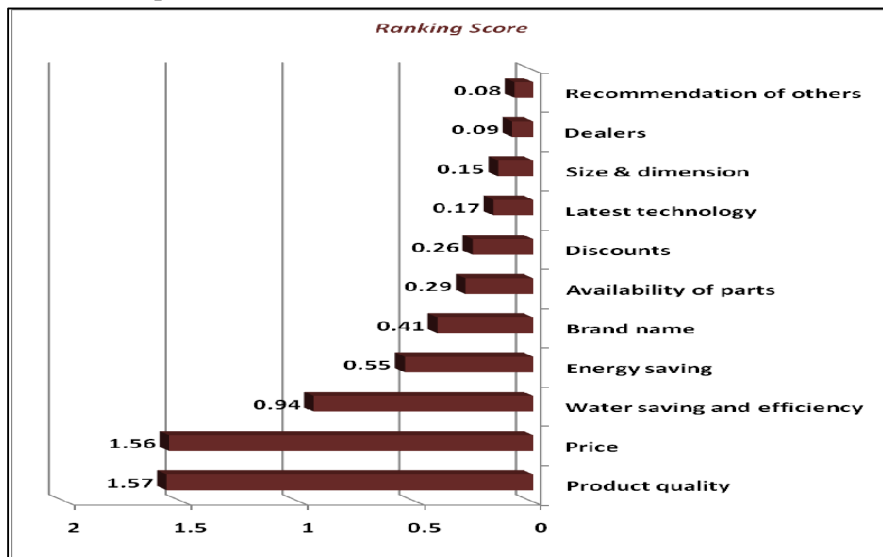


Figure 7: Relative importance of these aspects for electric appliances

Q2.2. Plumbing products

Price is by far the most important factor to be considered in the purchase of plumbing products, noticeably ahead of product quality. Water saving and efficiency is ranked as the third most important but considerably behind these two.

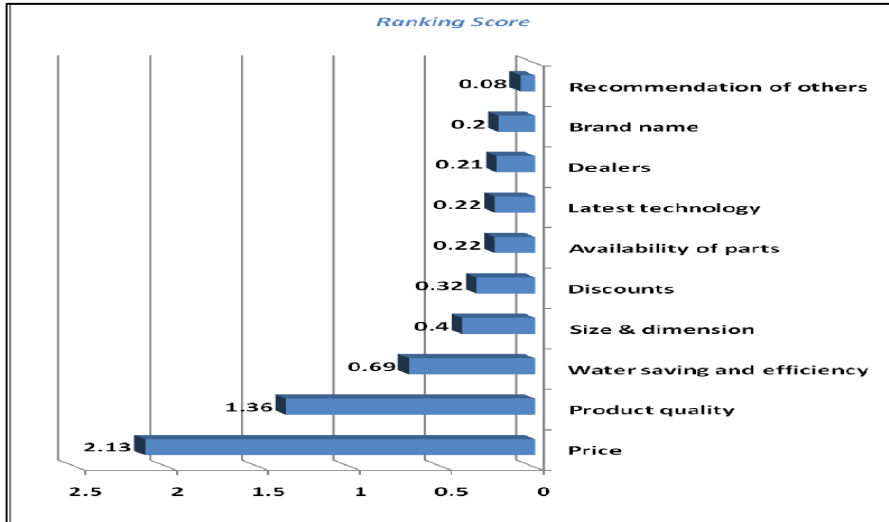


Figure 8: Relative importance of these aspects for plumbing products

Q2.3. Comparison between electrical appliances and plumbing products

While price and product quality are of equal importance for electrical appliances, price dominates the plumbing products category.

Water saving and efficiency is given greater emphasis in the electrical appliances category.

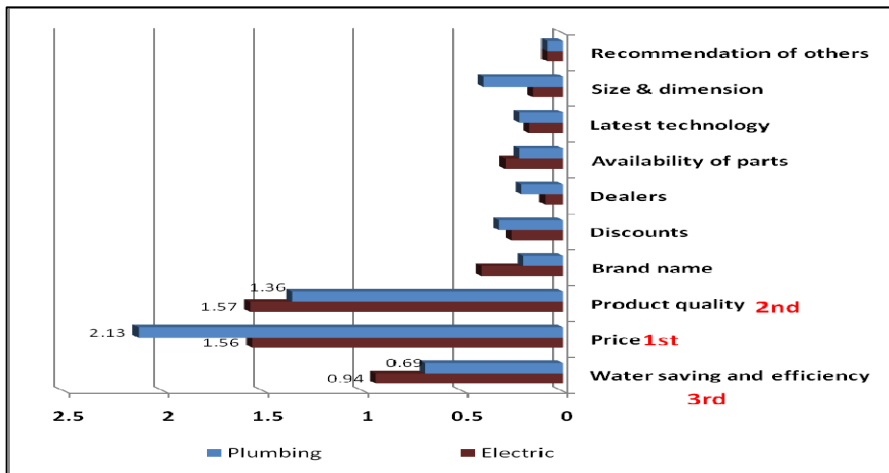


Figure 9: Comparison between electric appliances and plumbing products

Table 6: The relative importance of the factors of concern for customers

The relative importance of these factors								
Base:	Electrical appliances				Plumbing products			
	(65)				(135)			
	1 st %	2 nd %	3 rd %	Ranking score	1 st %	2 nd %	3 rd %	Ranking score
Water saving and efficiency	11	18	25	0.94	10	13	13	0.69
Energy saving	6	11	15	0.55	-	-	-	-
Price	38	15	12	1.56	55	19	10	2.13
Product quality	28	31	11	1.57	18	32	18	1.36
Brand name	8	6	5	0.41	1	5	7	0.20
Discounts	3	6	5	0.26	7	2	7	0.32
Dealers	2	-	3	0.09	-	9	3	0.21
Availability of parts	2	3	17	0.29	3	1	11	0.22
Latest technology	2	3	5	0.17	1	6	7	0.22
Size & dimension	2	3	3	0.15	4	9	10	0.40
Recommendation of others	-	3	2	0.08	-	2	4	0.08
	100	100	100		100	100	100	
Rank score calculation: $\frac{1^{st} \times 3}{2^{nd} \times 2}$ $\frac{3^{rd} \times 1}{\div 100}$								

Q3. Awareness and relevance of water saving and efficient products

Q3.1. Awareness of the availability of such products

Awareness of the availability of such products is relatively high, particularly in the case of electrical appliances. 83% of those buying a specified electrical appliance and 67% of those buying a plumbing product claimed to be aware of this.

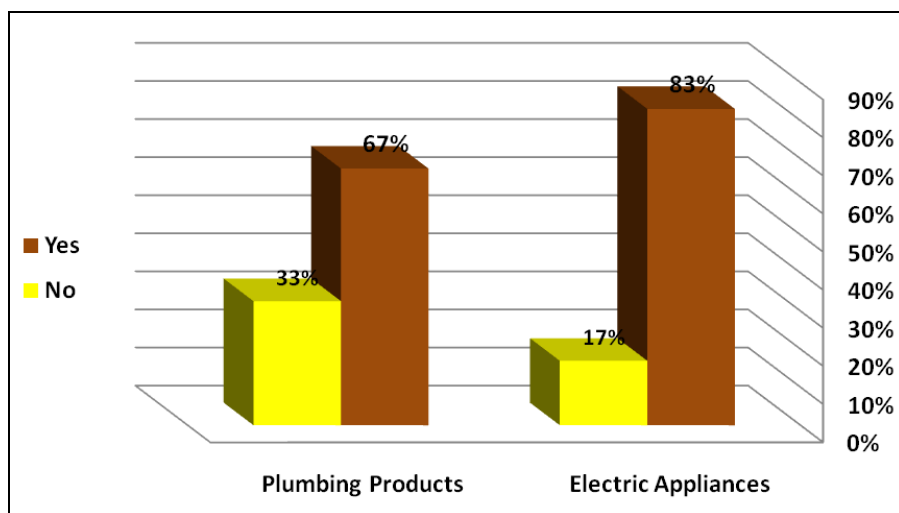


Figure 10: Awareness of customers on the availability of water saving products

- **Comparison between plumbing products in regards to awareness of water saving products:**

As shown in the chart below, toilet purchasers (79%) are aware of such products more than those purchasing showerheads or faucets.

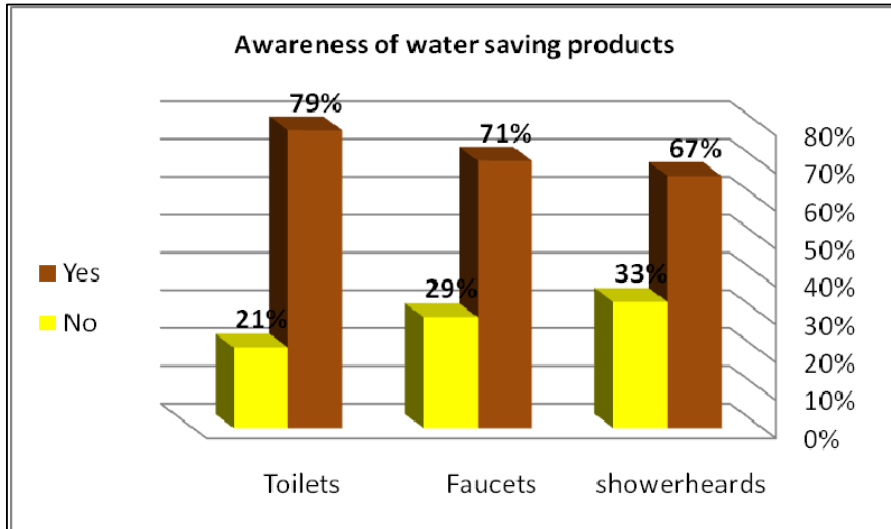


Figure 11: Comparison between customers of plumbing products on their awareness of water saving products

Q3.2. Whether the amount of water used is taken into consideration

88% of those buying an electrical appliance take the amount of water used into consideration, rather more than the percentage obtained from those buying plumbing products (55%) (as shown in the figure below).

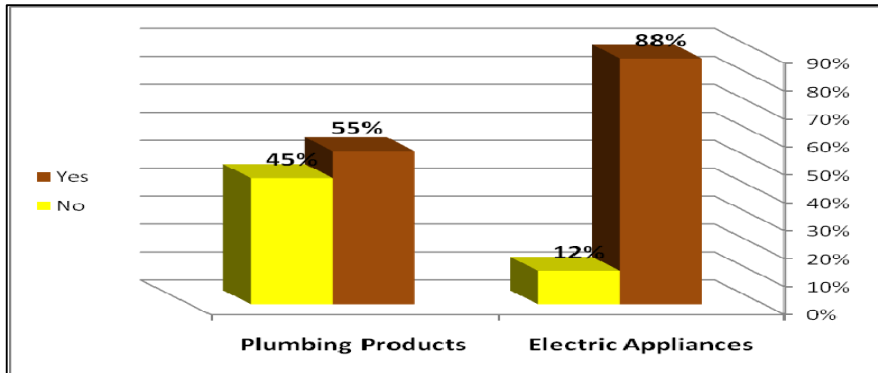


Figure 12: Percentage of customers that take water consumption quantities into consideration

- **Comparison between plumbing products whether the amount of water used is taken into consideration:**

As shown in the figure below, toilets and faucets purchasers (62%) do take the amount of water into consideration, compared to 55% in case of showerheads purchasers.

