Islamic Republic of Iran
Ministry of Commerce

The National Report on E-Commerce in Iran

2004

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E-Commerce Development office

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Foreword

Today, information and communications technology (ICT) has been the axis of economic, social and cultural development in different countries. E-commerce is an outcome of ICT revolution in economic fields. The rise of the Internet and its commercialization in recent decades has transformed traditional methods of commerce. E-Commerce has revolutionized the methods and practices of the past trade and also has achieved speed and economization in the best way possible. In electronic environment there is no geographical distance or time, space limits, commercial transactions are carried out on the basis of electronic information. Removing the boundaries facing international trade, E-commerce accelerates global commercial trend. It benefits from economic advantages such as market expansion, reduction of product source prices, promotion of productivity, reduction of transaction costs and inflation and plays a vital role in an endogenous economic growth.

Numerous advantages of e-commerce have led not only to develop but also developing countries as a means towards competition in internal and international areas. Lack of e-commerce strategies will have no benefits but only isolation from global economy. Increasing expansion of e-commerce all around the world, and application of e-commerce by businesses and its gradual adoption by consumers reflect potential advantages of e-commerce in economic and trade areas; as, there is no way but to double our efforts in application of e-commerce in economic activities.

The surveys show that e-commerce success in developed and leading developing countries is the result of appropriate e-readiness in these countries. E-readiness includes the Internet-based opportunities, quality of information technology infrastructure, government activities and level of trade facilitation. Individuals and businesses access to communication tools. High quality and low costs are some of the main e-readiness. Popularity of using the communications tools in economy is appropriate to business environment such as political stability, tax regulations and openness to trade and investment. Another prerequisite for the expansion of e-commerce is traders

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and consumers' adoption along with social and cultural infrastructure such as high-skilled labor and electronic literacy. Legal and political environment including the Internet regulations, new businesses, facilitating, protecting private and intellectual properties, investment and government support of technology infrastructure are all essential for development and promotion of e-commerce.

Thus, the development of e-commerce requires a series of essential activities in technical infrastructure, legal and regulatory issues, awareness, training and education, private sector protection, and government supports to provide conditions for economic players such as consumers and businesses to play a key role in the application of e-commerce.

In respect of its responsibility for implementation of e-commerce in the country, the Ministry of Commerce has endeavored for development and promotion of e-commerce while fully cooperated and worked with executive agencies in legal, education and technical areas. Cooperation in preparation and enactment of e-commerce law, financial support of masters and Ph.D courses in the fields of e-commerce, holding internal and international seminars, implementation of the E-Commerce Feasibility Study project and relevant projects, cooperation and sharing views with executive bodies are the main activities of e-commerce.

According to E-Commerce Memorandum of Policy, executive bodies have clear and specific duties in e-commerce. Following the same policies, Ministry of Commerce is to prepare and publish annually Iran's e-commerce performance report and identify and introduce the excellent works of active agencies as well. This report is based on statements received from the aforementioned bodies to assess their performance.

Note that since some agencies have not prepared and sent their performance report in 2004, the report is likely to face some deficiencies and does not show the performance of all the agencies.

At the conclusion, it is necessary to thank all executive agencies for kind cooperation to send their performance reports as well as Dr. Abbas Memarnejad director of office of e-commerce development and Mr. Mahmood Mahmoodzadeh. It is hoped that proposing criteria of e-commerce assessment, compiling and presenting information in forthcoming years, will help executive agencies attempt to achieve to the desirable state of e-commerce. We are

prepared to accept the suggestions and viewpoints of all executive agencies, authorities, and experts who shall play an important role in improving criteria of e-commerce assessment.

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1. Introduction

To measure the e-commerce progress is very essential to achieve a desirable status and to contribute to the identification of the effective factors of development and also the obstacles to e-commerce, coordination of relevant executive agencies and eventually elimination of current problems.

The current report aims to study e-commerce performance of Islamic Republic of Iran (I.R. Iran) up to the end of 2004. The key factors studied for preparation of this report are in accordance with the report issued by UNCTAD in 2002 in relation to development of e-commerce strategies. In that report, the strategies of 37 developing countries and 14 developed countries have been studied and such key elements as awareness, infrastructure, legal, financial, electronic, and logistic issues, trade facilitation, stimulating policies, and e-government have been identified as the common elements in most countries.

According to this report, 51 countries (14 developed countries and 37 developing countries), have been reviewed. The following strategies are of highest priority:

1. Awareness, Training and Education.

2. Access and Infrastructure.

3. Legal and Regulatory Issues.

These strategies have been supported along with stimulating activities such as e-business, e-government, standardization, trade facilitation, and research and development in Information Technology (IT). The results of this study are presented in Table1.

To collect the data required for compilation of this report, coordinated with the Ministries of Communications and Information Technology, Agriculture Jahad, Foreign Affairs, Economic Affairs and Finance, Roads and Transportation,

Industries and Mines, Energy, Science, Research and Technology, Management and Planning Organization, Public and Private Banks, Radio and Television Organization, Free Zones High Council, The Customs and Public and Private Insurance Organizations.

Note that due to the lack of organized statistics of private sector activities in e-commerce, the performance of this sector has not been observed in the report. Nevertheless, the Ministry of Commerce has supported private sectors' activities and encouraged excellence projects in the area of e-commerce whose full details are presented in "Stimulating Activities" of the report.

The report is organized as follows:

Following introduction, e-commerce statistics have been discussed; then, there is a reference to Iran strategic policies. In the next part, e-commerce performance in awareness, infrastructure, legal and regulatory issues, e-finance, logistic, e-government and stimulating activities have been provided.

Table 1: Key elements of e-commerce national strategies in different countries

No.	Elements of the Strategys	Countries		
		Number of Countries	Developing Countries (percent)	Developed Countries (percent)
1	**Awareness, Training, education**	50	70	64
	Training and Education	27	54	50
	Awareness	23	51	29
2	**infrastructure and Access**	41	68	39
	Infrastructure	21	43	36
	Access	16	41	7
	Improvement of Telecom	4	11	0
3	**Legal and Regulatory Issues**	37	41	85
	Legal Issues	29	46	85
	Taxation	8	5	43
4	**To Protect Private Sector**	21	41	43
5	**Sectoral Specific Policies**	19	32	29
	Business and Investment	9	19	14
	Development of IT and Other Sectors	10	19	21
6	**E-government**	16	27	43
7	**Banking and Online Payment**	9	24	0
8	**Other**	17	24	43
	Trade Facilitation and Standards	6	11	14
	Research	6	8	21
	International Cooperation	5	11	7

Source: UNCTAD (2002)

Developed Countries: 14
Developing Countries: 37

2. Worldwide E-Commerce

Recent changes in IT have been followed by significant economic outcome. E-commerce is an objective consequence of IT enjoying such advantages as globalization of commerce, elimination of time and space limits, reduction of source prices for purchase, increase in purchase rate, easy access to information, significant reduction of transaction costs and reduction of duration of transaction. A common definition of e-commerce is to provide trade processes through data interchange, transaction of goods and services via computer networks such as the Internet. However, a part of such processes may be carried out electronically.

According to UNCTAD report in 2005, the value of global e-commerce transactions is close to $6.7 trillion at the end of 2004 it is estimated that, in the most optimistic state, it will shoot upward to $12.8 trillion by 2006.

E-commerce growth rate is not the same in different countries. North America is the leader in e-commerce. According to Forrester report in 2005, the value of North America's (number one in the regions) transactions amounted to $3.5 trillion in 2004.

Asia-Pacific, with ($1.6 trillion) and Western Europe, with ($1.5 trillion) are respectively second and third in the region. Latin America with ($81.8 bn) and other regions with ($65.6 bn) stand at fourth and fifth in the region. The volume of the e-commerce transactions by regions in 2004 is summarized in table 2.

Table 2: The volume of e-commerce Transactions in World Regions (billions of dollars)

Region	2004
North America	3500
Asia-Pacific	1600
Western Europe	1500
Latin America	81/8
Other regions	68/8
Total	6750/4

Source: Forrester(2005)

The strategies of e-commerce in the leading countries are based on support for private sector, expansion of the Internet, supporting small and medium enterprises and limitation of government's role. By competition in environment and in all areas such as ICT, these countries have contributed to the quality enhancement of technology and reduction of prices. In such countries a certain Ministry, for instance, the Ministry of Commerce, the Ministry of Trade and Industries or E-Commerce Organization is responsible for the expansion of e-commerce and supervises the plans and activities of other government agencies of e-commerce. Large investments in awareness, technical and legal infrastructure and human resources with special attention to research and development for the promotion of e-commerce have played a key role in these countries.

Currently businesses are embracing e-commerce more than the households. For this reason, more than 95 percent of e-commerce transactions are related to B2B. In order to earn trust and confidence of their consumers, these countries have enacted appropriate useful laws.

In spite of all the attempts, e-commerce is still popular internally and its expansion at international level requires a reliable e-finance. However, countries have embarked much effort to cooperate in compilation of laws and regulations as the result it is expected that e-commerce gradually have a profound effect on foreign trade.

