



STATISTICAL SERVICE OF CYPRUS

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

2014

SUMMARY RESULTS

November 2014

CONTENTS

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT) USAGE AND E-COMMERCE SURVEY IN ENTERPRISES 2014

	Page
Preface	2
A. Survey Methodology	3
B. Main Findings	
Use of Computers.....	4
Access and Use of the Internet	5
Use of Social Media	6
Use of a Website.....	7
ICT specialists and skills.....	8
Use of cloud computing services.....	9
Sharing of information electronically within the enterprise.....	12
Electronic Invoicing.....	13
Use of EDI-type messages suitable for automated processing.....	14
Use of Radio Frequencies Identification technologies.....	15
e-Commerce.....	16
Annex: Description of NACE codes included in the survey NACE Rev.2	20

PREFACE

This report presents the results of the survey on ICT Usage and e-Commerce in Enterprises 2014. 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 sharing of information electronically within and outside the enterprise, the electronic invoicing and the use of radio frequency identification technologies. 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 Ms. Ch. Charalambous, under the supervision of Mr. C. Diamantides, Senior Statistics Officer, Head of Methodology, Statistical Dissemination, Prices, Labour Statistics and ICT Surveys Division.

G. Chr. Georgiou
Director
Statistical Service

November 2014

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

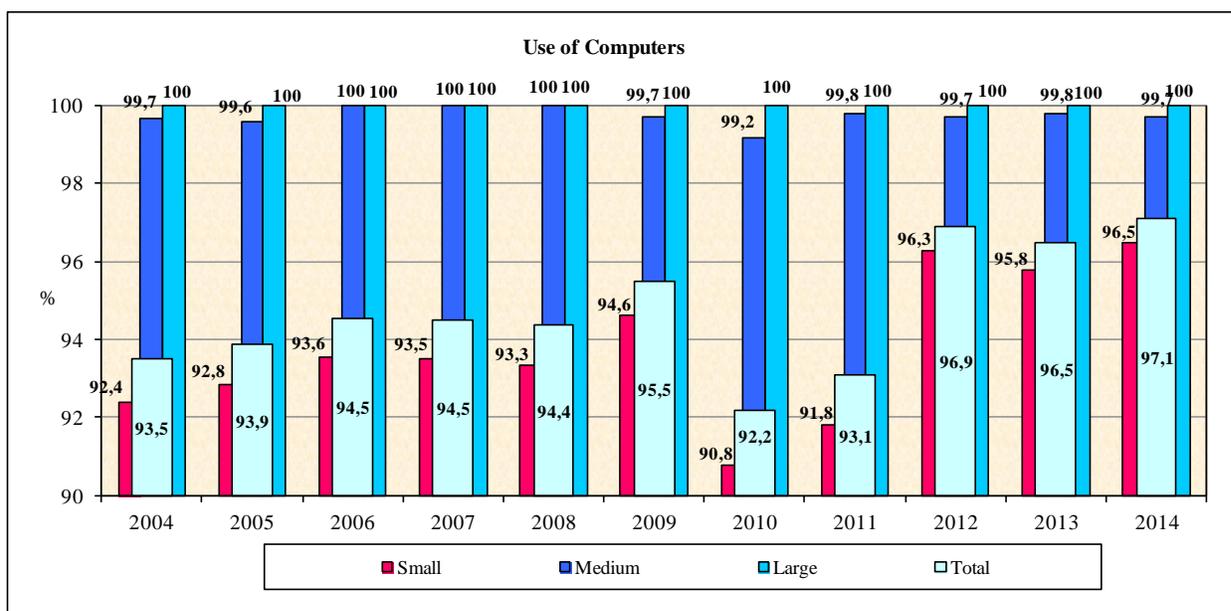
The sampling method used was stratified random sampling. Two variables were used for stratification, NACE group and size of the enterprise. There were 14 NACE groups and 3 size groups.

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

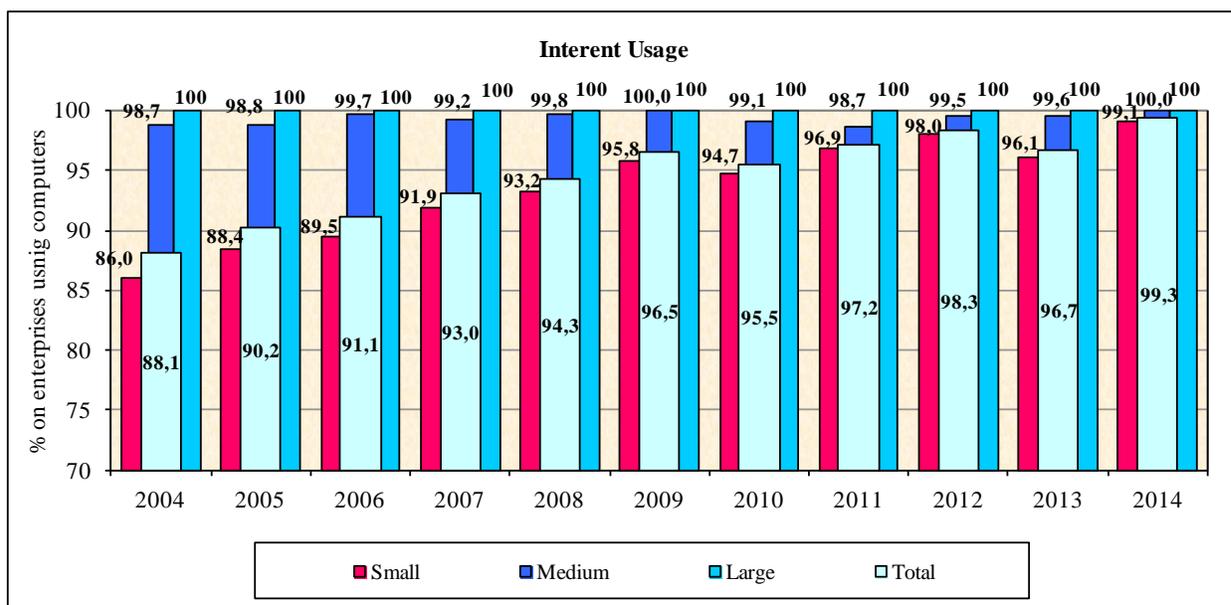
Use of Computers

In 2014, 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 increased to 96,5% compared to 95,8% in 2013. The percentage of enterprises with 10 or more employees using computer increased to 97,1% in 2014.

