



STATISTICAL SERVICE OF CYPRUS

**INFORMATION AND COMMUNICATION
TECHNOLOGIES (ICT) USAGE AND E-COMMERCE
SURVEY IN ENTERPRISES
2015**

SUMMARY RESULTS

Nicosia, December 2015

C O N T E N T S

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) USAGE AND E-COMMERCE SURVEY IN ENTERPRISES 2015

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PREFACE

This report presents the results of the survey on ICT Usage and e-Commerce in Enterprises 2015. The aim of the survey is to collect data about the use of information and communication technologies by the enterprises, the use of Internet, the e-commerce, the use of cloud computing services, the automatic share of information within and outside the enterprise, the sharing of supply chain management information electronically, the electronic invoicing and the ICT security. These data are necessary for the implementation of policy programmes of both the Government and the Private Sector.

The survey, which is cofounded by the European Community, conforms to the regulation (EC) No. 808/2004 of the European Parliament and of the Council of 21 April 2004 concerning Community statistics on the information society. The objective of this Regulation is to establish a common framework for the systematic production of Community statistics on the information society.

The report was prepared by Mr. Constantinos Mina, Statistics Officer, under the supervision of Mr. Costas Diamantides, Senior Statistics Officer, Head of Methodology, Statistical Dissemination, Prices, Labour Market, Labour Costs and ICT Surveys Division.

G. Chr. Georgiou
Director
Statistical Service

December 2015

A. SURVEY METHODOLOGY

The survey covers enterprises with 10 or more employees in the following statistical codes of economic activities NACE Rev.2 (Detailed description in annex):

C	Manufacturing
D	Electricity, Gas, Steam and Air Conditioning Supply
E	Water Supply; Sewerage, Waste Management and Remediation Activities
F	Construction
G	Wholesale and Retail Trade. Repair of motor vehicles, motorcycles and personal and household goods
H	Transport and Storage
I	Accommodation and Food Service Activities
J	Information and Communication
L	Real Estate Activities
M	Professional, Scientific and Technical Activities
N	Administrative and Support Service Activities
S	Other Service Activities

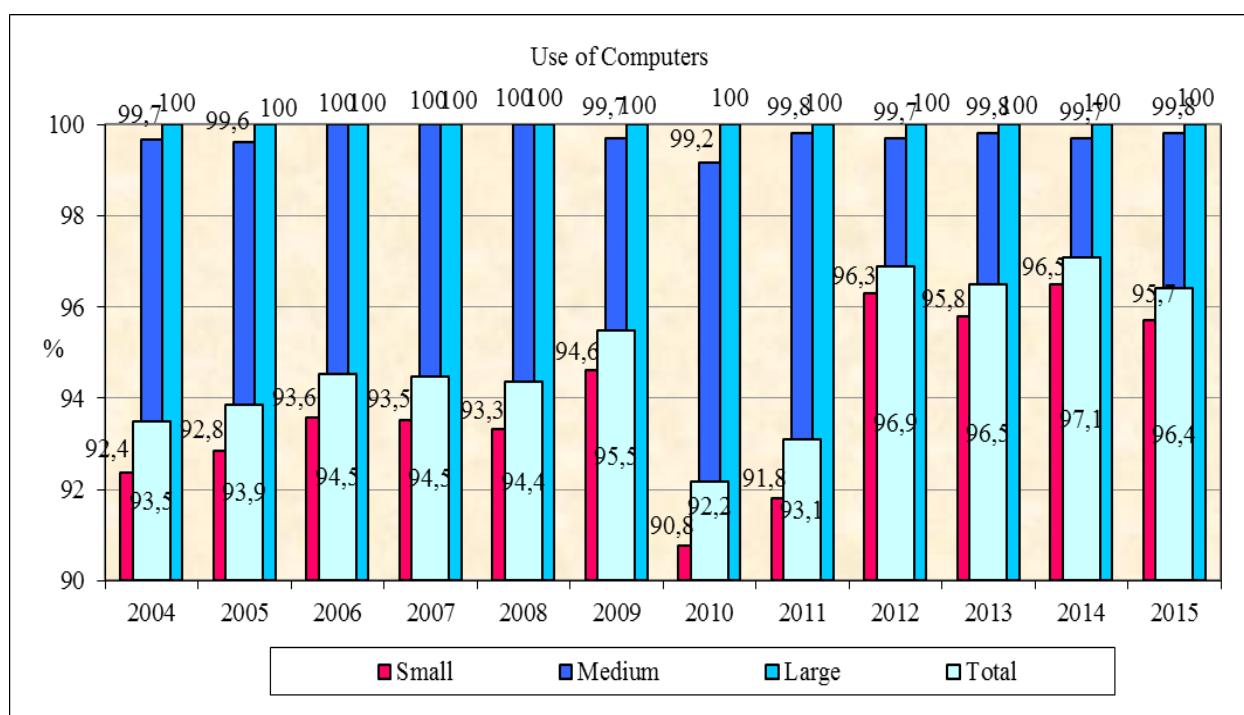
The sampling method used was stratified random sampling. Two variables were used for stratification, NACE group and size of the enterprise. There were 14 NACE groups and 3 size groups.

The 14 NACE groups (of economic activities) were the following: 10-18, 19-23, 24-25, 26-33, 35-39, 41-43, 45-47, 49-53, 55, 58-63, 68, 69-74, 77-82 and 95. The 3 size groups were: Small enterprises (10-49 employees), Medium enterprises (50-249 employees) and Large enterprises (250+ employees).

B. MAIN FINDINGS

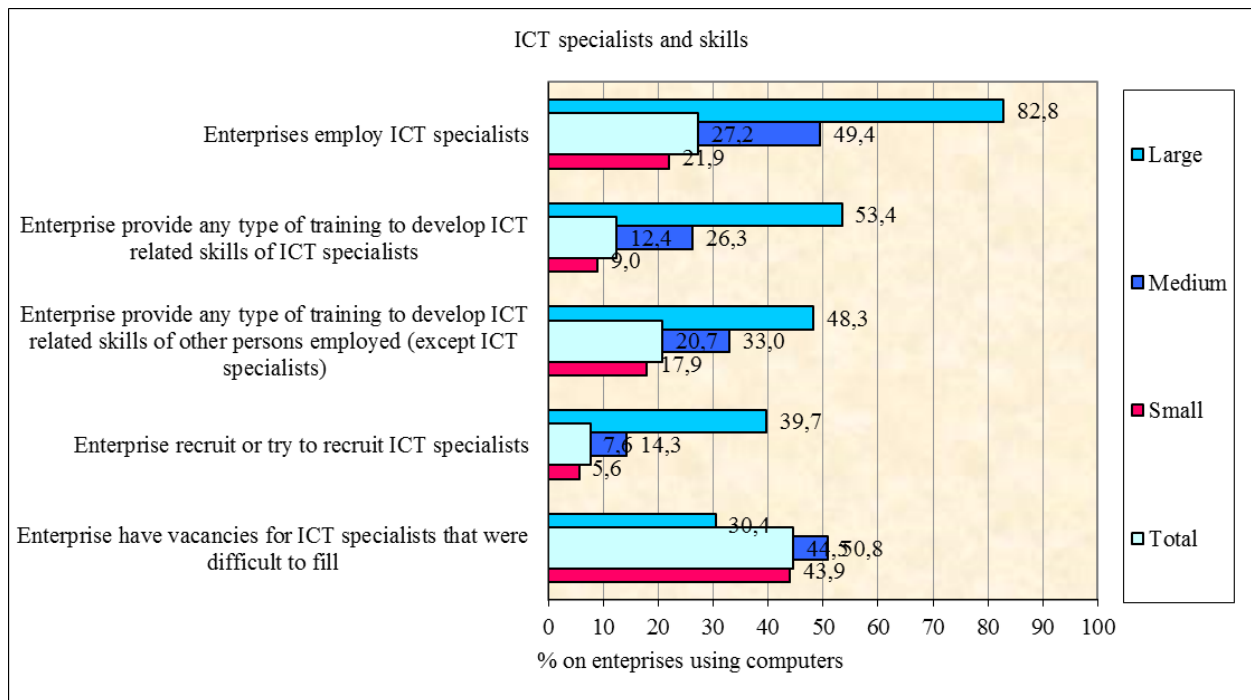
USE OF COMPUTERS

In 2015, computers were used in almost all enterprises in Cyprus with 50 or more employees (i.e. medium and large enterprises). The percentage of small enterprises (10 – 49 employees) using computers decreased to 95,7% compared to 96,5% in 2014. The percentage of enterprises with 10 or more employees using computer decreased to 96,4% in 2015.



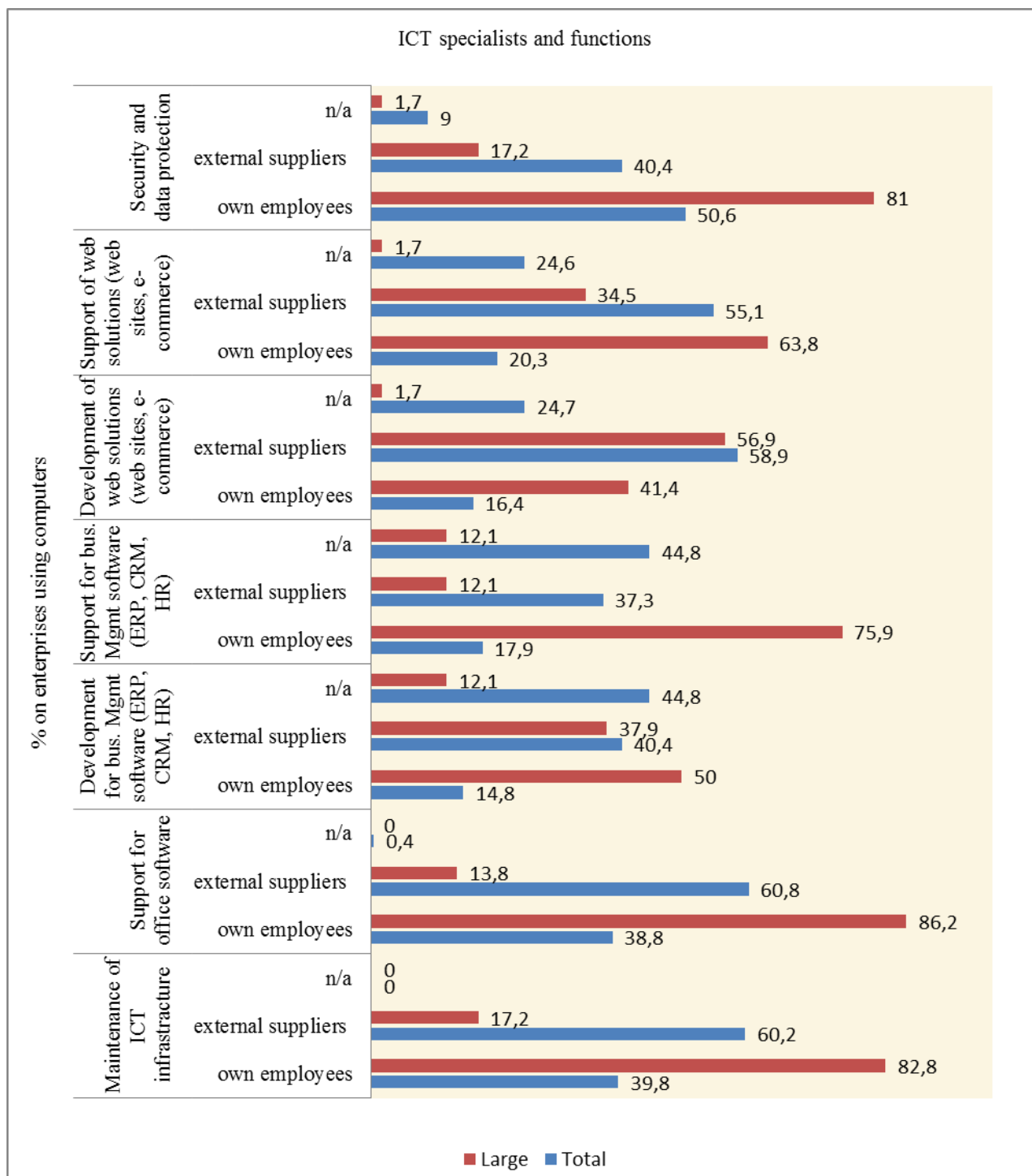
ICT SPECIALISTS AND SKILLS

ICT specialists are employees for whom ICT is the main job. For example, to develop, operate or maintain ICT systems or applications. The vast majority of large enterprises (82,8%) employ ICT specialists while only 21,9% of small enterprises employ ICT specialists. Only 7,6% recruit or try to recruit ICT specialists in 2014 and 44,5% of them faced difficulties to fill the vacancies. The percentage of enterprises that provide any type of training to develop ICT related skills to either ICT specialists or other person employed remains lower than 25%. In large enterprises the same percentage is presented higher than 45%.