3. E-Commerce Strategies in Iran

The e-commerce principles of I.R. of Iran in the e-Commerce Memorandum of Policy ratified by council of ministers in 2002 are as follow:

1. To provide the main infrastructure and legal and executive fields required for using e-commerce
2. To develop training and e-commerce application penetration.
3. To support development of non-public sectors and preventing monopoly and creating competition.
4. To remove any discrimination boundaries in e-commerce.
5. To expand the use of the Internet for e-commerce purposes in the country and to make essential decisions in relation to the health of its content.

According to this ratified law, the Ministry of Commerce and other Ministries such as Economic Affairs and Finance, Science and Research and Technology, Foreign Affairs, Industries and Mines, Communications and Information Technology, Management and Planning Organization, Central Bank, High Council of Informatics, High Council of Free Zones Secretariat, and Radio and Television Organization are all subject to specific task and responsibilities.

Theoretical and experimental studies at international level which are based on experiences of leading countries in e-commerce show that providing infrastructure is a key issue to e-commerce development. The expansion of infrastructure is in a way that to provide and establish them are not within the responsibility of a Ministry or agency and it requires the harmonized act of all associated government agencies, as well as private sector. The responsibilities of executive agencies in the framework of e-Commerce Memorandum of Policy are shown in Table 3.

In general, there are three strategies to promote e-commerce:

Awareness, providing technical and legal and regulatory infrastructure; with these strategies, stimulating policies for e-business, e-government, trade facilitation, and cooperation with the international organizations for e-commerce penetration and development, have been employed.

Table 3: Assignment of duties for establishment and development of e-commerce in Iran according to e-Commerce Memorandum of Policy.

Ministry/Organization	Assigned Responsibility	Cooperating Agency
Ministry of communications and Information Technology	- To provide and implement the required hardware and software and set up confidential, secure and high speed connectivity to Internet, and reduction of usage costs of these lines (to the End of 2002)	
Ministry of Economic Affairs and Finance	- To provide and implement the comprehensive project of e-transfer of money as well as use of credit card services (October 2002).	Central Bank and other banks of the country
Ministry of Commerce	- To do feasibility study on Iran comprehensive e-commerce project and long run e-commerce national development program within the Third Program.	———
	- To implement the e-commerce Pilot project as a typical e-commerce marketplace to provide secure basis for internal and foreign e-transactions and providing required utilities and to support the implementation of similar project by private sector.	
	- To establish a typical Certification Authority, an application to e-commerce as observing an executive agency, required hardware and software by a world- class services and technology.	
	- To conduct short term, expertise and general training programs and holding internal and international seminars on e-commerce.	
	- To absorb and stimulate internal and foreign private investment within the framework of e-commerce legislation.	

Ministry/Organization	Assigned Responsibility	Cooperating Agency
High Council of Informatics Secretariat	1. To compile the National System of Certification Authority and ratify by the Council of Ministers. 2. Preparation of providing secure e-Transactions comprehensive project of, Confidentiality of Statistics and Information and Observe the Health of Users Content in Public Network in the country.	Ministries of Commerce/ Communications and Information Technology/Industries and Mines/ Science, Research and technology/ Management and Planning Organization
Ministry of Science, Research and Technology	- To establish e-commerce and IT in Iranian universities and presenting courses on technical and economic aspects of e-commerce.	Ministries of Commerce/ Communications and Information Technology/ High Council of Informatics Secretariat
Radio and Television Organization	To provide and broadcast training programs in e-commerce.	Ministry of Commerce/ High Council of Informatics Secretariat
Ministry of Commerce	- To Cooperate in promotion and strengthen the activities related to e-commerce between Iran and other countries including: Islamic Conference Organization, 77 Group, ECO, Colombo Plan, and international agencies affiliated with United Nations	
High Council of Free Zones Secretariat	- to establish e-commerce in, at least, one of the free zones (at the end of 2002) and in another zone (to the end of 2003)	All Country's Executive Agencies active in free zones
Management and Planning Organization	- To allocate funds for implementation of e-commerce and Dissemination of Information Comprehensive Network projects through Iran's annual budget bill.	Relevant Executive Agencies

4. E-Commerce Performance at the End of 2004

In this section, Iran e-commerce performance at the end of 2004 has been discussed in the areas of awareness, infrastructure, legal and regulatory issues, e-finance, e-government, and stimulating activities.

4.1. Awareness, Training, and Education

According to UNCTAD report in 2002, most of policy makers believe that e-commerce will not have an increasing growth unless the businesses and consumers are trained in the areas of e-commerce opportunities and advantages or know-how to use the Internet. Though it is not sufficient to get access to the Internet and computer a prerequisite for generating demand for new technologies and e-commerce. Training is one of the main challenges of the developing countries in digital economy. Since high-skilled IT labor is needed for e-commerce and countries having high-skilled labor enjoy benefits and potential for the expansion of e-commerce therefore, in this section trainer has been surveyed.

Following the activities in awareness, training and education have been classified into 7 main categories.

a) Associate and Bachelor Courses
Executive Body: Ministry of Science, Research and Technology
- Bachelor of Information Technology Engineering with branches of e-commerce, data security, computer networks at the Amir Kabir University and Sharif University of Technology.
- Bachelor of E-Commerce at Sharif University of Technology in cooperation with Royal Roads University in Canada.

b) Master Degree Courses
Executive Body: Ministry of Science, Research and Technology
- E-Commerce at the Amir Kabir University and Sharif University of Technology.
- Multimedia Systems at the Amir Kabir University.
- Information Security at the Amir Kabir University.

- Computer Networks at the Amir Kabir University and Sharif University of Technology.
- Information Technology Systems Management at the Tarbiat Modarres University.
- Software Design and Production Engineering at University of Tehran.
- Secure Telecommunication Engineering at the Elm-o-Sanat University.
- Electronic information (confidential) at the Information College.
- Marketing and E-Commerce at the Tarbiat Modarres University in partnership with the Technology University of Lulea of Sweden.
- Advanced Communications and Information Technology and Computer Sciences at the Sharif University of Technology.
- Information Technology Management at the Al Zahra, Trabiat Modarres, Tehran, and Allameh Tabatabaee Universities.

Executive Body: High Council of Free Zones Secretariat

- To plan for implementation of business management course with the branch of e-commerce in cooperation with Multimedia universities of Malaysia (MMU)

Sponsor: The Ministry of Commerce

In line with e-commerce development policies, Ministry of Commerce has paid special attention to training and permanently provided technical and financial support for launching courses of master degree at internal universities in cooperation with universities of the leading countries in the field of e-commerce to acquire practical experiences. Some instances are as follow:

- Conducting master and Ph.D. courses in Communications and Information Technology Engineering with e-commerce branch at the Amir Kabir University.
- Conducting master's degree course in Marketing and E-Commerce at the Tarbiat Modarres University in cooperation with Lulea University of Sweden.
- Consulting with the universities of Tehran, Elm-o-Sanat, and Shahid Beheshti to establish other courses in e-commerce.

c) Short Term Courses
Executive Body: The Ministry of Commerce

Conducting general and expertise courses on e-commerce and relevant fields for publice and private sector including: holding training workshop on e-commerce in different provinces such as Ilam (1120 person hours) Khoozestan (1426 person hours) Lorestan (3900 person hours) and Booshehr (4476 person hours).

- Conducting international training program on "E-Commerce Technology Opportunities for Trade and Commerce, Banking and Financial Institutions" from May 18 to May 28, 2004 in cooperation with the Colombo Plan Secretariat and the Korea International Cooperation Agency (KOICA) in the presence of 23 participants from Iranian public institutions, banks and organizations and 11 representatives from public organizations of Colombo plan member countries.
- Cooperation with organizations of commerce in provinces affiliated to Ministry of Commerce to conduct long and short term courses.
- Conducting ICDL courses in organizations of commerce in 24 provinses such as Chahar Mahal (1016 person hours), Zanjan (7210 person hours), Fars (9520 person hours), Qazvin (5200 person hours), Kerman (7944 person hours) and Hamedan (2748 person hours).

Executive Body: The Customs

Conducting different workshop on e-Commerce and the Customs, the application of standard declaration SAD, the application and leading of ASYUA automated system for awareness of commercial community of the country with the standards of the Customs and e-commerce.

d) Scientific Meetings and Seminars

To hold conferences is one of the mid-term solutions for culture building and penetration of e-commerce culture among public. Similarly, in order to develop basic researches on e-commerce and all relevant fields, it is an appropriate solution to hold expertise local conferences and scientific meetings as an initiative to share views and presenting scientific and actual products. The following activities in this regard are:

Executive Body: The Ministry of Commerce

- To conduct the second E-Commerce Conference in 2004

To support other conferences related to e-commerce including:

1- E- Security in Iranian Society of Cryptology.

2- Seminar on Information Technology and Knowledge at the Amir Kabir University.

3- Seminar on the Customs and Information Technology.

Other activities carried out by Ministry of Commerce include conducting monthly meetings on e-commerce in cooperation with relevant executive agencies, experts and authorities to discuss problems and propose solutions.

The meetings have held in 2004 as follow:

- To review the e-payment system in Iran.

- To activate the Special Commission of Economic, Commercial and E-Commerce within the framework of the E-Commerce Memorandum of Policy. This commission has worked with the presence of agents of different executive agencies to integrate the projects proposed by different agencies in e-commerce.

Executive Body: The Ministry of Energy

- To conduct seminars on e-commerce.

