

Modelling of Knowledge as a Tool of Risk Evaluation at Exporting to China

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Abstract

Current society is often described as “knowledge-based” because knowledge represents the most important and also most expensive intangible asset. As the human’s brain capacity is quite limited, different knowledge-based models were and are developed in various areas of business. This paper presents a rough draft of knowledge-based model designed in order to evaluate the total commercial risk of a business entity at exporting to China. In general, international trade is always joined with various business risks while some of them are closely associated with habits of a country. Chinese market is considered to be the world’s largest but the most competitive at the same time. Nevertheless, the China trade habits are the key factor determining a success of business relations. Presented draft model is constructed on the basis of research findings with the objective to minimize the commercial risks of the Czech exporters on the Chinese market.

Keywords: Commercial Risk, Export, Knowledge Model, Trade Habits

1. Introduction

The international trade belongs from the long-term perspective to the drivers of the global economies. There are potential benefits related to the global business strategy, however, on the other hand, there are many risks associated with these international activities (Hoffman, 2008; Reuvid, 2008). Naturally, any kind of entrepreneurship poses a risk to the entrepreneur, and the risk is multiplied with crossing the borders of the home country. Since the globalization in this particular case is highly relevant, the number of internationally trading entities is rising and therefore, answers for related questions needs to be provided. As the questions rise, number of various studies on international commercial risk rises as well.

The general conception of risk associated with the international trade and risk classification bear the same patterns, however, as far as the commercial risk is involved, the particular definition of commercial risk is lacking. This paper aims to identify both theoretically and empirically the term commercial risk to put the basis for further research in the field of international trading relations between the Czech Republic and People’s Republic of China (China). China and its mutual trade balance with the Czech Republic confirm its position not only in the Czech exporting strategy, but also globally, on the world market.

As the globalization expands, the companies are trading also internationally, which means higher various risks exposure (Ekpenyong & Umoren, 2010). Those risks are specific and cannot be undervalued by the companies; they should be rather managed as specific trade risks called trade or

commercial risks. Whereas the standard risks are easily identified and managed (Miccolis, 1996), especially the diversifiable risks, the trade risks are special. In going global, Czech companies have to face a number of various commercial risks associated with exporting their products abroad. Janatka et al. (2001) consider the commercial risks as potential future losses emerging from business activities related with export or import of goods or services. These are the examples, as stated by Janatka et al. (2001):

- Risks associated with production, packaging, and labeling of products,
- Risks associated with selling and delivering of products (i.e. trade risks),
- Risks associated with negotiations errors or flaws,
- Risks associated with counterpart,
- Risks associated with territory and legal system,
- Payment risks and exchange rate risks,
- Risks associated with product responsibility,
- Specific unforeseeable but diversifiable risks.

This interpretation includes also the broad range of risks associated with the international trade. However, this range is beyond the paper scope. Other scientific literature and the research responders see the commercial risks in the narrower sense (eg. Černohlávková et al., 2007; Grath, 2008; Janatka et al., 2004; Machková et al., 2010; Polák, 2012):

- Withdrawal of Chinese counterpart from a contract,
- Change of the contract parameters,
- Failure to take the delivery by the counterpart,
- Non-willingness to pay of the counterpart,
- Debtor insolvency.

Janatka et al. (2004) consider the commercial risks either expectable or non-expectable insolvency, or non-willingness to pay. According to Grath (2008), the commercial risks are associated with the ability to fulfil the business obligations, including the risk of insolvency of the client. He recommends the prevention: to check the business activity of counterpart, especially the financial reports, before any contract is signed. Also Machková et al. (2010) relate the commercial risks to the obligations of customer's payment conditions. Primarily, the two counterparts (exporter and importer) are involved; however, there are also other participants involved, for example carriers, forwarders, inspecting companies, or insurance companies (Arteaga-Ortiz & Fernandez-Ortiz, 2010). The negative consequence of commercial risk means not fulfilling the contract, partial transaction, or unfavourable deviation from the contract. On the other hand, all the commercial risks are present not only on the international arena, but also on the home market. Needless to say, the consequences of international commercial risks are often more serious due the difference in legal and cultural system. This fact also represents the reason why knowledge is the most important asset in international trade, but not only in international trade, it is possible to say that it is in every sphere of business.

Objective of this paper is to present the possibilities of knowledge modelling application at evaluation the commercial risk connected with exporting to China. This paper is based mainly on the secondary research while partial results of the primary research are presented here as well.