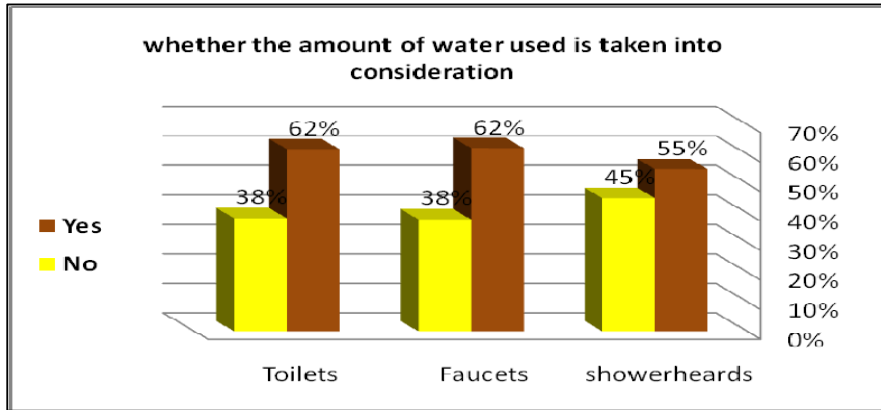


Figure 13: Comparison between customers of plumbing products that take water consumption quantities into consideration

Q3.3. Ability to recognize whether a product is water efficient

- Only a minority of those buying any of the specified products claimed that they were able to determine whether it was water efficient or not. Those buying shower heads and toilets were the least likely to be able to recognize this aspect.

Table 7: Percentage of customers that were able to recognize water efficient products

			Able to recognize	Not able to recognize
Clothes washing machine	(45)	%	40	60
Dish washing machine ³	(20)	%	35	65
Shower heads	(51)	%	33	67
Faucets	(58)	%	45	55
Toilets	(47)	%	28	72

³ Small base

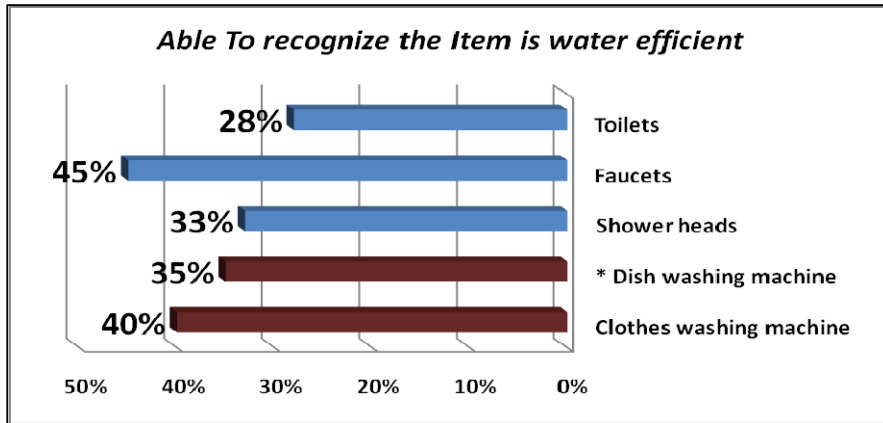


Figure 14: Percentage of customers that were able to recognize if the item is water efficient

Q3.4. Whether a label indicating that a product saves water would help the purchasing decision

The great majority of purchasers of each product, particularly the electrical appliances, stated that a label indicating water saving would assist their purchasing decision (as shown in the figure below).

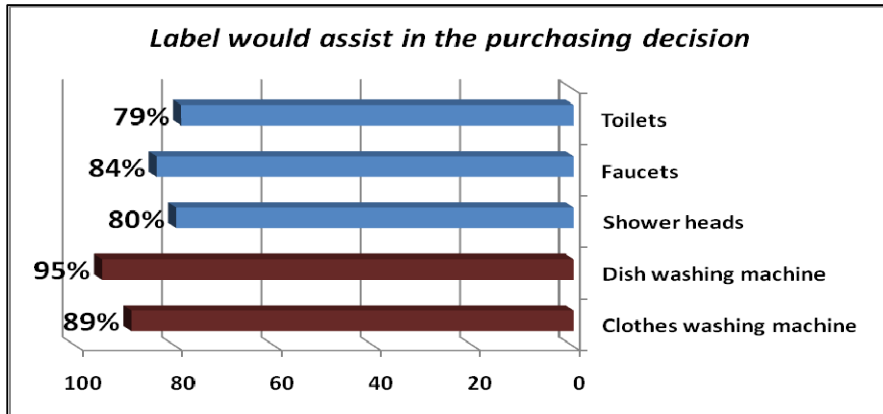


Figure 15: Percentage of customers that thought a label would assist in the purchasing decision

Q4. Awareness and relevance of energy saving electric products

Q4.1. Awareness of the availability of such products

- 69% of those buying an electrical appliance claimed to be aware of the availability of energy saving products.
- Cloth washer purchasers (71%) are more aware of the availability of energy saving products than those buying Dishwashers.

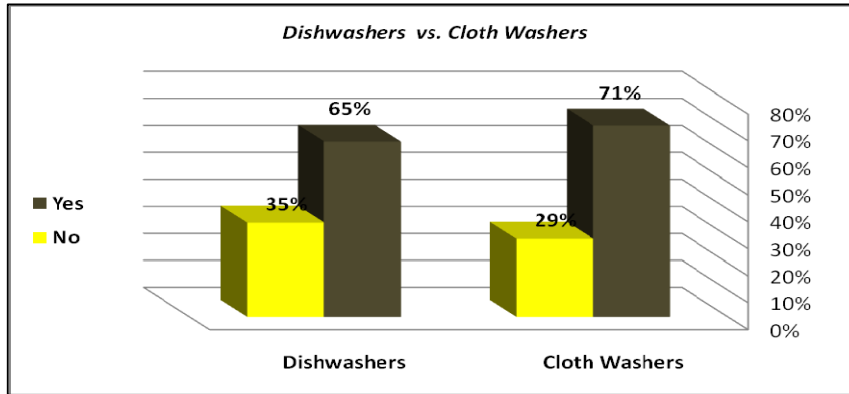


Figure 16: Awareness of customers on the availability of energy saving electric appliances

Q4.2. Whether energy consumption is taken into consideration

- 71% of those buying a clothes washing machine or dishwasher claimed to take the energy consumption into consideration in their purchase decision.
- Cloth washer purchasers (73%) are more likely to take energy consumption into consideration in their purchase decision.

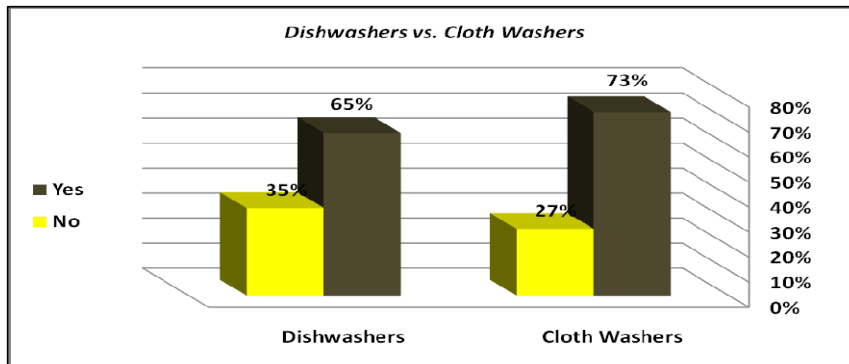


Figure 17: Percentage of customers that take energy consumption into consideration

Q4.3. Ability to recognize whether a product is energy efficient

Only 36% of those buying a clothes washing machine and 30% of those buying a dishwasher said that they were able to recognize whether a product was energy efficient.

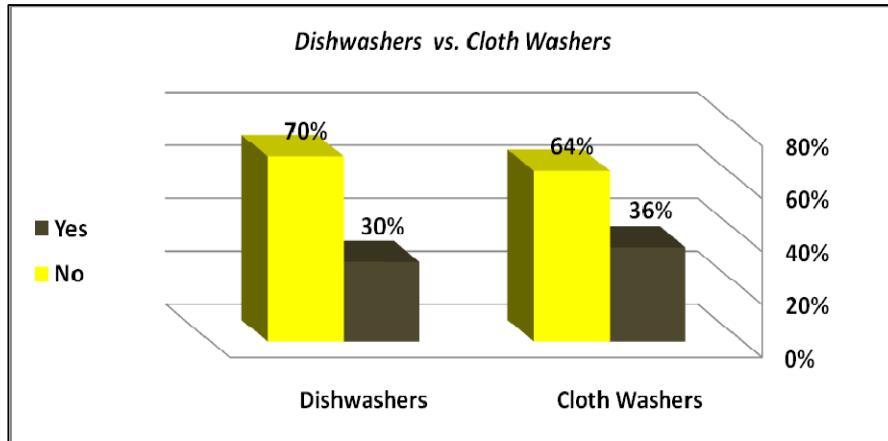


Figure 18: Percentage of customers that were able to recognize energy efficient products

Q4.4. Whether a label indicating that a product is energy efficient would help the purchasing decision

The great majority (around 90%) of purchasers of clothes washing or dishwashing machines stated that a label indicating energy efficiency would assist in their purchasing decision.

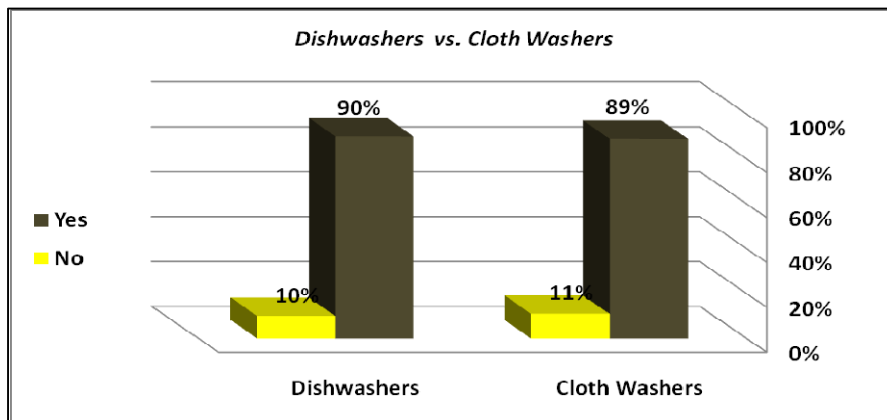


Figure 19: Percentage of customers that thought an energy efficiency label would help in taking the purchase decision

Q5. Labeling issues

Q5.1. Whether customers read labels before purchase

Purchases of electrical appliances (69%) are more likely to read the label than those buying plumbing products (54%), possibly reflecting the greater investment and technical complexity of the former.

Q5.2. Recall of what the label says

a) Electrical appliances

Of those who read the label of electrical appliances, 78% said that they were able to remember what it said. Among these, the country of manufacture was the most widely recalled aspect. Followed some way behind by performance, water saving, energy consumption and price.

b) Plumbing products

Among purchasers of plumbing products who read the labels, 63% were able to recall the content. Country of manufacturer was most widely recalled, followed a long way behind by water saving and price.

Table 8: Percentage of customers that recall labels content

Recall of what the label says		
	Electrical Appliances (%)	Plumbing Appliances (%)
Base:	(45)	(73)
Cannot recall content	22	37
Recall content	78	63
	100	100
Content recall base:	(35)	(46)
Country of manufacture	74	80
Water saving/water flow rate	26	26
Energy saving/consumption	26	-
Performance	31	-
Price	20	13
Other aspects	20	15

Although price is a key consideration in the purchase of these products, the low recall of price on the label suggests that it was shown elsewhere. Price is a factor which can vary from one store to another and hence it is not expected to be on a label which shows "fixed" technical information.

Q5.3. Visibility of label on products being purchased

As shown in the table below, relatively high proportions of the products being looked at did not have any kind of labels (40-60%). Even those that have labels, the label is not always exposed to customers, which requires effort and time from the customer to search for it, and he may lose interest in that.