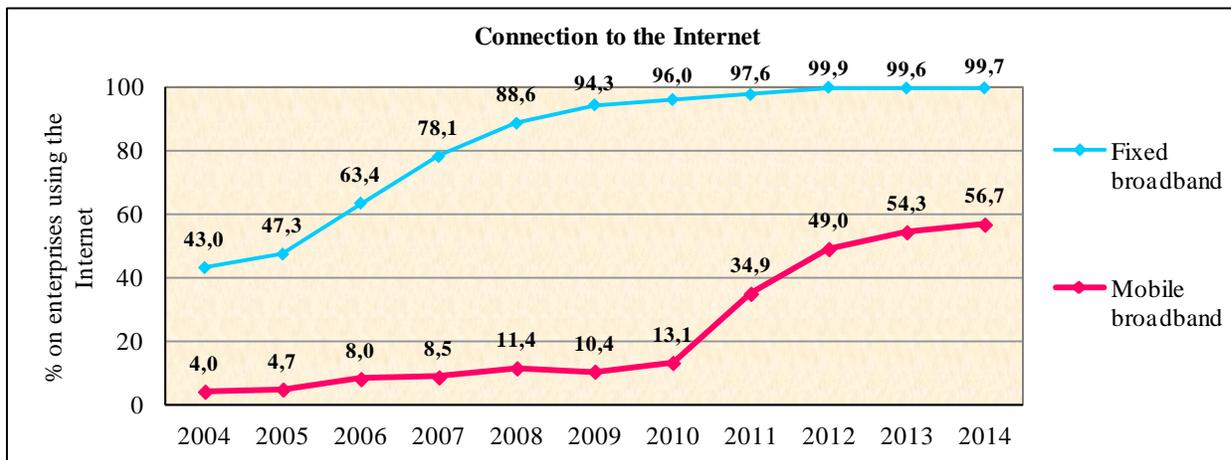


Access and Use of the Internet

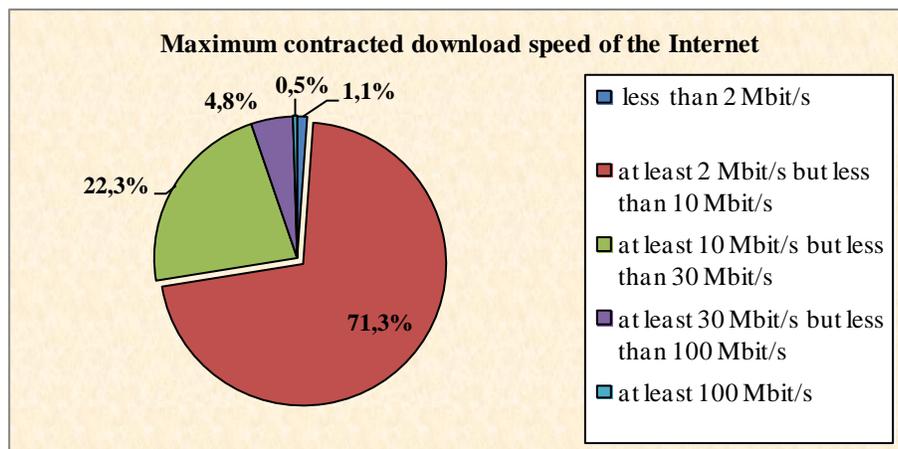
Over the last years, Internet usage in enterprises remains stable over 95%. 99,3% of enterprises using computers had access to the Internet in 2014. The Internet was used in all large and all medium enterprises.



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 2014 (56,7%) compared to the previous years.



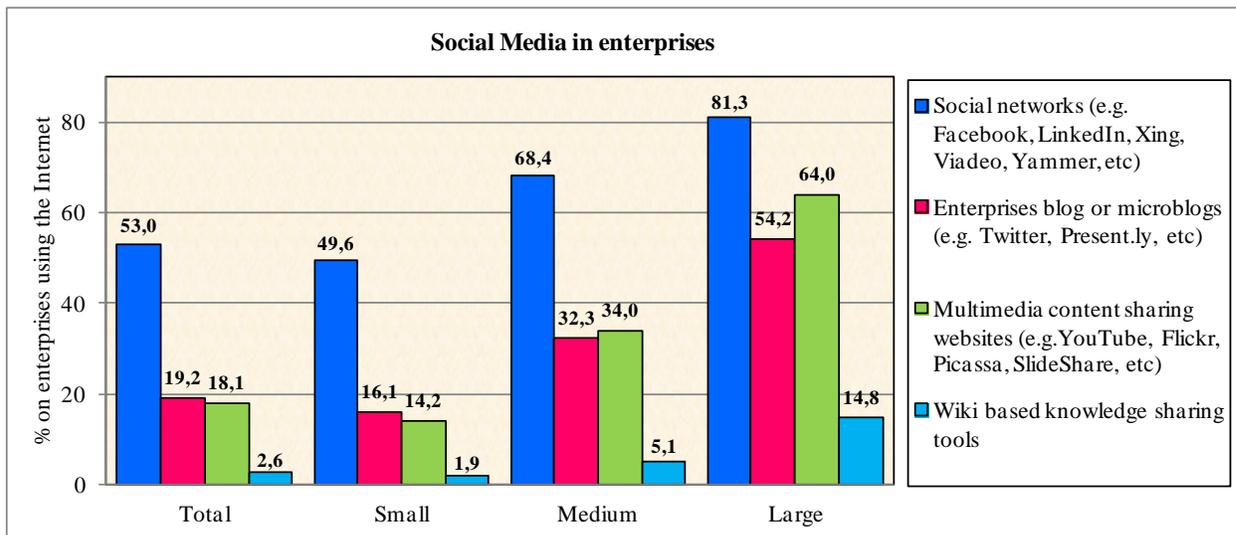
The vast majority of the enterprises (71,3%) in Cyprus has maximum contracted downloaded speed at least 2 Mbit/s but less than 10 Mbit/s. By maximum contracted speed it means the maximum theoretical speed according to the contractual obligations of the Internet provider at which data can be downloaded.



Use of Social Media

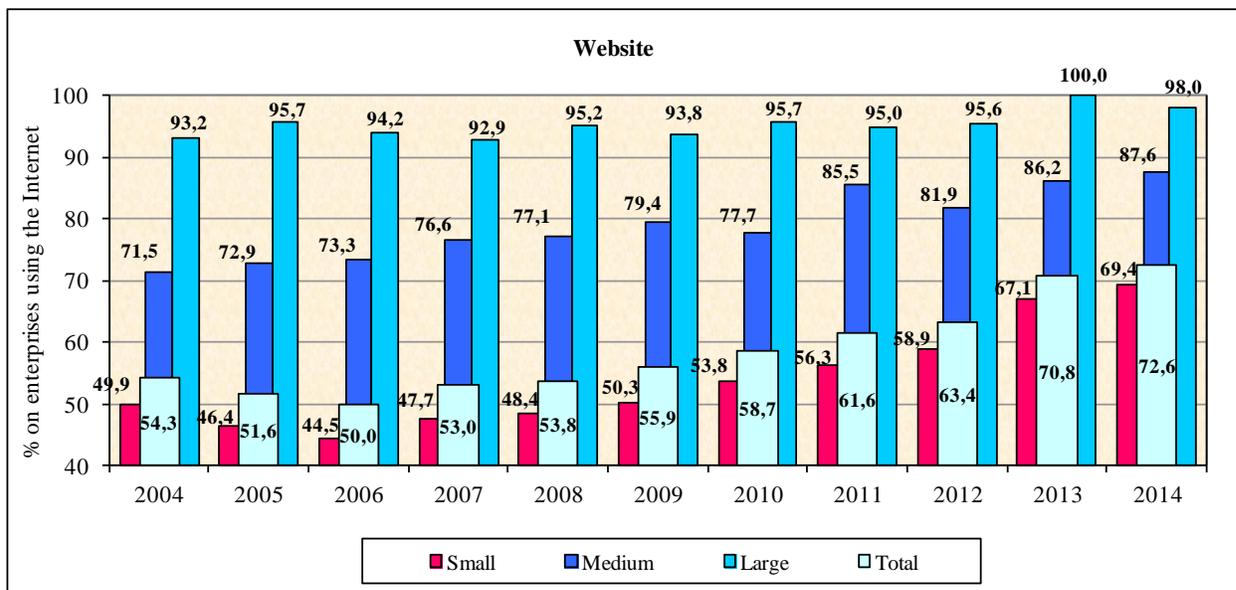
Use of Social Media refers to the usage of applications based on Internet technology or communication platforms for connecting, creating and exchanging content online, with customers, suppliers, or partners, or within the enterprise. Enterprises using social media are considered those that have a user profile, an account or a user license depending on the requirements and the type of the social media. 53,7 % 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 81, 3% 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.

