ANALYSIS AND RANKIING FACTORS AFFECTING FACILITATION OF BUSINESS WITH APPROACH OF EMPLACEMENT OF ICT IN AVOCATION BRANCH USING ELECTRE MODEL

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ABSTRACT

It should come as no surprise that is said today, electronic revolution is finding more extensive aspects. In fact the growth of information and communication technology during recent decades impresses expanded effects on humanoid life including development and reinforcement of countries economic processes. Foreign commercial branch is one of the components in forming the economic environment of every country that can be influenced by ICT. Thus, the present inquiry is aiming introduction of effective factors on commerce facilitation and analyzing those with emphasis on ICT emplacement in ground of commerce and avocation.

For this target, at the first, the factors affecting business facility were extracted from present theoretical basics, then by DELFI model, every one of factors got some benefits in some indexes. These benefits are used as the basics for ranking the factors in ELECTRE model. The conclusion was this: the status is the most important factor than others and ICT devotes forth grad to itself among all the factors were introduced.

Keywords: Trade Facilitation, ICT, ELECTRE Model

INTRODUCTION

Today, in most of the organizations and the specialized and social branches of developed countries, attention to optimized performance and management, has been one of the principles that plays a significant role in attainment to the targets of organizations. It is sensible that lack of coordination with this trend triggers death of the organizations. While, companionship to that, produces optimized using of humanoid and financial resources, appropriate relation to other organizations and social groups, higher quality of work and reduction of the costs. In the other hand, the growth of ICT created new form in procedure of global relations by electronic transmission of data, banking, business and government policies, so plays a mind role in decision making and performance of activities (Vaghfi, 2005). During recent decades, ICT made expanded evolution in humanoid life, as all of the aspects of life are influenced by that. Although the value of using ICT in various sections of society is not the same, different parts are exploiting the advantages of that. Sections which could be referred are included: security, hygiene, environment, avocation, development of regions and etc. Now, it seems one of the most important advantages of ICT is relevant to economic. ICT can affect the economic in different ways. For example, ICT can contribute to facilitate or promote the space of avocation and business activities that the first case is relevant to internal economic terms of every country. Even so, it forms new labor principles among customers and organizations on the basic of ICT services. The benefits of ICT application in trade branch includes various cases: increasing the speed of informing and presentation of services, promoting the quality and quantity of the harvests, the possibility of market development, the possibility of measuring presentation of goods and services, inhibiting customers attitude to competitors, creation of extra value for consumers (Moradhasel & colleagues, 2011).

Business Facilitation

Business facility was expressed in assembly of world trade organization as an international accepted global concept for the first time in 1996. Then it arrived in documents of this organization with the same

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name as a target. Whereas, there are different viewpoints about the phrase "facility of business", it has presented various definitions about that. For example, in scientific surveys this phrase includes one space which the trade happens in and the meaning of that is forming transparency, creation of coordination with regional and international regularities, reinforcement of regular space and moving toward making professional the commercial organs. In the other angle, some definitions have executive nature, while all of the definitions, practically have common concept. For example, it can be referred to a presented frame by ESCAP that includes six key pivots in trend of trade facility: predicating the courses of trade, the transparency of custom processes, making regular the business and customs, necessity and undertaking about commercial trends, using the ICT and development of financial institutions. At the side of capabilities of ICT, other factors affecting the avocation space of the countries which depending on time and geographic condition, these effects are different. Overall, effective factors on business space, can be exhibited by conceptual model of DAFT. As it is seen, DAFT indicated telling factors in 9 indexes. Meanwhile this topic can be investigated by different aspects. For example, CLARK believes that the space of avocation is influenced by eight cases. However both of mentioned models have the same frames and practically every one of them researched in the branch of effective factors with different approaches.
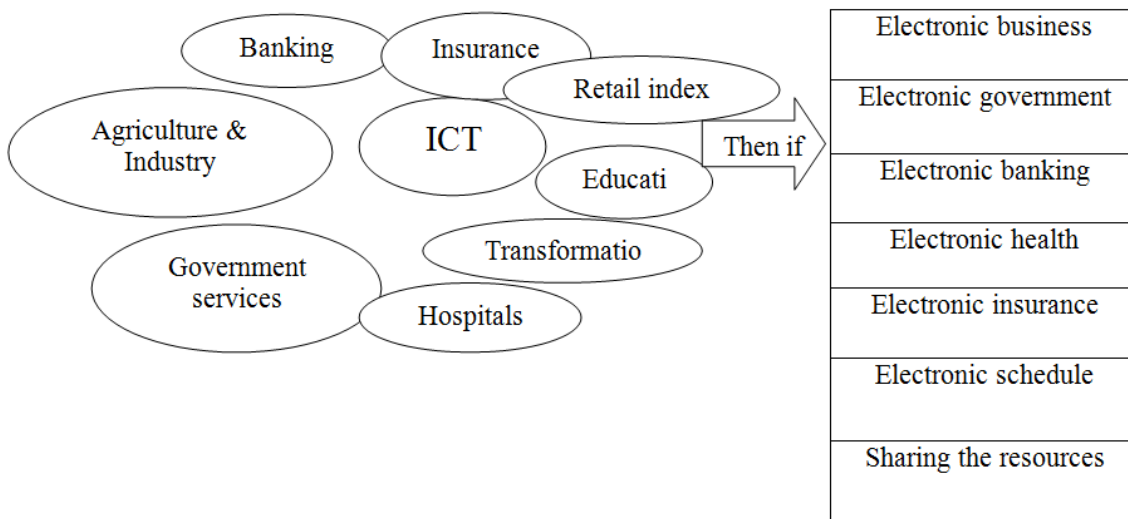