Executive Body: Islamic Azad University

- To conduct international seminar on e-commerce in Naishaboor in 2004.

e) Scientific Researches and Magazines

Executive Body: The Ministry of Commerce

In order to penetrate the culture of e-commerce in commercial community the Ministry of Commerce conducted and stimulated the research project and published the books on to e-commerce and related issues such as:

Books:

1- Smart card and its application.

2- The e-Customs.

3- The review of e-commerce.

4- Electronic money transfer and e-payment.

5- Insurance industry and e-commerce.

6- Book of articles of the first seminar on e-commerce.

7- The first National Report on e-commerce.

8- Book articles on the second seminar on e-commerce.

Research Projects

- What managers should know about e-commerce?

- The review of cultural boundaries to establish e-commerce.

- The review of the Customs and insurance problems to establish e-commerce.

- The review of the essential processes to apply e- Government at the Ministry of Commerce.

- The role of e-commerce and IT in trade development in OIC member countries.

- The review of e-commerce role on export jump: priority: Iranian industry

- The review of marketing strategies in Internet markets

- The review of legal boundaries of e-transactions development in Iran.

- To know the processes to establish e-commerce export promotion of goods and services.

- The review of the role of e-commerce potentials in globalization. Case study: Iran

- The review of the role of trade points in export promotion of goods and services.

- To know the effectiveness of the establishment of e-Government at the Ministry of Commerce for non-oil export promotion.

- The review of the establishment of e-Government at the Ministry of Commerce.

- To know and categorize the e-commerce researches.

- The review of the role of implementation of e-Government to reduce available bureaucracy in public commercial organizations.

f) Dissemination of Information

Executive Body: The Ministry of Commerce

- To design and implement the websites of the Commerce Organizations in 22 provinces.

- To provide the Automatic System Answer (ASA) at Commerce Organizations in 12 provinces:
- To conduct the data-base of Iran Trade Point at the Commerce Organizations in 23 provinces.
- To develop and complete the data-base of Iran Trade promotion organization www.cpo.ir
- To conduct website of businesses at department for development of Internal commerce. The web address is: www.asnaf.ir.
- To design and implement the first comprehensive data bank of I.R.Iran exporters in Persian and in English.
- To design and establish Iran Business contact data-base to introduce all economic, commercial and manufacturing –export web sites in English, accessible at Iranian Trade promotion organization data-base and as compact disc.
- To establish commercial laws and regulations data bank.
- The membership of 335 companies in Iran Trade Point website**.**

Executive Body: **Radio and Television Organization**

- To broadcast 3950 programs on national radio network for 65 hours and 5 minutes (Karaj, country-wide, Farhang).
- To broadcast 64 programs on TV news network for 19 house and 22 minutes.
- To broadcast 50 news programs on News Center Unit.
- To provide 142 news and 39 visual reports by Young Reporters Club.

Executive Body: The Ministry of Energy

- To conduct transactions on the website. The web site address is: www.tender.moe.org.ir.

Executive Body: High Council secretariat of Commercial and Industrial Free Zones

- To expand Kish Trade Center to facilitate communications between traders and businesses world-wide. The web site address is: www.Kishtep.com.
- To provide information, catalog and brochure of 70 businesses on Kish Trade Center website.

The other related projects will be assessed by Commission.

Executive Body: Islamic Republic of Iran Meteorological organization

- To provide country-wide weather forecast precisely on the organization's website.

Executive Body: Ministry of Health and Medical Education

- To provide information on websites available at www.ehealthrc.ir – www.portal.takfab.ir

g) E-Learning
Executive Body: Shiraz University

- Master's degree courses on e-commerce (virtual learning)

Conclusion:

As it is noted, different executive agencies have performed different training programs to develop and penetrate e-commerce; nevertheless, much more time is needed for training high-skilled and efficient experts. Training of specialists should be conducted by the Ministry of Science, Research and technology, but at the same time, public training and awareness should be done in cooperation with all agencies responsible for e-commerce. According to UNCTAD report in 2002, the review of 37 developing countries shows that, 70% have observed awareness as the top priority for development of e-commerce strategies. Iran has also emphasized on this issue and has attempted to achieve a desirable state.

4.2. Legal and Regulatory Issues

According to UNCTAD report (2002), upon reaching awareness and infrastructure, the third place of e-commerce strategies is legal and regulatory issues which are highly considered by the 37 countries of 51 reviewed countries. Lack of an appropriate legal framework in the area of information and infrastructure security and cyber-crime, has faced developing countries, with a serious challenges to enjoy the opportunities of e-commerce. Most of the industrial countries have passed appropriate laws of IT and cyber-crime. Adoption of global laws and regulations can serve as a proper way for developing countries.

The global nature of the Internet provides new serious problems for the region and country-wide laws. Furthermore, if there is not an appropriate legal support for consumers and producers, they will not adopt the risk of e-commerce environment.

The following major efforts have made in order to provide the related laws of e-commerce:

- To ratify e-commerce law:

The draft of e-commerce law provided by Iran EDIFACT committee and in order to accelerate the enactment of the draft, it was debated in the Parliament in 2001. The main issues of the first draft that was a Model Law on United Nation Commission on International Trade Law which was ratified in 1996, and was debated in Economic, Legal and Industrial and Mines Commissions. The draft was enacted in the first consultation in 2001.The draft had 17 sections. In the second consultation, the sections were increased from 17 to 27. The draft ratified by parliament in may, 2001. The draft was debated in Guardian Council and was rejected by the Council.

The e-commerce law with the framework that forecasted in the second consultation was ratified by Parliament in January 2004, and at the same time the Guardian Council ratified the law.

According to the articles of e-commerce law, the Ministry of Commerce along with other agencies is responsible for codification of by-laws of this law.

a) To provide the draft of the by-law of the Certification Authority.

b) To provide the draft of the articles 38 and 42 of the by-law of the E-Commerce law in January 2005 and confirmed by the Board of Ministers.

c) To provide the draft of the articles 48 of the by-law of the E-Commerce law (it is amended in the commission affiliated to the Cabinet)

d) To provide the draft of the articles 56 and 57 of the by-law of the E-Commerce law.

e) To provide the draft of the by-law of the virtual shops (e-shops).

f) To provide the constitution draft of the E-Commerce development Center (it's reviewed by the Cabinet).

g) The necessities for paragraph (t) of the article 33 of the Fourth Development program law.

- Regarding electronic trade documents, Ministry of Commerce has initiated to prepare the draft of electronic trade documents, forming working groups, and conducting meetings with the aim of explanation and ratification of this law.

- Amendment of trade law: Since electronic trade documents do not have an independent nature from other common trade documents and they are only the means of electronic registration, processing, and storage of data, they mainly replace the paper documents for use in secure electronic environment under PKI and there is no need to create a new means; thus, electronic trade documents law will be stated in the new trade law and will be applied as one of its chapters.

- To provide the draft of the leading committee of IT and e-government and professional committees of IT and e-government of affiliated organizations.

Executive Body: The Ministry of Energy

- To provide the new draft of transactions of professional companies adapted to e-commerce.

Conclusion:

Ratification of e-commerce law is one of the key activities that provides the field for businesses activities in e-commerce environment. It seems that ratification of the aforementioned by-laws along with development of e-commerce legal infrastructure, have played important roles in confidence building and security for application of e-commerce by consumers and producers. According to UNCTAD report, legal and regulatory issues are one of the key strategies in 85 percent of developed countries and 41 percent of developing countries. In Iran also, it is highly regarded in both strategies of e-commerce policies and compilation of regulations and rules. Corresponding to the performance of the paragraph 3 of article 69 in the Fourth Development Program, the bill intended to establish e-commerce specific courts and assign a branch or some branches of the courts to deal with cyber-crimes and legal and technical education of juridical personnel. This has had a good perspective for Iran electronic payment with regard to legal and regulatory issues.

4.3. E-Commerce Infrastructures

According to UNCTAD report in 2002, technical infrastructure and getting access to information are the strategies of developed countries, as 41 countries of 51 reviewed, have been highly regarded it, and they have acted as e-commerce second key strategy in these countries. For the developing countries, the main concern is to provide the way for easy access to a cheap, confident and high speed Internet. Internet access enables companies to obtain information on the price of the goods and services and generates new opportunities; moreover, it facilitates the access to education, knowledge and health for the public. In this part of the report, e-commerce infrastructure is discussed in 6 sections: telecommunication, scientific, security, technical, standardization and information infrastructure.

a) Telecommunication

Though personal computer cost has tremendously slipped in recent decade, it is still not accessible to many people and SMEs. Establishment of Telecenters is one of the common approaches to the enhancement of access to technology. These centers can be supported by government, national sponsors, and non-government organizations (NGOs). Note that expansion of the Internet and telecommunication infrastructure is one of the five principals of e-Commerce policy in Islamic Republic of Iran.

Outline of the Iran Telecommunication infrastructure is as follows:

- The fixed lines penetration jumped from 15 millions to 18 millions and the penetration rate represent 26.26% of population in 2004.
- The mobile phone penetration jumped from 3/5 millions to 5 millions and the penetration rate represents 7.49% in 2004.
- The total capacity of country-Wide data communications reached 5 gb/second which supported by international capacity (800mb/second).
- To issue a permit for 13 companies to provide high-capacity Internet.
- To issue a permit for 3 companies to provide Data Center and establish internal host and serve electronic services.
- To issue a permit for 31 ICP companies to enforce communications network with Internet.
- To issue a permit for 6 fixed line operators to facilitate telephony access.