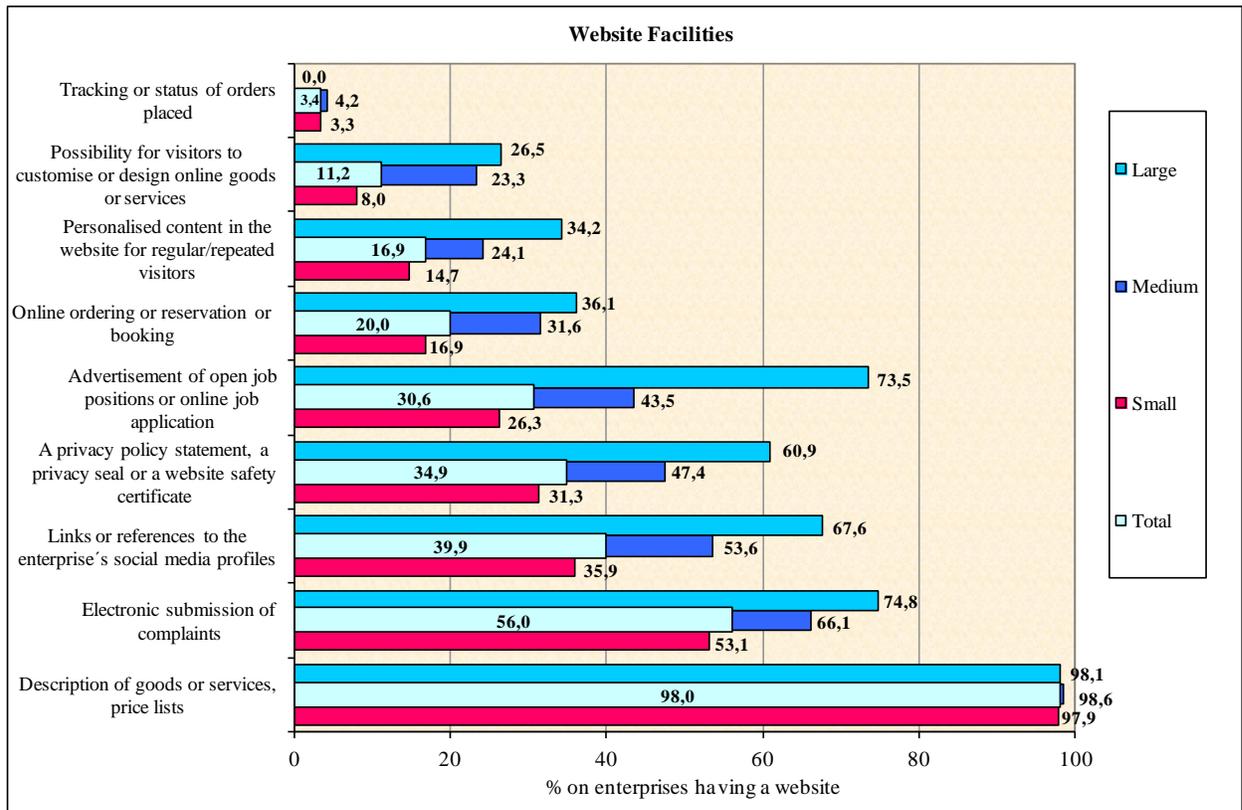


Use of a Website

Compared to 2013, a significant increase is observed on the percentage of enterprises that have a website (72,6% in 2014 from 70,8% in 2013). It is worth mentioning that almost all large enterprises had a website and a significant increase is observed in small enterprises that reach almost 70%.

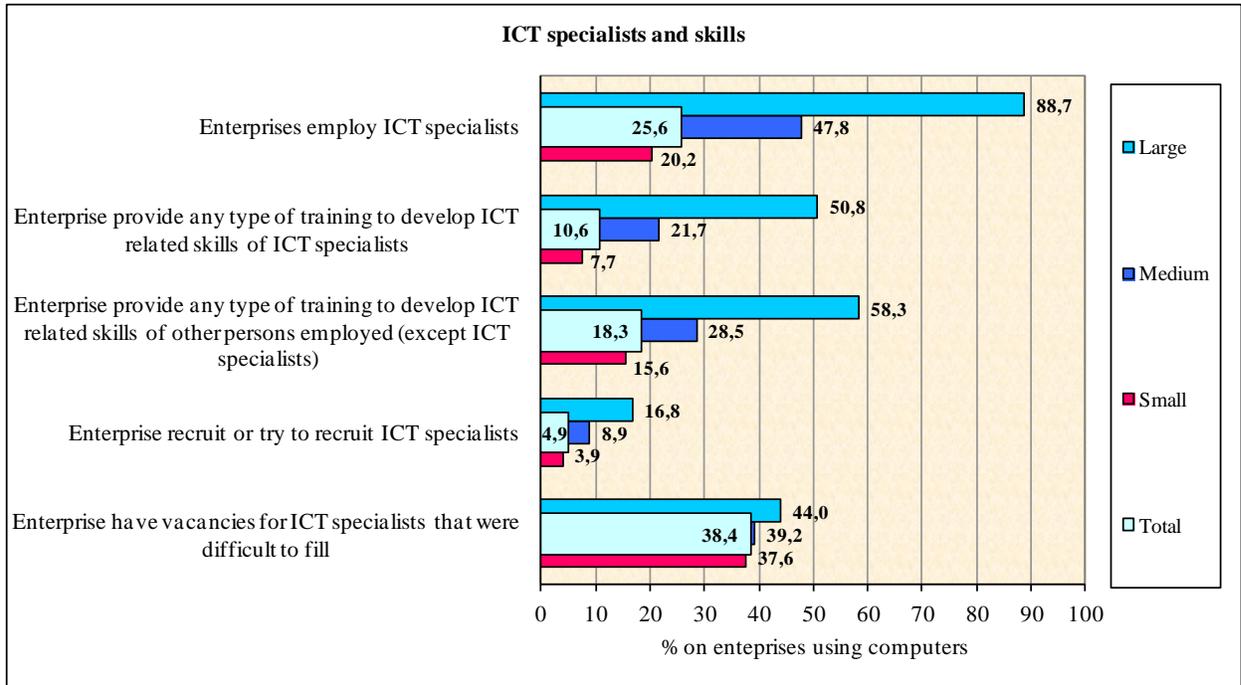


Among the facilities provided by enterprises through their website, the most predominant is the description of goods and services and price lists (provided by 98,0% of enterprises having a website). 20,0% of the enterprises with a website, provide the possibility of online ordering or reservation to their customers, while only 16,9% the possibility of personalized content for repeated visitors. 34,9% of the enterprises with a website, have a privacy policy statement, a privacy seal or certification. This percentage is much higher for large enterprises (60,9% 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 (73,5%). 56,0% of the enterprises with a website give the opportunity to their users to submit complaints electronically (i.e. via e-mail, web form, etc.). It is worth mentioning that almost 40% of the enterprises with a website have links or references to the enterprise's social media profiles (i.e. Facebook, Twitter, LinkedIn, YouTube, etc.)



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 (88,7%) employ ICT specialists while only 20,2% of small enterprises employ ICT specialists. Only 4,9% recruit or try to recruit ICT specialists in 2013 and 38,4% 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 20%. In large enterprises the same percentage is presented higher than 50%.