2. Knowledge Modelling

In the human's history, the name of society is usually derived from a prevailing mean of production; e.g. slaves, land, capital. Then, the power in society was held by the one who had owned this mean of production. But the progress, it is a change of a mean of production, in final result, the change of society, has always been proceeded from new train of thought that had led to a new invention or knowledge. It means that shifts in way of production, finally, movements in development of society, were caused by knowledge just because any impulse, any intuition is always born in the brain, never in muscles (Skalický, 2004).

Knowledge has been used in mounting degree from the last quarter of the 20th century. Then, the knowledge was also the thing that has made customer the crucial element of decision making process of what to produce and how to produce (Skalický, 2004). In an increasing number, organizations are becoming aware a necessity of relevant usage and management of their intellectual capital that is going to be a strategic source and a factor of high competitiveness in recent years (Bureš and Čech, 2003). This way, knowledge is, and will be the most important and the most desired mean of production. The society is changing as well; industrial society is shifted into information society that stands on the edge of knowledge-based society. But it does not mean that knowledge had no importance in previous forms of society. Knowledge-based society is the synonym for a society where knowledge is the deciding mean of production.

According to Skalický (2004), with regard to the fact that owners of knowledge are humans there should be found some analogy to slave society where main mean of production were humans, slaves, “owners” of physical power which were usurped by slaveholders. Nowadays, the mean of production is the knowledge; it means intellectual power of humans. But the author (Skalický, 2004) does not envisage a commencement of modern form of slave society at all. The cooperation between intellectual capital owners and financial capital owners is a necessity.

2.1 Business as a System

It was a custom to have an opinion of a business as of a bounded unit in seclusion for a long time in the past. Disinterestedly, this point of view is quite incorrect and very limited, and with sharp border separated from the reality because a business is formed with a web of activities, powers, means, relations, experience and knowledge which have to be transformed into an outcome. Then in present, businesses do not compete only by some of their market assets but the businesses compete by everything that is joined with them. More and more factors then the “only” product are employed in competition endeavour (Jirásek, 2006). Undoubtedly, it is necessary to see a business and international business as well, as the system.

In general, system is defined as a set of certain elements where some relations between elements exist. At the same time, every system has its environment, and is in certain interaction with this environment (Valach and Klír, 1965). According to other authors a system is understood at quite same way; e.g. Dostál (2005) defines the system as purposefully defined set of elements, objects, and set of relations between them which make a certain function or behaviour as a whole. “Humans already speak of institutions and organizations like they have a biological character, like they should be animate organisms.”¹

¹ According to Kelly, 2007; p. 245

Present world changes very fast. While adapting to new conditions, it is not possible to rely on approaches and algorithms from the past when substantially different conditions have been in validity. That is why the right behaviour and decision making in business is objectively very difficult, and a careful consideration of every possible impact on a global result of the business should have to play very important role. Functionally, to assess and to compare how and to what extent should certain decision, action, respectively its outcome, help the main business target make great sense. Such a principle supports perception of business as the complex unit, as the system, and supports the global perspective on business performance (Basl, Majer & Šmíra, 2003).

2.2 Model of Knowledge

General definition of a model says that model is understood to be a way of depiction and investigation of reality when complexity, behaviour and other attributes of one whole are conveyed by complexity, behaviour and other attributes of another whole, of the model (Brožová, 2006).

The word “model” as a concept is used very frequently in scientific publications. Even though the concept “model” is multi-meaning; it is possible to describe a model as a simplified form of map of features of reality (Hebák, 2003). Model is then intentionally simplified image of reality formed with chosen means of display. Model is an instrument of cognizance, and a mean of complex tasks’ solution. It is characteristic especially by functional reduction of reality that is forced by complicatedness of reality on one hand, and that is also intentional with regard to pragmatics and economy of the model and of working with it. That is why the analogy between model and reality is not perfect. Then the model should be seen as medium of experimenting, of accumulation and evaluation of results, and as a basis for development of a new system or for improvement of an existing system (Brožová, 2006).

Modelling of knowledge represents the sub-field of the knowledge engineering that is focused on formation of knowledge-based models more than on final implementation of knowledge-based systems (Berka, 2007). Model is purpose-built abstraction that enables to reduce complexity of investigated subject in such a way that it focuses only on some of its aspects.

