FACTORS OF RISK IN E-BUSINESS

C. ISPAS, Cristina MOHORA, Valentina Mihaela GHINEA*

*Studiul de faţă se doreşte o încercare de stabilire a relaţiilor dintre termenii ecuaţiei **e-Business.** Aceasta este o ecuaţie transdisciplinară (cu termeni din diverse sectoare: economic, politic, social, juridic, cultural, etc). Se poate constitui astfel baza creării unui model computerizat. Acest lucru se datorează faptului că, odată ce s-au stabilit relaţiile dintre factori, se poate trece la cuantificarea şi transpunerea lor într-un model computerizat. Astfel, utilizatorul primeşte o mână de ajutor în stabilirea celui mai probabil impact al posibilelor schimbări.*

*Present study wants to establish a correlation between the **e-Business** equation terms. This equation is a cross-disciplinary one, with terms from various sectors: economic, political, social, legal, cultural, etc. Thus, it can be created the basis of an electronic model. This is because once the relations between factors were established,onet can pass on their quantification and transpose in an electronic model. In this way, the user is helped to reveal the most probable impact of the possible changes.*

Keywords: ***e-Business***, analyse, factor of ***risk***.

Introduction

The present article takes into account one company's situation. The company has an open-mind managerial staff that also practices a prudential policy. It is not something usually for this staff to invest in a new technology without knowing the risks that can appear. So, the managers decide to analyse the possible implications of this kind of policy change. They are also pretty sure that it is not so easy to run an ***e-Business***. These are some of the reasons for which the managers try to apply some analysis methods [2].

1. Six Thinking Hats method

The first technique is *Six Thinking Hats*. Created by Edward de Bono, this is an important and powerful technique. It is used to look at decision from a number of important perspectives [3]. This forces the person to move outside of the habitual thinking style, and helps to get a more rounded view of a situation. It

* Professor, Dept. of Machines and Manufacturing Systems; Professor, Dept. of Machines and Manufacturing Systems; Ph.D. student, Dept. of Machines and Manufacturing Systems, University "Politehnica" of Bucharest, ROMANIA

has the benefit of blocking the confrontations that happen when people with different thinking styles discuss the same problem.

The advantage of *Six Thinking Hats* technique is that helps the person to put himself in the ambition's place, then in the skilled's, sensible's, creator's and also the good planner's situation. From a very simple point of view, each "thinking hat" is nothing else but a different style of thinking. Thus, in this light, it can be said that [1]:

- ***„White Hat"*** helps to focus on the available data (what can be learnt from it, how can be fill the existing gaps or, at least, the taking into account of them).

Otherwise said, the most proper persons are invited to sketch the broad image of the company, focusing on its strengths, but also on its weaknesses. For example:

- *object of activity* (market type, market share, reputation, tradition, target market, etc);
- *supply chain* (suppliers' market type, the percentage of row materials cost in the final price of the product, etc), *production chain* (the organisation and period of the internal processes, etc and their implication on the final price) and *delivery chain* (sales channels, their length and width, how they increase the final price, etc);
- *company's climate*, the employees' interaction, the front board manner of acting, level of training, the periodical training, etc.
- *marketing studies* (the product offered by the company is the ideal product for the client, or this one buy it just because this product is the best for that moment?);
- *auxiliary costs* (communication cost, labour cost, accident cost etc.);
- *payment method used* (techniques for supplier's payment and for the products sold, the delay between delivery and the incomes receiving etc.);
- *decisional flow* (management manner and how it affects the business processes period etc.) etc.

- ***„Red Hat"*** makes the wearer to look at problems using intuition, gut reaction, and emotion. It also reminds the need of *empathy*. The attitude of Red Hat wearer can emphasise the advantages but also the disadvantages of decision taking.