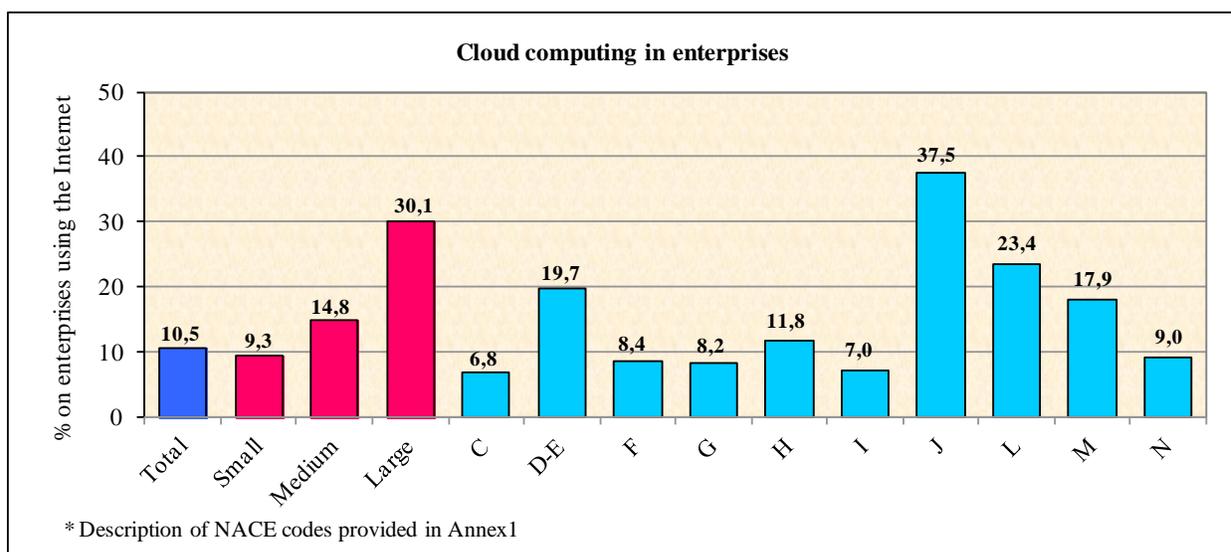


Use of cloud computing services

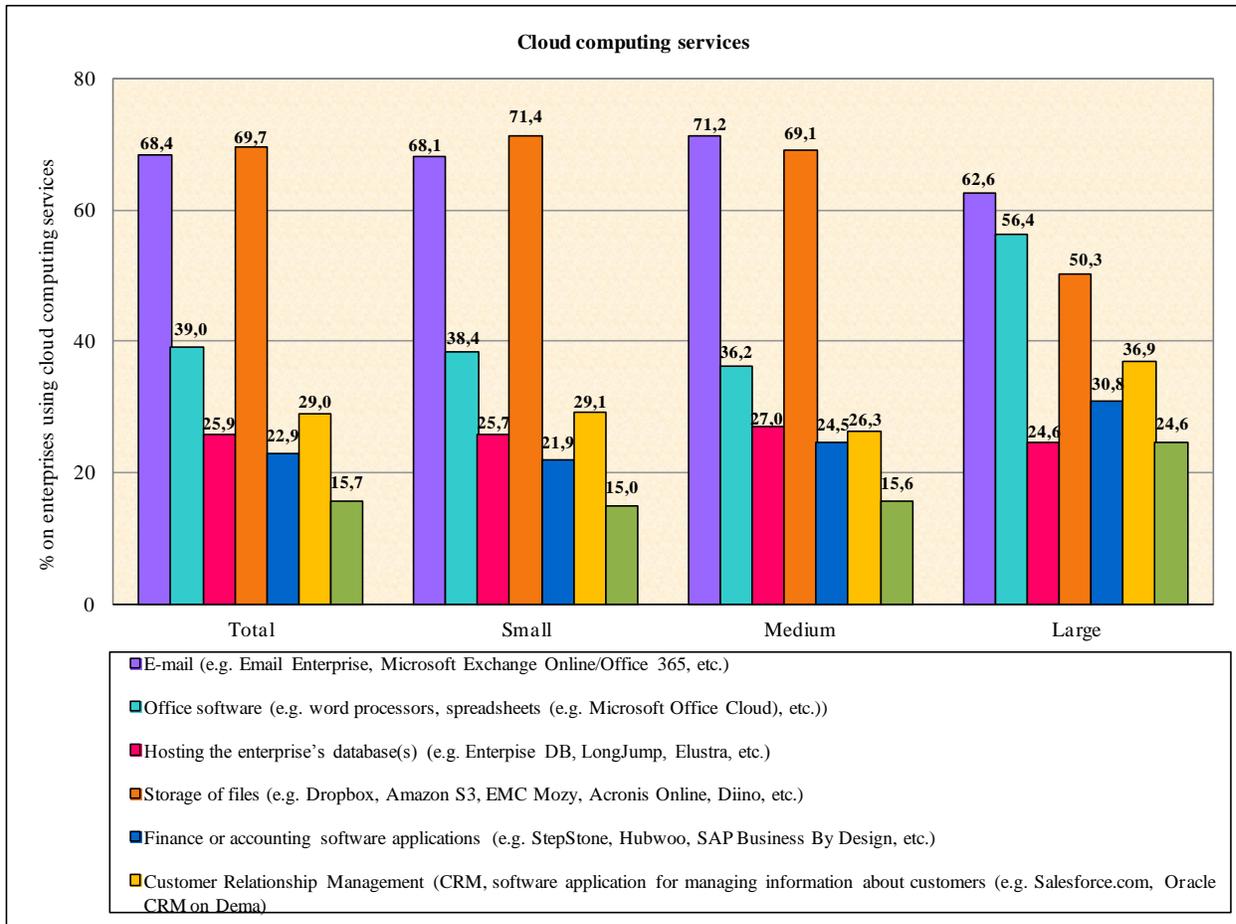
Cloud computing refers to ICT services that are used over the Internet to access software, computing power, storage capacity etc.; where the services have all of the following characteristics:

- 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.

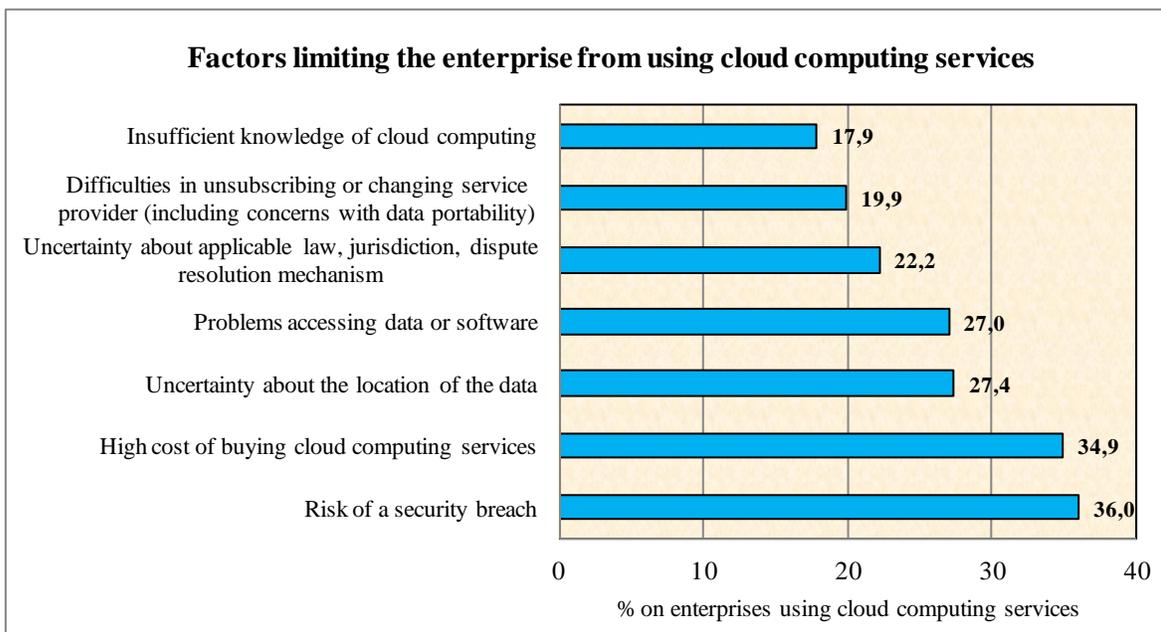
In Cyprus, cloud computing is not very common among enterprises. Only 10,5% of the enterprises using the Internet buy any cloud computing service. The percentage reach 30,1% in large and enterprises and 37,5% in enterprises of NACE rev.2 Group J: Information and Communication.



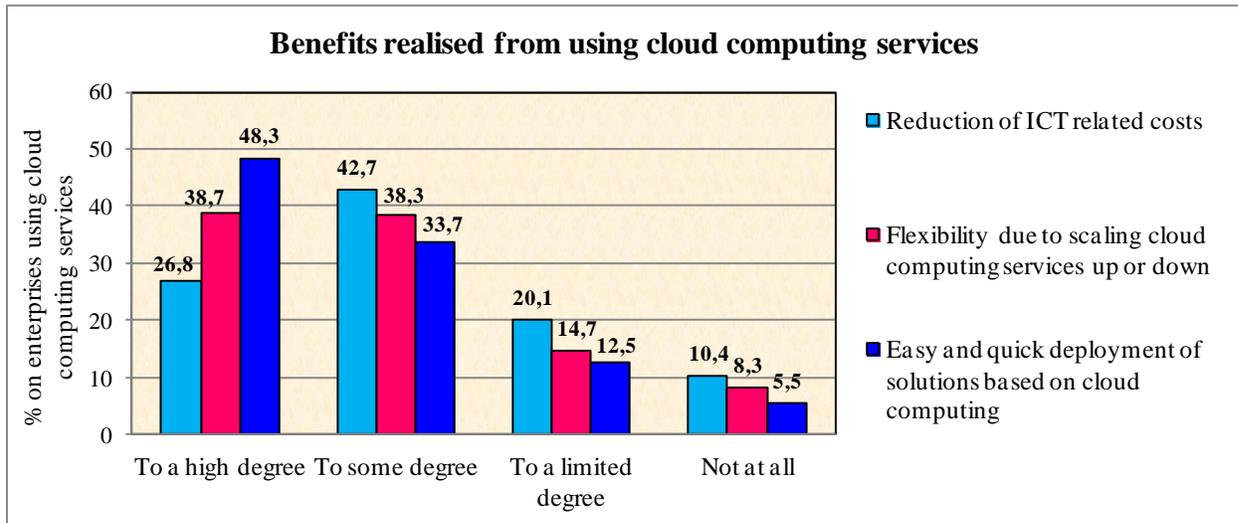
The main use of cloud computing services in enterprises is the storage of files (e.g. Dropbox, Amazon S3, EMC Mozy, Acronis Online, Diino, etc.) with a percentage of 69,7%. The same percentage is 71,4% in large enterprises, 69,1% in medium enterprises and 50,3% in small enterprises. Second in the row comes the e-mail (e.g. Email Enterprise, Microsoft Exchange Online / Office 365, etc.) as a cloud computing service with percentage 68,4%. In large enterprises office software (e.g. word processors, spreadsheets (e.g. Microsoft Office Cloud), etc.) is popular and we find it in more than half of the enterprises.



