

THE CONCEPTUAL MODEL OF CONSTRUCTION AND REAL ESTATE NEGOTIATION

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ABSTRACT. Negotiations are common in many activities; the sectors of construction and real estate are not an exception: here the negotiations are an inseparable part of the real estate buying and selling process. The article analyses scientific research related to negotiations and presents the developed model for multiple criteria analysis of construction and real estate negotiations. The analysis of the negotiation processes in construction and real estate and the analysis of the relevant support for decision-making in negotiations must be thorough; it must consider not only economic but also political, legal, socio-cultural, psychological, consumer behaviour, technological, quality of life and other issues. The developed model enables to analyse the combination of the real estate negotiation process, the improvement of its efficiency through use of decision support and voice stress analysis technology and the participating stakeholder groups seeking their goals together with the influencing external macro and micro environment. The paper dwells on the components of this model.

KEYWORDS: Real estate; Construction; Negotiation; Behavioural decision research; Macro environment

1. INTRODUCTION

The progress of a national economy and society is impossible without the construction, because the result of construction – real estate of various purposes – is necessary for people to live, to work and to satisfy their social and other needs. Globally, the construction sector contributes with one tenth of the total (annual) production of goods and services in average (Oxford Encyclopedia of Economic History,

2006). Rough estimates show that real estate (buildings and engineering structures) makes about 60% of fixed assets in any country (Brzeski, 2005). The growth of the construction and real estate sectors considerably affects the general growth of a country's economy. Historically, increasing or reducing amounts of construction are accompanied by economic prosperity or recession of an entire country.

Just like construction is an inseparable part of a national economy, the negotiations

are also part of daily communication, of business deals and of the national political and economic life. It is claimed that nearly 80% of communication cases between two persons can be considered negotiations (Jensen, 2006). Besides, as many as 80% of commercial deals are made through negotiations (Benyoucef and Rinderle, 2006). Agents devote about 20% of their work time to negotiations (Lim, 2000).

In contrast to prices of other products, the real estate prices depend not only on the supply-demand ratio in the market, the competitor prices and the reasons of real estate construction, buying or selling, but also, to a large extent, on the negotiation skills of buyers and sellers (McKenzie and Betts, 2006; Graham and Gruneberg 2000). Based on his personal experience at work, Cummins (1999) writes that about 95% of buyers overpay for real estate due to the lack of knowledge and experience at negotiations and pay more than expected by the seller. Jensen (2006) claims that most people lose up to 42% of opportunities in negotiations.

The construction products are very expensive, buildings and structures make the biggest share of assets both at the level of households, companies and the entire country; therefore, the percentage of the bargained amount may not be big, but it would amount to a considerable sum of money. Therefore, negotiations on contract provisions (construction, services, management, maintenance, etc.) and on real estate sales must be efficient. Besides, efficient negotiations, satisfactory to all parties, have huge value for any company: they create good reputation, help to develop mutual relations and the results are higher than achieved through huge expenditures on marketing (Jensen, 2006). Interest in real estate negotiations is constantly growing (Rondeau, 1993).

In 2007, about 84% of US real estate buyers used the internet to search for houses for sale and 88% of sellers announced about their houses for sale in internet. An average

of 15 houses was visited by a real estate buyer who was searching for a house through internet. The buyers who did not use internet for such search visited 6 houses in average (The National Association of Realtors, 2007). Internet helps to search and to visit more houses for sale at shorter times, thus providing more alternatives for negotiations on a real estate procurement deal. It can be assumed that users who search for a dwelling through internet would also want to try a web-based construction and real estate negotiation support system. IT is transforming entire industries, including the construction and real estate sectors; information is a very important factor in activities of the latter (Crowston and Myers, 2004). Currently the global demand for e-negotiations is huge, and web-based negotiation systems are being developed.

The developed model for multiple criteria analysis of construction and real estate negotiations was based on the best achievements of foreign scientists. A brief analysis of the main scientific fields dealing with negotiations is provided as an example below; the focus is on social psychology and behavioural decision research.