"The wearer" could be the person understanding the new trends of market, the fact that the probable customers already want new delivery channels, new ways of running trade, in accordance with the new IT performances (*a*, figure1). This wearer could also be the one interested in a new kind of brand promotion, market testing and touching new market segments (*g*). The passing over the geographical limits supposes a brave act, this being the reason for which the idea can be assigned to the same Red Hat wearer (*h*).

It can't be forgotten the emotional face of this segment of people, their capacity of empathy. Thus, it can be discovered that the reputation can be very sensitive and an easy to destroy thing (*s*). Not every country is so flexible; as a consequence, some legal restrictions can be imposed (*v*). A change of the business approaching way can reveal some managerial problem (*z*).

- "***Black Hat*"** brings into discussion all the bed points of a decision. These must be cautiously and defensively looked. The Black Hat wearer is a pessimist and circumspect person. Therefore he will always see only the dangers that can arrive. In this case, he will certainly consider very important the fear of the employees confronted by the new IT technology (*m*), and he will object regarding its cost. He will probably observe the risk of malfunction and the inherent moral wear (*n*). The risk of hackers' activity (*r*) and that of the electronic payment will be also reminded (*t*). And for being more convincing, he will add the non-existence of *e-Business* culture which could sustain the adopting efforts of this new kind of business (*x*).
- **"Yellow Hat"** helps to think positively. It is the optimistic point of view that emphasises all the benefits of a decision. It helps to keep going on when everything looks gloomy and difficult. Thus, it will be considered very important the increase of orders taking promptness (*b*), the improve of employees' reaction (*c*), the decrease of supply period (*d*), the decrease of row materials expenses (*e*) and also the decrease of selling price (*k*).
- ***"Green Hat"*** stands for creativity. It is a freewheeling way of thinking with no criticism of ideas. It can help to find a solution for dilemmas whatever it would be the side of the problem. For example, by employees training (*l*), it can be decreased their fear for new technologies (*m*). By business processes organising (*u*) can be solved some management problem (*z*) and emphasised some positive parts like speed reaction (*c*), the decrease of supply period (*d*) etc. Making and presenting some product selection in a virtual shop will attract a customer type. It will also encourage the client to sketch the ideal product (*f*). The decrease of communication costs (*i*) will balance that of IT technology (*o*), and the increase of labour spread (*i*) can be a consequence but also a premise of the geographical limits braking (*h*).
- ***„Blue Hat"*** stands for process control. It is "worn" by people chairing meetings. It gives the possibilities of disposing the "change of hats" if it is the case.

After every participant speech, it is necessary to analyse the result of the *Six Thinking Hats* method.

Thus, firstly, it was gave the possibility to speak to every kind of people. Secondly, it was obtained enough information regarding to potential effect of a business rearrangement. But it couldn't be solved their ordering and division on

the two main directions, namely, the sustaining and non-sustaining of e-Business implementation techniques. The conclusion is no decision was taken.

2. Force Field Analysis method

In order to solve this problem, it can be used *Force Field Analysis* technique [3]. This is a specialised method of weighing pros and cons. By carrying out the analysis it can be planned to strengthen the forces supporting a decision or/and reduce the impact of opposition to it. Both parts are taken into discussion, and then pointed; the result is each relative importance's established.

Thus, firstly, all forces for change will be listed in one column and all forces against change in another column (figure 1). Then, in accordance with their contributions to the company's well function, a score to each force will be assigned from 1 (weak) to 5 (strong). This thing is very subjective and for that this kind of analysis must be personalised. Finally, a total will be made for each force.

The result can be regarded both as an argument for the implementing / non-implementing the new IT technology, and as a simple start point for another debates and solutions looking for. Next figure show a possible *Force Field Analysis* diagram. Do not forget that the situation is a general one, of an average company willing to sustain the progress and performance. In a real situation, a company can be confronted with all these factors or just a part of them. Next to these, a lot of factors particular for each company can be found.

Comparing the two score reveals a bigger weight of the opportunities brought by the traditional way of thinking renouncing. It also speaks about a changing tendency.