- To provide mobile phone prepaid service and to issue a permit for internal operator to do this service.
- To sign a contract with second operator for mobile phone.
- To provide 25000 high-speed ports to connect all country wide banks and e-turnover.
- To define "Electronic Banking" project in the Post Bank Company affiliated to the ministry of ICT, to provide Core Banking and e-money turnover.
- To provide smart telephone network (IN) in large provinces of the country and pay telephone statement service through the network as an example in application of e-commerce.

The status of Iran telecommunication infrastructure is as follows:

Table 4: Mobile phone 2004

Mobile phone penetration (per 100people)	Number of BTS	Number of cities	Achievement of the program (percent)	Apppinted fixd lines (2004)	2004 plan	Operating fixed lines (2004)
7/49	3921	851	81/29	1625802	2000000	5075678

Table 5: Fixed lines prepaids (2004)

Undelivered	Achievement of the Program (percent)	Sold	Forecast (2004)
1115241	67/69	2246570	3224580

Table 6: Fixed lines (2004)

Fixed lines penetration per 100 housholds	Fixd lines penetration per 100 people	Achievement of the program	Appointed fixed lines (2004)	Appointed forecast	Operating fixed lines (2004)
98/12	26/26	75/92	2447960	3224580	17788765

Table 7: private companies active in ICT

Mobile phone operator	Fixed line operator	ISP Companies	ICP Companies	IDC Companies	PAP Companies
2	6	670	31	3	13

Table 8: Data activities, 2004

Number of permissions for private sector					Number of subscribers of high-speed lines				Number of subscribers	Lines capacity (megabit)					Number of telecommunication Data center	Cities	Number of ports	Number of ports
										Internal			International					
ISP	ICP	IDP	PAP	VOIP	P2MP	VPN	P2P	IP		Inter-provincial	Inter-urban	Urban	Send	Receive				
658	31	0	11	59	6214	747	291	1837	4003	2154	8775	65981	510	644	900	514	13092	48206

Table 9: Optic fiber (Kilometers)

Rest of 2004 program	Performance	Volume of program 2004	Current status
1021	3161	4182	29993

Table 10: Connection status to villages, 2004

Achievement of the program	Connection 2004	Program 2004	Connected 2004
113/29	3691	3258	43800

There is a wide digital divide between global averages, developed, leading developing countries and I.R.Iran, while recent advances in technical infrastructure and access to technology. To achieve a desirable state, serious attention to fixed line, mobile phone, PC penetration and number of Internet hosts is required.

Note that according to UNCTAD studies, the technical infrastructure of access is the second key strategy in developing countries and has a significant role. 30 countries of 37 countries reviewed by UNCTAD, have regarded it as their second priority.

b) Scientific
Executive Body: The Ministry of Commerce

To know about the results, consequences, and methodology of implementation of e-commerce, Ministry of Commerce has done e-commerce feasibility study.

- **E-Commerce Feasibility Study:** This project aims to specify the current and desirable status, analyze the divide and determine the road map to achieve the desirable status in Iran e-commerce. It follows the following goals:
- To recognize the experiences of the countries successful in performing e-commerce at international level.
- To recognize the experiences of economic businesses in e-commerce application at international level.
- To recognize the e-commerce application impact on macroeconomic.
- To recognize the e-commerce application effect on the activities of businesses.
- To arrange the future initiative of e-commerce development in Iran. Many attempts have made to achieve these goals:
- To recognize related executive agencies and their missions.
- To recognize current status of development boundaries in law, culture and technology.
- To study the trade in other countries.
- To draw up the desirable status to achieve it and the project perspective in Iran.

- To implement divide analysis.
- To present comprehensive innovations to develop national e-commerce.
- To provide the documents of Strategic Development of Iran E-Commerce.
- This project has been completed and road map of Iran e-commerce development has been established according to the results of the project.

c) Technical

Executive Body: The Ministry of Commerce

E-commerce Pilot project: This project is aimed to establish an operational type of e-commerce in the country. It provides the entire implementation of e-commerce in Iran. It also provides cultural development, secure electronic transactions and of e-commerce real operation in small areas including purchases, sales, banks, insurance and transportation. The general goals of this project are to achieve the followings:

- To prepare a process model and trade plan for offering services.
- To design operational systems and soft wares of Internet base.
- To establish the e-commerce host services at the levels of the host of participants, electronic sale, electronic payment, and after-sale services.
- To compile legal and criminal laws.
- To provide e-commerce services to particular customers.

d) Standardization

Along with the operation of standardization, businesses will be able to do e-transaction.

Executive Body: The Ministry of Commerce

- **Coding and Standardization of Goods and Services Project:** Facilitation of data interchange, goods and services (storing and recycling) by use of standard and similar codes is the main goal of this project. Regulation of coding method for different goods and services in Iran are carried out in accordance with international goods and services coding standards.

In this regard, important activities are being done which includes study of internal and international coding systems, localization of international systems, definition of standardization of codes, designing a harmonizing system for coding, specification and definition of procedures and updating, providing information reception and control systems, etc. This project has been completed.

e) Security

Security is one of the prerequisites for e-commerce. E- Security at high level is required for earning economic businesses, trust and confidence for working in electronic environment. E-security is one of the main challenges of developed and developing countries, so by more cooperation and coordination, they strive to contribute to e-commerce application at international level.

To commence certification authority project, the Ministry of Commerce is seeking to secure electronic transactions.

Executive Body: The Ministry of Commerce

Certification Authority: This project intends to produce, distribute and manage certification authority in accordance with valid international standards in order to provide security in e-transactions. The main goal of this project is to provide security through providing certification authority, the culture penetration of application of security tools and preventing problems to develop e-commerce and accelerating trade formalities which is a part of design, provide and implementation of software, production, distribution and management of certification authorities based on international standards and offering of security services to Iranian users in international interactions and its completion are at the top of the agenda.

f) Information

Executive Body: The Ministry of Commerce

- **Development and Completion of Iran Trade Point:** This project consists of consulting and information services to small and medium enterprises and facilitating paperless trade.

- **Iran's Comprehensive Commerce Information Network:** This project seeks to strengthen the competitiveness of country's exports through providing traders, exporters and importers with the economic information and information about all businesses in Iran and the world. Information plays a key role in trade. Comprehensive information network seeks to offer full comprehensive commercial and economic information about importers, exporters, internal traders and trade partners in other countries which cover all goods and services.

- To provide, install, and operate the hardware, software and telecommunication equipments of Iran's Comprehensive commerce Dissemination of Information network.
- To negotiate for establishment of Colombo Plan E-Commerce Regional Center of in Tehran.
- Coordination with responsible agencies, cooperating in the area of e-commerce.
- To activate the commission of commercial information dissemination, economic and e-commerce in High Council of Informatics.
- To implement research projects and feasibility study in sale of electronic insurance policy

Conclusion

Despite proper activities to provide telecommunication infrastructure, there is still a long way to reach global standards. Regarding technical, security and information infrastructure, the Ministry of Commerce has commenced basic projects. By their full implementation, economic and commercial information will be provided to businesses in Iran and around the world to exporters and importers. With regard to the key role of information in trade, full and comprehensive information can effect on trade, export and also stimulate traders to be active in e-commerce environment.

4.4. E-Finance

E- Taxation is a fundamental requirement of e-commerce. Developed industrial countries have invested heavily on e-payment e-banking, e-insurance and e-stock exchange. Nevertheless, without paying attention to e-finance, development of e-commerce could not be achieved.

Iran's commercial banks undertakings have relied on the field of e-banking, based on three different categories. In addition to e-finance, the operations of chained department stores and cooperatives have been included in this section.

4.4.1. E-Banking

In this section, operation of government owned commercial and specialized banks is presented.

a) E-Services

I-Government Owned Commercial Banks:

Melli Bank:

- Establishment of bank's website. The web address is: www.bmi.ir.
- To issue 2413746 credit cards.
- To install and operate 571 "ATMs".
- To install 906 "POS machines" in department stores.
- To provide "SMS" services in order to provide customers with bank statement.
- To implement a network based on Online-Real Time to be connected to more than 1380 branches, of a total of 3200 branches throughout Iran.
- To operate "BBS" system in order to provide banking information and banking statement to 1663 customers.
- To provide automated telephone banking at 828 branches.
- To use "MICR" in order to facilitate and accelerate banking activities.
- To provide receiving bills via telephone banking.
- To provide banking statement via Internet to use in centralized and de-centralized systems.
- To connect to "Shetab" project since 2002.
- To provide for bank's customers with a services to use other bank magnetic cards and vice-versa.

Saderat Bank:

- To provide bank's website. The web address is: www.sadebank.com.
- To connect to Shetab network since 2002.
- To issue over 1443154 credit cards.
- To install 534 ATMs.
- To equip 1360 branches to "Pin Pad".
- To operate centralized Sepehr telephone banking system.
- To provide bank statements to customers by e-mail.
- To provide "SMS" services in order to offer bank statements.
- To provide 1256 branches with online facilities.
- To use SSL (Security Stock Layer) standards in e-banking activities.

Mellat Bank:

- To establish bank web site. The web address is: www.bankmellat .ir.