At the knowledge-based model, an abstraction consists in departure from details of implementation. In the knowledge-based model, knowledge is captured relatively independently of deriving algorithms and of symbolic presentation while the knowledge bearer can be existing knowledge-based system, planned knowledge-based system but also a human expert (Berka, 2007).

The whole of knowledge represented by values knowledge’s components is possible to be displayed in the concept of system, respectively the system of knowledge here. Space of knowledge, the system of knowledge in a model form, is activated² in available subjective, technical, communication and implementation capacities, it means in capacities and in possibilities of users, receiver of knowledge (Vlček, 2003).

Then the system of knowledge has to fulfil following distinctive components of system (Vlček, 2003):

- selection of elements identified with their functions;

² in the system interpretation, as processes focused on certain behaviour aims

- definition of relations between elements, and of processes emerging from elements chaining;
- recognition of generic characteristics of the whole, of the knowledge, and of its identity.

These definition requirements are carried on constructions of knowledge components' spaces, on constructions of space of knowledge availability, and of space of knowledge usage. Elements of such a tri-dimensional space of system of knowledge represent the tasks of sub-spaces chained by joint interfaces of their inputs and outputs, and realizing processes represented by level of theoretical spaces coverage, i.e. by level of coverage of possible partial spaces.

Number of elements in the system of knowledge, given by the number of tasks at different detail level, logically runs to enormous extent. On one hand, such a number shows a volume or an extent of modelled subject, i.e. an ability of population to solve its problems, but on the other side it is also a support of the statement that system of knowledge as a model of object is not constructively manageable in its complexity. This way, it also supports the claim that control of object by the means of system tools has a sense only at higher resolution level.

In system of knowledge, the regulatory function is given to the external environment. If this regulator would not be applied it leads to emergence of disorder and uncontrollability, i.e. non-functionality of the system of knowledge. In the theory, such a situation is closely connected with the concept of chaos.

The extent and the application of environment of knowledge represent the current level of population ability that is usually joined with cultural level of population, i.e. historical, educational and social level (Vlček, 2003).

2.3 General Knowledge for Effectiveness

At measuring the effectiveness in various spheres of business the basic measure is always a form of input to output ratio.

This way it is possible to measure an effectiveness of every input factor. But the greatest weight carries the overall effectiveness, of course. Technical sciences (e.g. Wöhe, 1995) then look effectiveness as "a level of energy employment". Undoubtedly, even if there is this objective technical side of effectiveness, only to assess this side at global effectiveness measurement is not enough. It is always necessary to measure the value of every input, and to realize that everything what is able to change values of anything could also change its effectiveness (Synek, 2002). Then, according to Heyne (1991), every change in preferences can basically change effectiveness of any process. It means that there is also a subjective side of effectiveness, i.e. what is effective in one business needn't to be effective in another one. As for effectiveness, it is relative because the targets of economic subjects are on the front burner. Relative effectiveness is then considered as another side of effectiveness that is expediency (Heyne, 1991).

Necessarily, effectiveness is the concept that is related to values where value of inputs and value of outputs are measured; to appraise inputs and outputs is the condition. A value of all performances within a given period is taken as an output that is usually measured with an income or a profit. On the other side, an input is measured with means of production used for the output fabrication which are considered as costs or invested capital.

$$\text{Measure of effectiveness} = \text{value of output} / \text{value of input} \cong \text{income} / \text{costs} \cong \text{income} / \text{capital}$$

(Synek, 2002)

These indicators could be also considered as characteristic of economy because e.g. Heyne (1991) takes “effectiveness” and “economy” as synonyms; both denote effectuality of means of production usage in order to reach the targets. The economy becomes evident in effort to reach a maximum with minimum of claims, technical and even economical. Fundamentally the principle of economy is nothing else than a requirement to saving spend of resources (Zwach, 1945). Then the following indicator would be right indicator of economy (Synek, 2002).

$$\text{Economy} = \text{real costs} / \text{costs at optimal combination of inputs}$$

With regard to these theoretical bases, any assessment of effectiveness would be always constructed on the sight business targets.

3. Knowledge in International Business

The scope of commercial risk in international business is given by a range of factors. It is generally presented that understanding a territory is the basis for effective contract realization. This statement is true in full in accordance to determination of partial risks which represent the total commercial risk. Incomprehension, respectively ignoring the environment of foreign markets and mentality causes that from the viewpoint of probability, the scope of commercial risk in limit is closing to one. Then, it is obvious that if exporter is not ready to behave with given cultural, commercial and mental differences it would not be possible to realize and finish the contract successfully, the loss of invested resources will be suffered while substantial risk of patents and design copying occurs.