In general, the percentage of labels that are available on electric appliances is higher than plumbing products.

Table 9: Percentage of products that were labeled

	Base:	Label exposed (%)	Label hidden (%)	No label (%)
Clothes washing machines	(45)	40	9	51
Dish washing machines ⁴	(20)	50	10	40
Shower heads	(58)	22	12	59
Faucets	(58)	22	19	59
Toilets	(47)	30	10	60

Q5.4. Whether label noticed

- Of those buying electrical appliances that were labeled (either exposed or hidden), 79% said that they had noticed the label.
- Among purchasers of plumbing products that were labeled (either exposed or hidden), only 54% said that they had noticed the label (as shown in figure below).

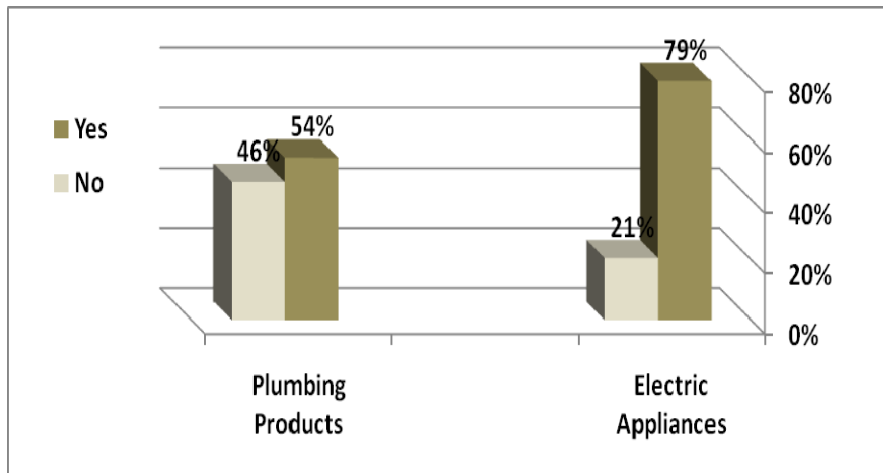


Figure 20: Percentage of customers that notice labels

- Among the very few (7) purchasers of electrical appliances who had not noticed the label, the main explanations were that the label did not stand out, that it was not understood or that the font size was too small (implying that they had actually noticed but not read the label).

⁴ Small base

- Similarly, among the 23 purchasers of plumbing products who had not noticed the label, the main explanations of language barrier (26%), lack of understanding (22%) and small font size (17%) implying that the label had been noticed but not read. 17% of these respondents explained that the label did not stand out.

Q6. The mechanics of labeling

Q6.1. Where a label should be placed

Among purchasers of electrical appliances, preference was for the label to be placed on the front of the product (51%) while a further 20% preferred the top of the product. Only 15% preferred the label to be placed on the box which one assumes would not normally (if a box exists) be seen in the showroom.

Of purchasers of plumbing products, 50% preferred the label to be on the box while a further 24% preferred the top of the product. However, it is assumed that affixing a label to products such as faucets may not be easy.

Table 10: Preferred place for a label

Where a label should be placed		
	Electrical Appliances (%)	Plumbing Appliances (%)
Base:	(65)	(135)
On the box	15	50
On the top of the product	20	24
On the front of the product	51	11
On the back of the product	11	7
On the side of the product	6	9
Elsewhere	3	-

Q6.2. Which factor would most influence the purchase decision: water efficiency or energy efficiency?

Among purchasers of electrical appliances, opinions on this issue were divided. 32% thought that water efficiency would most influence them, while 17% were most likely to be influenced by energy efficiency and 31% by both equally. A further 20% said that neither would influence them.

Table 11: Factors most likely to influence the purchase decision

Factor	%
Base:⁵	(65)
Water efficiency	32
Energy efficiency	17
Both equally	31
Neither of them	20
Total	100

⁵ All purchasers of electric appliances

- **Water Efficiency vs. Energy efficiency**

Keeping in mind that the base of Dishwasher purchasers is very small (20), it appears that purchasers of Dishwashers consider water efficiency more than energy efficiency, while the opposite is true for purchasers of clothes washing machines.

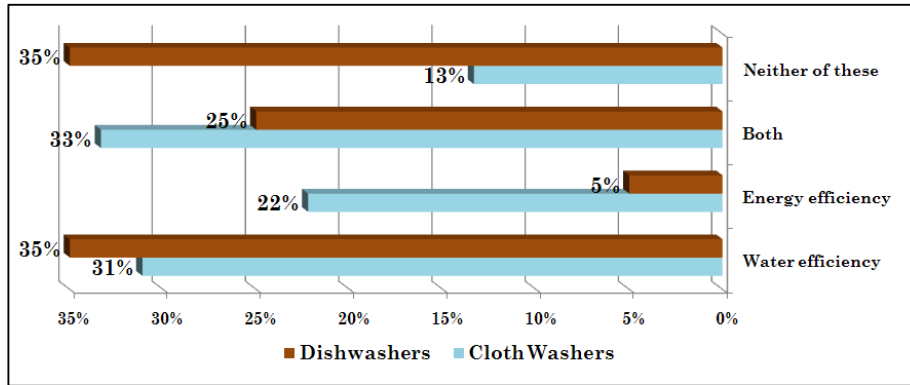


Figure 21: Comparison between customers of clothes washing machines and dish washers on taking water efficiency into consideration

Q6.3. Label information that would most influence the purchase decision

- Among purchasers of electrical appliances, performance (52%), water flow and consumption (52%) and energy use are thought to be the factors on the label which would most influence purchase decisions.
- Among plumbing product buyers, performance (67%) and water flow and consumption (49%) are thought to be the most influential factors.

Table 12: Label information that would most influence the purchase decision

	Electrical Appliances (%)	Plumbing Appliances (%)
Base:	(65)	(135)
Performance	52	67
Water flow and consumption	52	49
Energy use	34	-
Other aspects	14	13

Q6.4. Whether information on the label would be trusted

- Virtually all (94%) electric appliance buyers but slightly fewer (81%) purchasers of plumbing products said that they would trust the information on the label (as shown in the figure below).

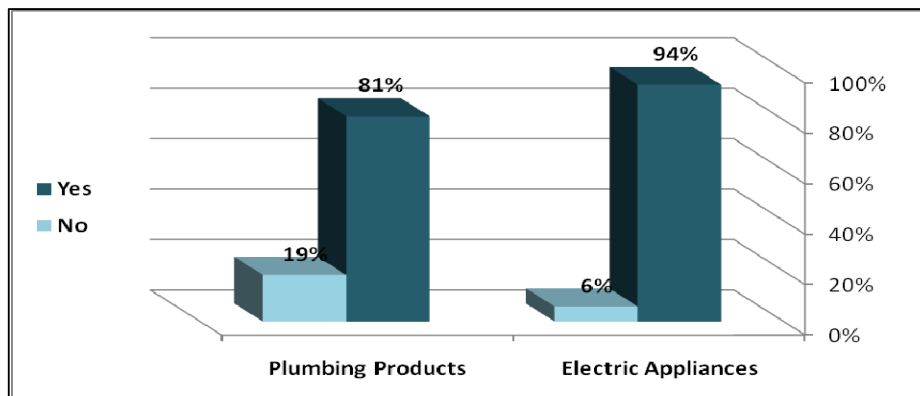


Figure 22: Percentage of customers that trust the information on labels

Q6.5. Which entity should issue the label?

- Among purchasers of either electrical appliances or plumbing products the manufacturers or the Jordan Institute for Standards and Metrology were considered most suitable to issue the labels. Purchasers of plumbing products also suggested the Ministry of Water and Irrigation.

Table 13: Opinion of customers regarding the entity that should issue labels

	Electrical Appliances (%)	Plumbing Appliances (%)
Base:	(65)	(135)
The manufacturer	34	32
Jordan Institute for Standards & Metrology	32	27
Ministry of Water & Irrigation	12	27
Chamber of Commerce & Industry	10	7
Royal Scientific Society	2	3
Other	8	2
Don't know	4	3

Q6.6. Format of the information

- Preference among both electric appliances and plumbing product purchasers was for the labels to be in Arabic and in graphic format. Only a minority mentioned a numeric format (figure below).

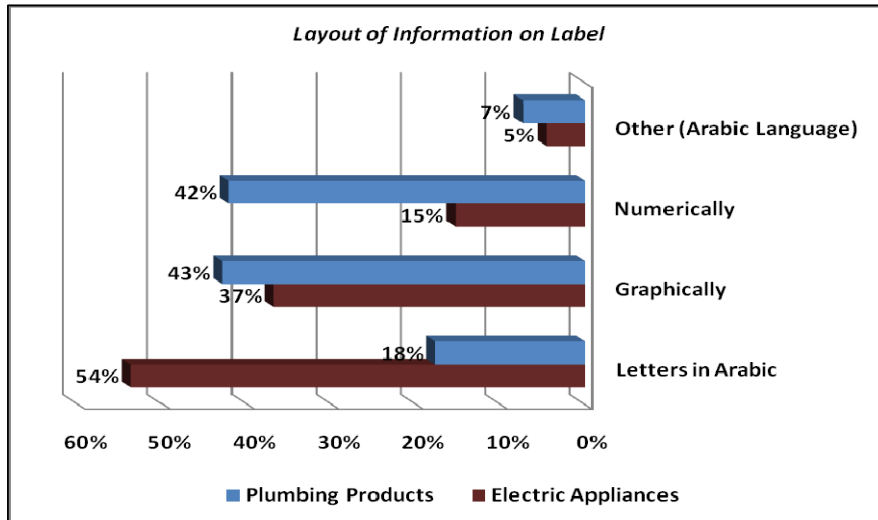


Figure 23: Opinion of customers on the layout of information on labels

Q6.7. Ideal reading time of the label

- Ideas of how long a label should take to read varied considerably, presumably reflecting personal temperament and interest.
- Among purchasers of electrical appliances, 66% were prepared to spend at least a minute reading the label although 26% were only prepared to give it 30 seconds.
- Purchasers of plumbing products were somewhat less patient. Only 54% were willing to devote at least a minute reading the label but a further 20% were prepared to spend only 5 seconds.

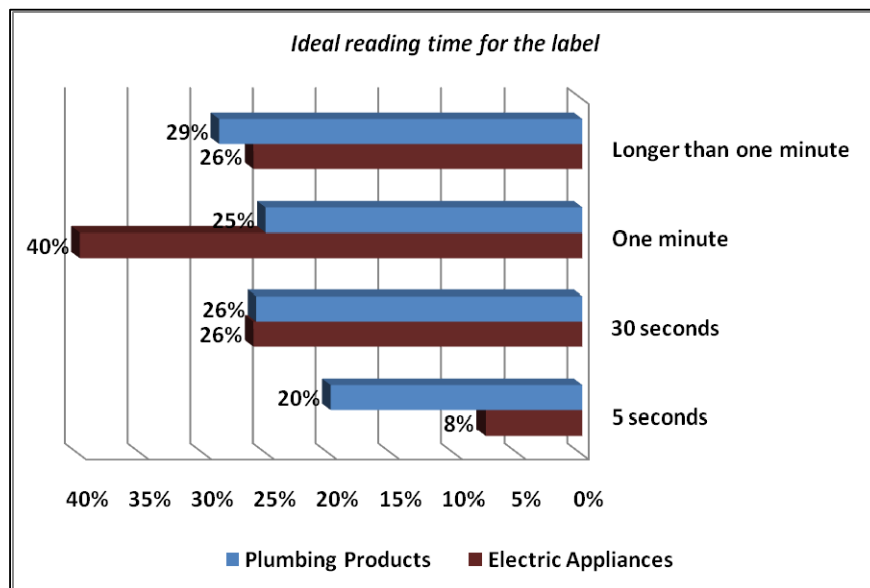


Figure 24: Ideal reading time of labels

5. Labeling Survey Targeting Salespeople

5.1 Methodology

This survey addressed the following:

- Salespeople perception towards the most important factors customers seek in a product, their background information, and most reliable source of information,
- Knowledge level of salespeople about the presence of water- and energy-efficient products,
- Knowledge level of salespeople about labels and their importance,
- Commitment of salespeople to “Sell” labelled products,
- Preferred placement and type of the proposed label,
- Interest of stores in participating in a labelling program for water and energy use,
- The support needed by salespeople to better understand the label.