- To connect to Shetab network since 2004.

- To issue over 136680 credit cards for customers.

- To install 482 ATMs.

- To initiate operational process of sending e-receipts between JAAM accounts (bank mellat e-current account) via ATMs.

- To provide SMS services in order to deliver bank statements.

- To provide e-purse service, online and off-line by Mellat card.

- To provide customers with current accounts with telephone banking services to pay utility bills in any time of day or night, even on holidays. Provision of information regarding account balance, the last three account operations, and receiving bank statement by fax.

- To issue smart credit cards, based on EMV and VSDS standards.

- Feasibility study of the plan to provide "Mellat card services via Internet".

- To operate E-Central Account project in order to eliminate physical issue of documents between different units of bank to facilitate the speed and automated daily transfer of documents and prevention of re-filing of documents.

Tejarat Bank:

To establish bank web site. The web address is: www.tejarat-bank.com.

And registrations of new web address www.tejaratbank.ir.

- To connect to Shetab network since mid-January 2004.

- To issue over 973233 credit cards.

- To install and operate 481 ATMs.

- To install 602 "POS" machines at the department stores.

- To provide centralized and decentralized telephone banking system and necessary information to customers day and night.

- To provide bank statements with e-mail, Tehran (phase "2") and throughout the country.

- To provide SMS services in order to deliver bank statements for customers.

- To provide bank statements to customers on the Internet. This system offers account circulation, change of the password (code) and general information regarding bank performances to customers.

- To operate a system for paying utility bills, receiving payments and paying debits, providing statements and transfer of money from customer's account to specified account via ATMs.
- To implement prepaid cards for foreign tourists.
- To operate three electronic parks at universities of Tehran, Shaheed Beheshti and Elmosanaat.
- To equip ten branches with "line" system.
- To implement and operate automated system to transfer receipts, and facilitation for verification of signatures at different branches.
- To operate automated coding system and de-coding in all branches.
  By using coding and decoding system, verification of cheques, receipts, fax cheques and current accounts, is automated. This system has reduced time spent for de-coding from five to ten minutes to 30 seconds.

Sepah Bank:

To establish bank web site. The web address is: www.banksepah.com.

- To connect to Shetab network since 2004.
- To issue over 1453754 credit cards.
- To install and operate 394 ATMs.
- To install 35 "POS" machines at the department stores.
- To provide customers centralized and decentralized telephone banking system and offer required information for day and night at over 1500 branches.
- To provide SMS services in order to deliver the bank statements to customers. 2nd phase of this service offers payment of bills and transfer funds between different accounts.
- To provide bank statements for Golden Current and saving accounts at all branches of Sepah bank over the Internet (Sepah bank site) all over the world.
- To design and implement a virtual (Internet) branch in 2004. This branch prepared to open accounts for customers.
- To expand Gold Current en account to 904 branches.
- To purchase 100 customer "waiting" machines and equip ten branches with these machines.
- To issue Sepah smart cards and Saypa cards

- To study and review GIS software for banking system, in order to gather geographic information to open new Sepah bank branches, to install ATMs and … in appropriate locations.
- To study the comprehensive system "core banking".

B: Specialized Government Owned Banks:

Maskan Bank

- To establish bank web site. The web address is: www.bankmaskan.com.
- To issue over 50000 credit cards.
- To install 85 ATMs.
- To e-mail bank statements to customers.
- To provide SMS services to deliver statements to customers.

Keshavarzi Bank (Agriculture Bank)

- To establish bank web site. The web address is: www.agri-bank.com.
- To connect to Shetab network since 2002.
- To issue over 851148 credit cards.
- To install and operate 308 ATMs.
- To install 300 "POS" machines at the department stores.
- To operate telephone banking system.
- To provide SMS services in order to deliver statements to customers.
- To operate computerized intelligent system (Mehr), in order to provide "Mehr" card services, "Mehr" current account, "Mehr" credit card and Banking Information Interchange Network (Shetab).
- To initiate implementation processes of comprehensive banking system "Mehr Gostar" at 900 branches.
- To provide Internet in order to make available information regarding banking accounts at head office using Internet, via bank web site.
- To equip head office branches with "Ista Bank" system to make available information software regarding customers' accounts.

Sanat va Madan Bank (Industry and Mine Bank)

- To connect to Shetab network since 2004.
- To issue over 1400 credit cards.
- To establish "Data Communication Network" between branches and head office including X.25, X.28 and MPLS/VPN and other communications system available in Iran.

- To design e-banking central system GL; CRM and current account.
- To provide RFP in order to announce tender for purchase of ATMs.

Refah Kargaran Bank (Worker's welfare bank)

- To install bank web site. The web address is: www.bank-refah.com.
- To sign a contract with Central Bank of Iran (CBI) In order to be connected to Shetab network.
- To expand communication network (to install high speed lines of "PTMP" at 800 branches).
- To open branches to provide special services and connect them to online main network.
- To establish an office to offer new services to provide "back office service", relevant to united accounts and payment card systems.

Tosea Saderat Bank

- To establish bank web site. The web address is: www.adb-iran.com.
- To connect to Shetab network since 2002.
- To issue over 10180 credit cards.
- To install and operate 13 ATMs.
- To install 160 "POS" machines.
- To check bank statements over the Internet one hour before the time of request.
- To sell and buy stocks via Internet.
- To provide "SWIFT" services at all branches of the bank.

Iran Post Bank

- To connect to Shetab network.
- To own 480 branches in different cities of Iran.
- To install 750 "POS" machines.
- To provide 3008 smart cards.
- To transfer foreign exchange to Turkish and Japanese post banks.
- To install 50 ATMs.
- 397 branches and 636 offices provide service in 28 provinces of Iran.

Private Banks

Saman Bank:

- To establish bank web site www.samanbank.com.
- To connect to Shetab network since 2003.

- To issue over 39300 credit cards.

- To install and operate 29 ATMs.

- To install 2232 "POS" machines at department stores.

- To e-mail bank statements to customers.

- To provide "SMS" services in order to offer statements to customers.

- To establish a "portal" for e-payment with high security.

- To provide banking services to over one hundred sellers using Internet via "Saman" e-payment portal.

- To provide prepaid cards, no need to open an account.

- To make ready macro e-payments (PKI enabled) for B2B transactions with security protocol (SET).

- To disseminate information for customers (Call Center) so that they can have easy access to banking information via telephone.

- To provide all e-banking services including: e-payment; Internet banking; telephone banking, e-mail banking and mobile banking.

- To provide Saman purchase card, in order to purchase goods from Internet selling sites, which have contract with Saman bank or with selling terminals of Saman bank (POS).

Parsian Bank

- To establish web site. The web address is: www.samanbank.com.

- To connect to Shetab network since 2004.

- To issue over 397214 credit cards.

- To install 11831 "POS" machine at department stores.

- To connect electronically with CBI to interchange information.

- To request information on blank checks from other banks for new customers.

- To pass information on blank checks and gathering information to omit their negative effect.

- To request information from other banks with respect to credits offered to customers.

- To provide customers-based banking services.

- To offer information to customers relying on the latest available technology.

- To provide telephone banking system; offering full service for transfer of funds; giving information on balance of account and receiving statements by fax.

- SMS: To send automated transactions with regard to customers' account over their mobile phone.
- LSS: To provide bank statements via Parsian web site.
- EMS: To send bank statements to customers' by e-mail.
- To register customers' national ID in banking system by electronic communication with National Organization for Civil Registration.
- To provide reports on the web from all activities of Saman bank by bank's internal Intranet for the use of branches and head offices.

Eghtesad Novin Bank

- To establish bank web site. The web address is: www.samanbank.com.
- To issue over 2000 credit cards.
- To install and operate 14 ATMs.
- To operate centralized telephone banking.
- To initial process of providing SMS services and e-mail statements to customers.
- To connect to "SWIFT" world network to transfer international money transfers between banks.
- To establish data communication between branches and VPN center.

Karafarin Bank

- To connect to Shetab network since 2004.
- To issue over 622 credit cards.
- To install and operate 13 ATMs.
- To provide Online Real Time banking services using centralized data and VSAT/X.25.

In the following table (11), the status of Iran's banks, members of Shetab network from 2002 to 2004 is shown and in table "12", card payment network, for each active bank, is presented.

Table 11: the number of banks, which are members of Shetab network

Saderat; Keshavarzi,Tosea Saderat	3	2002
Saman	4	2003
Melli; Sanat and Madan; Karafarin; Sepah, Tejarat, Mellat, Parsian, Post bank	12	2004

Table 12: card payment network at the end of 2003

	Bank	Card	ATM	Sale Terminal	Branch Terminal
1	Eghtesad Novin	2000	14	0	0
2	Parsian	397214	0	11831	145
3	Post	3396	0	3	279
4	Tejarat	937233	481	602	0
5	Tosee Saderat	10180	13	160	27
6	Refah Kargaran	0	0	0	0
7	Saman	39300	29	2232	0
8	Sepah	1453754	394	35	3140
9	Saderat	1443154	534	0	1343
10	Sanat and Madan	1400	2	1	2
11	Karafarin	622	13	0	0
12	Keshavarzi	581148	308	300	311
13	Maskan	50000	85	0	146
14	Mellat	136680	482	0	387
15	Melli	2413746	871	906	1010
	Total	**7505827**	**2926**	**16070**	**6790**

b) Dissemination of Information

Melli Bank

- To operate bank's website. The web address is: www.bmi.ir.