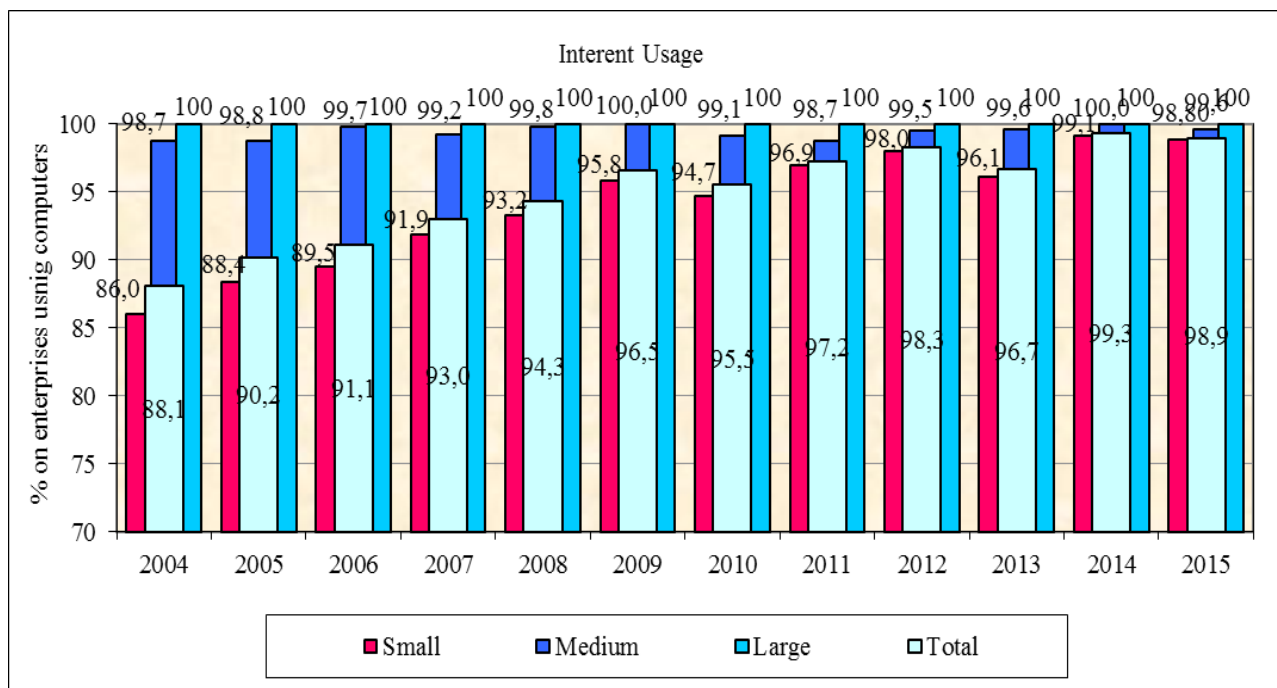
Furthermore, we can see that enterprises prefer to outsource ICT functions rather than having their own employees performing them. With the exception of the “Security and Data protection” which is mainly performed by the enterprise’s own employees (including those employed by parent or affiliated enterprises), all other ICT functions – maintenance of ICT infrastructure, Support for office software, development of business management software/systems, support for business management software/systems, Development of web solutions, Support for web solutions were outsourced.

For large enterprises though, the majority of the ICT functions (all except from the development of web solutions) are performed by the enterprise’s own employees.

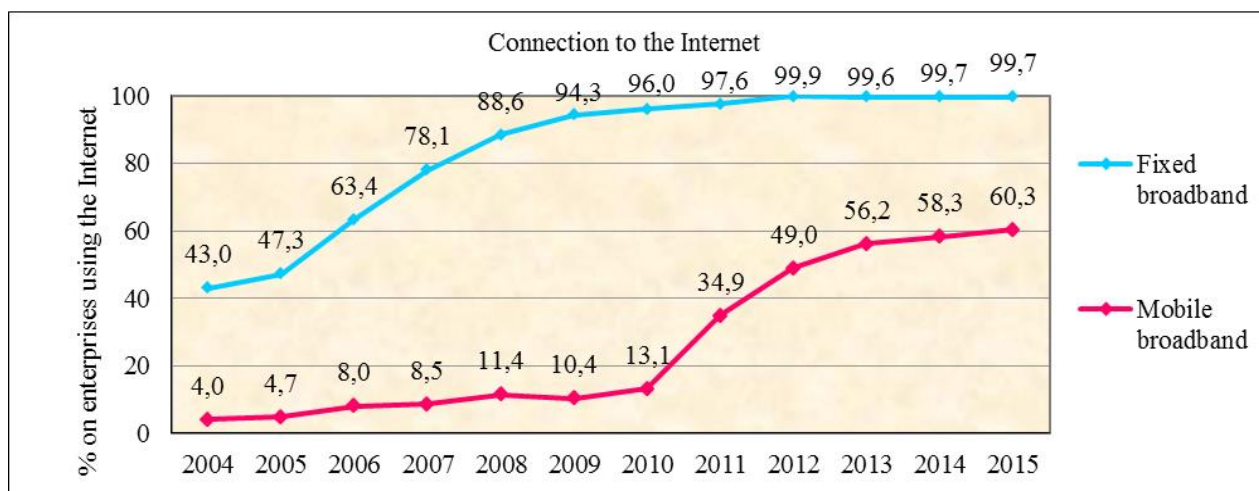


ACCESS AND USE OF THE INTERNET

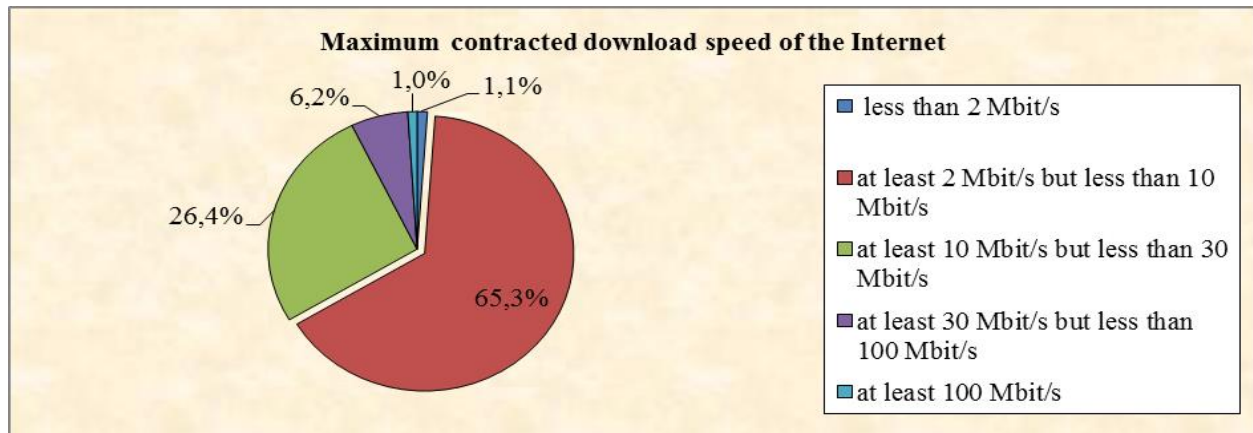
Over the last years, Internet usage in enterprises remains stable over 95%. 98,9% of enterprises using computers had access to the Internet in 2015. The Internet usage was almost 100% in all medium and large enterprises.



In the last years there was a significant increase in broadband connections to the Internet. By broadband connection we mean DSL, ADSL, SDSL, VDSL, fiber optics technology (FTTH), cable technology, satellite etc. A significant increase is observed in mobile connection in 2015 (60,3%) compared to the previous years.



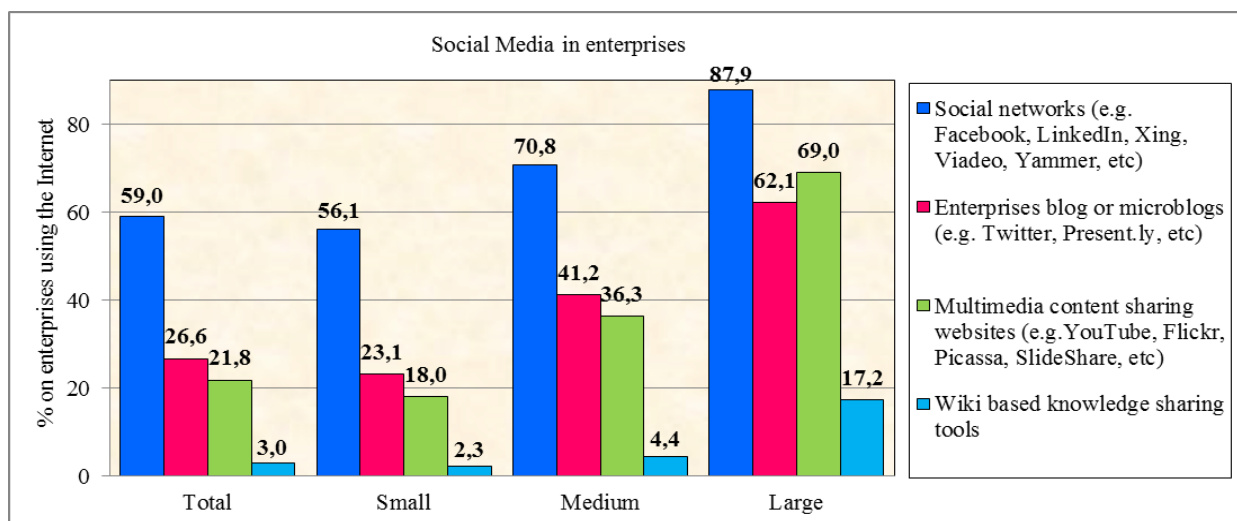
The vast majority of the enterprises (65,3%) in Cyprus has maximum contracted download speed at least 2 Mbit/s but less than 10 Mbit/s. Enterprises with download speed of more than 10 Mbit/s have increased from 27,6% to 33,6%. By maximum contracted speed it means the maximum theoretical speed according to the contractual obligations of the Internet provider at which data can be downloaded.