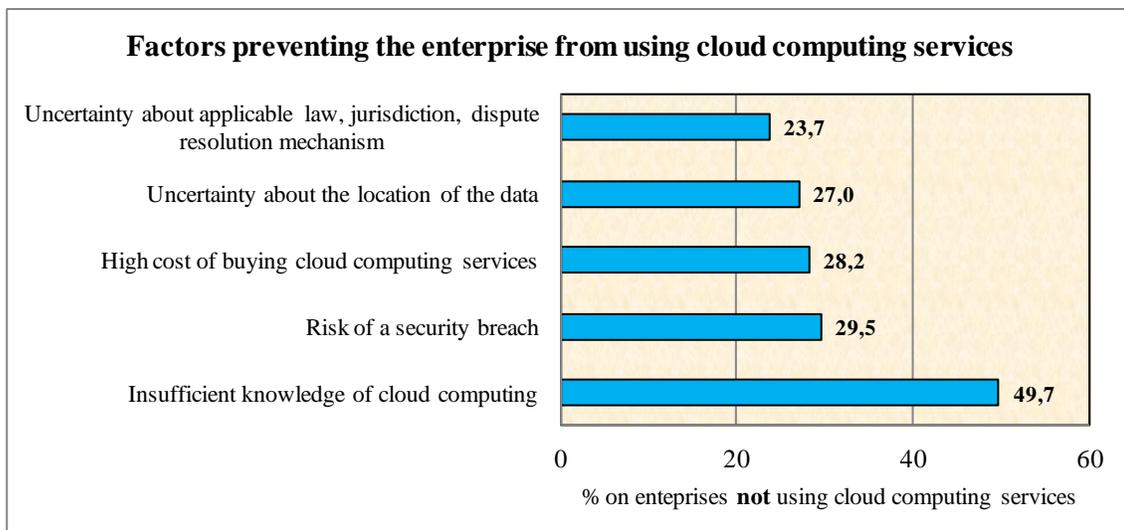
Regarding the factors that may limit an enterprise from using cloud computing services, the risk of a security breach is presented as the main one with percentage 36,0% and the high cost of buying cloud computing services with percentage 34,9%.



On the other hand, enterprise using cloud computing services may benefit from the use in terms of costs related to ICT, flexibility due to scaling cloud services up and down, ease and speed of deployment of solutions based on cloud computing. In the following table the benefits from cloud computing services are presented in combination with the level of their impact in the enterprise.

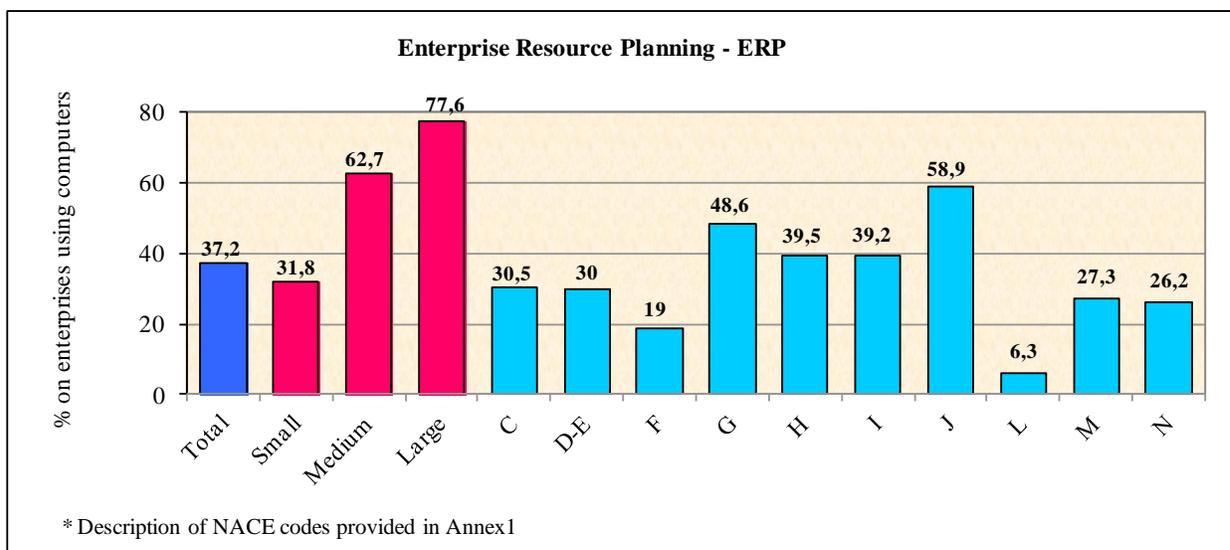


The majority of the enterprises do not use cloud computing services. The main reason for which they do not buy cloud computing services is the insufficient knowledge about cloud computing (49,7%). Many other reasons prevent an enterprise from using cloud computing services such as the risk of a security breach (29,5%) and the cost of buying cloud computing services (28,2%).

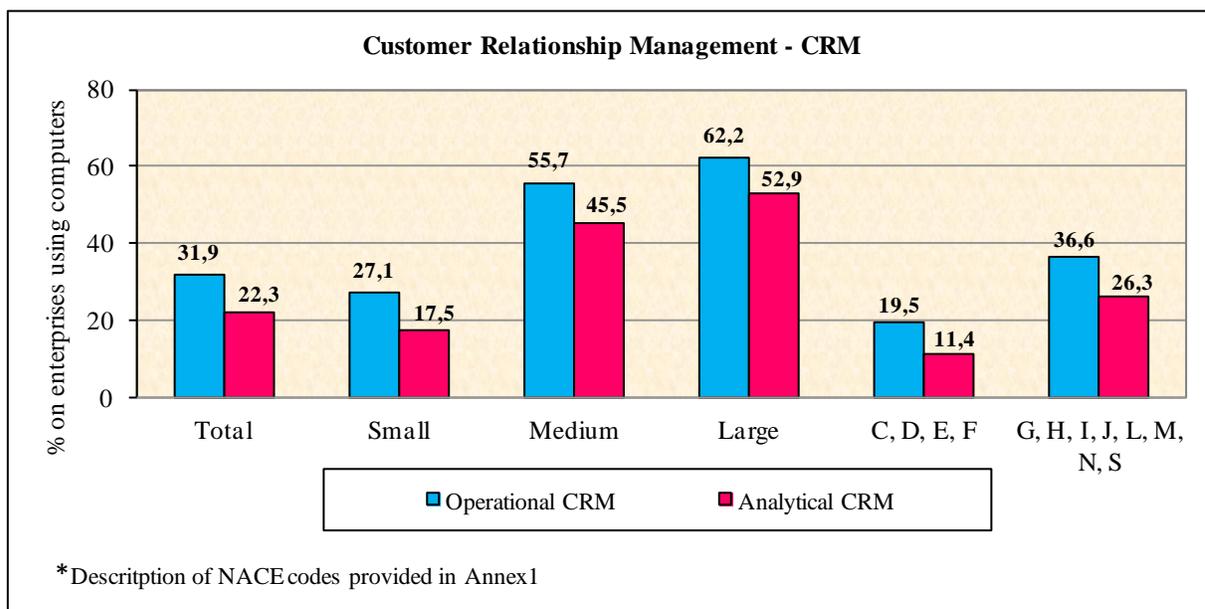


Sharing of information electronically within the enterprise

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. 37,2% 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. ERP software package is most common in large enterprises that used computers, with percentage 77,6%. Regarding NACE Rev.2 group, the highest percentage of enterprises having ERP is 58,9% in NACE Rev.2 group J: Information and Communication.