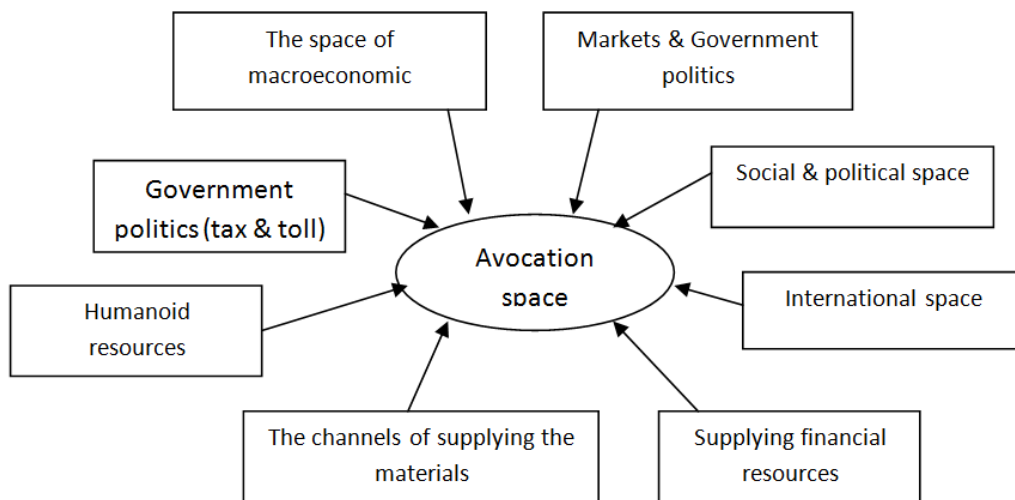**Figure 1: The holes of ICT effects on avocation environment**