USE OF SOCIAL MEDIA

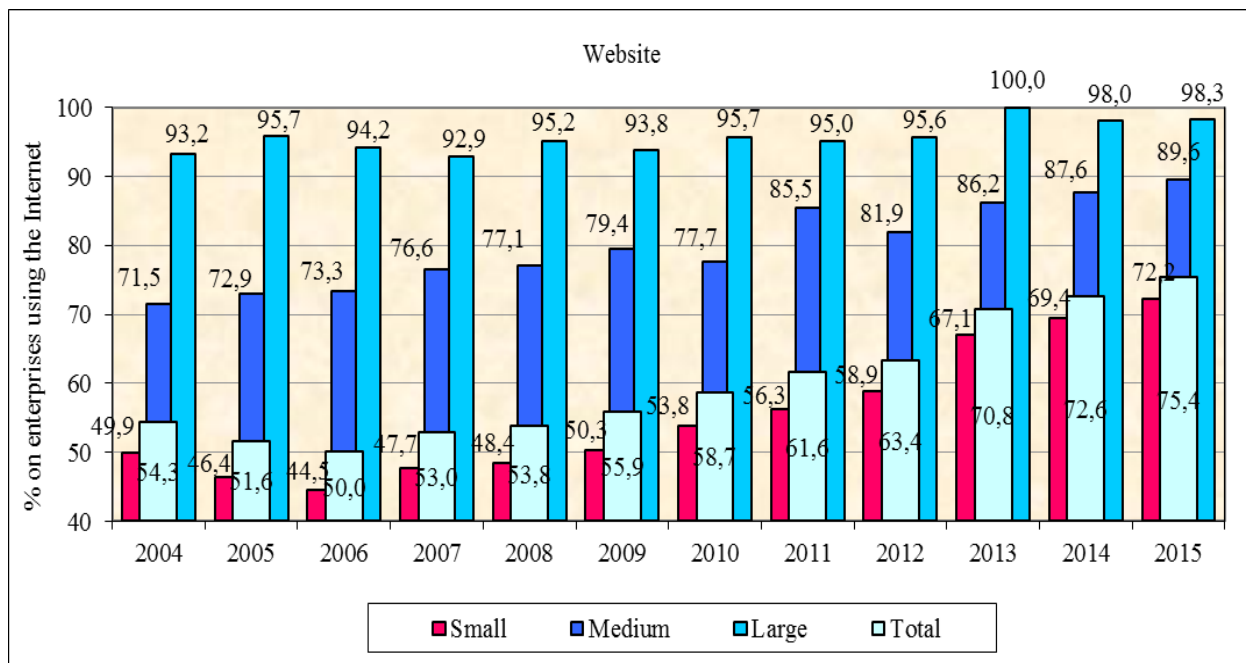
Use of Social Media refers to the usage of applications based on Internet technology or communication platforms for connecting, creating and exchanging content online, with customers, suppliers, or partners, or within the enterprise. Enterprises using social media are considered those that have a user profile, an account or a user license depending on the requirements and the type of the social media. 59 % of the enterprises use Social Media.

Social networks (e.g. Facebook, LinkedIn etc.) are the most popular in enterprises and especially in large enterprises since 87,9% of large enterprises using the Internet use social networks. Enterprises blog or microblogs like Twitter and multimedia content sharing websites such as YouTube, Flickr, etc, are the second in enterprises preferences.



USE OF A WEBSITE

Compared to 2014, a significant increase is observed in the percentage of enterprises that have a website (75,4% in 2015 from 72,6% in 2014). It is worth mentioning that almost all large enterprises had a website (98,3%). Over the last 5 years a steady increase can be observed in small enterprises where 72,2% have a website.



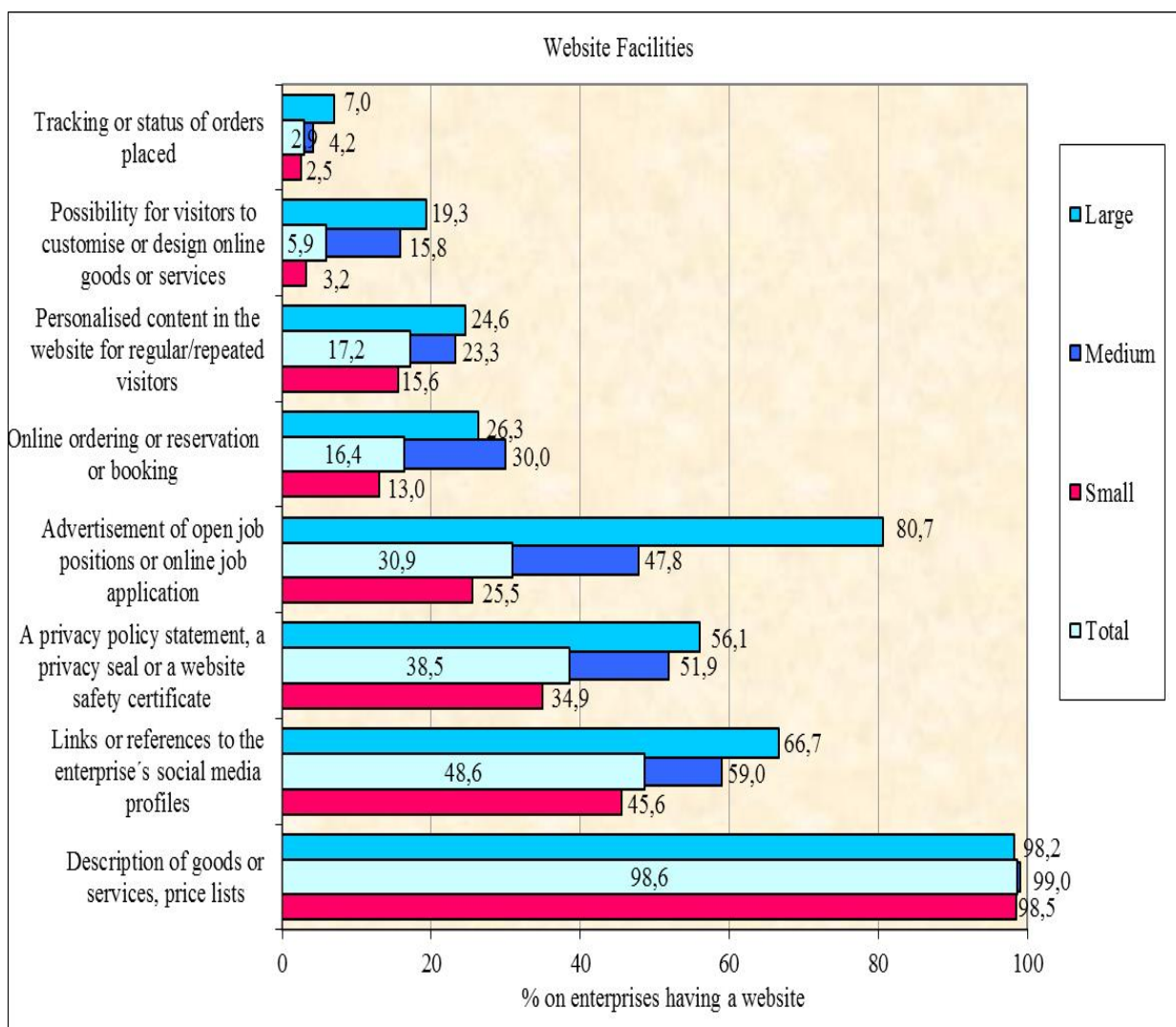
Among the facilities provided by enterprises through their website, the most predominant is the description of goods and services and price lists (provided by 98,6% of enterprises having a website).

16,4% of the enterprises with a website, provide the possibility of online ordering or reservation to their customers, while only 17,2% offer the possibility of personalized content for repeated visitors.

38,5% of the enterprises with a website, have a privacy policy statement, a privacy seal or certification. This percentage is much higher for large enterprises (56,1% of the enterprises that had a website).

Advertisement of open job positions on a website was a common facility among enterprises that have a website with a significant percentage in large enterprises (80,7%).

It is worth mentioning that almost 48,6% of the enterprises with a website have links or references to the enterprise's social media profiles (i.e. Facebook, Twitter, LinkedIn, YouTube, etc.).

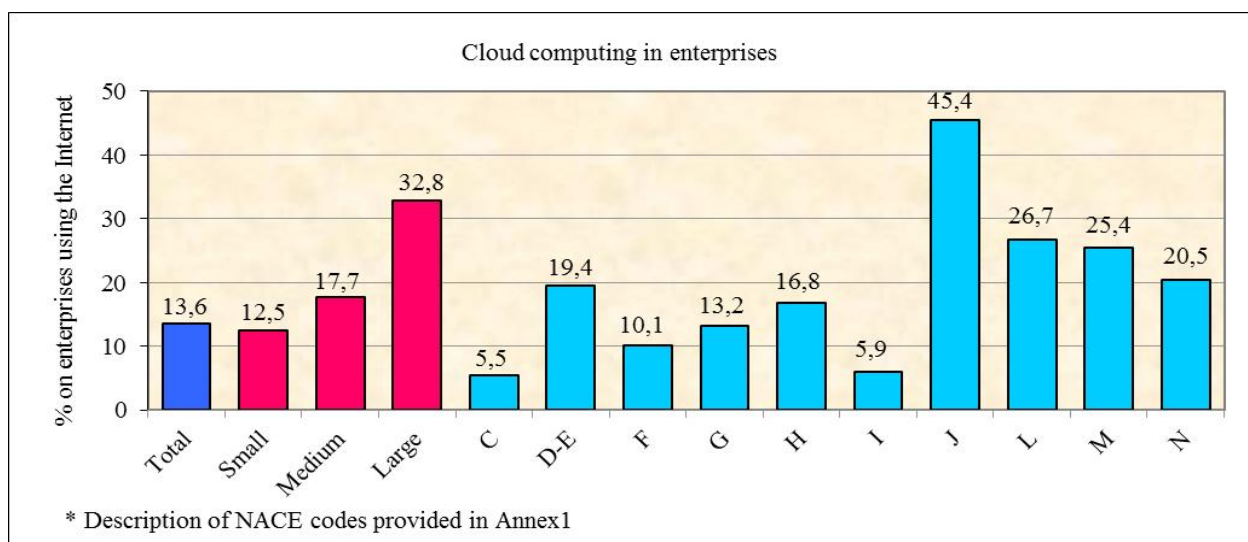


USE OF CLOUD COMPUTING SERVICES

Cloud computing refers to ICT services that are used over the Internet to access software, computing power, storage capacity etc.; where the services have all of the following characteristics:

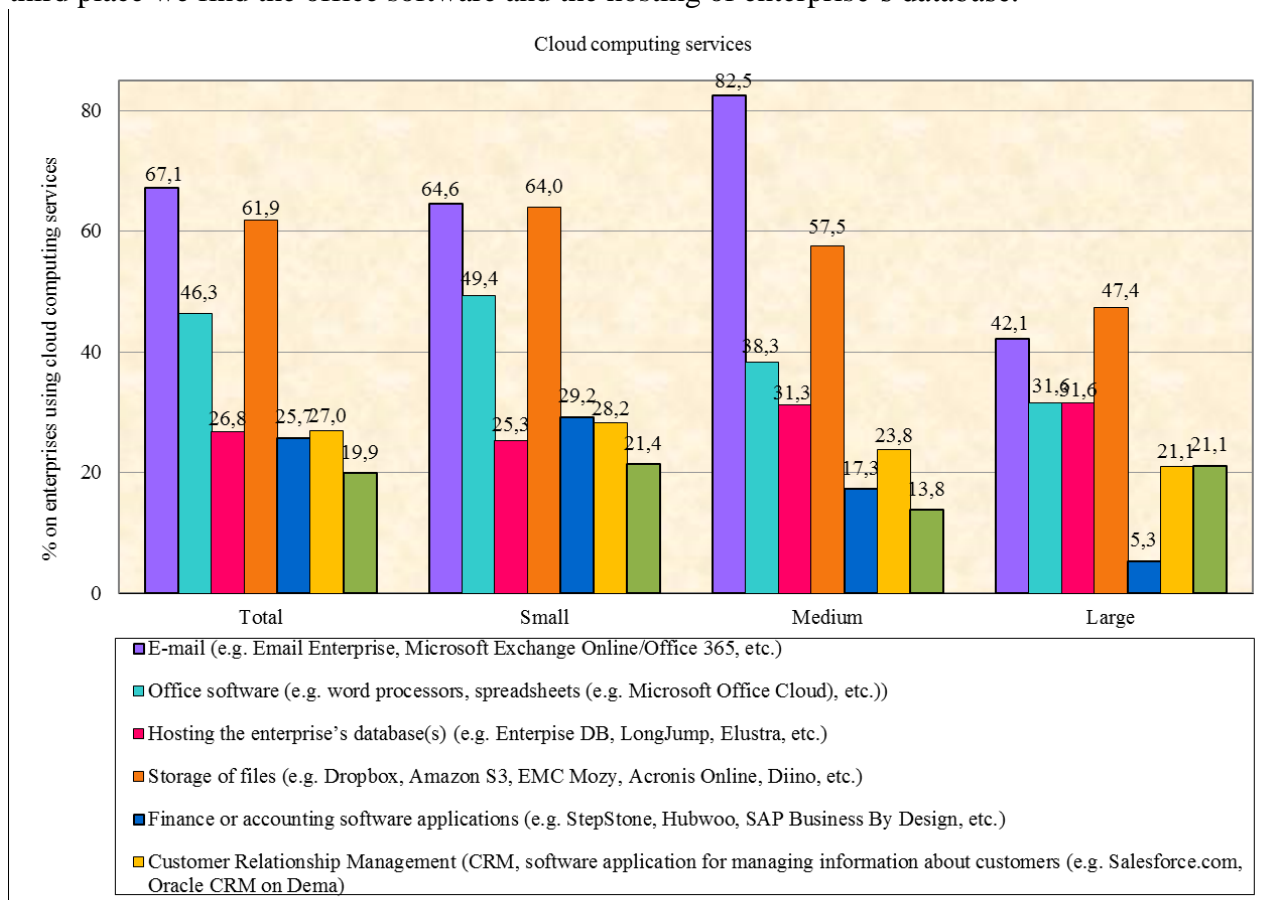
- are delivered from servers of service providers
- can be easily scaled up or down (e.g. number of users or change of storage capacity)
- can be used on-demand by the user, at least after the initial set up (without human interaction with the service provider)
- are paid for, either per user, by capacity used, or they are pre-paid.

In Cyprus, cloud computing is not very common among enterprises. Only 13,6% of the enterprises using the Internet buy any cloud computing service. The percentage reach 32,8% in large and enterprises and 45,4% in enterprises of NACE rev.2 Group J: Information and Communication.

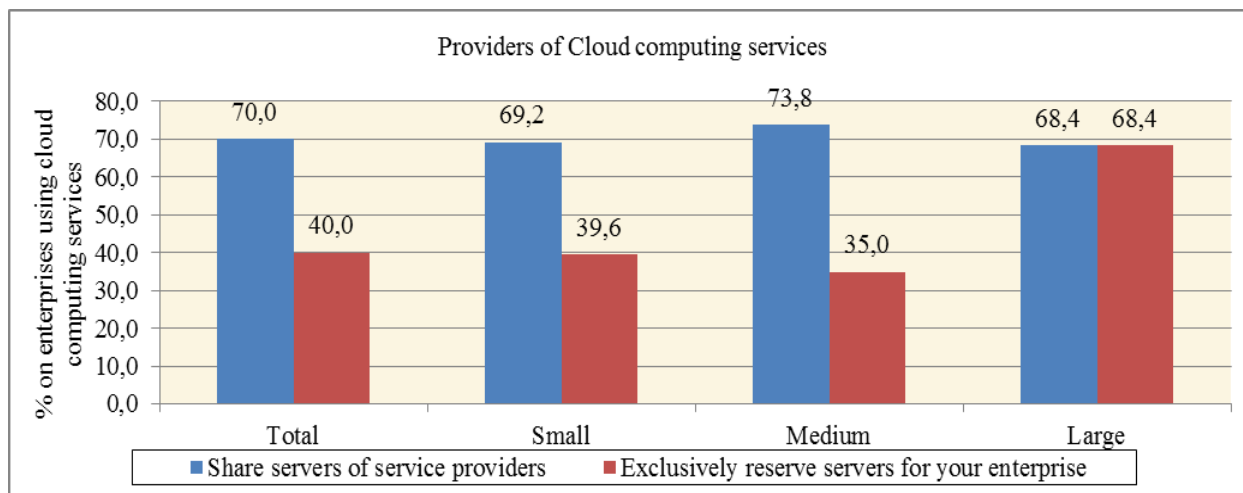


The main use of cloud computing services in enterprises is the e-mail (e.g. Email Enterprise, Microsoft Exchange Online / Office 365, etc.) as a cloud computing service with percentage 67,1%. Second in the row comes the storage of files (e.g. Dropbox, Amazon S3, EMC Mozy, Acronis Online, Diino, etc.) with a percentage of 61,9%. The office software (e.g. word processors, spreadsheets (e.g. Microsoft Office Cloud), etc.) is in third place with 46,3%.

In small and medium enterprises the most popular is the e-mail as a cloud computing service while in the large enterprises the storage of files is the most popular, the e-mail is second, and in third place we find the office software and the hosting of enterprise's database.

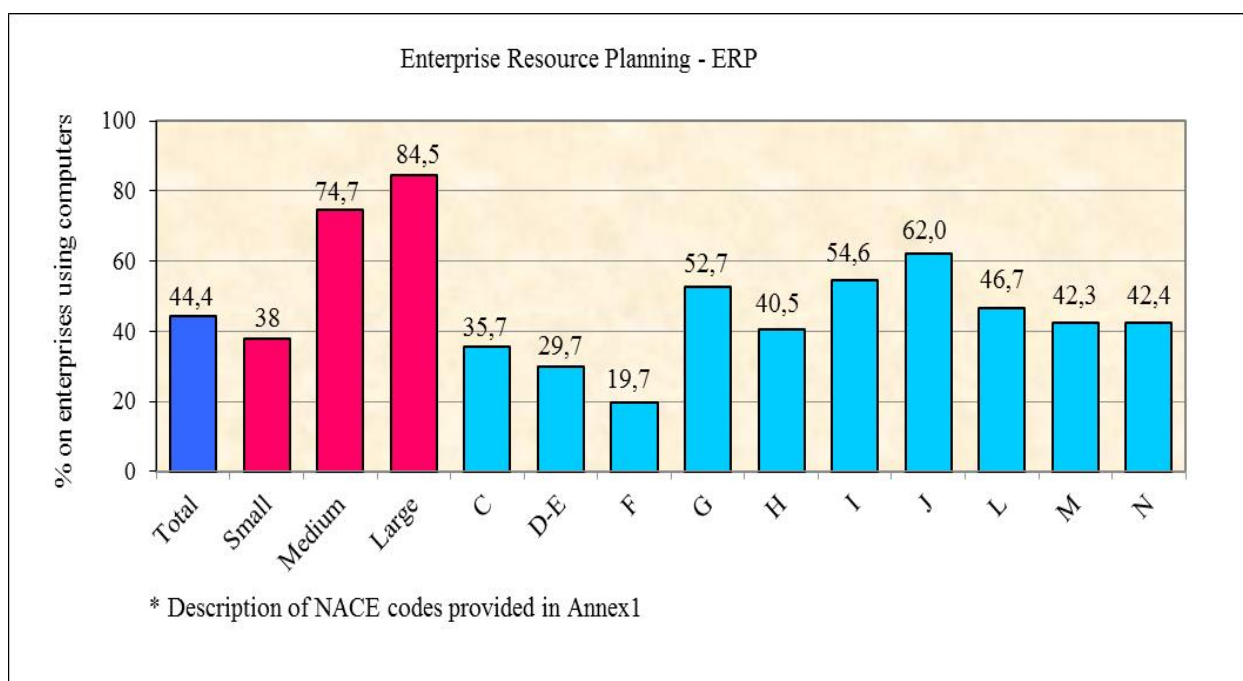


70% of enterprises using cloud computing services bought services delivered from shared servers compared to 61,2% for the year of 2014. Purchases of services from exclusively reserved servers dropped from 51,9% in 2014 to 40%.

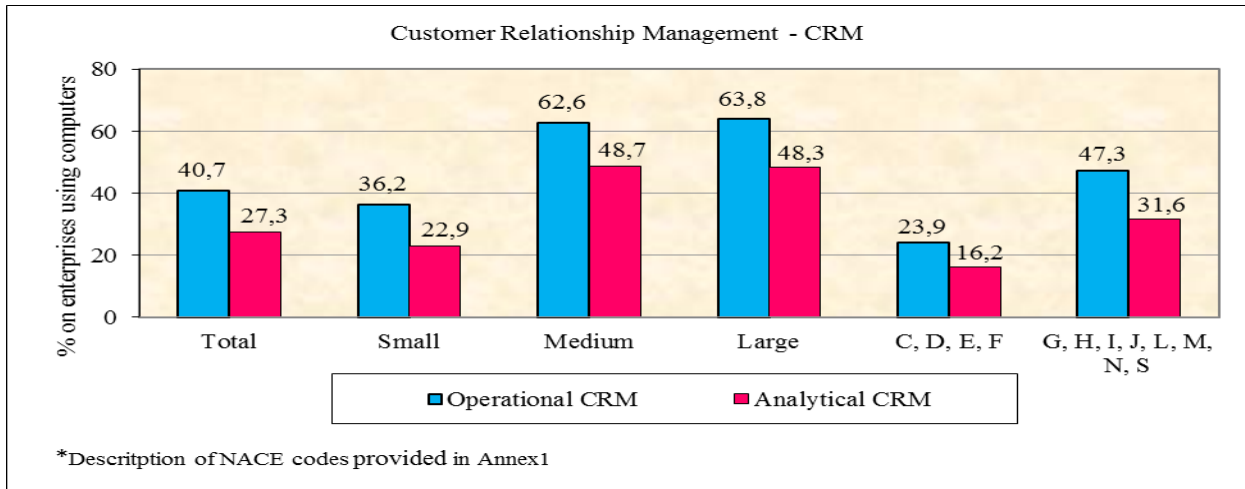


SHARING OF INFORMATION ELECTRONICALLY WITHIN THE ENTERPRISE

An Enterprise Resource Planning (ERP) software package is a set of applications that integrate information and processes across the several business functions of the enterprise. 44,4% of enterprises that used computers said that they had an ERP software package to share information on sales and purchases with other internal functional areas of the enterprise, a significant increase from the 37,2% of the previous year. ERP software package is most common in large enterprises that used computers, with percentage 84,5%. Regarding NACE Rev.2 group, the highest percentage of enterprises having ERP is 62% in NACE Rev.2 group J: Information and Communication.