3.1 Elements of Effectiveness of Export to China

China represents a huge market not only for exporters but also for production of domestic business entities. Foreign companies which have production facilities in China try to translate their trade marks to Chinese, selection of proper Chinese signs included, in order to increase attractiveness of their products in Chinese market. Chinese government starve to maintain one-way flow of good that is possible to be characterized as “investments to China, goods from China”. The opposite flows are minimized up to the scope of current need of production resources, goods and luxury goods, services, and investments.

With regard to these facts, there exists only one possibility how to penetrate the Chinese market. The product of a company has to attractive for the Chinese party enough to motivate it for negotiation and realization of contracts for a period until another alternative product is found, or until the Chinese party finds a way how to enforce its negotiation position, or also until the Chinese party finds a way how to make the product by its own facilities.

Based on the outcomes of primary research, it is necessary to point out that one of the great risks of exporting to China is payment risk. In case the Chinese party does not fulfil its liability to pay, this situation is not seen as theft. In mind of the Chinese partner the contract is correctly finished while the Chinese partner was the stronger and more successful one.

Another great source of ineffectiveness at exporting to China is that in China, there are acknowledged only those patents and trademarks which are registered directly at Chinese offices where repeated registrations are necessary. Stronger position in this case has always the exporter who supplies goods, equipment or technologies which the Chinese party is not able to assure by self-resources. Nevertheless, it is always possible to assume that in certain period the Chinese party would make a copy of any imported supply and would start the production of its equivalent. This way, the technological lead and subsequent great competitive advantage is the need.

Following the results of primary research, there are defined the main issues of effective exporting to China. These are:

- Technological competitive advantage,
- Patents and trademarks registration at Chinese offices,
- Payment conditions,
- Adoption of Chinese behaviour.

These four elements represent complex groups of activities which exporter's financial funds would be spent on. It means that these four elements are considered as inputs measured with financial expenditures³. At the process of decision making about these inputs, three decision making principles are possible to be applied; these are⁴:

- Maximization (Minimization);
Basic principle of the classical theory of decision making that leans on the finding extreme of a criterion equation.
- Optimization;
Searching for an optimum is a formulation of some compromise that is the integrated result of several factors influences.
- Satisfaction;
Decision maker goes for such a variant that satisfies his aspiratory level when higher aspiratory level leads to a variant getting closer to optimum.

Knowledge, more precisely wide range of knowledge is necessary here of course. This knowledge has to lead off the environment of knowledge that comes, said in the simplified way, from a system creating exporter's satisfaction; it means what customer wants and what impact on business effectiveness it would have.

3.2 Construction of Knowledge-based Model

Representation of knowledge in the knowledge-based model is currently not able enough to cope with time-conditioned or space-conditioned knowledge, or with inconsistent knowledge. That is why the stage of knowledge acquisition is still marked as a weakness of knowledge-based models, respectively knowledge-based applications making (Brožová, 2006).

Knowledge base is a set of prerequisites, assumptions, and conclusions, inferences which are expressed in the form of implications possibly completed with logical conjunctions. Establishment of

³ also the spent and many other "pieces" of inputs have to be (and are possible to be) evaluated with finance

⁴ see e.g. Beranová (2007), Fotr et. al (2006), Mañas (1974)

knowledge base generally consists in following five stages.⁵ At the first stage an expert sets the list of possible solutions of a problem that is the subject of this knowledge base. Elements of this list represent conclusions which the future knowledge-based system should provide. After obtaining the list of solutions (targets), system clusters these solutions into groups for three and asks the expert for definition of the characteristic for the triplet that distinguishes one element of the triplet from the other two. This characteristic have to be defined as opposite values like “yes – no”. At this stage, in the cooperation with expert, rating grid emerges. This rating grid is a certain kind of table where every solution (target) is described with these characteristics, so called constructs. At defining these characteristic it is also possible to work with uncertainty. After the creation of rating grid, system constructs the knowledge in a form of implications between single poles of characteristics. Activities of the system follow with generating of rules. Target rules⁶ are generated at first. Then, one rule with the factor of certainty is generated from every cell of the rating grid. Intermediate rules are generated for every implication found as mentioned above. Realization of rules leads to the stage when two rules come out of every construct to every subject. These rules are as follows⁷:

$$\begin{aligned} \text{If } v_j \text{ then } O_i \text{ waged with } w_{ij} \\ \text{If } -v_j \text{ then } O_i \text{ waged with } -w_{ij} \end{aligned}$$

Wage w_{ij} is given by the product of the *value* t_{ij} from the rating grid and of the *importance* d_j of the j^{th} –construct that is multiplied by correction coefficient f_m then.

$$w_{ij} = f(m) \times d_j \times t_{ij}$$

(Berka, 2007)

After establishment of all the rules, expert can start the stage of testing the knowledge base. If results of such a consultation show incongruence another tone down of the knowledge base⁸ is done.