Figure 2: Conceptual model of factors affecting avocation space using DAFT model

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No matter of two above models, SACHA AND ARTHUR (2002-2003) in their surveys which was published in the form of global competitive reports, presented an approach that researches about the factors affecting competitiveness index of countries economic spaces in trend of growth. These scientists presented a conceptual model in designing an index as competitiveness growth index which in, the fluctuations of this index are influenced by technology branches, public organs and macroeconomic environment.
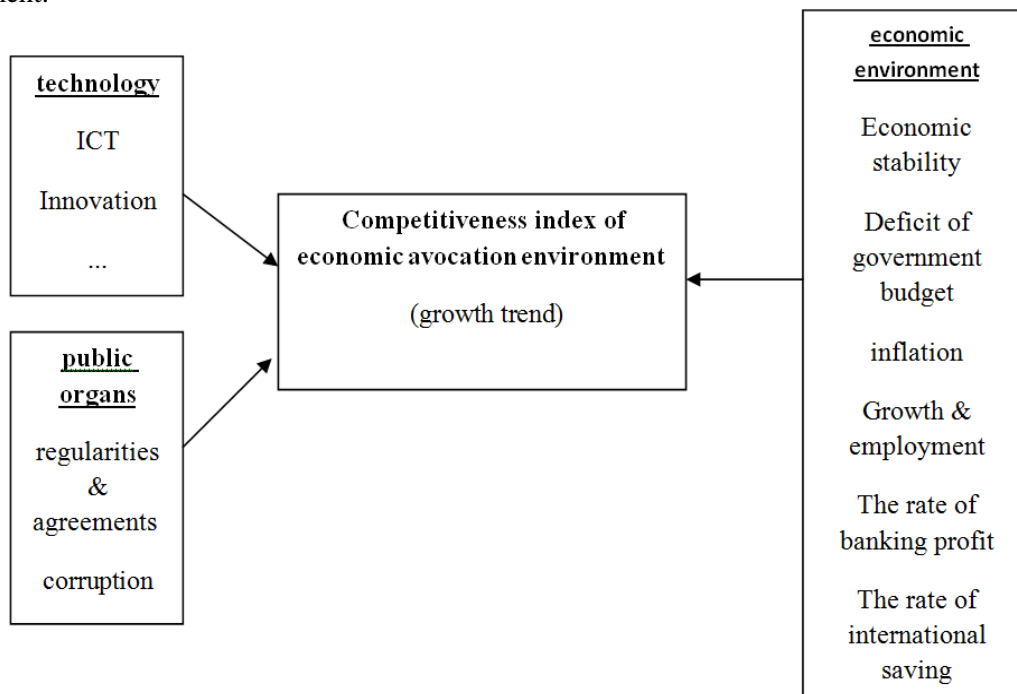
Figure 3: Conceptual model of the factors affecting competition index of avocation environment according to SACHS & ARTHUR theory

As it is obvious, in above presented model, every one of these branches are expressed and measured in the form of separated indexes.it is necessary to mention that in some inquiries, other indexes are defined in the branch of competitiveness, they are the reviewed prescriptions of sachs and Arthur model. For example, the global competitiveness index which is accounted and published annually. For accounting this index some ingredients like organs, infrastructures, macroeconomic environment, optimization of markets and preparedness in education and technology are used.

Analysis and Ranking Factors Affecting Avocation Environment Using Conceptual Model
At present time, using theoretical basics and mentioned models including DAFT model, KLARK model and SACHS-ARTHUR approach the factors affecting avocation environment of every country with macro approach, can be showed in the form of below conceptual model. In present survey, it is considered the extensive concept of business. In other expression, some factors which are considered, situate out of commercial branch. Thus, mentioned factors can be exhibited by figure 6. This model coordinates with the presented model from UNDP.

As it was said in before, this research endeavors to apply ELECTRE model for ranking factors affecting avocation environment and business facility. In this way, as the first stab, according to presented conceptual models, some indexes are introduced and then using by DELFI model, the benefits belong to every one of indexes. These benefits are used as the basics of ranking process in ELECTRE model. In ground of accounting the mounts of indexes, it is necessary to mention, the benefits of indexes are expressed in percent. It means the number of economic elites and experts who answered to the questions was 100. Table (1) indicates the scale of effects of indexes on every one of the factors affecting business facility and avocation environment progression.
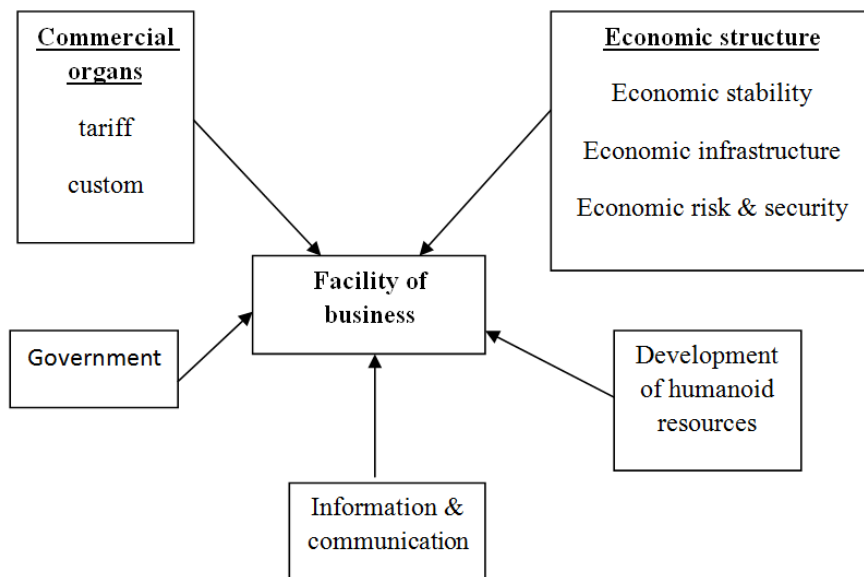
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Figure 4: Conceptual model of factors affecting business facilitation