3. Systems Diagrams method

In order to take a final decision, it appears the necessity of understanding the way that a change in one factor may impact elsewhere. This doesn't result from *Force Field Analysis*. Just for this reason it can be used *Systems Diagrams* (also known as causal loop diagrams). This is a powerful tool that helps to understand how complex systems work (figure 2). It is excellent for flushing out the long term impacts of a change. ***Importantly, a good system diagram will show how changing a factor may feed back to affect itself.***

Drawing a system diagram is a good way of starting to build a computer model [1]. The technique helps to map out the structure of the system to be modelled. It shows the factors and relationships that are important and helps to start quantifying the linkages between factors.

In this case, the diagram shows the general situation of a company willing to implement ***e-Business***. At the beginning, the central factor of the analysis is

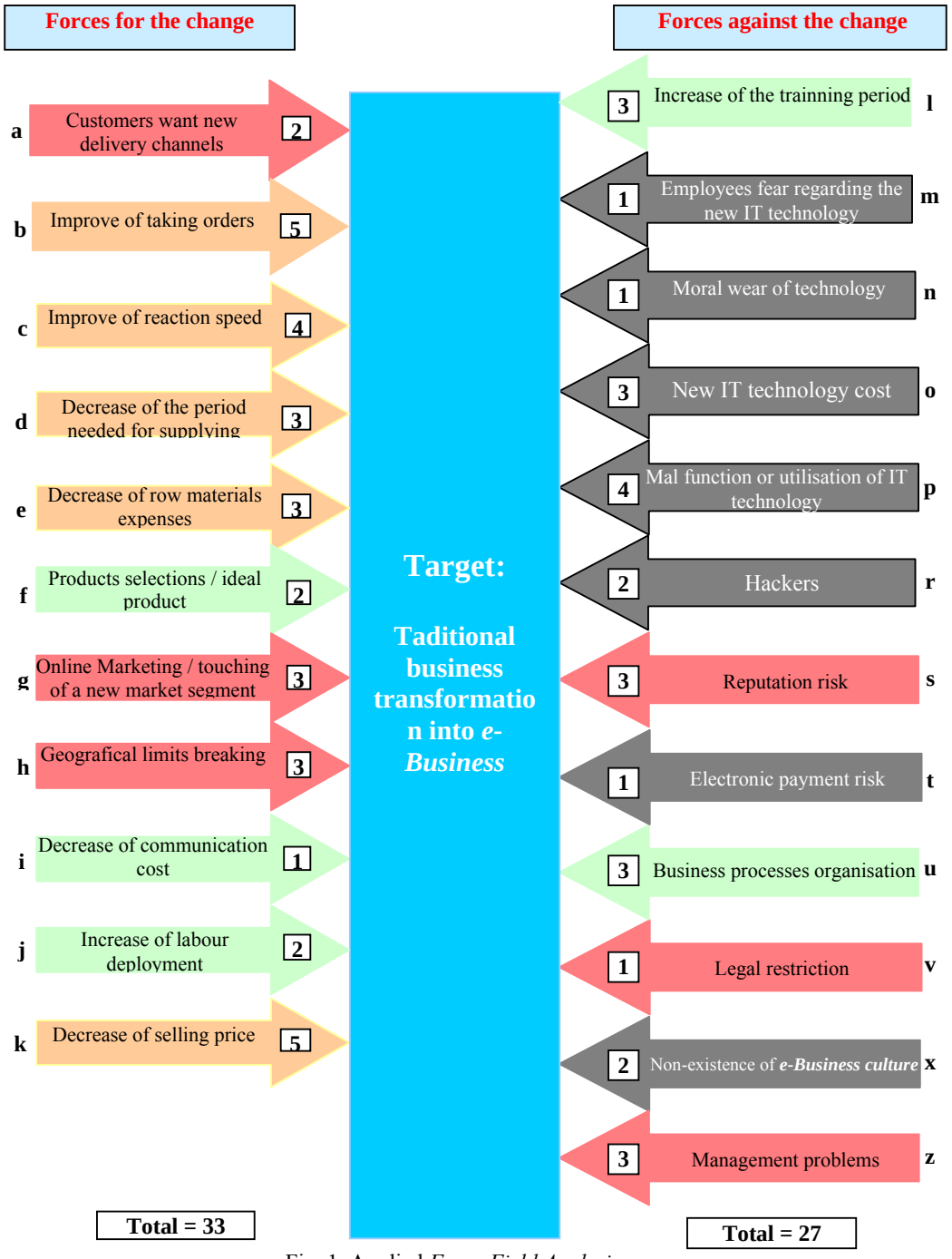

Fig. 1. Applied *Force Field Analysis*

established. Depending on its result, the final decision will be taken. In fact, the whole analysis starts and ends with this factor. In our case, the ***profit***. At the end, this factor will be linked to the others already identified.

The ***S*** shows two factors moving in the same way (as first improves, so will the second). In contrast, the ***O*** shows that the relationship works in the opposite way (as it is raised the first, the second will be reduced). The arrow from the centre of the diagram shows the direction of the relationship. The reciprocal is not necessarily true (improving the quality of a product leads to improved customer satisfaction, but raising customer happiness does not necessarily raise the quality of the goods).