Very important step before implementing the knowledge-based system is a realization of syntactic and semantic control of the knowledge base. This is also called verification and validation of the knowledge base (Brožová, 2006).

As it is visible at Figure 1, knowledge base is one of four parts of knowledge-based system. Through dividing the knowledge base from the base of facts the different substance of general knowledge and of individual facts is accentuated here as well as different way of making them accessible, and different manipulation with them.

⁵ according to Brožová (2006)

⁶ the rules where one of the solutions is on the right side

⁷ according to Berka (2007)

⁸ e.g. adding of new characteristics, making changes in rating grid etc.

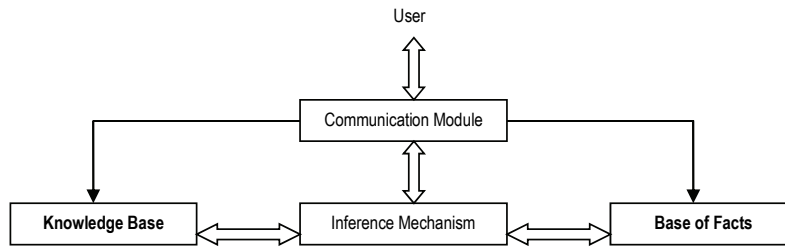


Figure 1 Traditional Architecture of Knowledge-based System (Source: Štýbnarová, 2006)

3.3 Concept of Knowledge-based System for Exporting to China

International business represents links standing between exporter and foreign business partner. At establishing a knowledge-based model supporting effectiveness of the exporting to China from the viewpoint of commercial risk minimizing, it is necessary to divide the relations or links into three basic groups. There groups are:

- Before the contract relations – negotiating level,
- Contract realization relations – realization level,
- After the contract relations – service level.

In accordance with such a division the knowledge base and the base of facts are going to be realized with regard to these three focused levels which are characterized by certain risks while some of these risks are common at each level. As these three levels of exporting consist in wide range of activities and processes, the final global model would contain various sub-models targeted especially on:

- Customer relationship management (CRM), evaluation of customer included;
- Management of goods flow;
- Human resources management.

From the perspective of evaluation of Chinese customer, the sub-model of CRM is the biggest one; respectively, each sub-model could be divided further. While mentioning the sub-model of CRM, it would contain at least sub-model of customer's financial position, sub-model customer's negotiating power, sub-model customer's business behaviour, sub-model of customer's perceptions.

Base of Facts

Base of facts is a passive data structure; it contains the list of data where is not any procedure or algorithm how to deal with these facts. Base of facts is a bearer of particularly given or derived facts, or alternatively, expected even estimated entries of a specific problem. These are the information which is based on a specific Chinese partner and specific supply. The data stored in the base of fact then directly determine selection of applicable rules from the knowledge base. It means that the form of their record has to correspond with the knowledge base. The facts are almost recorded in the form of ordered triplet (*object*, *attribute*, *value*). In the intended model of exporting to China it would be for example:

(Customer's Financial Position, **Risk of Insolvency**, Level of Risk of Insolvency)
(strong, **Risk of Insolvency**, very low)

Consequently, e.g.

(Risk of Insolvency, **Payment Risk**, Level of Payment Risk)
(very low, **Payment Risk**, medium)

These examples are of course rather simplified comparing to the reality of this knowledge modelling.