Selection of Market Survey Sample

A total of 52 stores (23 for electric appliances and 29 for plumbing products) were visited for the purpose of conducting the salespeople survey. These stores were located in different areas in East and West Amman.

Structure of the achieved sample

Most of the respondents interviewed in this survey were males. More than 50% had undergraduate university degrees and the rest were mainly high-school graduates. The interviewees were mostly salespersons, store owners or managers.

5.2 Data Analysis and Results

T1 Motivators/Demotivators for Customers⁶

T1-1 The 5-most important factors customers consider when buying a product.

Salespersons of electric appliances and plumbing products were given the opportunity to list the factors that are considered most important for customers. They were asked to mention up to five factors ranked according to their importance.

Salespeople of electric appliances mentioned that customers were more concerned about water and energy use and efficiency, followed by factors such as the presence of extra or optional features, price, and quality of product.

Table 14: Five Most Important Factors Customers Seek When Buying a Product at Electrical Appliances Stores.

	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Total
Water use and efficiency	4	9	3	1	1	18
Energy use and efficiency	3	4	4	3	0	14
Extra or optional features	3	4	3	2	0	12
Price	1	1	2	4	3	11
Reliability or good quality	3	2	4	2	0	11
Capacity	6	1	1	0	0	8
Brand name/manufacturer	1	0	0	2	4	7
Origin	0	1	1	2	1	5
Convenience	1	0	1	0	1	3
Availability of parts	0	0	1	0	1	2
Latest technology	0	0	1	0	0	1
Length of warranty	0	0	1	0	0	1
Appearance and color	0	0	0	1	0	1

Salespersons of plumbing products believed that their customers are mostly concerned about price, since the purchase of plumbing products comes at the final stage of construction when many customers are financially constrained, followed by quality of product, then by appearance and color.

According to the opinion of plumbing products salespeople, water use and efficiency is not one of the highest ranked factors of concern for customers of plumbing products. This could be due to the general understanding that customers of plumbing products can save water by adjusting the flow rate of faucets and showerheads.

⁶ Questionnaires of salespeople are listed in Appendices 4 and 5

Table 15: Five Most Important Factors Customers Seek When Buying a Product at the Plumbing Stores

	Rank 1	Rank 2	Rank 3	Rank 4	Total
Price	15	9	0	1	25
Reliability or good quality	9	12	1	0	22
Appearance and color	0	4	5	1	10
Brand name/manufacturer	1	1	1	1	4
Water use and efficiency	0	1	2	0	3
Dealer	1	0	2	0	3
Length of warranty	0	1	2	0	3
Convenience	2	0	0	0	2
Availability of parts	0	0	0	1	1
Size and dimension	1	0	0	0	1

T1-2 Background information on product specifications.

More than half of the salespersons (54% for electric appliances and 73% for plumbing products) mentioned that customers usually have background information on the specifications of products they are willing to purchase.

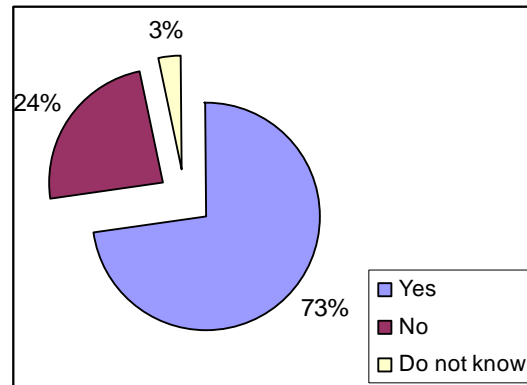
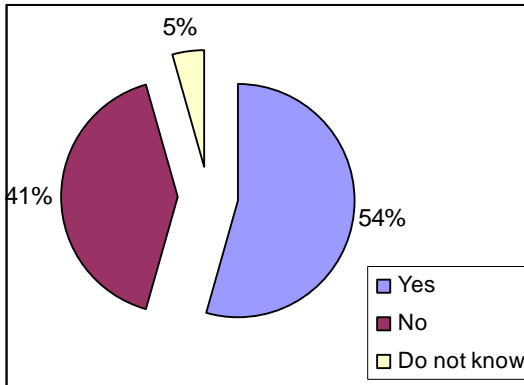


Figure 25: Background Information for Customers of Electric Appliances

Figure 26: Background Information for Customers of Plumbing Products

T1-3 Most important source of information for customers.

Interviewed salespersons were given the opportunity to mention up to five most important sources of information for customers. In the case of electric appliances, salespersons believed that the opinion of friends and relatives was the most important source of information, followed by customers' previous experiences and the reputation of the company, presence of announcements and publications, in addition to information obtained from the internet and other electronic sources.

Table 16: Most Important Sources of Information for Customers of Electric Appliances

Source of Information	Rank 1	Rank 2	Rank 3	Rank 4	Total
Opinion of friends or relatives	9	7	2	1	19
Experience of customer and reputation of company	6	9	3	0	18
Announcements and publications in newspapers, TV, Radio, etc.	5	1	3	0	9
Use the Internet or other electronic sources	2	0	3	1	6
In-store signage and opinion of sales person	0	2	2	0	4
Window shopping	0	0	1	0	1
Maintenance service	0	0	1	0	1

For plumbing products, salespersons believed that the previous experience of customers and the reputation of the company was the most reliable source of information for customers, followed by the opinion of friends and family, the influence of announcements and publications, and in some cases window shopping.

Table 17: Most Important Sources of Information for Customers of Plumbing Products

Source of Information	Rank 1	Rank 2	Rank 3	Total
Experience of customer and reputation of company	13	11	1	25
Opinion of friends or relatives	8	2	2	12
Announcements and publications in newspapers, TV, Radio, etc.	2	2	0	4
Window shopping	4	0	0	4
Manufacturers information and products labels	1	0	0	1
In-store signage and opinion of sales person	1	0	0	1
Opinion of plumber	0	1	0	1

T1-4 Ease of obtaining the information inquired by customers.

The majority of interviewed salespersons mentioned that they did not find difficulties in answering the questions of customers and that the information customers seek was usually easy to obtain.

T1-5 Products with the highest sales.

All salespersons of electric appliances mentioned that clothes washing machines had higher sales than dishwashers. However, the opinion of plumbing products salespersons varied widely. Some mentioned that toilets had the highest sales; others mentioned that showerheads had higher sales, while the rest stated that showerheads and toilets had the same amount of sales.

T1-6 The most popular type of electric appliances and plumbing products.

The majority of electric appliances salespersons mentioned that automatic clothes washing machines were sold more than the other types (semi-automatic and washer with dryer).

As for plumbing products, salespersons indicated that dual flush toilets were sold more than single flush toilets; one-handle faucets were sold more than two-handle faucets; and movable and low flow rate (minimal) showers were sold more than the fixed and high-flow rate (strong) showers.

T1-7,8 Stores that sell clothes dryers in addition to clothes washing machines.

The majority of interviewed electric appliances salespersons (18 out of 22) mentioned that they do sell clothes dryers in addition to clothes washing machines. However, the quantities of dryers sold varied widely. One salesman mentioned that dryers are sold twice as much as clothes washing machines, while another salesman mentioned that dryers are sold in equal quantities as washers, while the rest mentioned that clothes washing machines are sold much more than dryers.

T1-9,10 Months of maximum sales volume.

The majority of interviewed salespersons mentioned that the investigated plumbing products and electric appliances were sold mainly in summer. Most of the electric appliances salespersons commented that clothes dryers were sold more in the winter season.

T2 Knowledge Level of Sales People about Labels

T2-1 Types of labels available on the investigated products at store.

The majority of electric appliances salespersons mentioned that water and energy consumption/rating was labeled on products. Others mentioned the capacity and number of cycles. A minority mentioned specifications and origin of manufacture. While, in the case of plumbing products, the majority of salesmen mentioned that labels include brand name and origin of manufacture. They indicated that some of the dual flush toilets were marked on the flush button with the volume of flushed water.

T2-2 Familiarity of salespersons about water and/or energy efficient products.

The vast majority of the surveyed salespersons mentioned that they were familiar with water and energy efficient products. Paradoxically none of the surveyed plumbing stores sold water saving devices separately. They were only available if they were built in with the product. Salespersons indicated that they were not encouraged to sell such WSDs due to low profit margins or lack of sufficient demand.

T2-3 Notice of water and energy use labels on products.

Most of the respondents ((73%) in electrical appliances and (83%) in plumbing stores) mentioned that they never noticed a label that indicated water use and efficiency on any of the products they bought.

T2-4 Coordination of importers with manufacturing companies regarding labels' content.

The majority of plumbing stores (79%) mentioned that they contact the mother company to agree on financial issues and quantities of imports, but never discussed labeling contents and specifications. However, of the 40% of stores that import electric appliances and establish contacts with manufacturers, only 20% discuss labeling contents and specifications.

T3 Commitment of Sales People to "Sell" Labelled Products

T3-1 Frequency of mentioning the efficiency of a product when marketing it.

The majority of electric appliances salespersons (81%) mentioned that they always refer to product's efficiency for marketing purposes, 5% said that they sometimes mention efficiency, while 14% said that they do not frequently mention water efficiency when selling their products.

In plumbing products stores, 42% of salespersons said that they always mention efficiency of products for marketing purposes, 17% said sometimes, 17% said infrequently, while 24% said that they never mention efficiency when selling a product. The answers varied depending on the awareness of salespersons regarding the importance of efficiency in marketing a product and on the factors that are of most concern for customers.

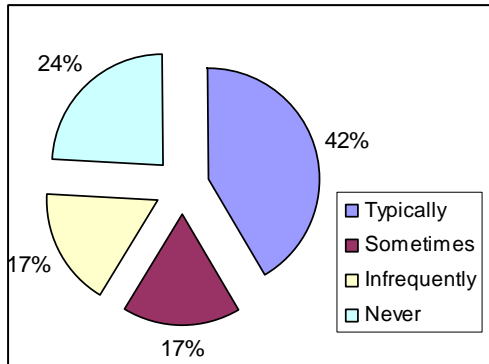


Figure 27: Frequency of Mentioning Water Efficiency of a Product in Plumbing Product Stores.

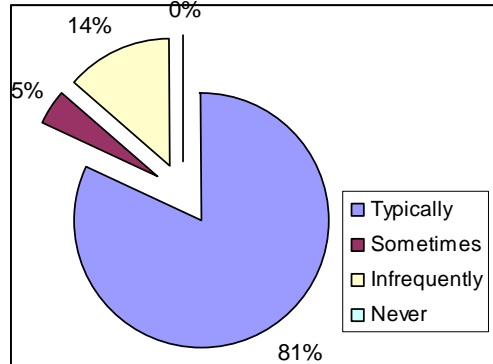


Figure 28: Frequency of Mentioning Water Efficiency of a Product in Electric Appliances Stores.

T3-2 Water and energy use and efficiency as a selling point for customers.

The majority of interviewed salespersons (95% in case of electric appliances and 79% in case of plumbing products stores) mentioned that water and energy use and efficiency is considered as a selling point for customers.