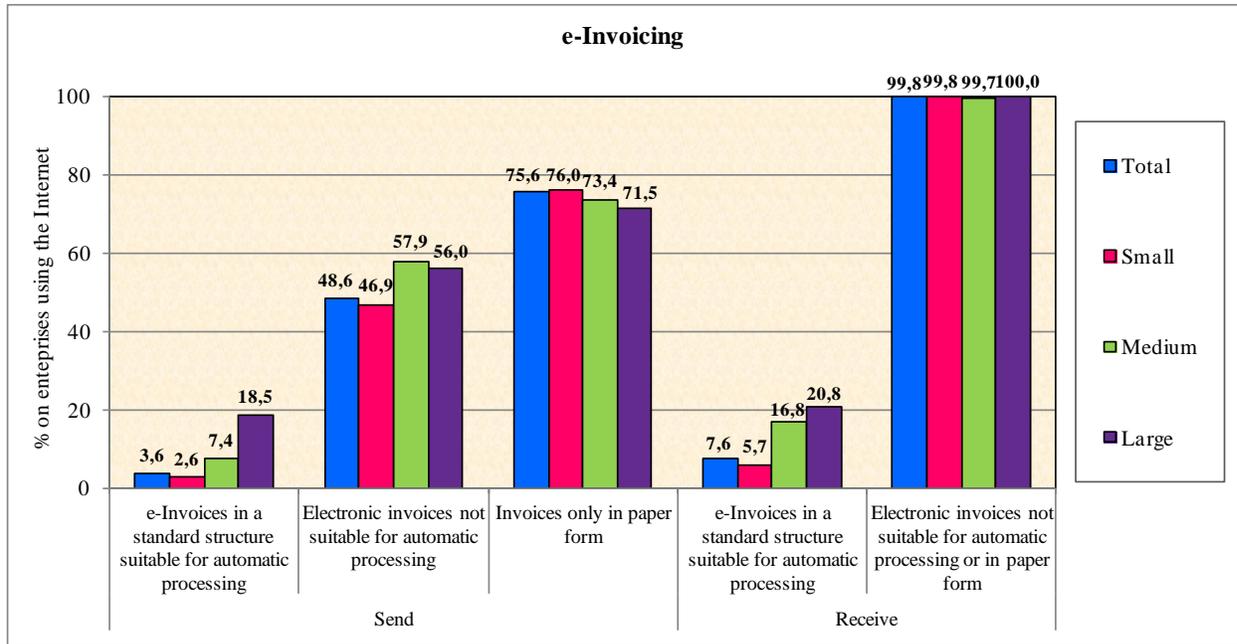
Among enterprises using computers 31,9% have Operational CRM (Customer Relationship Management) software application for managing information about clients, either to capture, store and make available to other business functions the information about clients, and 22,3% have Analytical CRM to make analysis of the information about clients for marketing purposes. Both Operational and Analytical CRM are most common in large enterprises (62,2% and 52,9% respectively).



Electronic Invoicing

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

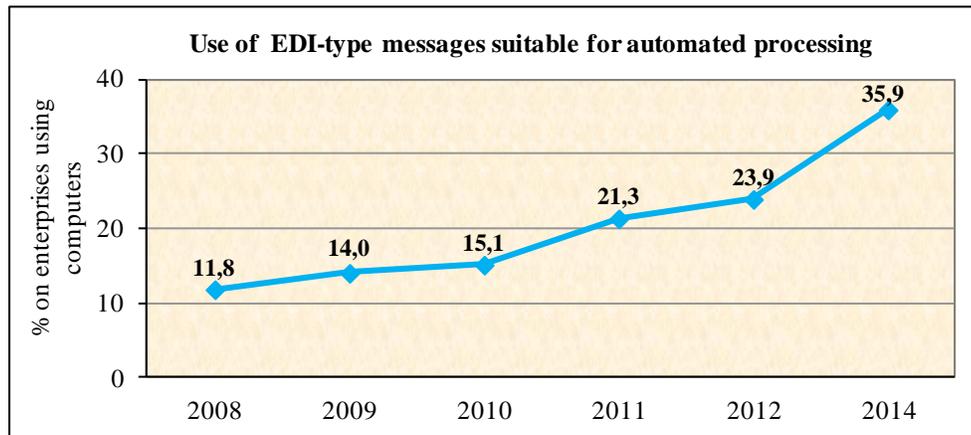
- (a) e-invoices are electronic invoices in a standard structure (suitable for automatic processing) that may be processed automatically. They may be directly exchanged between suppliers and customers, via service operators or via an electronic banking system.
- (b) Invoices in electronic format **not**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



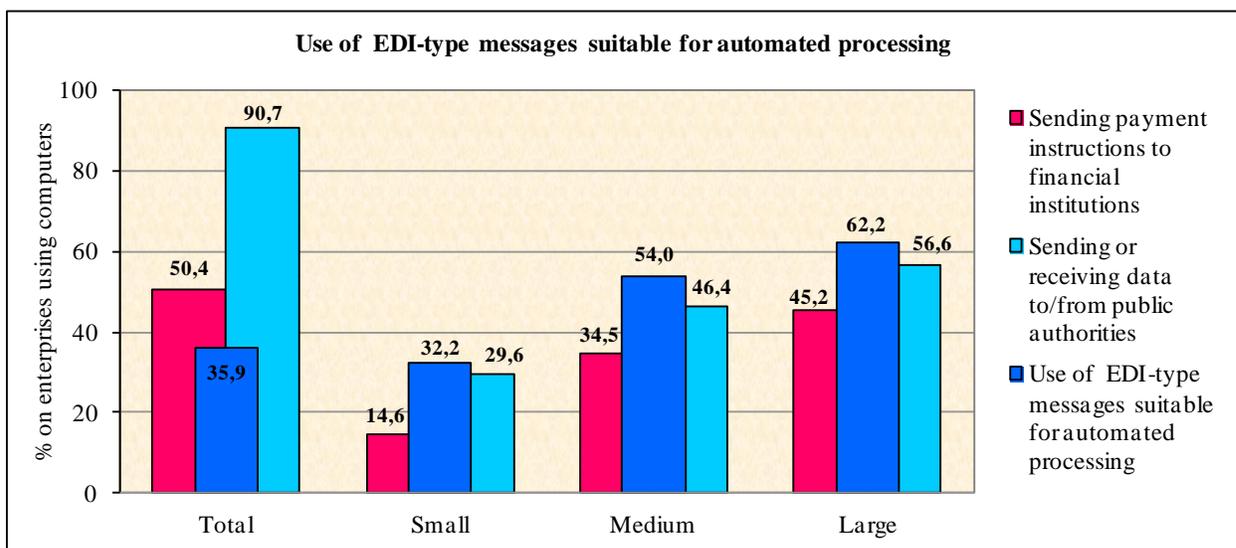
In Cyprus, e-invoices in a standard structure suitable for automatic processing (3,6% on enterprises using the Internet) is not as common as invoices in electronic format not suitable for automatic processing (via e-mail as an attachment) (48,6% of the enterprises using the Internet). But, the invoice in paper form is the most popular with percentage higher than 70%. However, 18,5% of large enterprises using the Internet sent e-invoices in a standard structure suitable for automatic processing and 20,8% received an e-invoice in a standard structure suitable for automatic processing.

Use of EDI-type messages suitable for automated processing

Electronic transmission of data suitable for automated processing - often called Electronic Data Interchange (EDI) - means sending and/or receiving of messages (e.g. payment transactions, tax declarations, orders, etc.) in an agreed or standard format suitable for automated processing without the individual message being typed manually. The percentage of enterprises using such a data exchange increased to 35,9% compared to 2012 when the percentage was 23,9%.

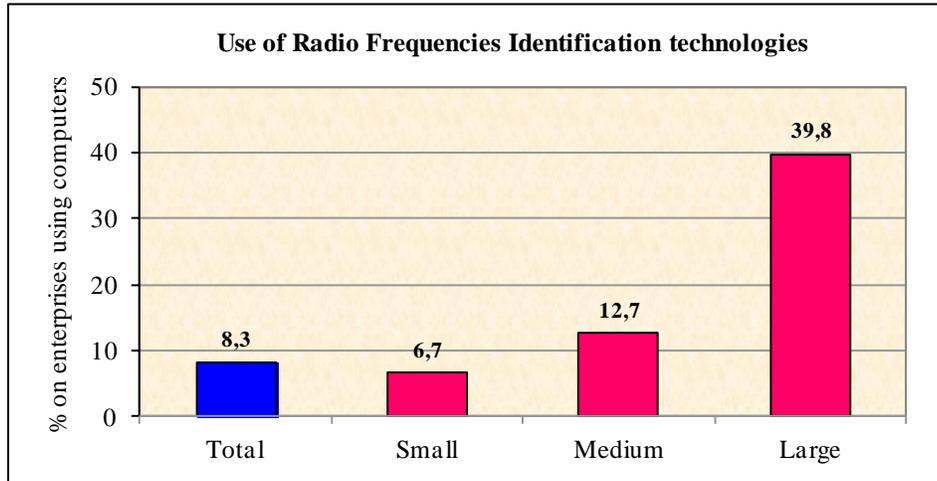


Most of the enterprises using EDI-type messages suitable for automated processing are sending or receiving data to/from public authorities (90,7%) while half of the enterprises are sending payment instructions to financial institutions.