Knowledge Base

Knowledge base is a passive data structure as well. Knowledge base represents generally applicable and valid knowledge about rules and orders in a given area. Very important characteristic of the knowledge base is that it is unchangeable during the process. Rules saved in the knowledge base are usually formed like:

$$\text{If } P_1 \& P_2 \& P_3 \& \dots \& P_n \text{ then } Q_1 \& Q_2 \& Q_3 \& \dots \& Q_n$$

On the left side there are the prerequisites P_i . When these prerequisites are fulfilled then the inference mechanism would realize the actions, consequences from the right side. Conditions and consequences recorded in the base of facts are in the form of ordered triplets, as mentioned above. If knowledge should be worked with, first of all it has to be possible to record them into the system. It means that knowledge has to be possible to express. Secondly, know how to use the knowledge is necessary. These are two requirements on knowledge which are named with the terms “logic adequacy” and “heuristic power”. Logic adequacy requires that formalism has to be able to express knowledge. The only way how to provide the system with knowledge necessary for its functioning is to integrate them into certain formal structures, i.e. knowledge representation. Heuristic power then traces an existence of tools knowledge usage which is constructed at problems solving. In any formalization is chosen it has to have semantics that is based on the term of verity. One of the tools which are applicable on modelling of deduction or reasoning is formal logic. But the requirement of logic adequacy and requirement of heuristic power are in the opposite, from a certain point of view (Brožová, 2006; Štýbnarová, 2006).

Knowledge engineering is then one of the key parts of artificial intelligence. That is because the solution of knowledge transition problem and the filling knowledge-based systems and knowledge-based tools with sets of knowledge which would be applicable and quality enough is the essential and necessary condition for implementation of these system in practice (Husáková, 2006).

Quality of knowledge in the knowledge-based system influences the effectiveness of the whole system quite substantially. That is why a special attention has to be paid to the knowledge base establishment. So, the knowledge base establishment is never a one-time operation. It is the long-term process of knowledge acquisition and its encrypting (Husáková, 2006).

Inference Mechanism

Inferences represent elementary deriving processes (Berka, 2007). Inference mechanism is composed of the set of cooperating programmes ensuring a procedural part of the system actions. This way the inference mechanism enables to simulate expert's competence to reason. The mechanism simulates especially those competences which relate to effective usage of knowledge and skills acquired by associations, hierarchies, cause-effect relations, contexts, and by joining the knowledge into suitably connected sets and sequences (Štýbnarová, 2006).

At the beginning of its work, the inference mechanism puts “starting item” into the base of facts. It means that if it is not possible to apply any rule the work goes to be finished.

The inference mechanism works within the three-step sequence⁹:

- 1) Comparison of the rule's condition with the item from the base of facts;
- 2) If more than one suitable rule is found the inference mechanism decides which one to apply, i.e. “conflicts solving” is in the process;
- 3) Application of the chosen rule and following addition of the new item to the base of facts, possibly also deleting of an existing item, and return to the step one.

3.4 Rough Draft of Knowledge-based Model for the Effectiveness of Exporting to China

If a knowledge-based model for the effectiveness of exporting to China is considered here, modelling risk is especially focused here.

Rough draft of the model architecture is shown at Figure 2. At its development the methodology CommonKADS¹⁰ has been considered and also the knowledge-based model of K4CARE¹¹ has been watched.

General practical target of this work is to establish a knowledge model of commercial risk evaluation and for commercial risk elimination at exporting to China. Implementation of such a model would then serve as knowledge-based support to users, exporters. The model consists in three layers; domain layer, inference layer, task layer.

Domain layer records concepts, facts and relations relevant for given problem area, for a domain. Knowledge is recorded here regardless of a method of their usage for deductions. It is the level of stationary knowledge. In the suggested model this level is formed with two different parts. The first one is “Profiles of Players”. The term “players” is understood to be single elements influencing the export contracts. Then, this block contains:

- Profiles of objects of contracts – goods, equipment, technologies;
- Profiles of customers;
- Profiles of suppliers;

⁹ according to Štýbnarová (2006)

¹⁰ see e.g. Berka (2007); Engineering and Managing Knowledge, 2006 [on-line: <http://www.commonkads.uva.nl/>]; KADS Conceptual Model, 1996 [on-line: <http://ksi.cpsc.ucalgary.ca/KAW/KAW96/coelho/node2.html>]; BPM Portál, 2007 [On-line: <http://www.procesy.cz/Temata/Modelovani-znalosti.htm>]

¹¹ see Lhotská and Riaño (2006); K4CARE (2006) [on-line: <http://www.k4care.net/>]

- Profiles of competitors;
- Profiles of general environment (especially legislation).