Mellat Bank

- To operate bank's website. The web address is: www.bankmellat.ir.

Saderat Bank

- Sepehr education site.

- To operate bank's website. The web address is: www.saderbank.ir.

Maskan Bank

- To operate bank's website. The web address is: www.bank-maskan.ir.

Refah Kargaran Bank

- To operate bank's website. The web address is: www.bank-Refah.com.

Tejarat bank

- To update information regarding the bank on the Internet. The web address is: www.tejarat-bank.com and registration of new address: www.tejaratbank.ir.
- To operate dissemination of information kiosks.

Sepah Bank

- To operate bank's website. The web address is: www.banksepah.com.

Parsian Bank

- To operate bank's website. The web address is: www.parsian-bank.com. To register customer's national ID in bank's unified system via e-connection National Organization for Civil Registration.

Eghtesad Novin Bank

- To operate bank's website. The web address is: www.en-bank.com.

Automated system

Melli Bank

- To implement Online Real Time network in order to connect more than 1280 branches to each other of the total of 3200 branches throughout Iran.

Mellat Bank

- To realize operational phase of project related to central electronic accounts (of the bank) in order to eliminate physical issuance of documents between different units of the bank, and daily accelerated automated transfer of documents from different units and avoiding re-registration of documents at different units of the bank.
- To use Internet so that personnel can get access to announcements.

Tejarat Bank

- To implement SGB automated system at all branches.
- To allocate forty thousand work hours annually so that personnel in charge at the bank and other personnel can get access to the Internet.
- To offer services to colleagues via bank's domestic intranet (such as providing accounts, announcements, and …).

Saderat Bank

- To equip with the automated system.

Maskan Bank

- To establish Data communication network between branches and head office including X.25; X.28; MPLS/VPN, and other telecommunication resources in Iran.
- To design centralized e-banking including GL; CRM; and current account.
- To provide RFP to tender for purchasing ATMs.

Sepah Bank

- To establish office automated system (paperless).
- To do feasibility study on comprehensive and unified banking system (core banking).
- To review managing information software.
- To provide appropriate information for different departments.

Agricultural Bank

- E-training for new employees during the first phase of employment.
- To offer computer training, via bank web site for the personnel.
- To start executive phases to operate comprehensive banking system (Mehr Gostar) at 900 branches.

Eghtesad Novin Bank

- To establish a unified automated system for centralized letter of credits.

Parsian Bank

- To prepare reports via "web", covering all bank activities under web in internal intranet for use at headquarter and at the branches.

Refah Kargaran Bank

- To establish an office in order to offer new services related to unified bank accounts and card payment systems.

Tosee Saderat Bank

- To provide "Core Banking System" software to unify banking information system.
- To do feasibility study on e-banking as one of principle tasks for implementation of e-commerce in Iran.

Table 13: A summary of performance of Iran's banks in 2004

| # | Illustration | Government Owned Banks | | | | | | | | | | | Private Banks | | | |
| | | Commercial Banks | | | | | Specialized Banks | | | | | | | | | |
		Sadera	Melli	Mellat	Tejarat	Sepah	Maskan	keshavarzi	Sanat and madan	Refahe kargaran	Tosea saderat	Post Bank of Iran	Saman	Parsian	Eghtesad novin	Karafarin
1	Members of Shetab network	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	✓	✓
2	Automated branches	3250	✓	✓	✓	✓	200	✓	-	-	-	-	✓	-	-	-
3	Number of debit cards	1508607	1776244	✓	✓		-	300000 Mehr card	-	✓	-	-	7534	-	✓	-
4	Number of credit cards	1443154	2413746	136680	973233	1453754	50000	581148	1400	50000	10180	3396	39300	397214	2000	622
5	Number of ATMs	534	571	482	481	394	85	308	2	102	13	50	29	-	14	13
6	Number of POS machines	-	906	-	602	35	-	۳۰۰	1	600	160	-	2232	11831	-	-
7	Branches Terminal	1343	1010	387	-	3140	146	311	2	-	27	-	-	145	-	-
8	PIN PAD	1360	✓	✓	✓	-	-	-	-	✓	-	-	✓	-	-	-
9	Quing branch	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-	✓	-	✓	-
10	Telephone banking	✓	828	✓	✓	✓	-	✓	-	✓	✓	-	✓	-	-	-
11	e-mail services	✓	-	-	✓	-	✓	-	-	-	-	-	✓	-	✓	-
12	SMS services	✓	✓	✓	✓	✓	✓	✓	-	✓	-	-	✓	-	✓	-
13	Swift	43	✓	-	-	-	-	-	-	20	-	-	-	-	✓	-
14	Online	1256	1280	✓	✓	✓	-	✓	✓	✓	-	-	-	-	-	✓
15	Web site	Saderat bank.com	bmi.ir	bankmellat.ir	tejaratbank.ir	banksepah.com	bank_maskan.ir	agri-bank.com	Bim.ir	bank-refah.com	Edbi-iran.com	postbank.ir	Samanbank.com	Parsian-bank.com	En-bank.com	Karafarin bank.com
16	E-purse	Feasibility phase		Online and offline services												
17	E-signature															

- **Not available**
✓ **the banks have these indicator but the figures are not available**

Chain stores:

In this section, activities of such chain stores as "Etka, Shahrvand" and "Farhangian" will be presented:

Etka chain store

- To equip forty large stores, and ten smaller ones with ("Samin" store card) POS machines.
- To provide smart cards (Etka card) to replace non-cash coupon.
- To install Shetab system POS machines at many stores. By the end of 2005, this system would be used at all Etka stores throughout Iran.
- To install POS machines for "Saypa" and "Iran khodroo" cards.

Shahrvand chain store

- To operate wireless communication with 12-18 mbit/sec band width.
- To equip selling site with hardware, including server, terminal, and ….
- To prepare implementing e-sale project.

Farhangian Cooperative:

- To operate automated system to store information and promotion of sale using special codes. This is done in one fourth of Farhangian cooperatives
- To using ATMs for Mehr card (belonging to Agricultural bank), Samin and Melli cards at some stores.

4.4.2. E-Insurance

This plan intends to organize the present systems, design new software, establish infrastructure, and upgrade Iran insurance information systems.

Following further steps have been taken with respect to e-insurance

Executive Body: Dana Insurance Company

- To design e-request system. In this system, customers through connection with website of "Dana" insurance can request their insurance policy.

Executive Body: Iran Insurance

- To design comprehensive expansion plan for e-insurance at Iran insurance company, (Nosaba). RFP of the plan is prepared and is at execution stages.
- To establish wireless network shared with 5 different loss insurance payment centers in Tehran
- To re-establish Iran Insurance co. website

- To complete comprehensive network plan of Iran Insurance at 45 main points in Iran and follow-up network expansion, for full coverage of 205 branches

- To complete IDC website of Iran Insurance in order to provide unified software network services.

- To design and implement web-based loss payment system in the third person section.

- To design and implement individual insurance coverage system.

Executive Body: Investment and Export Insurance Company

- To issue insurance policy and additional protocols automatically.

- To establish wireless intranet connection throughout Iran.

Executive Body: Hafez Insurance Company

- To sign a contract to issue e-insurance policy.

Executive Body: Sina Insurance

- To design and implement Sina Internet website. The web address is: www.sina insurance.com.

Executive Body: Central Insurance Co

- To provide wireless access to Internet.

- To design a comprehensive electronic website for auto insurance at central insurance co. (SIAB)

- To update central insurance co. website. The web address is: www.centinsurance.ir and print information and insurance news letter.

- To train over 200 personnel from different insurance offices and representative offices, by software systems.

Executive Body: Asia Insurance Co

- To operate intranet site.

- To connect central offices of the company in Tehran to each other and establish a unified network.

Executive Body: Alborz Joint Stock Insurance Company

- To sign a contract to buy comprehensive and unified insurance software.

- To install, operate and complete the network, software and hardware for central office and branches.

- To transfer and complete the company data-base network from BBS to web.
- To issue fire insurance policy (for residential homes), auto and trucks via Internet site. The web address is: www.alborzinsurance.ir
- To establish data bank of loss paid for auto insurance and updating it within 48 hours.

Executive Body: Parsian Insurance

- To prepare the draft of Parsian E-Commerce Pilot plan.
- To design and implement electronic request system insurance fee on the Web.
- To prepare training plan on the Web, for training in insurance industry, and information technology from the Internet.
- To design and implement comprehensive and simultaneous information collection plan from all branches in less than 24 hours to be transferred to unified service.
- To design and implementing information model and store data (Data Ware House).

Executive Body: Insurance Development Co

- To implement centralized insurance on the web system "development apple".

Executive Body: kar-afarin insurance co

- To study technical, financial and administrative infrastructure in order to issue e-insurance policy.

Executive Body: The Ministry of Economic Affairs

- E-portal for auto insurance: to access data-base of auto insurance policies; the background on auto losses and driving fines, to determine appropriate insurance tariff and risk-management in auto insurance industry.

4.4.3. E-Stock Exchange

The aim is to provide necessary resources to get access to capital markets by application of ICT in Iran and in the international level.