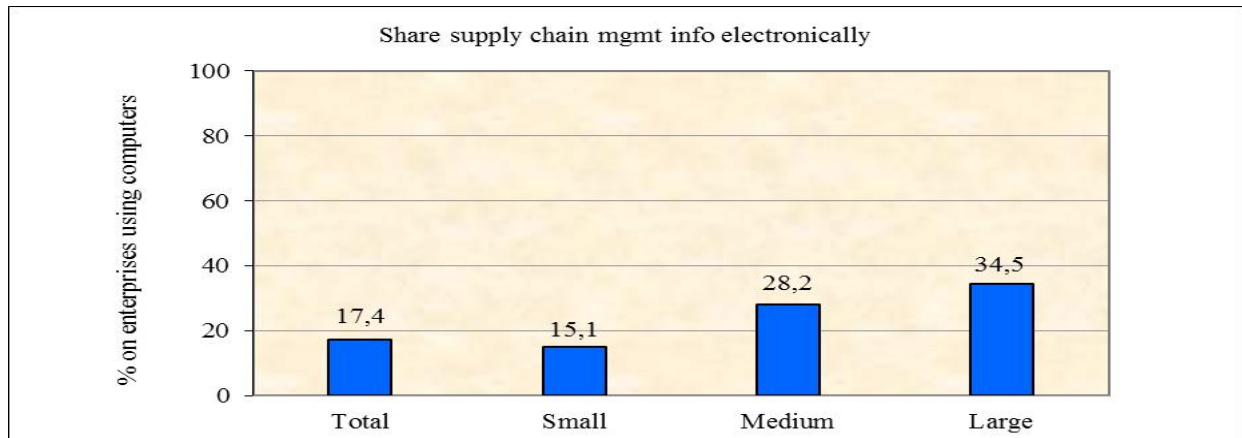
Among enterprises using computers 40,7% have Operational CRM (Customer Relationship Management) software application for managing information about clients, either to capture, store and make available to other business functions the information about clients, and 27,3% have Analytical CRM to make analysis of the information about clients for marketing purposes. Both Operational and Analytical CRM are most common in large enterprises (63,8% and 48,3% respectively).



SHARING SUPPLY CHAIN MANAGEMENT INFORMATION ELECTRONICALLY

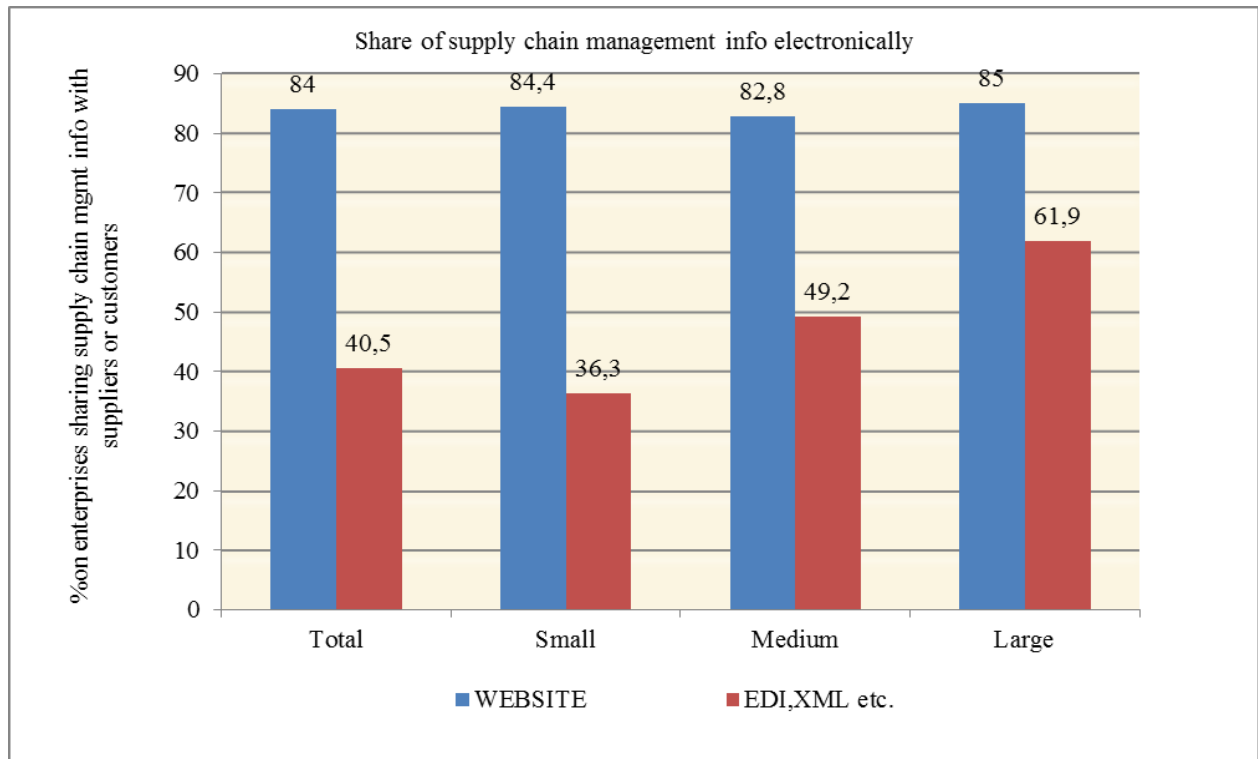
This part intends to measure the level of integration of business processes of an enterprise with those of its suppliers and/or its customers. It focuses on the processes related to the supply chain management.

17,4% of enterprises using computers share supply chain management information electronically with its suppliers and/or customers. For small enterprises that percentage reaches 15,1% while for large enterprises it is 34,5%.



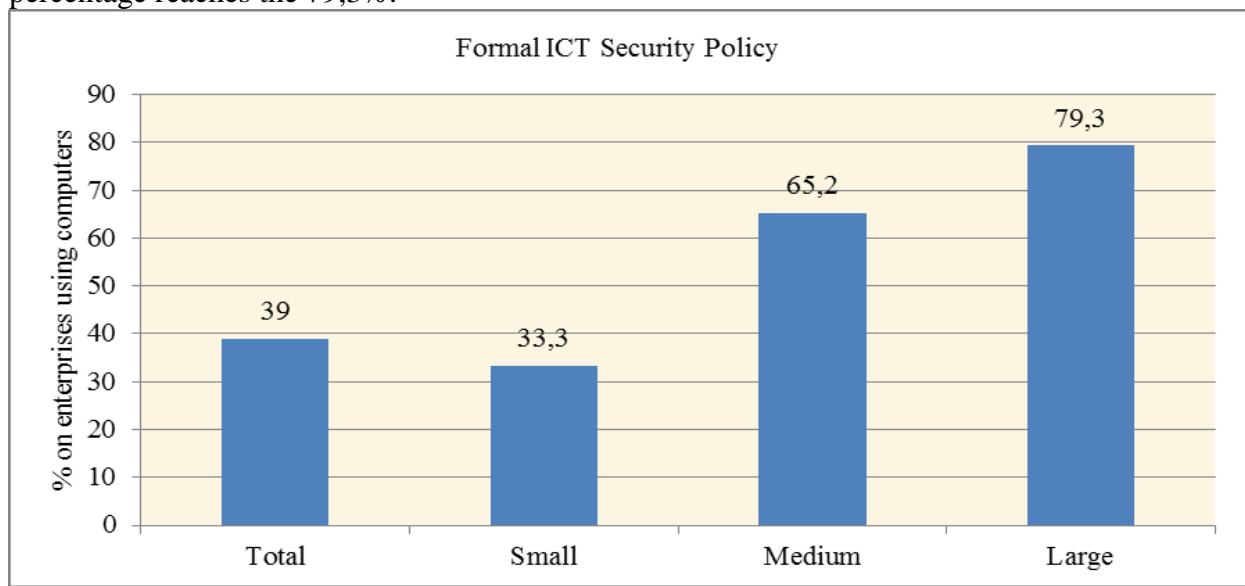
The majority (84%) of the enterprises that share supply chain management information electronically do that via websites or web portals. Only 40,5% do that via electronic transmission suitable for automated processing (EDI type systems, XML, EDIFACT, etc).

Regardless of their size, all enterprises (with 10+ employees) use websites or web portals as their primary method of sharing supply chain management information electronically.

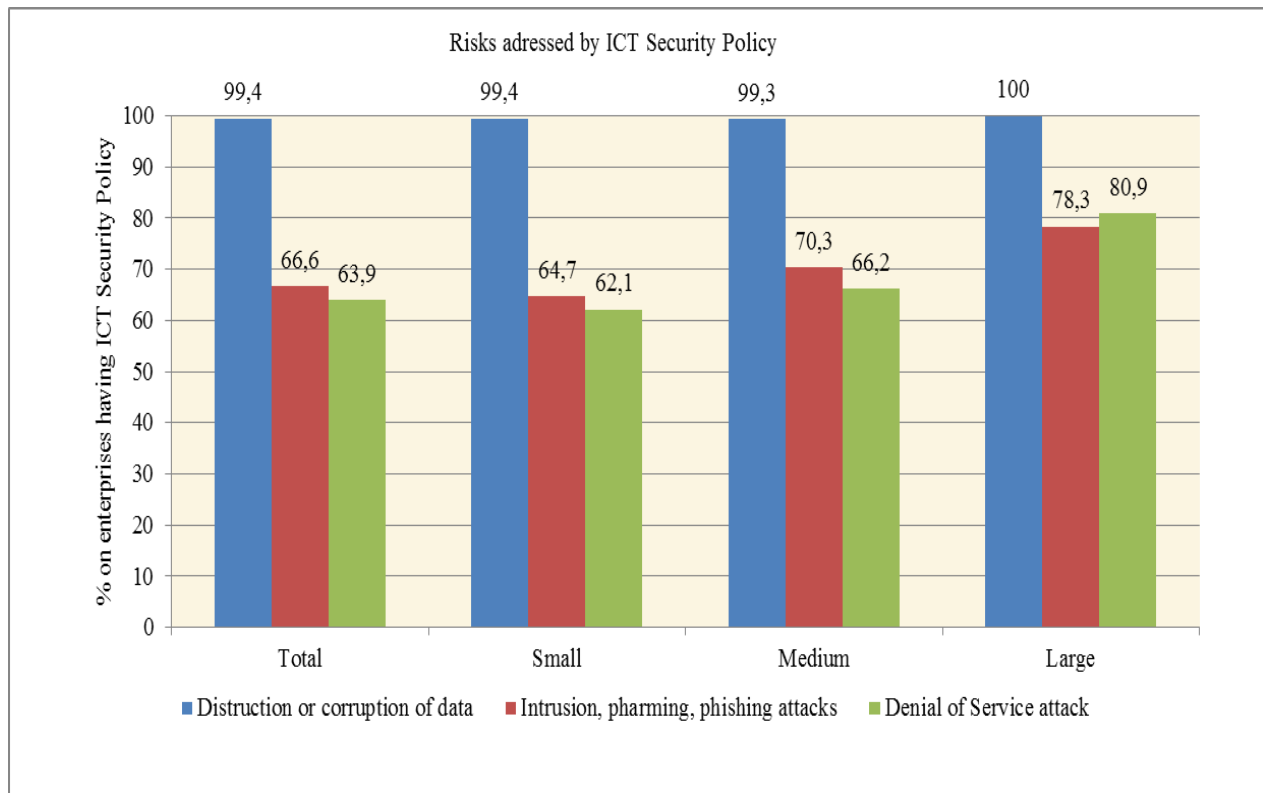


ICT SECURITY

ICT security means the measures, controls and procedures applied on ICT systems in order to ensure integrity, authenticity, availability and confidentiality of data and systems. Only 39% of enterprises using computers had a formal ICT Security Policy. In large enterprises that percentage reaches the 79,3%.