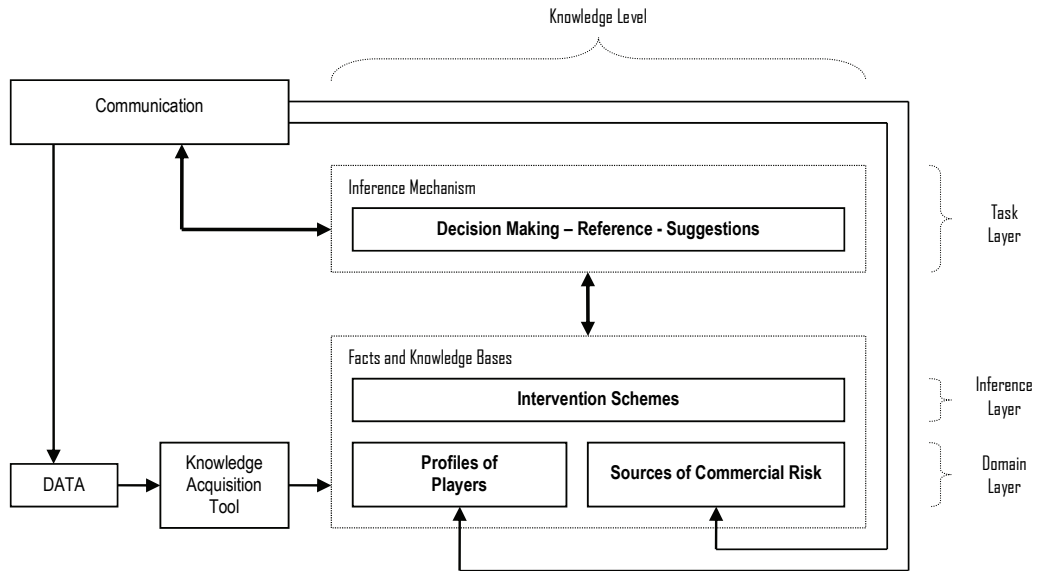


Figure 2: Basic Architecture of the Model

The second block of domain layer is created with commercial risks in export to China. Sources of ineffectiveness are described here. For this part fulfilment, secondary sources i.e. specialized publications would be used especially. The domain layer and its two parts create the base of facts then.

Following inference layer records conceptual inferences which it is possible to apply on domain knowledge, and relations between them. Upper layer, inference layer contains the intervention schemes here. This block represents the knowledge base where possible ways of commercial risks elimination with regard to players' profiles and source of commercial risks are recorded.

Task layer specifies what information would be really applied on a given problem. It is a procedural side of deduction. Every inference from the inference layer is understood as a primitive task. These primitive tasks are grouped into hierarchies of tasks and joined by procedural operations. The top layer here represents the decision making mechanism giving suggestions for export contract effectiveness improvement.

At realization of the model, it is necessary to take into account the wide research, primary research and secondary research as well. These researches are the sources of data. By use of the means of data-mining methods and also other knowledge acquisition methods the parts of the base of facts, and knowledge base are filled in. As was partially mentioned above, profiles of players are based especially on primary research. Sources of commercial risk come mostly from specialized resources of information but usage of primary research information is not out of the question.

Intervention schemes are then the proper “combinations” of profiles of players and of sources of commercial risks directing to possible methods of risk elimination. Finally the inference mechanism is constructed as a decision making element based on the statistic methods, and on the fuzzy logic, while the theory of games application is necessary. In words of this theory, exporter and his Chinese partner are two rational players with their strategies. At the inference mechanism construction a certain level of uncertainty has to be composed into it; then the Bayesian models are on the scene.

4. Conclusion

Methodical difficulties of the knowledge taking lie in the fact that knowledge can be a source, an asset, or a product as well. It is always necessary to know what knowledge is needed in which process with the aim of added value performing. Knowledge is an asset that has to be assembled in order to gain a new quality. Generally, it is needed to be able to identify where the knowledge emerges and to extract new knowledge from them.

In the case of entering Chinese market through exporting, the specific way of doing a business in China needs to be realized. The knowledge and connections play the crucial role, without them it is hardly to expect any successful result of business negotiations. The substantial part of commercial risks is related to the Chinese mentality typical for its different approach to solving problems. In case of conflict situations, all the research respondents stated the efforts to make a deal and to find an alternative with mutually favourable solution. This fact confirms the difficult enforceability within the Chinese business environment. The significantly different from the European conception is the signed contract performance by the Chinese counterpart. It is connected with the change in positions of Czech exporters on the Chinese market and active diplomatic representation which is now lacking, as confirmed by the research respondents.

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