2. THE MAIN SCIENTIFIC FIELDS DEALING WITH NEGOTIATIONS

A single and universally accepted definition of negotiations is absent (Farlex, 2008); and as early as 1979, Gulliver claimed that definitions of negotiations found in literature are often contradictory and confusing (Gulliver, 1979). Definitions of negotiations found in scientific literature include various descriptions: deal making and dispute resolution are the most frequent among them. Negotiation is a process of common decision-making (Young, 1991) involving two or more parties which have different interests and try to achieve an agreement (Brodt, 2006). Negotiation is also a form of communication – direct or implicit, formal or informal – between persons who, seeking

mutual benefits, are interested to make an agreement (Raiffa, 1982). Negotiation is a dynamic process (Schoop, 2004). The aim of negotiations is to conclude a contract, which will be binding to the signing parties. Conclusion of a contract is possible only if all negotiating parties benefit from it in some way or solve the relevant problem.

Many scientists, various institutions, organisations and governments made extensive studies of the negotiation process, negotiation decision support, object of negotiations and the external micro and macro environment affecting the parties of negotiations. The integrated nature of the negotiation process, human relationships which affect the negotiations, the influence of power relations, the regulations, the economic environment, etc. determine the continuous interest in studies related to negotiations (Akdere, 2003) and the fact that the field of negotiations becomes interdisciplinary as it stands at the boundary of various sciences dealing with its analysis. Negotiations are analysed by scientists from various fields, including psychology, sociology, political sciences, economics, management, communication sciences, sciences dealing with organisational behaviour, applied mathematics, engineering, computer sciences and artificial intelligence (Raiffa, 1982; Cohen, 1997; Hipel and Fraser, 1991; Kersten and Noronha, 1999; Wierzbicki et al., 1993; Lax and Sebenius, 1986; Gulliver, 1979; Kremenuk, 1991; Young, 1991; Keeney, 1992; Pruitt, 1995; Akdere, 2003; Ströbel and Weinhardt, 2003; De Dreu and Carnevale, 2005; Schoop et al. 2008; etc.).

Electronic support for negotiations demands thorough knowledge of actual negotiations (Schoop et al., 2008) and of the negotiation theory. In order to have a better understanding of the origins of the construction and real estate negotiations and better understanding of the influencing factors, the main subjects which deal with negotiations and which have made a considerable input into this scientific field must be distinguished and reviewed.

3. SOCIAL PSYCHOLOGY AND BEHAVIOURAL DECISION RESEARCH

In the 1960s and 1970s, psychology scientists were active in research of negotiations (Rubin and Brown 1975). Then, studies related to negotiations focused on individual differences of negotiating parties and on the negotiation context (see Figure 1).

Impact of individual differences of negotiators was analysed, including their number, the entities they represent, types of their personalities, their demographic characteristics, their interpersonal relationships (emphasizing the significance of trust), etc. (Barry and Friedman, 1998; Tung, 2002). Despite numerous studies, they failed to fully explain differences in behaviour of negotiators (Thompson and DeHarpport 1994). Even experts were hardly able to properly assess the personality of the other negotiating side in order to formulate an opposing negotiation strategy (Morris et al., 1999). However, Barry and Friedman (1998) think that individual characteristics of negotiators are very significant in negotiations.

Issues related to the negotiation context also encompassed the motivation of the negotiating parties and the outcomes, the influence of power on negotiations, the existence or lack of deadlines, the presence of a third party in negotiations, the nature and complexity of negotiated issues, the place of negotiations (public or private sector), the branch of industry of the target product, the customer base, motives and criteria of negotiations, existence of common interests of the negotiating parties, etc. (Bazerman et al., 2000; Tung 2002). Studies of these variables helped to improve understanding of negotiations; however, often not only an individual negotiator controls the real situation of negotiations. Bazerman et al. (2000) claim that, in general, these approaches of social psychology hardly helped to improve efficiency of real negotiations, because they