Figure 2 shows that the first causal loop can be established between *profit, IT new technology investment, ordering period, business reaction (way of organise and degree of business processes overlapping),* and *customer happiness (being the study object for CRM – Customer Relationship Management).* In fact, these factors speak about the ***intranet*** and its relation with the services of improving customer services. One company's ***intranet*** supposes the existence of automatic work flows and informations between its different departments. It can be observed that the feedback amplifies the impact of the change.

The second loop makes a broad analyse of the change caused by the ***extranet*** appearance (this being a kind of private internet over the *Internet*, used for companies' connection). This loop sketches the influencing relationship between *profit, IT investment, supplying period, row materials expenses, selling price of the product, customer happiness.* It is obviously that some increases of the profit can appear.

The third causal loop represents the ***Internet*** spinal column. It reveals its implication and consequences concerning a company: *profit, IT investment,* ***e-Commerce*** *appearance and development, geographical limits breaking, legal restrictions, customer happiness.* Unfortunately, in spite of general expectations, the result of this loop can also be a decrease of company's profit. So, an ***e-Commerce*** side development will increase ***the risk*** of hackers appearance (the two slashes show a possible delay between the events. This can lead to a wearing down of the company's reputation (***O*** link), and going on, to a customer's disatisffaction (***S*** link).

Analysing loops number 1, 2, 3 and 4, it can be observed that a good result can be obtained not only from ***S*** links, but also from ***O*** links (loops number 1 and 2). Loops number 3 and 4 show possible threatens finished with possible decreases of the analysed factor (present case, the *profit*). These observations are very important because of their help offered to the proper persons in taking into discussion the company's weaker points.

Far away to be finished, the diagram must also presents the factors influencing the IT investment value. It is easily to see that *the employees fear*