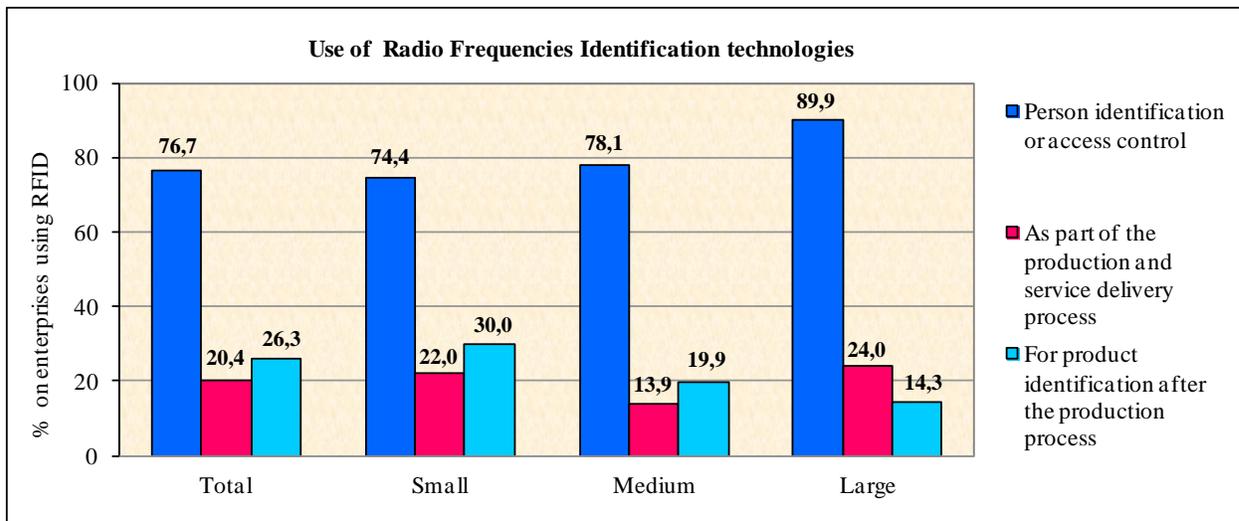


Use of Radio Frequency Identification technologies (RFID)

Radio Frequency Identification (RFID) technologies mean an automated identification method to store and remotely retrieve data using RFID tags or transponders. Only 8, 9% of the enterprises using computers in Cyprus, use RFID technologies for their businesses. The percentage in large enterprises is much more higher, reaching 39,8%.

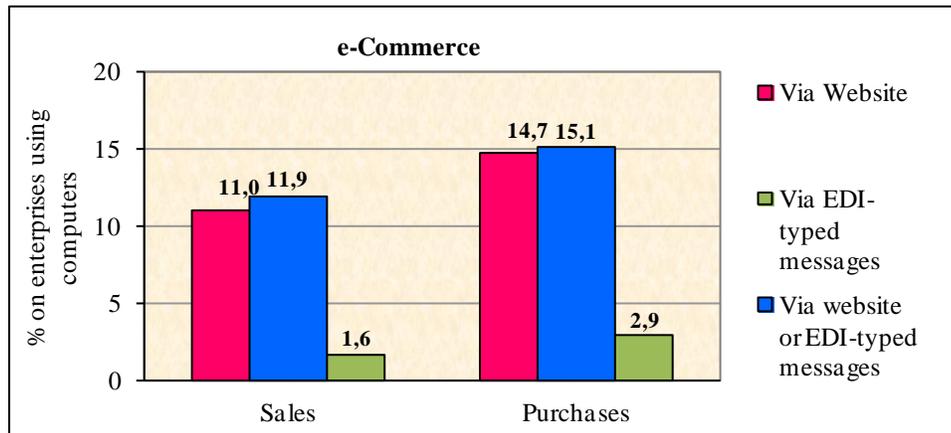


Basically, RFID technologies are used for person identification or access control (76,7% of the enterprises using RFID technologies).

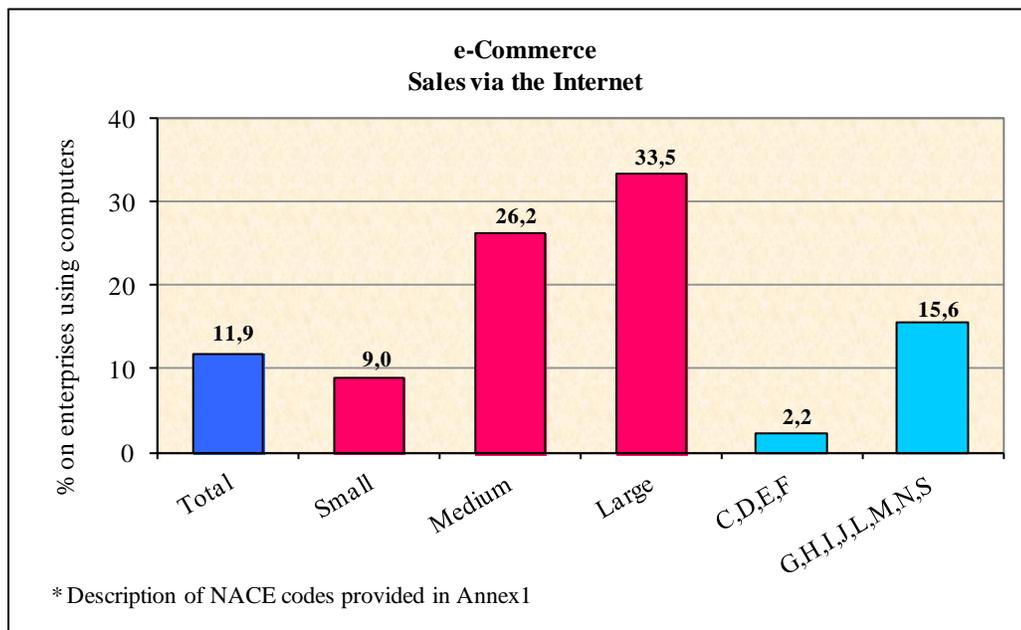


e-Commerce

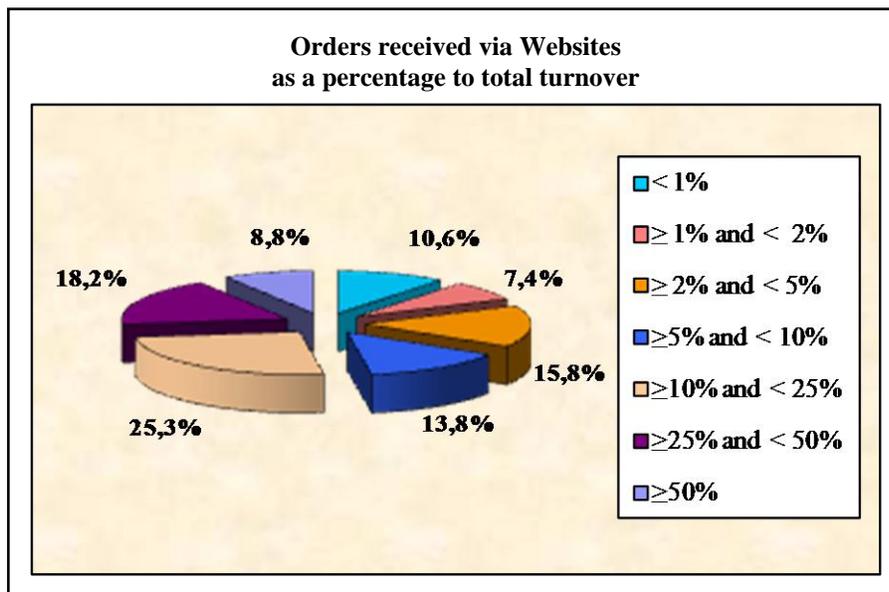
e-Commerce is not very popular among enterprises in Cyprus. Only 11,9% of enterprises using computers had received orders via computer networks (excluding manually typed e-mails), during 2013 while 15,1% sent orders via computer networks. E-Commerce via a website is more common compared to e-commerce via EDI-typed messages.



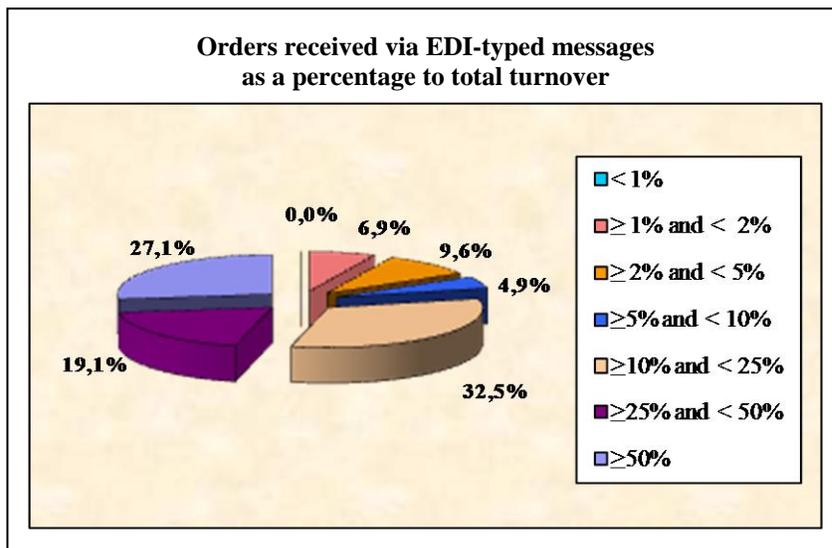
Enterprises receiving online orders in Cyprus seemed to be mostly the ones that belong in NACE Rev.2 group G, H, I, J, L, M, N, S (See Annex I) with percentage 15,6% which is much higher than in other economic activity (C, D, E, F: 2,2%). It is worth mentioning that large enterprises received more orders via computer networks (33,5%).