Conclusion

As it was noted, Iran's banks are members of Shetab network. They offer such services as SMS, e-mail to customers the bank statements and telephone banking. Banks in Iran provide ATMs and POS machines at their branches. They have initiated to automate most of their daily activities. Nevertheless; services offered by the banks are still far away from desirable e-banking. As yet, payment gateways have not been used at Iranian banks, no international credit cards are offered by these banks. In order to strengthen banking network with the system of transactions of inter-banking accounts, there is an urgent need for foreign exchange automated system and connection to SWIFT network. Therefore, one of the requirements to develop e-commerce is to strengthen e-banking, which needs taking fundamental steps and making important decisions in this regard. Even though activities in e-insurance and e-stock exchange transactions have been started, still they require taking more serious measures.

4-5. E-Government

To coordinate e-government performances and undertakings are important component in e-commerce strategy. "UNCTAD" report in 2002, pointed out that governments can facilitate to get access to e-commerce strategy and participate in development of following goals:

Efficiency: In information-intensive activities, governments can use the efficiency from the Internet. With respect to the importance of public sector in economy and shortage of resources, government can manage these incomes which are significant in economic efficiency.

Competition: To offer online services in taxation, social welfare; Customs, import and export procedures, can reduce the cost to companies dealing with government.

Transparency: Transparency and accountability in public services reduces financial corruption. Transparency in e-government can increase competition in economy and make preparation for foreign investment.

Education and Awareness: with expansion use of the Internet; governments can facilitate required needs of e-commerce, and distribute it among different enterprises of private sector, like "SMEs". Wide participation of government (in

education and awareness) can bring about coordination between exporters-importers on e-commerce. Governments in offering potential leverages of e-commerce may encourage private sector to adopt e-commerce and cooperate with government owned companies.

Executive Body: The Ministry of Economic Affairs

In line with development of e-commerce, the Ministry of Economic Affairs has initiated the implementation of following projects:

a) E-Treasury

The aim of this plan is to automate operational processes regarding the costs and treasury department of the Ministry of Economic Affairs. This plan started in October 2003. To implement this project shall bring about following results:

- To provide a unified procedure for public finance in Iran.
- To provide information for strategic financial decision making.
- To create dissemination of information network.
- To provide government performance annual sheet.
- To oversight government properties effectively.
- To increase productivity of government accountants.
- To increase government's revenues.
- To provide supervision, coordinate and unified procedure in government financial affairs.
- To create sound and safe communication between different government organizations.

b) E-Readiness

E- Readiness is a commercial tool for government organizations and institutes, that eliminates barriers and creates supply chains, for buyers and sellers in a virtual environment and provide required facilities to sell and buy. To implement this project should have following outcomes:

- To create safe and purposeful competition.
- To provide the principles and rights to benefit from opportunities created by government
- To increase productivity and efficiency

J) Electronic taxation:

E-taxation has following benefits:

- To facilitate sending and filing tax returns for tax-payers.
- To facilitate follow-up of tax files.
- To facilitate tax returns between tax-payer and the taxman.
- To facilitate tax-payments.
- To make prepare for financial resources and tax man management.

As yet, present condition has been reviewed; tax system of Republic of Ireland has been studied and experiences of France and Germany have been used.

d) Electronic Customs:

The aim is to modernize and simplify the Customs procedures mainly, automate calculation of the Customs dues and taxes. Provide upto date, and accurate statistics, standardization of procedures and electronic data interchange with other organizations.

h) E-Services:

To strengthen and enhancement of internal and external communications are main outcome and advantages of e-government; that not only increases the efficiency of government sector but also enhances effectiveness in meeting people's expectations. In e-government, at one hand, the interaction of different government organizations and intra-systems reaches a quality state by using electronic tools and instruments and on the other hand, the idea is that government provides people with acceptable services in the shortest time.

In this respect the main activity that has been done by different organizations are as follow:

Executive Body: National Iranian Oil Co (N.I.O.C)

- E-tender for sale of excess goods in oil, gas and petrochemical industry by Internet.
- Internet sale of petrochemicals via Internet over the web site. The web address is: www.petrochem –air.net.
- To make ready for e-distribution and e-sale of petrol and other refined oil products at petrol stations.

- To provide Internet services to 35 thousand staff of oil, gas and petrochemical industries via privileged ISPs.
- To initiate stock exchange market for crude oil transactions.
- To plan for foreign retailing e-purchases, up to $5600.
- E-tender for sale of excess items.
- To plan and study e-transaction for some refined products (B2B).
- To implement the first phase of e-release of N.I.O.C goods.

Executive Body: The Ministry of Oil

- To plan and study the establishment of stock exchange market for crude and refined oil, as well as for natural gas and petrochemicals.
- To tender purchase and sale of oil, natural gas and petrochemicals via Internet. The web address is: www.shana.ir.
- To provide educational facilities for distance learning.

Executive Body: National Iranian Gas Company ((N.I.G.C)

- To provide and expand dissemination of information base as the main site by "N.I.G.C" and a "portal" for other N.I.G.C sites.
- To expand education and penetrate culture of application of e-commerce.
- To provide and expand more than 30 dissemination of information bases in provincial, operational sites and refining gas companies.
- To facilitate e-payments of gas bills.
- To provide "VPN" connection lines, connecting different buildings and centers country-wide. This covers over 20 provincial gas companies and refineries.

Executive Body: National Iranian Refining and Oil Products Distribution Company

- E-purchase of equipment
- To re-engineer old systems and sale of fuel to airlines and data transfer to "LAN" network and receive reports on this undertaking via the Internet.

Executive Body: Iran National Petrochemical Company

- To operate distance sale system via the Internet.
- To provide online tender system for sale of goods at international level.
- To provide short transaction messages to contact with domestic customers and overseas offices.

- To make prepare comprehensive material data bank for dissemination of information to customers and get access to commercial information by petrochemical plants.
- To implement a comprehensive financial system in the company and automate the activities of operational departments.
- To present commercial resources of petrochemicals and performing commercial affairs over the website in two languages (Farsi and English).

Executive Body: The Ministry of Agricultural Jahad

- To provide websites and central portal for public information, with more than fifteen thousand pages of information.
- To do feasibility study on architecture of information to identify trends in activities and turning it to e-services.
- To make ready and expand communication and the Internet network.
- To make plan for creation of information dissemination kiosks.
- To produce content materials for creation of data-base to offer quality services.

Executive Body: The Ministry of Cooperatives

- To establish virtual offices.
- To establish cooperative companies (B 2 C).
- To establish cooperatives and unions (C 2 C).
- To establish the Ministry of Cooperative fund and Cooperative chamber (C 2 G).

Executive Body: The Ministry of Health and Medical Education

- To implement initial processes of the plan to prepare e-file for patients.
- To operate information hospitals infrastructure.
- To operate information system with respect to the doctor's; pharmacies; laboratories; and medical centers.

Executive Body: Islamic Republic of Iran Meteorological organization

- To design paperless correspondent system to automate office operations and written communication with different complexes using the system.

Executive Body: High Council of Free Zone Secretariat

- To implement paperless correspondent system, "Negar Network" at kish island.

4.6. Logistics

a) The Customs Activities

Executive Body: Islamic Republic of Iran's Customs Administration

- To implement "ASYCUDA" system at 41 Customs offices.

- To design advance information system passenger (APIS) at the Customs offices.

- To design a system to determine the value of goods accurately and bring up the Customs offices to the speed.

- To design a plan to determine transit routes and tracking of transit consignments, "GPS" and putting to use "X-RAY" units for extra control and monitoring of trucks on the roads, and facing-up to and fighting smuggling. At the present, an X-RAY unit, a container mobile at Bandar Abbas port and one at Dogharoon Customs offices have been installed.

- To implement e-manifest to facilitate the sending of manifest's information for trucks and bills of lading, on the web in Farsi and in English. The web address is: www.asycuda.ir. In this system, it may release goods. This project was implemented at the Customs of Anzali, Mehrabad, Nowshar, Shaheed Rejaie and Imam Ports in 2004.

- To automate sending and receiving information at executive Customs "Message Oriented Middleware"

- To initiate "port tracker" plan in cooperation with "UNCTAD" and "UNDP" in order to unify chain of events and Collect information.

- To use smart cards as a replacement for authentic and valuable Customs documents in order to store and transfer information in Customs procedures.

- To operate automatic select system of assessors at the Customs. In this system, Customs declaration by assessors is done automatically at random and the Customs personnel are not involved in this procedure personally.

- To create a system to determine transit routes automatically at the Customs offices. This system selects specific cities and the transit route automatically on a map. In this system arrival and departure are,

safe and speedy transits of goods are guaranteed, and any change out of specified destination routes for trucks is impossible.

- To operate border-crossing system: this system is already operated at the Customs of Astara; Poldasht; Bilesavar and Jolfa. This system oversights and calculates discounts, used by passengers.
- To operate a new system to determine foreign trade statistics and add transit information and ASYCUDA modules to the statistics.
- To develop risk management system (Selectivity)
- To automate coding system for traders. This system has a unified code for natural persons and legal persons. The code for natural person is the national identity code and for legal person is the serial number of their commercial card.
- To develop and complete the dissemination of information network.

b) Transportation

Executive Body: The Ministry of Road and Transport

- To sell train tickets over the Internet with cooperation of banks which are members of Shetab Network.
- Experimental online selling of tickets for air travels and travels by land at traveling agencies.
- To design and implement e-tender system (ETS) at 150 tender offices of the Ministry and affiliated organization in Tehran and provinces.
- To design dissemination of information system for consultants and contractors (CCS).
- Experimental implement of e-issuance of bills of lading at Iranian railway network in Tehran and suburbs.
- To design office automation, in order to automate office processes and implement paperless system
- To design and implement geographic data-base at the Ministry at scale of 1:250000 in order to create appropriate data structure and prepare software for topological analysis of road network.
- Feasibility study on comprehensive plan for satellite telecommunication, to disseminate information between organizations affiliated to the Ministry of Road and Transport.