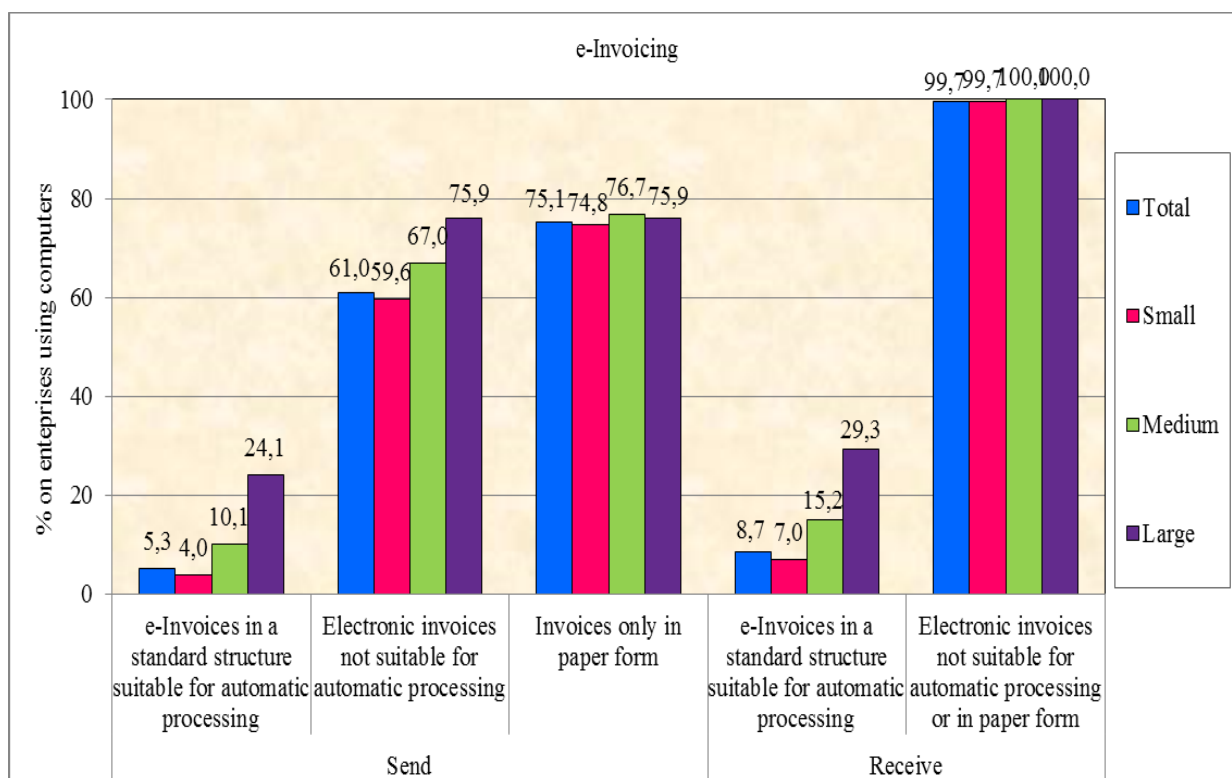
The main risk addressed by the ICT security policy of almost all of the enterprises, regardless of their size, was the destruction or corruption of data due to attack or by unexpected event. Second was the disclosure of confidential data due to intrusion, pharming, phishing attacks or by accident and last was the denial of service attack.



ELECTRONIC INVOICING

An electronic invoice is an electronic transaction document that contains billing information. There are two different types of electronic invoices:

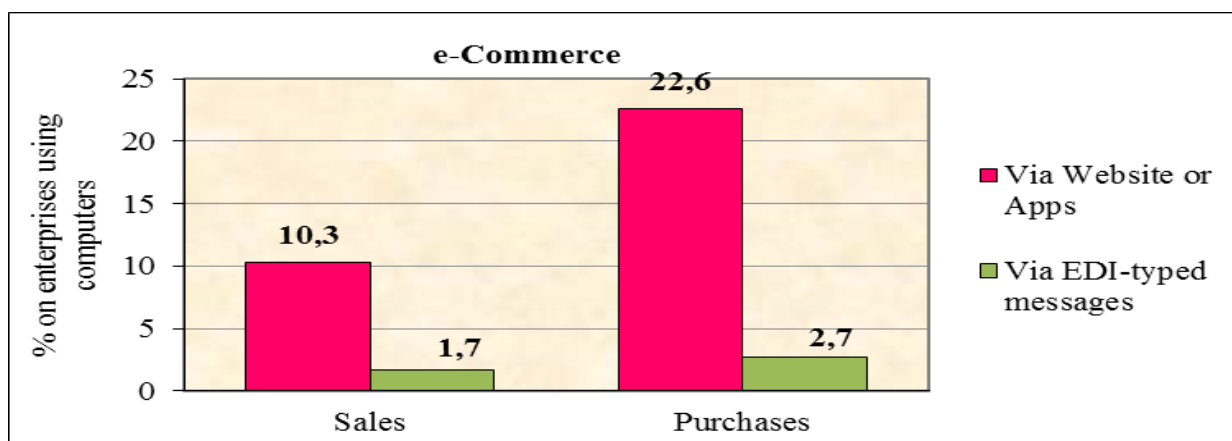
- (a) e-invoices are electronic invoices in a standard structure (suitable for automatic processing) that may be processed automatically. They may be directly exchanged between suppliers and customers, via service operators or via an electronic banking system.
- (b) Invoices in electronic format not suitable for automatic processing.



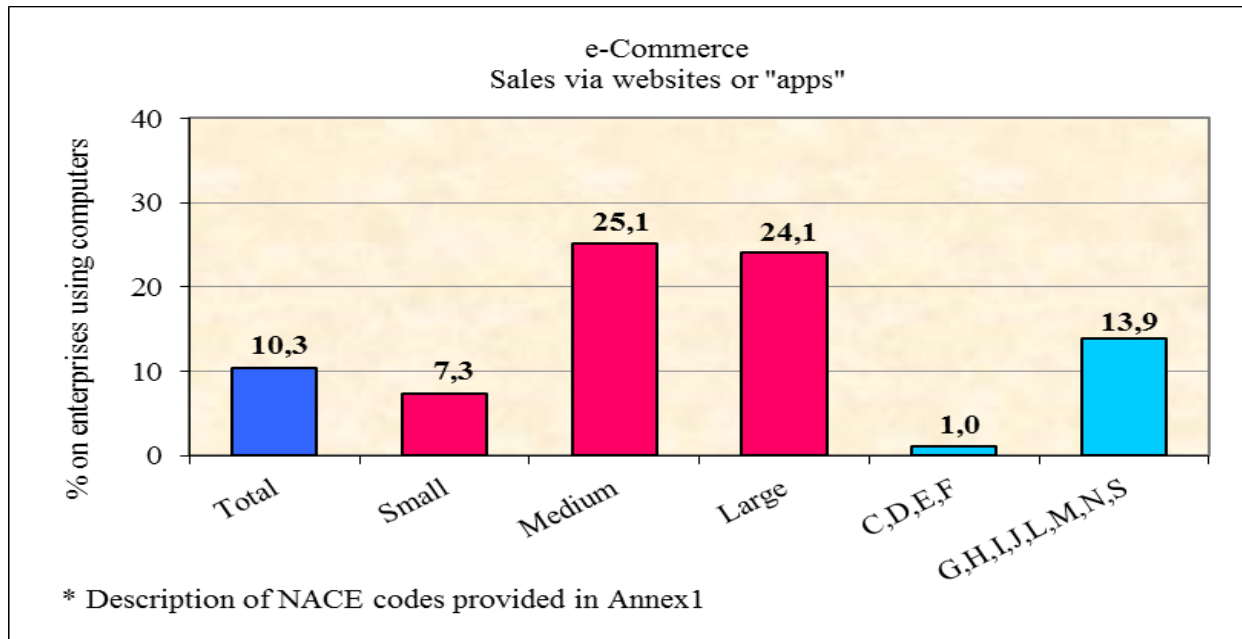
In Cyprus, e-invoices in a standard structure suitable for automatic processing (5,3% on enterprises using computers) is not as common as invoices in electronic format not suitable for automatic processing (via e-mail as an attachment) (61% of the enterprises using computers). But, the invoice in paper form is the most popular with percentage 75,1%. However, 24,1% of large enterprises using computers sent e-invoices in a standard structure suitable for automatic processing and 29,3% received an e-invoice in a standard structure suitable for automatic processing.

E-COMMERCE

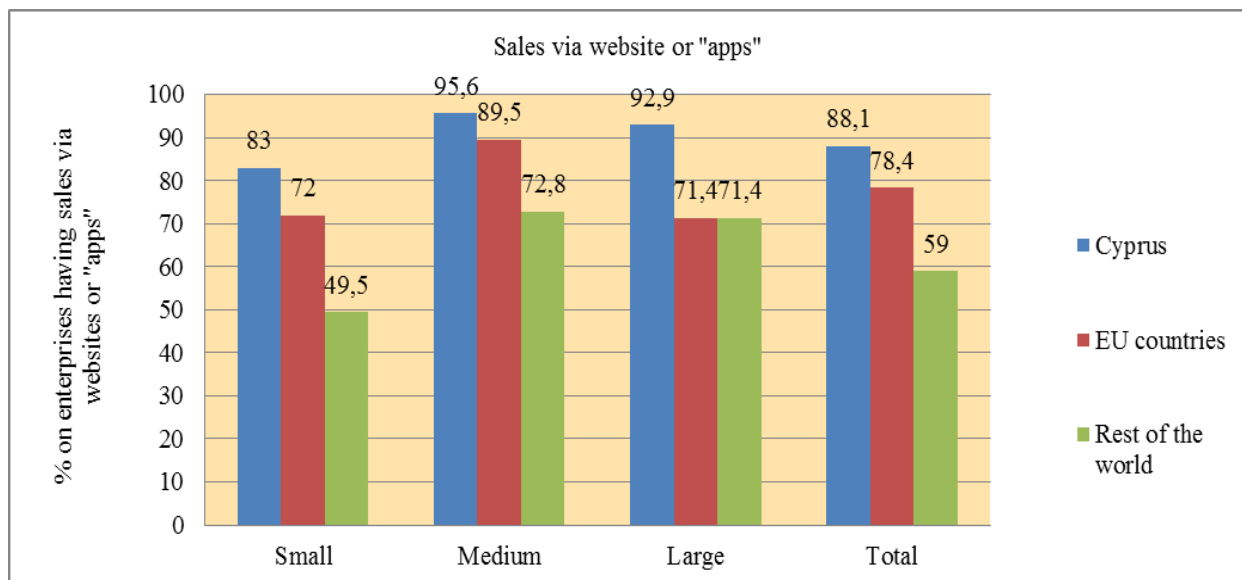
E-Commerce is not very popular among enterprises in Cyprus. Only 10,3% of enterprises using computers had received orders via computer networks (excluding manually typed e-mails), during 2014 while 22,6% sent orders via computer networks. E-Commerce via a website is more common compared to e-commerce via EDI-typed messages.