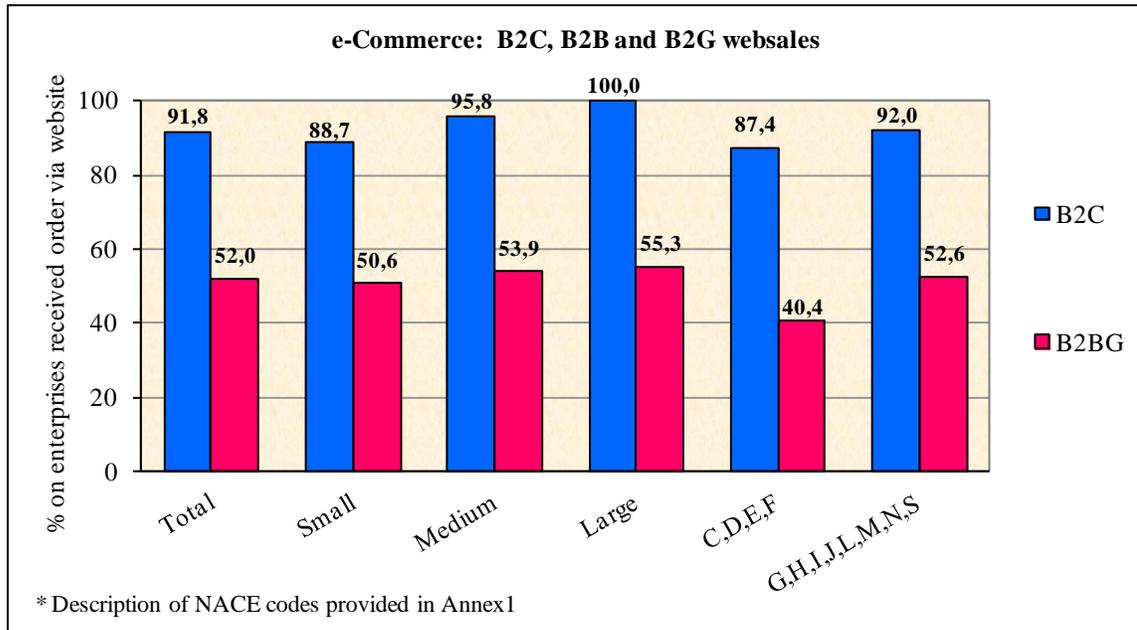
In relation to the total sales (in monetary terms, excluding VAT) sales via websites represented only a small percentage in many of the enterprises. Only in 8,8% of the enterprises that received electronic orders, the value of the turnover resulted from those orders represented more than 50% of their total turnover and in 33,8% of the enterprises that received electronics orders, the value of the turnover resulted from those orders represented less than 5% of their total turnover.



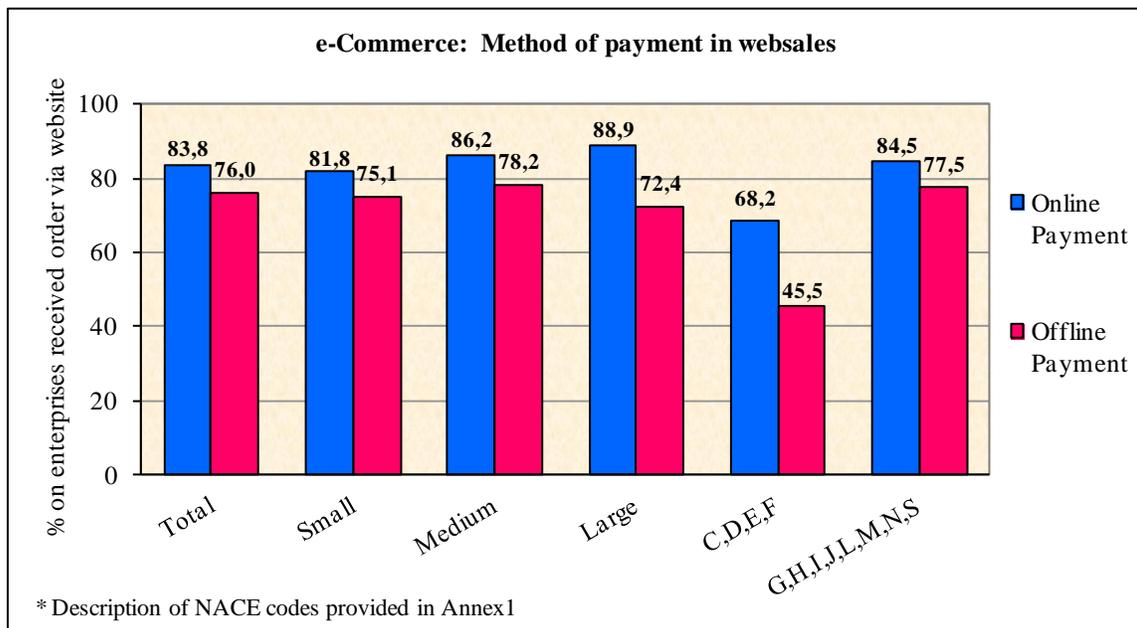
On the other hand, 27,1% of the enterprises that received electronic orders via EDI-typed messages, the value of the turnover resulted from those orders represented more than 50% of their total turnover. The majority of the enterprises that received electronic orders via EDI-typed messages (51,6%), the value of the turnover resulted from those orders represented more than 10% but less than 50% of their total turnover.



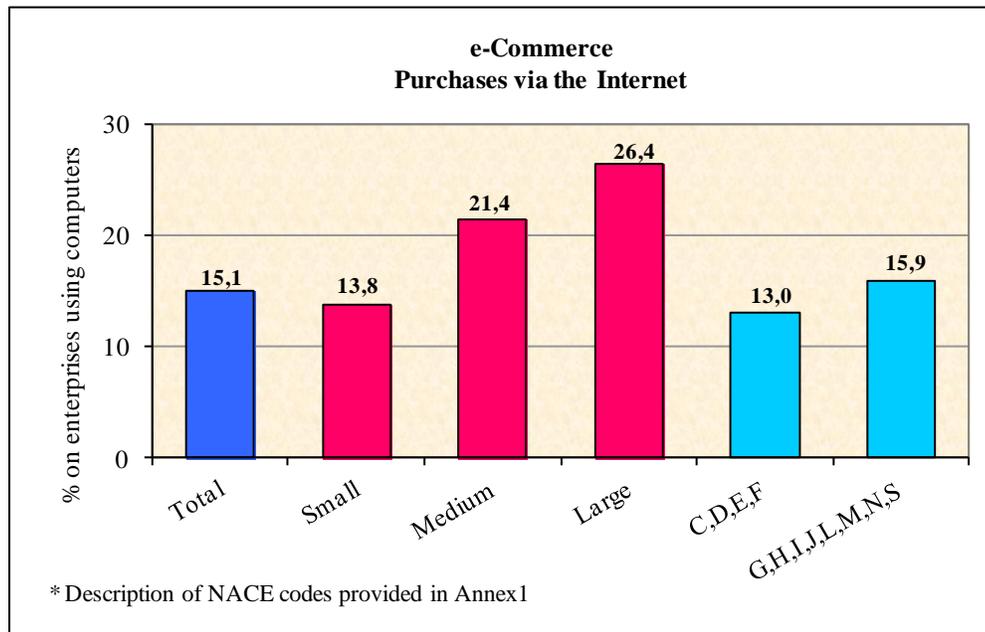
In 2013, the enterprises that received orders for goods or services via a website seem to received more orders from private consumers (B2C) than from other enterprises (B2B) and public authorities (B2G).



The online payment predominated 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).



Only 13,7% of enterprises with 10 or more employees using the Internet made orders of products or services via computer networks during 2013. In large enterprises the percentage of ordering via computer networks was 31,9%.



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