T3-3 Role of efficiency labels in marketing products.

For electric appliances stores, 55% of salespersons answered that such labels would help in marketing products, while 45% mentioned that the presence of labels would not make any difference on the opinion of customers. As for plumbing products, 83% of salespersons mentioned that efficiency labels would help them promote their products, 14% said that labels would not help, and only 3% had no answer.

T4 Label Placement and Type

T4-1 Opinion of salespersons on information related to water and energy use and efficiency to be labelled.

In the electrical appliances stores most of the respondents (63%) indicated the need to have the consumption of water and energy on the label, and 21% indicated the need to have the amount of water and energy saving on the label.

In plumbing stores, over 76% of respondents believed the label should contain information about water saving and consumption, others believed that including information about maintenance and warranty was also necessary.

T4-2 Data presentation on labels.

Forty percent of salespersons at electric appliances stores preferred having the labeled data written in Arabic, 17% preferred numerical presentation, 5% preferred having the data presented either graphically or in a combination of letters, numbers and figures. Thirty-eight percent of salespersons in the plumbing stores preferred the data to be written in Arabic, 31% preferred the data to be presented graphically, and about 14% mentioned that using colors can help customers better understand the contents of the label.

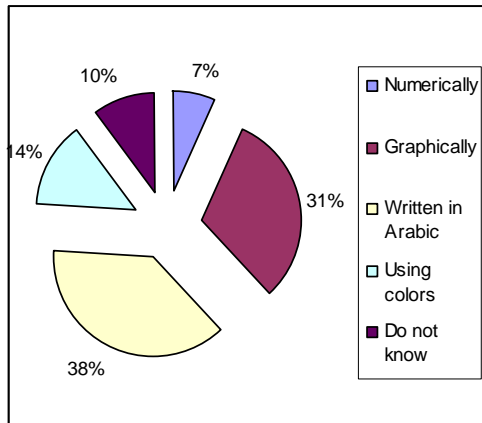


Figure 29: Opinion of Plumbing Products Salespersons of Data Presentation on Labels.

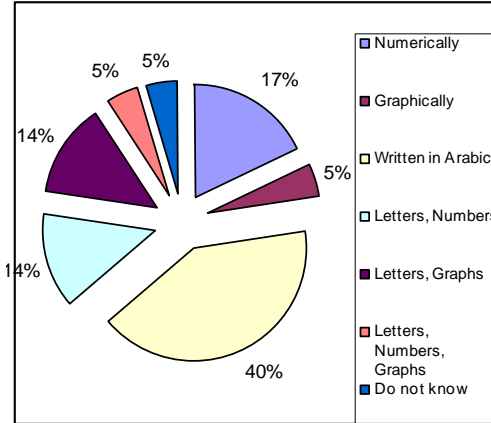


Figure 30: Opinion of Electrical Appliances Salespersons of Data Presentation on Labels

T5 Point of Purchase Support for Efficiency

T5-1 Time estimated for customers to spend on reading a label.

Thirty-five percent of salespersons in the stores of electric appliances mentioned that customers usually spend or are willing to spend around a minute to understand and grasp the information on a label, 25% answered that customers were willing to spend more than one minute, another 25% said that customers would not spend any time reading labels, 10% said that customers would spend only 5 seconds, and 5% said that customers would spend up to 30 seconds.

While in the case of plumbing products, 35% of salespersons were under the impression that customers were not willing to spend any time in reading labels, 24% said that customers were willing to spend 5 seconds, another 24% said that customers were willing to spend more than one minute, and only 17% said that customers were willing to spend a minute to read the label.

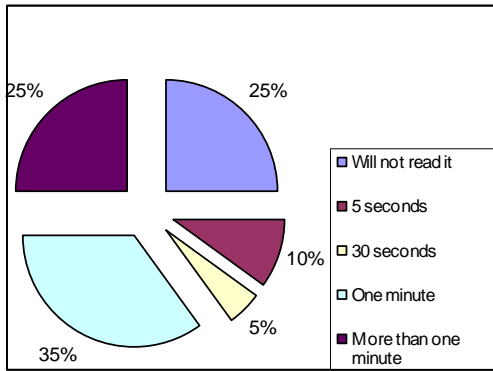


Figure 31: Opinion of Salespersons of Electrical Appliances on the Time Likely to be Spent by Customers on Reading Labels

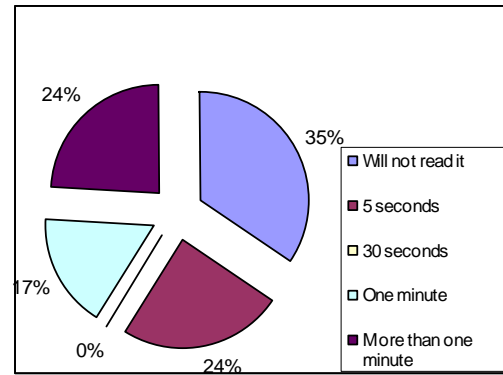


Figure 32: Opinion of Salespersons of Plumbing Products on the Time Likely to be Spent by Customers on Reading Labels

T5-2 Preferred place for the proposed efficiency label.

The majority of salespersons (12 out of 22 salespersons of electric appliances and 21 out of 29 salespersons of plumbing product) expressed their preference to put the label on the front of the product. Others had different opinions as indicated in the table below.

Table 18: Preferred Place for the proposed efficiency label on electrical appliances and plumbing products

Placement of label	Percentage- electric appliances	Percentage- plumbing products
On the front	54	73
On the top	22	3
On the back	14	
On the side	10	
On the box		7
In a hidden place		7
Do not know		7
Inside the box (in a catalogue)		3

T5-3 Willingness of store to participate in a labelling program for water and energy use.

More than half of the interviewed salespersons mentioned that they were willing to participate in the proposed labeling program, others (41% of electric appliances

salespersons and 28% of plumbing products salespersons) were not able to give a direct answer and referred it to store owner (Figures 12 and 13) .

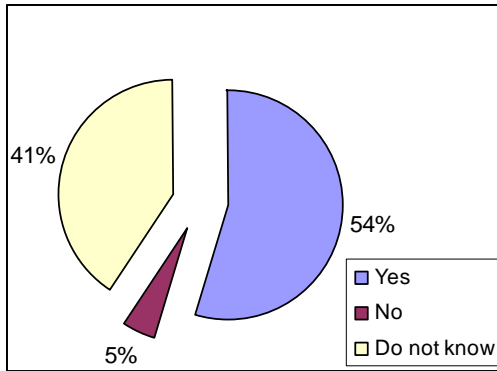


Figure 33: Willingness of Plumbing Products Stores to Participate in the Proposed Labeling Program

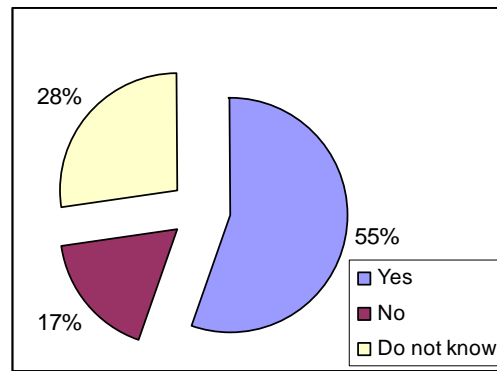


Figure 34: Willingness of Electrical Appliance Stores to Participate in the Proposed Labeling Program

T6 Needed Support for Salespersons

T6-1 Support needed by salespersons to enhance their knowledge of label's content.

In the case of electric appliances stores, half of the interviewed salespersons mentioned that they did not need any assistance to understand labels, 32% said that an illustrative manual would be sufficient, while only 18% said that they needed to receive training.

While in the case of plumbing products stores, more than half of the interviewed salespersons (59%) said that they needed training, 24% said that an illustrative manual would be sufficient to better understand the information on the label, while the rest (17%) said that they did not need any assistance.

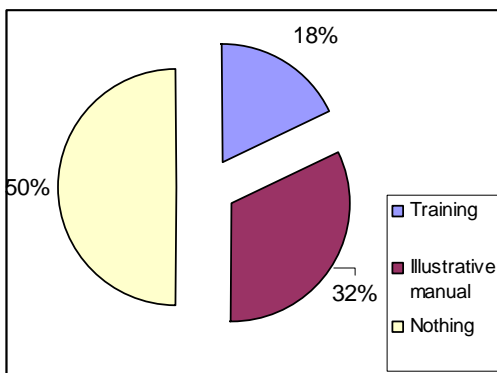


Figure 35: Support Needed by Salespersons of Electric Appliances

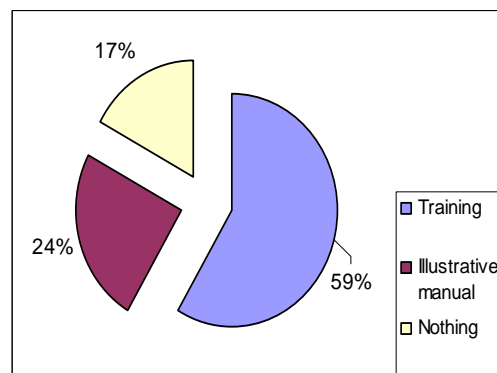


Figure 36: Support Needed by Salespersons of Plumbing Products

T6-2 Previous training on water and energy efficiency.

Fifty percent of electric appliance salespersons and 17% of plumbing salespersons indicated that they never had any training on efficiency for their products. Of those who answered positively, several salespersons stated that they received this training as part of an integrated training program on marketing.

6. Findings and Conclusion

1. The majority of plumbing products do not have water efficiency labels. Even those that have labels, the label is not always exposed to customers, but included in the cover box or within the catalogue.
2. Salespeople of plumbing products were not encouraged to sell water saving devices in their stores due to low profit margins or lack of sufficient demand.
3. Local manufacturers find it more cost effective to import water saving devices than to manufacture them locally as the market for such devices is still small.
4. Water saving devices are tax exempted provided that this is clearly stated on their labels.
5. Salespersons indicated that new standards with enforcement were needed in addition to public awareness to sell efficient products.
6. Most of the labels on water and energy efficiency that are available on the market are not simple and easy to comprehend for customers.
7. The general preference is to have labels written in Arabic.
8. Certain local manufacturers issue two types of energy and water use labels; the label for the local market does not include descriptive information while the label for exported products such as those exported to Egypt were informative and compliant with the Jordanian standards. This is due to the enforcement of the Egyptian labelling program.
9. According to JISM, there are three justifications to enforce a standard:
 1. National security
 2. Safety
 3. Deceptive actions.

7. Issues and Challenges

- Lack of comprehensive records for the quantities and brands of the surveyed products that are either imported or currently placed in the market.
- Lack of powerful market surveillance on the existing products, the only governmental body to handle inspection of products is JISM by testing randomly selected samples of products which are placed in the market or produced by local manufacturers.
- Daman program ended with the end of the contract with Bureau Veritas in August 2007. JISM implemented a sustainable internal system to monitor product standards through post-market surveillance and other means. Unlike Daman, this program does not pose technical barriers to trade but is not as powerful and effective as Daman.
- Lack of systematic enforcement.
- There are no specialized labs in either JISM or the RSS for testing of technical performance of sanitary fixtures. JISM tests are only conducted for safety purposes.
- Developing or updating standards or regulations is a random process and is usually initiated by individuals with a product to sell.
- None of the interviewed salespersons at the plumbing stores were able to give information on the water use and performance of the products such as water volumes and flow rates.
- The catalogues of the plumbing fixtures rarely mention water consumption and flow rates, except in products such as dual flush toilets (3/6 litres/flush).