- To establish communications and services center; to inform and to follow-up resolution of problems which people and staff of the Ministry may be facing; evaluate and study of outcomes for expansion and development of the center to benefit from thoughts and understandings between public and the staff.

- To operate a comprehensive educational site in order to automate process of education management and to facilitate process of registration for educational courses at Ministry and its affiliated organizations.

Executive Body: Transportation and Terminals Organization

- To create up-to-date and accurate data-base website for better management of roads network, using up-to-date technology (GPS) in Farsi and in English over the Internet. The web address is: www.Iranroads.com

- To do feasibility study on the project to issue smart cards for truck drivers and public transport fleet.

- To design and implement online tracking project with the aim of controlling transit truck movement in and outside of Iran.

- To prepare the specifications of e- bills of lading plan to update and control it by e-registration over the web in cooperation with "crane – soon logic" company of singapour.

- To track the number of trucks in the country's roads by 93 sensors; 40 NC97 and 5 "RTMSs"

Executive Body: Iranian Railway

- To do feasibility study on the project to track railway transport equipment; centralized traffic control (arrivals and departures of the trains CTC) and office automation to automate office procedures.

- To get access to GIS railway information to forecast new railways; this is done with the aim of preventing railway accidents, by monitoring the use of railway equipment and tracking all trains and their consignments.

- To design automated system of accident prevention and to report on application-based and web-based to manage and forecast accidents.

Executive Body: I.R.I Civil Aviation Organization

- To design flights statistics system, and office automation to implement paperless system.
- To disseminate information to consumers over the website.
- To develop a strategy for dealing with information in the next five years, in order to present "IT" and offer directions to different departments of the organization.

g-Energy

Executive Body: The Ministry of Energy

- To issue e-bills including debits; the amount of energy consumed; and the type of consumption in four regional electric companies.
- To operate e-electricity market to interchange data production; consumption and pricing between regional electricity companies.

4- Postal Network

The postal service company started payment project since July 2002 by Rahnema Co. The system is designed to connect to e-systems of banks, financial institutions and pay on delivery time as well.

h- Logistics

- To pay utility bills (water and electricity) on the Internet and Mobile phone over Tosea-Saderat bank web site. The web address is: www.edbi.org.
- To offer services by affiliated companies to the Ministry of Energy. The web address is: www.tse.ir.

Conclusion:

With respect to logestics; appropriate activities by the Customs have been done. The Customs has set up projects to accelerate penetration of e-commerce. Equipping Iran's ports with ASYCUDA system. In addition to other projects such as setting-up web sites, determine value; tracking transit consignments; providing e-manifest; in a unified procedure of the

Customs affairs to accelerate keeping store, data interchange, releasing process and make ready the application of e-commerce.

4.7. Stimulating Activities

The Ministry of Commerce, in order to develop and penetrate e-commerce, has stimulated activities such as top articles, papers, web sites, and projects excellence in e-commerce. Some of the major activities are as follow:

A- Awards

1- Top organizations:

- Keshavarzi Bank (Agricultural Bank)
- "REJA" train traveling organization
- Parsian Bank
- Industrial Development and Renovation Organization of Iran (IDRO)

2- Top books

- Nouri, Mohammad Ali & Naghjavani Reza, Rights of Data Protection National Library of Iran, first edition, summer 2004.
- Shakoori moghadam, Mohsen, E-Commerce Rights; Centre for Islamic Revolution Documents Center. Tehran; 2005.
- Institute for Studies and Commercial Research, Contents and Application of E-Commerce, Tehran, 2004.

3- Top Articles

- Moshiri, Saeed & Jahangard, Esfandiar, ICT and Iran Economic Growth Iran Economic Research Quarterlies, No: 19, summer 2004.
- Nassiri Mofakham, Feria & Nemat – Bakhsh Mohammad Ali & Baraani Dastjerdi, Ahmad, A way to Use e-Cheques, an analysis of check payment system in Iran Commercial Research. Quarterlies; No: 32 fall 2004.
- Safari, Hossein; Khoshsima, Gholamreza, "to Design a Phase System to Measure e-Government in the Ministry of Commerce" presented at the seminar on Iran Phases System.

4- Top Web sites:

- Gold Iran co. LG representative in Iran. The web address is: www.goldiran.ir.
- Tashil Gostar co. The web address is: www.wwwbaazar.com.
- Moasseseh Farhangi Tabian: the web address is: www.tabyan.com .
- Sazandeh Forushgahaie Internet dar Iran; the web address is: www.eshopbuilder.ir .

5- Top Magazines and Newspapers:

- Asre Ertebatat weeklies.
- Abrar Eghtesadi newspaper.
- Donyaye Eghtesad newspaper.

B- To support exhibitions related to e-commerce by the Ministry of Commerce in 2004

- First seminar on creativity; innovation and entrepreneurship.
- Exhibition and conference on e-Money (Tehran).
- National conference on e- business (Elmo –Sanat University), Tehran.
- Seminar on IT; Software and Electronic City (Mashhad).
- First national seminar on e-commerce (requirements and approaches) Isfahan.
- International seminar on E-Commerce (Islamic Azad University, neishabour branch).
- International seminar on the Customs and IT (I.R.I. Customs Administration, Tehran).
- Seminar on E-Commerce held in Bushehr.
- To provide a part of expenses to design and implement electronic registration of visitors of the tenth exhibition of Electronic, Computer and E-commerce (tenth Elecomp), Tehran.

c- Tax-exemption:

- According to the laws and regulations to e-Commerce policies in Iran, all expenses spend on development of "ec" has considered as tax-exempt.

Conclusion*:*

E-Commerce is one of the important economic issues. It has always been an attentive issue to governments. I.R. Iran has emphasized serious approach to develop and expand e-commerce as well. In this report. I.R. Iran's e-Commerce performance has been reviewed to the end of 2004.

The issues such as awareness, infrastructure; legal and regulatory issues, e-finance, logistics, e-taxation; e-government, and trade facilities have been discussed:

1. To develop awareness, training and education strategy, the main activities such as: to hold e-commerce MBA and MA degree courses, workshop and seminars on e-commerce, to create websites, and present awards to projects excellence in e-commerce have been done. Our aim in this strategy is to provide efficient man-power and stimulate demand for application of e-commerce by businesses.

2. To develop legal strategy, in addition to ratifying E-Commerce law and executive by-law (paragraph A article 79), and provide E-Commerce Development Center constitution and by-law of Certification Authority offices and article 48 of E-Commerce law that have been submitted to the Cabinet to review. To make ready the draft of paragraph B article 79 of E-Commerce law to develop e-commerce in Iran.

3. Despite attempts to establish e-commerce infrastructure in Iran, it still lags far behind the International standards. In 2004 penetration rate of fixed lines & mobile phones were 26.26 and 7.49 respectively and 5.5 million people got access to Internet. With respect to technical; security and information, the Ministry of Commerce has finished "Feasibility Study of E-Commerce", "Coding and Standardization of Goods and Services" projects and has a road map, based on results of the projects. In addition, "E-Commerce Pilot" and "Certification Authority" projects are under review. By the end of 2004, trade points in 21 provinces at Domestic Affairs department of the Ministry of Commerce and Kish free zone have been activated, and implementation of Comprehensive Network for Dissemination of Information has provided an appropriate field for traders and businesses in Iran.

4. To develop e-finance, Iranian banks are members of Shetab network and offer customers services such as "SMSs"; sending statements by e-mail. ATMs and

POS machines have been installed at different branches. In spite of all these efforts; there are still fundamental steps needed to further development of e-commerce.

There have been some efforts for bringing into operation e-insurance and e-stock markets.

5. To develop e-government; the Ministry of Economic Affair has commenced to implement e-treasury; e-readiness; e-taxation; e-portal and e-Customs projects, that to coordinate e-government performances with e-commerce. Other executive departments of government provided information dissemination and e-services appropriately.

6. to develop logistics, some fundamental steps have been taken, such as: implementation of ASYCUDA system in 41 Custom's offices, equipping Iran ports with optic fiber, designing advance information passenger system; designing system to determine the value of goods; using smart cards in the Customs procedures; tracking transit consignments and e-manifests. In transport sections, in addition to appropriate information dissemination, some of the projects which have been put to work are: sale of train tickets on the web site, and experimental sales of it for land and airline passengers.

7.To develop stimulating activities; the main activities are: to present awards to successful organizations, top projects on e-commerce and trade facilities, web sites, articles, books; media and support internal and international seminars on e-commerce.

The contributions and assistance of government entities to provide performance report are greatly appreciated. We hope that government executive entities that submit appropriate information would develop and penetrate e-commerce by their activities and with specified criteria move to desired status.