Enterprises receiving online orders in Cyprus seemed to be mostly the ones that belong in NACE Rev.2 group G, H, I, J, L, M, N, S (See Annex I) with percentage 13,9% which is much higher than in other economic activity (C, D, E, F: 1%). It is worth mentioning that medium size enterprises received more orders via websites or “apps” (25,1%). Large enterprises were in second place with 24,1%.

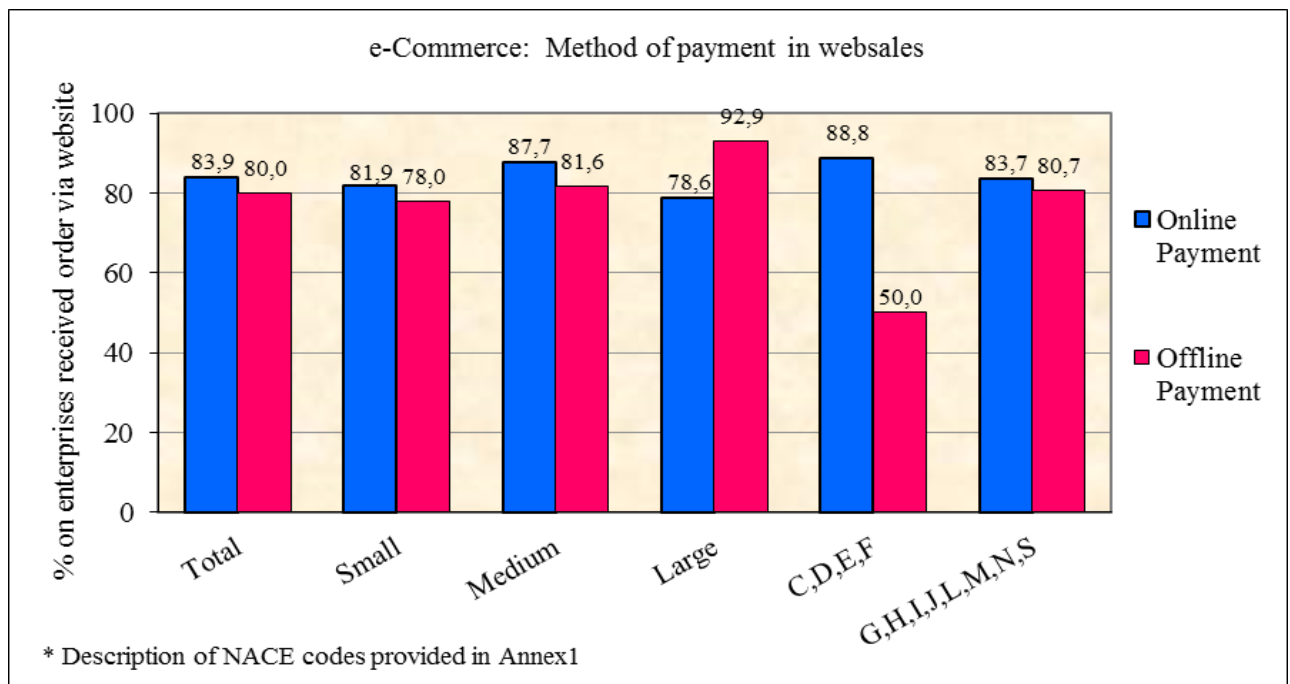


Enterprises received orders via website or “apps” mainly from Cyprus (88,1%), from EU countries (78,4%) and from the Rest of the world (59%).

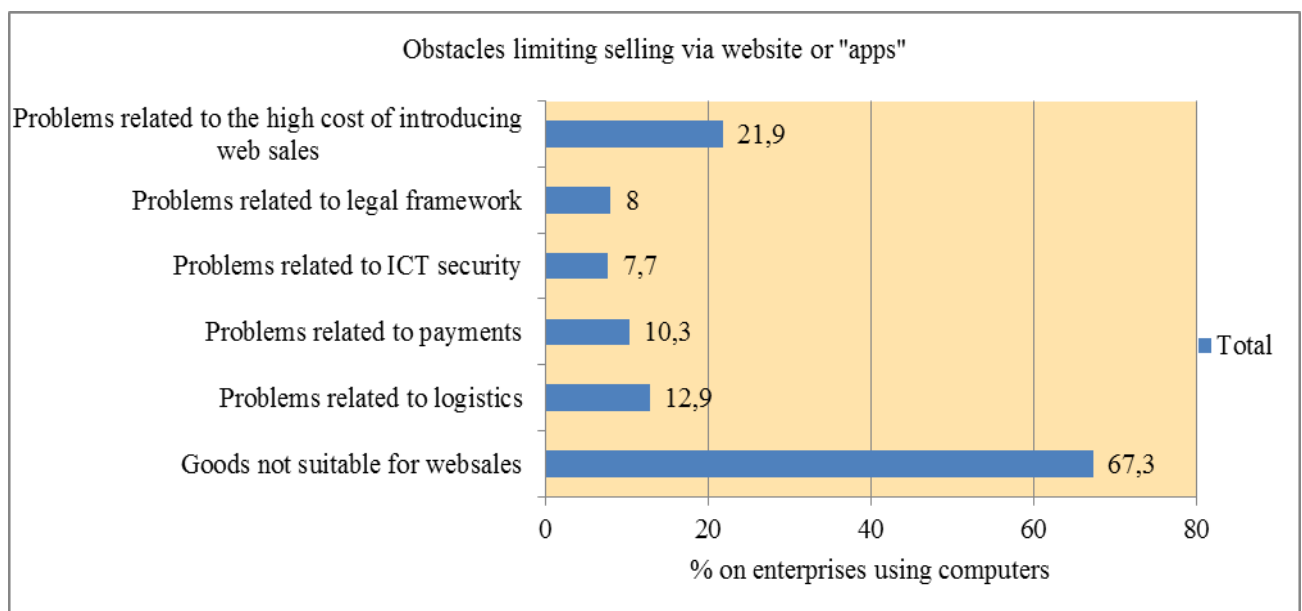


The online payment overcame to offline payment in web sales. By online payment we mean the payment integrated in the ordering transaction (e.g. credit, debit card, direct debit authorization, via 3rd party accounts (e.g. JCC)) and by offline payment the payment process that is not

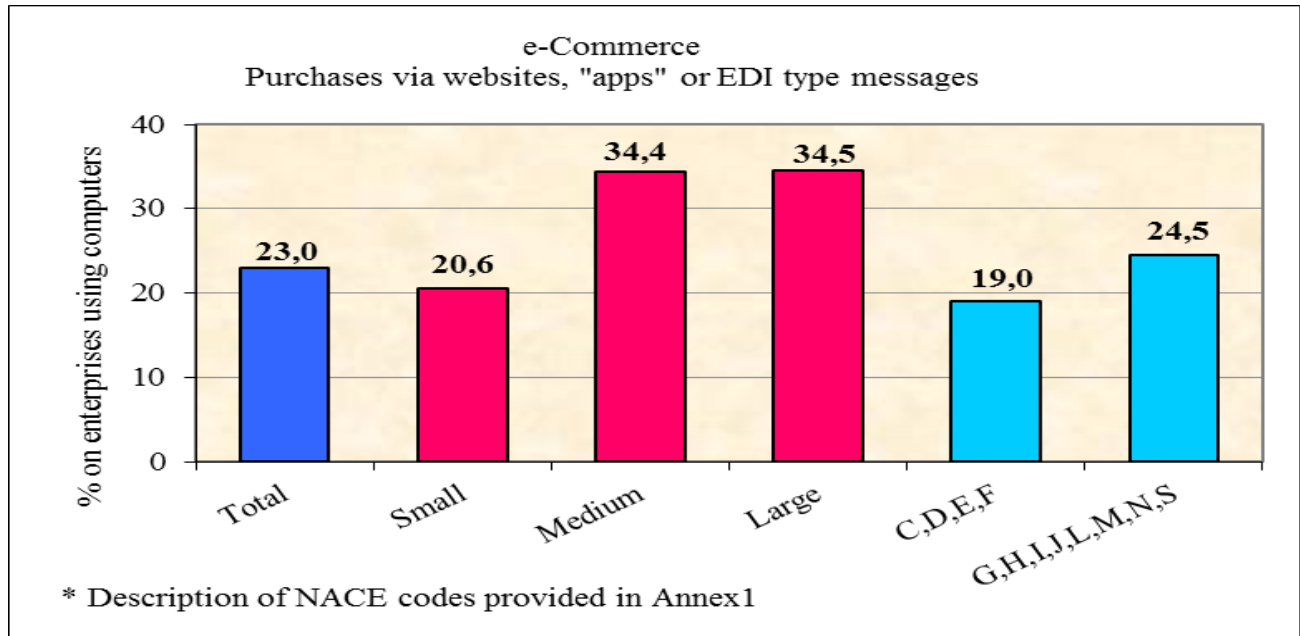
included in the ordering transaction (e.g. cash on delivery, bank transfer, cheque payment, other not online payment).



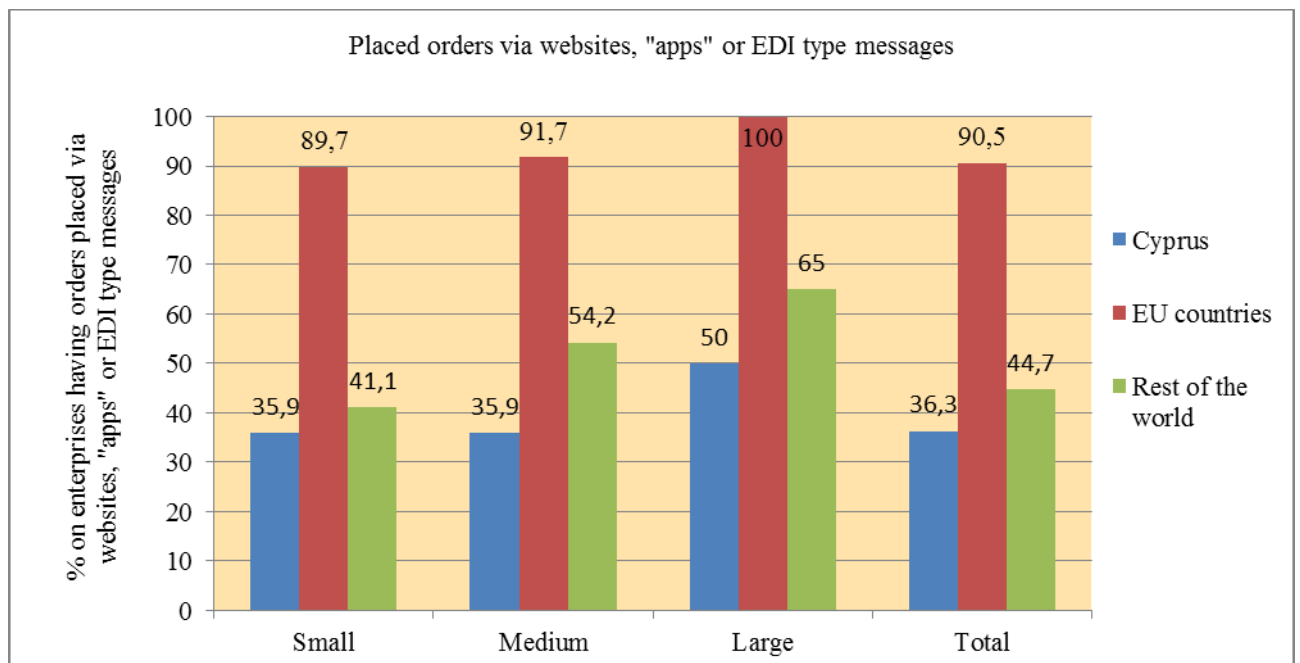
Goods not suitable for web sales was the most common reason preventing enterprises from selling via websites or “apps” (67.3%). Problems related to the high cost of introducing web sales compared with the benefits, was second with 21.9% of the enterprises using computers.