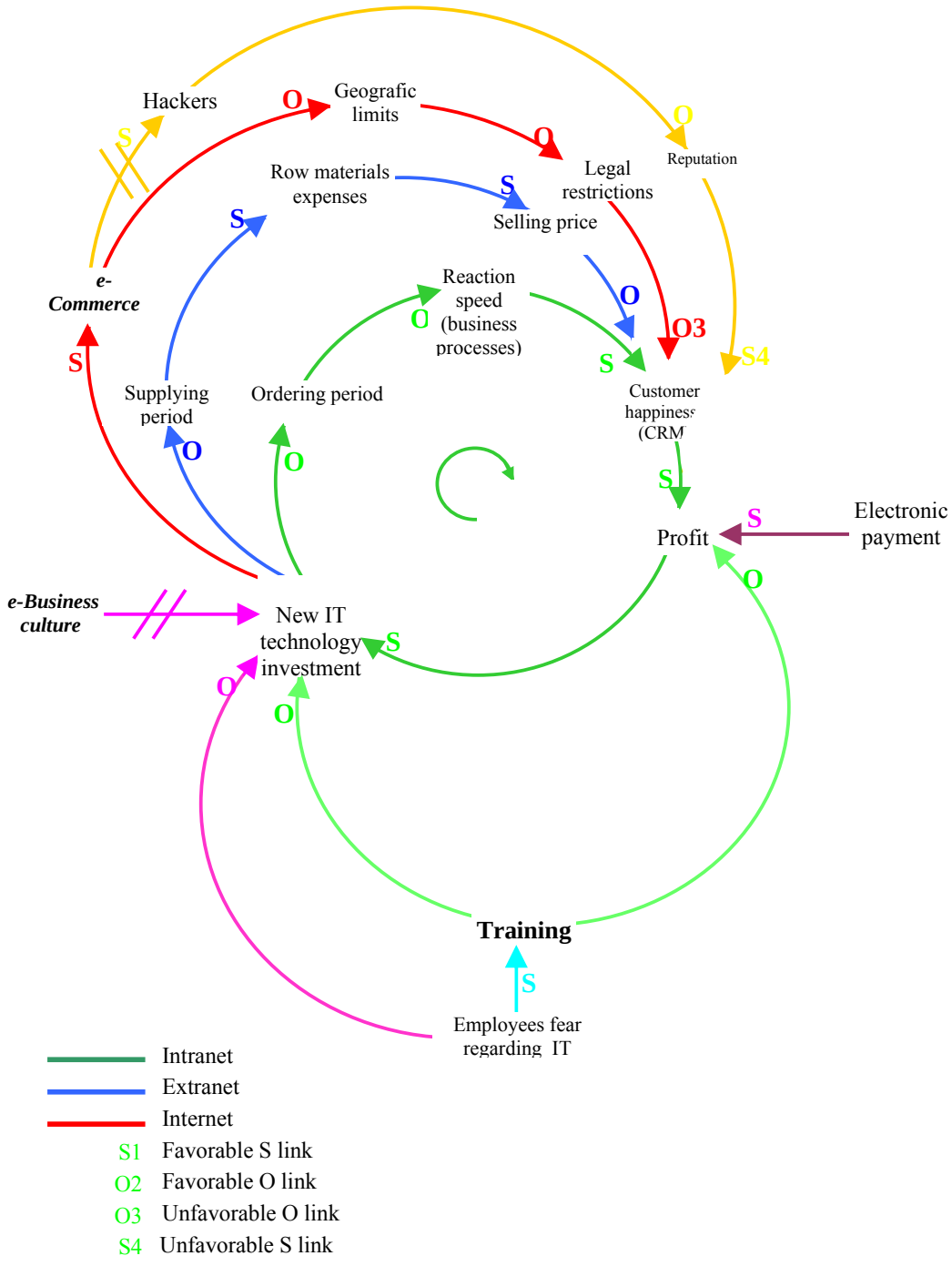

Fig. 2. Applied *Systems Diagrams*

regarding the new technology and *the period required for training* directly action on it. From financial point of view, an increase of training expenses leads to a decrease of company's profit (***O*** link).

Do not forget the seeming independent factors like ***e-Business*** *culture, electronic payment*, etc. These certainly have more or less important functions, depending on each company's and market's specific.

Conclusions

Present analyse did not try to quantify the identified ***risks***, first of all because of its very subjective nature, not everybody agreeing it. The chosen situation was a very general one, of an average company willing to implement the new IT technology. Next to these, the problems itself is too complex to receive a clear answer.

Other words, systems diagrams allow the simulation of complex systems work. They equally help to reveal the interaction of one system's factors. Decision of proceeding or not to the change is extremely *subjective*, the explanation consisting in *personal judgement and risk appetite of each person apart that must be taken into consideration in a decision process*.

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