8. Recommendations

- The results of this study clearly suggest a positive reaction towards the concept of labeling although; however, it would be inaccurate to assume that this would automatically lead to increased purchase of water and energy saving products. The other important factors such as price and quality may outweigh any factors of environmental benefit.
- The completed labeling surveys were quantitative and lacked open-ended explanatory responses. In order to achieve a deeper understanding of consumer motivations and the psychology of labeling, a qualitative investigation is recommended. A series of mini-groups among potential purchasers would perhaps best serve this purpose. This stage would also provide a useful vehicle for the testing of label options to determine their effectiveness in communicating the desired messages.
- In order to have an effective labelling program, public awareness should be taken into consideration; awareness programs must target customers, in addition to salespersons and owners that interact directly with customers.
- The labelling program should have a strong promotional campaign and sponsorship.
- Training would be the best tool to enhance the knowledge of salespersons about the products they sell and the water saving advantage of each product.
- If the label is to be posted on the item, it should be simple to identify and comprehend; customers generally pay attention to labels that are written in Arabic.
- JISM needs legal enforcement powers to ensure the products meet the standards, as well as to improve enforcement at the Customs Department so as to ensure the ban of non-compliant products from entering the market.
- Enhance the role of local manufacturers so as to improve the quality of their production to meet water efficiency standards.

9. References

1. Standards & Metrology Law No. (22) 2000
2. Examples of labels (Jordanian and Egyptian)
3. Energy label as in JS 1717
4. <http://www.clasponline.org/programinfo.php?no=912>
5. <http://www.cee1.org/>
6. <http://www.awwa.org/Resources/content.cfm?ItemNumber=29269&navItemNumber=156>
7. <http://www.allianceforwaterefficiency.org/>
8. <http://www.awwa.org/waterwiser/references/Sources2006.cfm?navItemNumber=3375>
9. <http://www.waterrating.gov.au/>
10. <http://epa.gov/watersense/>
11. http://www.cuwcc.com/products_tech.lasso
12. http://en.wikipedia.org/wiki/European_Union_energy_label
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15. <http://www.eere.energy.gov/buildings/>
16. <http://oregon.gov/ENERGY/>
17. <http://www.t2c.org.uk/aboutus.html>
18. <http://www.ceced.org/>

10. Appendices

1. Standards and Metrology Law No. (22) for the Year 2000
2. Electric Appliance Questionnaire for Customers
3. Plumbing Products Questionnaire for Customers
4. Questionnaire of salespersons at electric appliances stores
5. Questionnaire of salespersons at plumbing stores
6. List of individuals that were interviewed for consultation

10.1 Standards and Metrology Law No. (22) for the Year 2000

Article 27:

- a. The fees for services, testing, analysis, calibration, stamping carried out on products, materials, and measuring instruments produced and manufactured in the Kingdom, imported to or exported from the Kingdom, shall be determined in accordance with instructions issued by the Board, and shall be paid by the parties requesting such services.
- b. The fees for granting the quality mark, certificates of conformity and accreditation for laboratories shall be determined in accordance with instructions issued by the Board, and shall be paid by the parties to which such conformity assessment activities are carried out in order to grant them the quality mark, the certificate of conformity, or accreditation.
- c. The fees and prices charged for the services provided by the Institution shall reflect solely the cost of such services.
- d. Notwithstanding what is stated in any other legislation, no Ministry, government department, public corporation, natural person, or corporate entity shall be exempt from paying the fees and financial charges and duties imposed for the activities and services that the Institution performs, pursuant to this Law or any of the related regulations, or instructions issued by the Board.

Article 2: Definitions

Standard: A document that provides for common and repeated use, rules, guidelines or characteristics for a service, or for a product or its related production methods, including the applicable administrative provisions, with which compliance is not mandatory. These may also include, or deal exclusively with, terminology, symbols, packaging, marking or labeling requirements as they apply to a product or its production method.

Technical Regulation: A document that lays down the characteristics for a service or for a product, or its related production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labeling requirements as they apply to a product or its production method.

10.2 Electric Appliance Questionnaire for Customers

Name of Interviewer: _____

Date: ____/____/2009

"You have been randomly selected to participate in a survey being conducted on a variety of subjects to obtain information. Apart from product information, we would like to know about your buying habits.

"To obtain reliable, scientific information, it is required that you answer the questions as honestly as possible. Your opinion is important in this research.

"You personally have been selected randomly for the purposes of this study. The fact that you have been chosen is quite coincidental. Your name will not be written anywhere on this questionnaire and you need not to sign the questionnaire or any other documents. The information you provide will be treated confidentially, in such a way that no personal identification is possible.

"Thank you in advance for your time today."

S1. What are you planning to buy?

(Interviewer: Spontaneous answer- Do not read the items mentioned in the table for customers)

		Yes	No
a	Automatic clothes washers	1	2
b	Dishwashing Machine	1	2
d	None of these	Close interview	

S2. Are you buying this/these products for a new home or as a replacement for an older product(s)?

New home	1	Continue
Replacement	2	Skip to Q1a

S3. Are you buying for yourself, a relative, or for a housing project?

For personal use	1
For a housing project	2

Q1a. What factors do you take into consideration when purchasing such product(s)?

(Interviewer: Record all mentions in the table below - Spontaneous answers - Multiple answers).

Show Card 1b

Q1b. What about?

(Interviewer: Show Card - Record all mentioned in the table below - Multiple answers

Record those mentioned spontaneously from Q1a under the prompted list (Q1b) in the table bellow).

Show Card 1b

Q1c. Again, from the following list of factors, what is the most important factor you take into consideration when purchasing such product(s)? What is the second most important? And what is the third most important?

		1a.	1b.	1c.		
		Spontaneous	Prompted	1c.1 1st Most important	1c.2 2nd most important	1c.3 3rd most important
A	Price	1	1	1	1	1
B	Brand name	2	2	2	2	2
C	Product quality	3	3	3	3	3
D	Dealer/Place of purchase	4	4	4	4	4
E	Availability of parts	5	5	5	5	5
F	Water saving product	6	6	6	6	6
G	Energy saving product	7	7	7	7	7
H	Latest technology	8	8	8	8	8
I	Discount	9	9	9	9	9
J	Size and dimension	10	10	10	10	10
K	Recommendation of others	11	11	11	11	11
L	Other	12	12	12	12	12

Q2. Do you know that there are water savings electric appliances?

Yes	1
No	2

Q3. When buying an automatic clothes washer, or/and a dishwashing machine, do you take into consideration the amount of water that will be used?

Yes	1
No	2

(Interviewer: Check the product(s) the respondent is willing to purchase)

Q4. At present, are you able to recognize if the product is water efficient?

		Yes	No
a	Automatic clothes washers	1	2
b	Dishwashing Machine	1	2

Q5. If there was a label connotes that this product saves water, would this help you make your purchase decision?

		Yes	No
a	Automatic clothes washers	1	2
b	Dishwashing Machine	1	2

Q5.1 Do you know that there are energy saving electric products?

Yes	1
No	2

Q5.2 When buying an automatic clothes washer, or/and a dishwashing machine, do you take into consideration the energy consumption that will be used?

Yes	1
No	2

Q5.3 At present, are you able to recognize if the product is energy efficient?

		Yes	No
a	Automatic clothes washers	1	2
b	Dishwashing Machine	1	2

Q5.4 If there was a label connotes that this product saves energy would that help you make your purchase decision?

Yes	1
No	2

Q6. Do you usually read labels before buying a product?

Yes	1
No	2

Q7. Can you remember what does the label say?

Yes	1	Continue
No	2	Skip to instructions before Q9 then ask Q9

Q8. What does it say?
(Interviewer: Do not read)

Country of manufacture	1
Water flow rate and consumption/ water saving	2
Energy consumption/Energy saving	3
Price	4
Performance	5
Other (specify) _____	8

(Interviewer: Check if products he wishes to buy are labeled -record in table below then continue. If none of the products are labeled - Skip to Q11a.)

		Exposed Label	Hidden Label	No Label
a	Automatic clothes washer	1	2	3
b	Dishwashing Machine	1	2	3

Q9. Have you noticed such a label on the products you wish to buy now?

Yes	1	Skip to Q11a
No	2	Continue

(Interviewer: Check if the product is labeled, if yes, ask)

Q10. It seems you have not noticed the label on the product, why?

Label does not stand out	1
Not interested	2
Font size	3
Language barrier	4
Does not understand the information on the label	5
Does not trust the information	6
Other (specify) _____	8

Q11a. If we were to develop a label on water, where would you prefer such a label to be placed?

(Interviewer: Do not read - Multiple answers)

On the box	1
On the top of the product	2
On the front of the product	3
On the back of the product	4
On the side of the product	5
Near the cord of the product	6
Other (specify) _____	8

Q11a.1 which factors do you think would most influence your purchase decision: water efficiency or energy efficiency?

Water efficiency	1	(Read out)
Energy efficiency	2	
Both	3	(Spontaneous answer - Don't read)
Neither of these	4	

Q11b. What information do you think the label should have that would make a bearing on peoples' decision to buy?

Performance	1
Water use (flow rate and consumption)	2
Energy use	3
Other (specify) _____	8

Q11c. Do you trust the information on the label?

Yes	1
No	2

Q11d. Which entity do you think should issue such a label?

(Interviewer: Read)

Manufacturer	1
Jordan Institute for Standards and Metrology	2
Ministry of Water and Irrigation	3
Royal Scientific Society	4
Amman Chamber of Commerce	5
Amman Chamber of Industry	6
National Society for Consumer Protection	7
Don't know	8
Other (specify) _____	9

Q11e. How would you want this information to be presented?

(Interviewer: Read - Multiple answers)

Numerically	1
Graphically	2
Letters in Arabic	3
Other (specify) _____	4

Q11f. About how much time are you willing to spend reading a label to be able to make your decision?

5 seconds	1
30 seconds	2
One minute	3
Longer than one minute	4

Demographics:

D1. Gender of Respondent:

- Male 1
- Female 2

D2. Age Range:

- 18-20 1
- 21-35 2
- 36-50 3
- Over 50 4

D3. Current marital status:

- Married 1
- Single 2

D4. Income of family (JDs/month):

- Less than 200 1
- 200-500 2
- 500-1000 3
- Above 1000 4
- No answer 9

D5. Level of education:

- Elementary education (up to grade 10) 1
- High school education 2
- Undergraduate university degree 3
- Masters or Ph.D. degrees 4
- No answer 9

D6. Area:

- West Amman 1
- East Amman 2

D7. Type of products sold: _____

(Interviewer: Ask D8 for store owners)

D8. Annual sales: _____

D9. Location of Shop: _____

D10. Name of Shop: _____

Thank the respondent and close interview

10.3 Plumbing Products Questionnaire for Customers

Name of Interviewer: _____

Date: ____/____/2009

"You have been randomly selected to participate in a survey being conducted on a variety of subjects to obtain information. Apart from product information, we would like to know about your buying habits.

"To obtain reliable, scientific information, it is required that you answer the questions as honestly as possible. Your opinion is important in this research.

"You personally have been selected randomly for the purposes of this study. The fact that you have been chosen is quite coincidental. Your name will not be written anywhere on this questionnaire and you need not to sign the questionnaire or any other documents. The information you provide will be treated confidentially, in such a way that no personal identification is possible.

"Thank you in advance for your time today."

S1. What are you planning to buy?

(Interviewer: Spontaneous answer- Do not read the items mentioned in the table for customers)

		Yes	No
a	Showerheads	1	2
b	Faucets	1	2
c	Toilets	1	2
d	None of these	Close interview	

S2. Are you buying this/these products for a new home or as a replacement for an older product(s)?