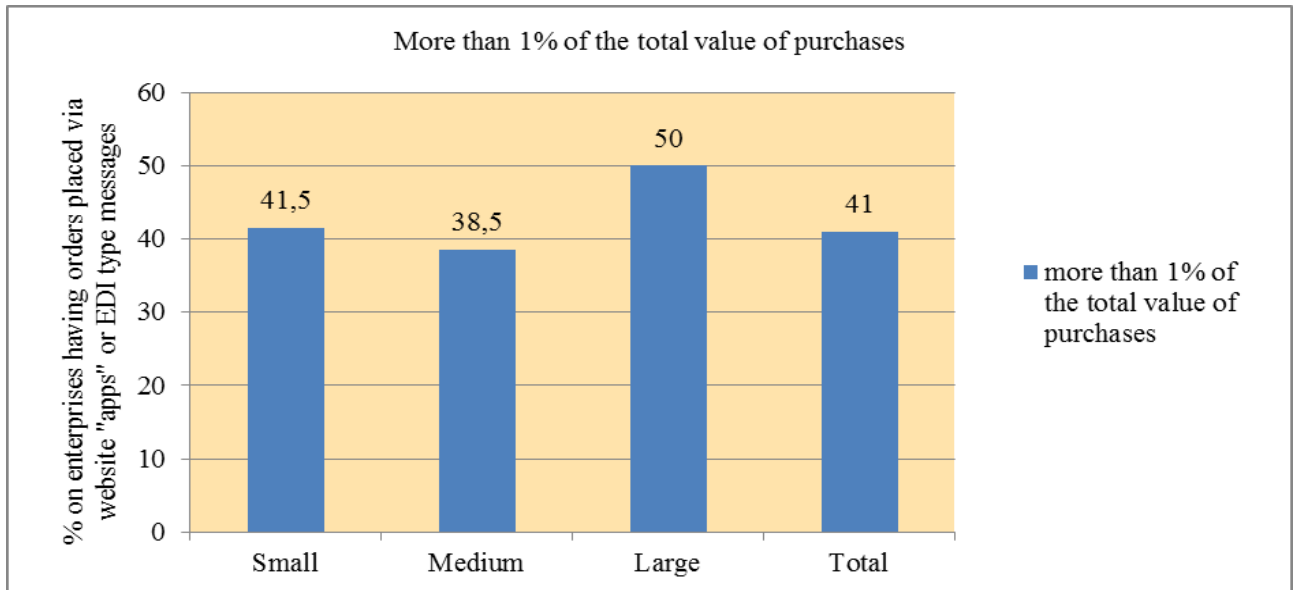
During 2014, 23% of enterprises with 10 or more employees using computers placed orders of products or services via websites, “apps” or EDI type messages (excluding e-mails) compared with 15.1% in 2013. In large enterprises the percentage of placing orders via websites, “apps” or EDI type messages was 34,5%.



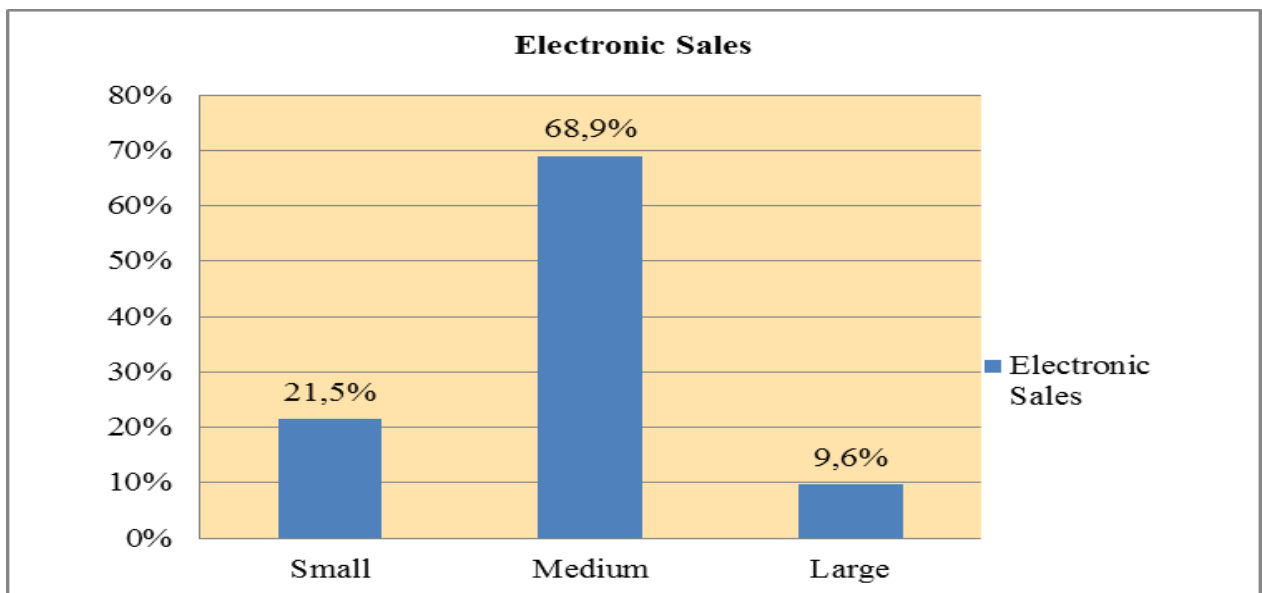
90,5% of enterprises having orders placed via website, “apps” or EDI type messages prefer ordering goods and services from EU countries, 44,7% from the Rest of the world and only 36,3% from Cyprus.



During 2014, 41% of enterprises which have placed orders via websites, “apps” or EDI type messages stated that their orders exceeded 1% of the total value of their purchases. For large enterprises that percentage was 50%, for medium was 38,5% and for small 41,5%.



Sales via websites, “apps” or EDI type messages amounted to 6,2% of the total turnover. In terms of value 68,9% of sales via websites, “apps” or EDI type messages was performed by medium size enterprises, 21,5% by small and 9,6% by large.



Annex
Description of NACE Codes included in the Survey
NACE Rev.2

C	MANUFACTURING
C10	MANUFACTURE OF FOOD PRODUCTS
C11	MANUFACTURE OF BEVERAGES
C12	MANUFACTURE OF TOBACCO PRODUCTS
C13	MANUFACTURE OF TEXTILES
C14	MANUFACTURE OF WEARING APPAREL
C15	MANUFACTURE OF LEATHER AND RELATED PRODUCTS
C16	MANUFACTURE OF WOOD AND OF PRODUCTS OF WOOD AND CORK, EXCEPT FURNITURE; MANUFACTURE OF ARTICLES OF STRAW AND PLAITING MATERIALS
C17	MANUFACTURE OF PAPER AND PAPER PRODUCTS
C18	PRINTING AND REPRODUCTION OF RECORDED MEDIA
C19	MANUFACTURE OF COKE AND REFINED PETROLEUM PRODUCTS
C20	MANUFACTURE OF CHEMICALS AND CHEMICAL PRODUCTS
C21	MANUFACTURE OF BASIC PHARMACEUTICAL PRODUCTS AND PHARMACEUTICAL PREPARATIONS
C22	MANUFACTURE OF RUBBER AND PLASTIC PRODUCTS
C23	MANUFACTURE OF OTHER NON- METALLIC MINERAL PRODUCTS
C24	MANUFACTURE OF BASIC METALS
C25	MANUFACTURE OF FABRICATED METAL PRODUCTS, EXCEPT MACHINERY AND EQUIPMENT
C26	MANUFACTURE OF COMPUTER, ELECTRONIC AND OPTICAL PRODUCTS
C27	MANUFACTURE OF ELECTRICAL EQUIPMENT
C28	MANUFACTURE OF MACHINERY AND EQUIPMENT N.E.C.
C29	MANUFACTURE OF MOTOR VEHICLES, TRAILERS AND SEMI-TRAILERS
C30	MANUFACTURE OF OTHER TRANSPORT EQUIPMENT
C31	MANUFACTURE OF FURNITURE
C32	OTHER MANUFACTURING
C33	REPAIR AND INSTALLATION OF MACHINERY AND EQUIPMENT
D	ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY
E	WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES
E36	WATER COLLECTION, TREATMENT AND SUPPLY
E37	SEWERAGE
E38	WASTE COLLECTION, TREATMENT AND DISPOSAL ACTIVITIES; MATERIALS RECOVERY
E39	REMEDIATION ACTIVITIES AND OTHER WASTE MANAGEMENT SERVICES
F	CONSTRUCTION
F41	CONSTRUCTION OF BUILDINGS
F42	CIVIL ENGINEERING
F43	SPECIALIZED CONSTRUCTION ACTIVITIES
G	WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
G45	WHOLESALE AND RETAIL TRADE AND REPAIR OF MOTOR VEHICLES AND MOTORCYCLES
G46	WHOLESALE TRADE, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES
G47	RETAIL TRADE, EXCEPT OF MOTOR VEHICLES AND MOTORCYCLES

H	TRANSPORT, STORAGE AND COMMUNICATION
H49	LAND TRANSPORT AND TRANSPORT VIA PIPELINES
H50	WATER TRANSPORT
H51	AIR TRANSPORT
H52	WAREHOUSING AND SUPPORT ACTIVITIES FOR TRANSPORTATION
H53	POSTAL AND COURIER ACTIVITIES
I	ACCOMODATION AND FOOD SERVICE ACTIVITIES
I55	ACCOMODATION
I56	FOOD AND BEVERAGE SERVICE ACTIVITIES
J	INFORMATION AND COMMUNICATION
J58	PUBLISHING ACTIVITIES
J59	MOTION PICTURE, VIDEO AND TELEVISION PROGRAMME PRODUCTION, SOUND RECORDING AND MUSIC PUBLISHING
J60	PROGRAMMING AND BROADCASTING ACTIVITIES
J61	TELECOMMUNICATIONS
J62	COMPUTER PROGRAMMING, CONSULTANCY AND RELATED ACTIVITIES
J63	INFORMATION SERVICE ACTIVITIES
L	REAL ESTATE ACTIVITIES
M	PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES
M69	LEGAL AND ACCOUNTING ACTIVITIES
M70	ACTIVITIES OF HEAD OFFICES; MANAGEMENT CONSULTANCY ACTIVITIES
M71	ARCHITECTURAL AND ENGINEERING ACTIVITIES; TECHNICAL TESTING AND ANALYSIS
M72	SCIENTIFIC RESEARCH AND DEVELOPMENT
M73	ADVERTISING AND MARKET RESEARCH
M74	OTHER PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES
N	ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES
N77	RENTAL AND LEASING ACTIVITIES
N78	EMPLOYMENT ACTIVITIES
N79	TRAVEL AGENCY, TOUR OPERATOR RESERVATION SERVICE AND RELATED ACTIVITIES
N80	SECURITY AND INVESTIGATION ACTIVITIES
N81	SERVICES TO BUILDINGS AND LANDSCAPE ACTIVITIES
N82	OFFICE ADMINISTRATIVE, OFFICE SUPPORT AND OTHER BUSINESS SUPPORT ACTIVITIES
S	OTHER SERVICE ACTIVITIES
S951	REPAIR OF COMPUTERS AND PERSONAL AND HOUSEHOLD GOODS