Table 1: The benefits of factors by indexes (DELFI model)

factors	Political stability	Economic stability	Opening the economy	Lack of creation of space for participation of private section	Defective structure of national macro management	Technology infrastructure	Regular environment
Economic environment	6	18	23	16	17	8	12
Public organs	8	14	7	10	33	12	16
ICT	4	3	21	6	13	48	5
Commercial organs	9	20	16	11	3	6	35
Government	20	21	14	15	11	0	19

In Electre model the respectively:
a) All the digits in every column of high table should be squared and then the square roots should be congregated the square root of this sum should be accounted .
b) Then the row data in table 1 should be divided on the square root which got from numbers of relevant column.
c) Next step in Electre model is giving weight to every one of the indexes.as it was mentioned, the weights are estimated by DELFI method. These weights are indicated in below:
Political stability………………….0/20

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Economic stability………………..0/18
Opening the economy……………..0/06
Lack of creation … ………………..0/14
Technology infrastructure…………0/14
Regular environment………………0/01

d) Now, result data from third step, should be multiplied in relevant weights.

e) In this step, positive and negative indexes are separated.

f) In this part, the alternatives are compared together in couple and considering the positive or negative amount of them, it should be selected the more or less amount of them.

g) Now, harmonious matrix should be formed. For forming this matrix, after comparing couple, it should be considered the selected amount for every couple of alternatives, then their weights must be gathered.

h) After forming the harmonious matrix, internal digits of the matrix should be gathered together and divided into 20. (the number of lines in couple comparisons matrix is 20).

i) In this step, it should be formed unharmonious matrix. For creation of disharmonious matrix it is enough to decrease components of result matrix of forth step from each other.

j) As the harmonious matrix, the digits of disharmonious matrix should be gathered together and divided on 20.

k) Now it should be formed harmonious and disharmonious effective matrixes. These matrixes form by digits 0 and 1 regularity.

l) The components of effective harmonious matrix should be multiplied in the components of effective disharmonious matrix and thus the final matrix forms. The final matrix has one column with the name of "win", one column with the name of "loss" and one column with the name of "final answer". In fact sum of the lines will be "win" and the sum of the columns will be "loss". the higher digit amounts respectively, produces the favorite reply of present research.as it is observable in table 2:

Table 2: Ranking the factors affecting business facility and avocation environment (ELECTRE)

The factors affecting business facility (on basic of importance degree)	Grades of factors
Government	1
Economic environment	2
Commercial organs	3
Information and communication technology(ICT)	4
Public organs	5

CONCLUSION

In this survey, the aim was analysis and ranking the factors affecting business facility with emphasis on emplacement of information and communication technology. In this way, as the first stab, the theoretical basics and conceptual models were presented till it to be described how various economic and social factors affect business facility and avocation environment, so the principle and effective ingredients and artificial indexes were introduced and demonstrated. Then by DELFI model which is on the basic of the integration of experts opinions in relevant branches, the weights of indexes were determined. In the next step in addition to explanation of ELECTRE model mechanism which was applied in this inquiry, the mentioned factors were gradated. The conclusion expresses that among five mentioned factors in this survey, government situates in the first grade and other factors including economic environment, commercial organs, ICT and public organs, respectively devote grades second to forth to themselves.

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