New home	1	Continue
Replacement	2	Skip to Q1a

S3. Are you buying for yourself, a relative, or for a housing project?

For personal use	1
For a housing project	2

Q1a. What factors do you take into consideration when purchasing such product(s)?

(Interviewer: Record all mentions in the table below - Spontaneous answers - Multiple answers).

Show Card 1b

Q1b. What about?

(Interviewer: Show Card - Record all mentioned in the table below - Multiple answers

Record those mentioned spontaneously from Q1a under the prompted list (Q1b) in the table below).

Show Card 1b

Q1c. Again, from the following list of factors, what is the most important factor you take into consideration when purchasing such product(s)? What is the second most important? And what is the third most important?

		1a.	1b.	1c.		
		Spontaneous	Prompted	1c.1 1st Most important	1c.2 2nd most important	1c.3 3rd most important
A	Price	1	1	1	1	1
B	Brand name	2	2	2	2	2
C	Product quality	3	3	3	3	3
D	Dealer/Place of Purchase	4	4	4	4	4
E	Availability of parts	5	5	5	5	5
F	Water saving product	6	6	6	6	6
G	Latest technology	7	7	7	7	7
H	Discount	8	8	8	8	8
I	Size and dimension	9	9	9	9	9
J	Recommendation of others	10	10	10	10	10
K	Other (specify) _____	11	11	11	11	11

Q2. Do you know that there are water saving plumbing products?

Yes	1
No	2

Q3. Do you take into consideration the amount of water that will be used when buying a toilet, faucet or a showerhead?

Yes	1
No	2

(Interviewer: Check the product(s) the respondent is willing to purchase)

Q4. At present, are you able to recognize if the product is water efficient?

		Yes	No
a	Showerheads	1	2
b	Faucets	1	2
c	Toilets	1	2

Q5. If there was a label connotes that this product saves water, would this help you make your purchase decision?

		Yes	No
a	Showerheads	1	2
b	Faucets	1	2
c	Toilets	1	2

Q6. Do you usually read labels before buying a product?

Yes	1	Continue
No	2	Skip to instructions before Q9 then ask Q9

Q7. Can you remember what does the label say?

Yes	1	Continue
No	2	Skip to instructions before Q9 then ask Q9

Q8. What does it say?
(Interviewer: Do not read)

Country of manufacture	1
Water flow rate and consumption/ water saving	2
Price	3
Other (specify)_____	8

Instructions: Interviewer Check if products he wishes to buy are labeled - record in table below then continue. If none of the products are labeled - Skip to Q11a.

		Exposed Label	Hidden Label	No Label
a	Showerheads	1	2	3
b	Faucets	1	2	3
c	Toilets	1	2	3

Q9. Have you noticed such a label on the products you wish to buy now?

Yes	1	Skip to Q11a
No	2	Continue

(Interviewer: Check if the product is labeled, if yes, ask)

Q10. It seems you have not noticed the label on the product, why?

Label does not stand out	1
Not interested	2
Font size	3
Language barrier	4
Does not understand the information on the label	5
Does not trust the information	6
Other (specify) _____	8

Q11a. If we were to develop a label on water, where would you prefer such a label to be placed?

(Interviewer: Don't read - Multiple answers)

On the box	1
On the top of the product	2
On the front of the product	3
On the back of the product	4
On the side of the product	5
Near the cord of the product	6
Other (specify) _____	8

Q11b. What information do you think the label should have that would make a bearing on peoples' decision to buy?

Performance	1
Water use (flow rate and consumption)	2
Other (specify) _____	8

Q11c. Do you trust the information on the label?

Yes	1
No	2

Q11d. Which entity do you think should issue such a label?

(Interviewer: Read)

Manufacturer	1
Jordan Institute for Standards and Metrology	2
Ministry of Water and Irrigation	3
Royal Scientific Society	4
Amman Chamber of Commerce	5
Amman Chamber of Industry	6
National Society for Consumer Protection	7
Don't know	8
Other (specify) _____	9

Q11e. How would you want this information to be presented?

(Interviewer: Read - Multiple answers)

Numerically	1
Graphically	2
Letters in Arabic	3
Other (specify _____)	4

Q11f. About how much time are you willing to spend reading a label to be able to make your decision?

5 seconds	1
30 seconds	2
One minute	3
Longer than one minute	4

Demographics:

D1. Gender of Respondent:

- Male 1
- Female 2

D2. Age Range:

- 18-20 1
- 21-35 2
- 36-50 3
- Over 50 4

D3. Current marital status:

- Married 1
- Single 2

D4. Income of family (JDs/month):

- Less than 200 1
- 200-500 2
- 500-1000 3
- Above 1000 4
- No answer 9

D5. Level of education:

- Elementary education (up to grade 10) 1
- High school education 2
- Undergraduate university degree 3
- Masters or Ph.D. degrees 4
- No answer 9

D6. Area:

- West Amman 1
- East Amman 2

D7. Type of products sold: _____

(Interviewer: Ask D8 for store owners)

D8. Annual sales: _____

D9. Location of Shop: _____

D10. Name of Shop: _____

Thank the respondent and close interview

10.4 Questionnaire of salespersons at electric appliances stores

Name of Interviewer:
Date of Interview:
Estimated Annual Sales Volume of the Store:

Interviewer: Check mark the one that most closely matches the store's product lines.

- Store Sells Major Appliances and Plumbing Fittings
- Store Sells Only Major Appliances
- Store Sells Only Plumbing Fittings

Interviewer to Randomly-Selected Store Staffer:

"Your store has been randomly selected to participate in a survey being conducted on a variety of subjects to obtain information. Apart from product information, subjects being covered are consumer patterns and knowledge.

"To obtain reliable, scientific information, it is required that you answer the questions as honestly as possible. Your opinion is important in this research.

"The store and you personally have been selected randomly for the purposes of this study. The fact that you have been chosen is quite coincidental. Your name will not be written anywhere on this questionnaire and you need not sign the questionnaire or any other documents. The information you provide will be treated confidentially, in such a way that no personal identification is possible.

"Thank you in advance for your time today."

Screener:

- i. Do you have customer interaction daily to sell products?
 - Yes
 - o If yes: Do you have customer interactions selling at least one of the following products: clothes washing machines or dishwashers?
 - Yes (If yes, continue with this respondent.)
 - No (If no, thank the respondent and select another respondent.)
 - No (If no, thank respondent and select another respondent.)

THE SCREENER IS NOW COMPLETE. THE PERSON YOU ARE TALKING TO NOW IS THE ONE YOU SHOULD ASK ALL THE REMAINING QUESTIONS TO.

Beginning of Survey (*Interviewer, do not read "headings" to respondent*).

T1- Motivators/Demotivators		
1.	What is the most important factor customers seek when buying a product in your store? (Interviewer: Mark with a 1, 2, 3, 4, 5 in rank-order of importance to customers. Mark only 5).	1. Price <input type="checkbox"/> 2. Brand name/manufacturer <input type="checkbox"/> 3. Dealer <input type="checkbox"/> 4. Length of warranty <input type="checkbox"/> 5. Reliability or good quality <input type="checkbox"/> 6. Life of the product or durability <input type="checkbox"/> 7. Operating cost <input type="checkbox"/> 8. Availability of parts <input type="checkbox"/> 9. Availability of discounts or "on sale" <input type="checkbox"/> 10. Appearance and color <input type="checkbox"/> 11. Size and dimension <input type="checkbox"/> 12. Latest technology <input type="checkbox"/> 13. Energy use and efficiency <input type="checkbox"/> 14. Water use and efficiency <input type="checkbox"/> 15. Convenience (ex. top-loading vs. front-loading washing machines) <input type="checkbox"/> 16. Extra or optional features (ex. no. of cycles, type of operating programs) <input type="checkbox"/> 17. Recommendations of friends or family <input type="checkbox"/> 18. Delivery charges <input type="checkbox"/> 19. Capacity <input type="checkbox"/> 20. Other (specify) <input type="checkbox"/>
2.	Do your customers have background information on the products before they come to your store?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>
3.	What is the most important source of information for customers coming to purchase a product from your store?	<i>(Interviewer: mark with a 1, 2, 3, 4, 5 in rank-order of importance to customers. Mark only 5).</i> 1. Opinion of friends or relatives <input type="checkbox"/> 2. Manufacturers information and products labels <input type="checkbox"/> 3. Announcements and publications in newspapers, TV, Radio, etc. <input type="checkbox"/> 4. Use the Internet or other electronic

T1- Motivators/Demotivators		
		sources <input type="checkbox"/>
		5. In-store signage and opinion of sales person; <input type="checkbox"/>
		6. Other (Specify) <input type="checkbox"/>
4.	Is the information consumers seek for comparison of products easy to obtain?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>
5.	Which of these appliances do you sell most often to your customers? (Mark only one).	1. Clothes washing machines <input type="checkbox"/> 2. Dish washers <input type="checkbox"/>
6.	Which of the following kinds of washing machines do customers prefer?	1. Semi-automatic washing (twin-tub) <input type="checkbox"/> 2. Automatic washing <input type="checkbox"/> 3. Washing and drying <input type="checkbox"/>
7.	If the store sells clothes washing machines, do you sell dryer machines as well?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>
8.	If yes, what is the percentage (or quantities) of clothes washing machines sold compared to dryer machines?	1. <input type="checkbox"/>
9.	Are there any peak months during which your sales are higher than other months?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>
10	If yes, which months?	

T2- Knowledge Level of Sales People about Labels		
1	Please name two sorts of labels that are on the products you sell. <i>(Not Brand Names) (If respondent is not aware of any labels on products, allow respondent to check for labels and list below the responses mentioned, but note that labels were checked for.)</i>	
2	Have you ever heard of appliances that are more efficient in water use and energy use?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>
3	Personally, when you were last buying a product (clothes washing machine or dishwasher) for your home, do you recall	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>

T2- Knowledge Level of Sales People about Labels		
	seeing a label that suggested the energy use or water use of the product?	
4	<i>If the store used to import products, ask:</i> Do you coordinate with the mother company concerning the information that should be written in a label?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. I don't know <input type="checkbox"/>

T3- Commitment of Sales People to "Sell" Labeled Products		
1.	How often do you mention efficiency in connection with a product? (Check only one)	1. Typically <input type="checkbox"/> 2. Sometimes <input type="checkbox"/> 3. Infrequently <input type="checkbox"/> 4. Never <input type="checkbox"/>
2.	Do you feel that water use or energy efficiency is a selling point for consumers?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>
3.	Would the presence of a label connoting efficiency help you sell products?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>

"Next I'm going to ask you some questions about a label. A label may appear on products in the future to indicate certain aspects about the product."

T4- Label Placement and Type		
1.	If a label that indicated energy use or water use was to be placed on the products you sell in your store, what types of information would you expect such a label to contain?	
2.	How would you want this information to be presented or organized?	1. Numerically <input type="checkbox"/> 2. Graphically <input type="checkbox"/> 3. Other (specify) <input type="checkbox"/>

T5- Point of Purchase Support for Efficiency			
1.	About how much time do you think a customer would be willing to spend to understand a label enough to use its main information to make a buying decision? (Check only one.)	1. 5 seconds 2. 30 seconds 3. One minute 4. Longer than one minute	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2.	Where do you think it would be best to place this efficiency label on the product? (Check only one.) <i>(Explain that the label will be about the size of a bank card or credit card).</i>	1. On the box 2. On the top 3. On the front 4. On the back 5. On the side 6. Near the cord 7. Other (specify)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3.	Would your store be interested in participating in a labeling program for water and energy use?	1. Yes 2. No 3. Don't know	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

T6- Support Sales People Will Need			
1.	What kind of support would help you explain new labels to consumers?	1. Training 2. Incentives 3. Other (specify)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2.	Have you ever got trained on the efficiency of these appliances with regards to water and energy use?	1. Yes 2. No	<input type="checkbox"/> <input type="checkbox"/>

"Finally, I'd like to ask you some questions for us to be able to group you together with other respondents. Without these questions, the research cannot be analyzed."

T7- Demographics of Those Interviewed			
1.	Gender of Respondent	1. Male 2. Female	<input type="checkbox"/> <input type="checkbox"/>
2.	Age range	1. 18-20 2. 21-35	<input type="checkbox"/> <input type="checkbox"/>

T7- Demographics of Those Interviewed		
		3. 36-50 <input type="checkbox"/> 4. Over 50 <input type="checkbox"/>
3.	Current marital status	1. Married <input type="checkbox"/> 2. Single <input type="checkbox"/>
4.	Income of family (JDs/month)	1. Less than 200 <input type="checkbox"/> 2. 200-500 <input type="checkbox"/> 3. 500-1000 <input type="checkbox"/> 4. Above 1000 <input type="checkbox"/>
5.	Level of education	1. Elementary education (up to grade 10) <input type="checkbox"/> 2. High school education <input type="checkbox"/> 3. Undergraduate university degree <input type="checkbox"/> 4. Masters or Ph.D. degrees <input type="checkbox"/>
6.	How long have you worked in this store?	
7.	What is your current occupational level? (salesperson, manager...)	
8.	Which of the following products do you have in your own home?	1. Clothes washing machines <input type="checkbox"/> 2. Dishwashers <input type="checkbox"/> 3. Showerheads <input type="checkbox"/> 4. Faucets <input type="checkbox"/> 5. Toilets <input type="checkbox"/>

"Thank you for your participation in this survey."

10.5 Questionnaire of salespersons at plumbing stores

Name of Interviewer:
Date of Interview:
Estimated Annual Sales Volume of the Store:

Interviewer: Check mark the one that most closely matches the store's product lines.

- Store Sells Major Appliances and Plumbing Fittings
- Store Sells Only Major Appliances
- Store Sells Only Plumbing Fittings

Interviewer to Randomly-Selected Store Staffer:

"Your store has been randomly selected to participate in a survey being conducted on a variety of subjects to obtain information. Apart from product information, subjects being covered are consumer patterns and knowledge.

"To obtain reliable, scientific information, it is required that you answer the questions as honestly as possible. Your opinion is important in this research.

"The store and you personally have been selected randomly for the purposes of this study. The fact that you have been chosen is quite coincidental. Your name will not be written anywhere on this questionnaire and you need not sign the questionnaire or any other documents. The information you provide will be treated confidentially, in such a way that no personal identification is possible.

"Thank you in advance for your time today."

Screener:

Do you have customer interaction daily to sell products?

- Yes
 - o If yes: Do you have customer interactions selling at least one of the following products: shower heads, faucets, or toilets?
 - Yes (*If yes, continue with this respondent.*)
 - No (*If no, thank the respondent and select another respondent.*)
- No (*If no, thank respondent and select another respondent.*)

THE SCREENER IS NOW COMPLETE. THE PERSON YOU ARE TALKING TO NOW IS THE ONE YOU SHOULD ASK ALL THE REMAINING QUESTIONS TO.

Beginning of Survey (*Interviewer, do not read "headings" to respondent*).

T1- Motivators/Demotivators		
1	<p>What is the most important factor customers seek when buying a product in your store? (Interviewer: Mark with a 1, 2, 3, 4, 5 in rank-order of importance to customers. Mark only 5).</p>	<ol style="list-style-type: none"> 1. Price <input type="checkbox"/> 2. Brand name/manufacturer <input type="checkbox"/> 3. Dealer <input type="checkbox"/> 4. Length of warranty <input type="checkbox"/> 5. Reliability or good quality <input type="checkbox"/> 6. Life of the product or durability <input type="checkbox"/> 7. Operating cost <input type="checkbox"/> 8. Availability of parts <input type="checkbox"/> 9. Availability of discounts or "on sale" <input type="checkbox"/> 10. Appearance and color <input type="checkbox"/> 11. Size and dimension <input type="checkbox"/> 12. Latest technology <input type="checkbox"/> 13. Water use and efficiency (ex. dual flush vs. single flush toilets) <input type="checkbox"/> 14. Convenience (ex. one handled vs. two handled faucets) <input type="checkbox"/> 15. Extra or optional features <input type="checkbox"/> 16. Recommendations of friends or family <input type="checkbox"/> 17. Delivery charges <input type="checkbox"/> 18. Capacity <input type="checkbox"/> 19. Other (specify) <input type="checkbox"/>
2	<p>Do your customers have background information on the products before they come into your store?</p>	<ol style="list-style-type: none"> 1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>
3	<p>What is the most important source of information for customers coming to purchase a product from your store?</p>	<p>(Interviewer: mark with a 1, 2, 3, 4, 5 in rank-order of importance to customers. Mark only 5).</p> <ol style="list-style-type: none"> 1. Opinion of friends or relatives <input type="checkbox"/> 2. Manufacturers information and products labels <input type="checkbox"/> 3. Announcements and publications in newspapers, TV, Radio, etc. <input type="checkbox"/> 4. Use the Internet or other electronic sources <input type="checkbox"/>

T1- Motivators/Demotivators		
		5. In-store signage and opinion of sales person; <input type="checkbox"/> 6. Other (Specify) <input type="checkbox"/>
4	Is the information consumers seek for comparison of products easy to obtain?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>
5	Please rank-order the plumbing products you sell most often to your customers (ranking from most-sold to least-sold, 1 st , 2 nd , 3 rd).	1. Shower heads <input type="checkbox"/> 2. Faucets <input type="checkbox"/> 3. Toilets <input type="checkbox"/>
6	Which type of toilets is sold more frequently?	3. Dual flush toilet <input type="checkbox"/> 4. Single flush toilet <input type="checkbox"/>
7	Which type of faucets is sold more frequently?	5. One handle <input type="checkbox"/> 6. Two handles <input type="checkbox"/>
8	Do customers prefer buying high flow rate or low flow rate showerheads?	1. High flow rate (strong shower) <input type="checkbox"/> 2. Low flow rate (minimal shower) <input type="checkbox"/>
9	Do customers prefer buying fixed or movable showerheads?	1. Fixed showerhead <input type="checkbox"/> 2. Movable showerhead (microphone) <input type="checkbox"/>
10	Are there any peak months during which your sales are higher than other months?	7. Yes <input type="checkbox"/> 8. No <input type="checkbox"/> 9. Don't know <input type="checkbox"/>
11	If yes, which months?	

T2- Knowledge Level of Sales People about Labels		
1	Please name two sorts of labels that are on the products you sell. <i>(Not Brand Names) (If respondent is not aware of any labels on products, allow respondent to check for labels and list below the responses mentioned, but note that labels were checked for.)</i>	
2	Have you ever heard of fixtures that are more efficient in water use?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>
3	Personally, when you were last buying a product (shower head, faucet, or toilet) for your home, do you recall seeing a label that	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/>

T2- Knowledge Level of Sales People about Labels		
	suggested the water use of the product?	
4	<i>If the store used to import products, ask:</i> Do you coordinate with the mother company concerning the information that should be written in a label?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. I don't know <input type="checkbox"/>

T3- Commitment of Sales People to "Sell" Labeled Products		
1	How often do you mention efficiency in connection with a product? (Check only one)	1. Typically <input type="checkbox"/> 2. Sometimes <input type="checkbox"/> 3. Infrequently <input type="checkbox"/> 4. Never <input type="checkbox"/>
2	Do you feel that water use or efficiency is a selling point for consumers?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>
3	Would the presence of a label connoting efficiency help you sell products?	1. Yes <input type="checkbox"/> 2. No <input type="checkbox"/> 3. Don't know <input type="checkbox"/>

"Next I'm going to ask you some questions about a label. A label may appear on products in the future to indicate certain aspects about the product."

T4- Label Placement and Type		
1	If a label that indicated water use was to be placed on the products you sell in your store, what types of information would you expect such a label to contain?	
2	How would you want this information to be presented or organized?	1. Numerically <input type="checkbox"/> 2. Graphically <input type="checkbox"/> 3. Other (specify) <input type="checkbox"/>

T5- Point of Purchase Support for Efficiency			
1	About how much time do you think a customer would be willing to spend to understand a label enough to use its main information to make a buying decision? (Check only one.)	1. 5 seconds 2. 30 seconds 3. One minute 4. Longer than one minute	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2	Where do you think it would be best to place this efficiency label on the product? (Check only one.) <i>(Explain that the label will be about the size of a bank card or credit card).</i>	1. On the box 2. On the top 3. On the front 4. On the back 5. On the side 6. Other (specify)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
3	Would your store be interested in participating in a labeling program for water and energy use?	1. Yes 2. No 3. Don't know	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

T6- Support Sales People Will Need			
1	What kind of support would help you explain new labels to consumers?	1. Training 2. Incentives 3. Other (specify)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
2	Have you ever got trained on the efficiency of these products with regards to water use?	1. Yes 2. No	<input type="checkbox"/> <input type="checkbox"/>

“Finally, I’d like to ask you some questions for us to be able to group you together with other respondents. Without these questions, the research cannot be analyzed.”

T7- Demographics of Those Interviewed			
1	Gender of Respondent	1. Male 2. Female	<input type="checkbox"/> <input type="checkbox"/>
2	Age range	1. 18-20 2. 21-35 3. 36-50 4. Over 50	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

T7- Demographics of Those Interviewed		
3	Current marital status	1. Married <input type="checkbox"/> 2. Single <input type="checkbox"/>
4	Income of family (JDs/month)	1. Less than 200 <input type="checkbox"/> 2. 200-500 <input type="checkbox"/> 3. 500-1000 <input type="checkbox"/> 4. Above 1000 <input type="checkbox"/>
5	Level of education	1. Elementary education (up to grade 10) <input type="checkbox"/> 2. High school education <input type="checkbox"/> 3. Undergraduate university degree <input type="checkbox"/> 4. Masters or Ph.D. degrees <input type="checkbox"/>
6	How long have you worked in this store?	
7	What is your current occupational level? (sales person, manager...)	
8	Which of the following products do you have in your own home?	1. Clothes washing machines <input type="checkbox"/> 2. Dishwashers <input type="checkbox"/> 3. Showerheads <input type="checkbox"/> 4. Faucets <input type="checkbox"/> 5. Toilets <input type="checkbox"/>

"Thank you for your participation in this survey."

10.6 List of individuals that were interviewed for consultation

Name	Position	Organization
H.E. Eng. Mohamed Momani	Assistant secretary general for water affairs	Ministry of Water and Irrigation
Dr. Mohammed Obeidat	President	National Society for Consumer Protection
Eng. Dalal Shehadeh	Head of Preparation of Standards Division	JISM
Eng. Hussein Radaydeh	Head of Monitoring Department	JISM
Eng. Nizar Qaqish	Consultant Engineer	RSS
Eng. Rania Abdel Khaleq	Director of Water Demand Management Unit in the MWI.	Ministry of Water and Irrigation
Eng. Waleed Shahin	Technical Manager	RSS - NERC
Mr. Mohamad Salma'	Head of Jordan Quality Mark Division	JISM
Mr. Moheye Eddin Twalbeh	Energy Consultant	RSS - NERC
Mr. Radi Alghoul	Technical Manager	Middle East Complex for Engineering, Electronics, and Heavy Industries PLC
Mr. Said Dahbour	Factory Manager	Middle East Complex for Engineering, Electronics, and Heavy Industries PLC
Ms. Amal Dababseh	Environmental Specialist	UNDP Jordan