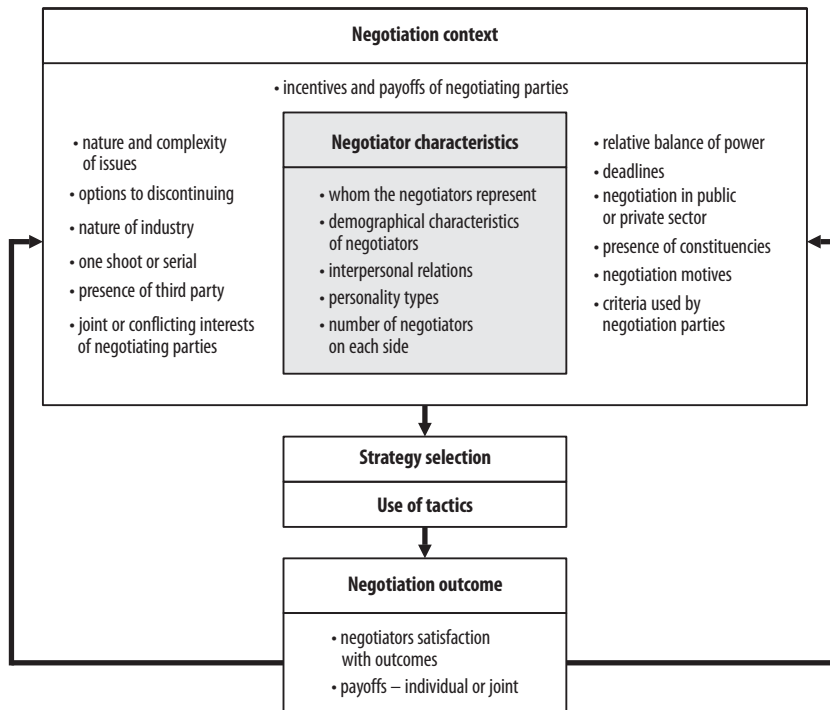


Figure 1. Areas of negotiation research in social psychology

lacked clear standards of rationality and optimal solutions, which would enable assessment of the behaviour of negotiators.

The 1980s and 1990s brought about rapid development of negotiation studies which took the approach of the behavioural decision research (BDR), because the negotiating skills were considered crucial in management (Lax and Sebenius, 1986) and the social sciences tried to find possible ways for a negotiator to improve efficiency of the negotiations. The behavioural decision research defines how and why people have their particular way of thinking (Rubin and Brown, 1975). The main works analysing this approach in the area of the behavioural decision research are *Judgment under Uncertainty* (Kahneman et al., 1982) and *The Social Psychology of Bargaining and Negotiation* (Rubin and Brown, 1975).

In the 1980s, BDR contributed to psychological studies of negotiations by a serious

reform and made a significant impact on the practice of negotiations. This behaviouristic approach moved away from the initial psychological studies of negotiations, because it focused on how the real decisions differ from the decisions determined by normative models based on rational behaviour (Bazerman et al., 2000). A negotiator, as a decision-maker, also became a research object. Attention turned to a negotiator's view to and structuring of the negotiation problem, which was already more controlled by the negotiator. Raiffa (1982) claimed that thorough assessment of the other negotiating party is more important than an assumption that it acts only on a rational basis. Microeconomics usually assumes that each individual is rational, considers personal interests and foresees the outcomes of his/her decisions. Kahneman challenged such opinion suggesting that there are more psychological motives which determine human behaviour

and these motives are important to economic phenomena (Kahneman and Tversky, 1979). It was observed that intuitively negotiators not always follow a fully rational strategy: if people lack a system of decision-making, they do what they can. People are bound to act rationally; however, they have limited capacity to act like this (Simon, 1957). Raiffa (1982) introduced a basis for a study which attempted to understand how negotiators make actual decisions. As a follow up to his study, Bazerman and Neale (1992) provided a foundation for the psychological understanding of negotiations, which would increase probability for negotiating parties to get a bigger share of the cake (i.e. the added value created by the negotiations) and, at the same time, to extend beneficial cooperation, if acting honestly during negotiations.

Descriptions of behavioural realities inform the negotiating parties about characteristic human erroneous approaches to decision-making, the so-called bias and heuristics, which lead to predictable errors and show paths how the negotiating decision-makers move away from the standards of rationality and optimality (Tversky and Kahneman, 1974). These facts help to foresee how people make decisions which are inconsistent, inefficient and based on inappropriate information. Descriptive assessment of the other negotiating party used in BDR allows the negotiators to simulate the considered strategies using likely answers of other people. Negotiations on real estate development and construction projects involve real people, who are burdened by numerous human concerns and limited cognition and who not necessarily correspond to the ideal of "rational and economical person." First of all, BDR enables rather good forecasts of possible behaviour of other parties in negotiations on real estate development and construction projects (Murtoaro and Kujala, 2007).

BDR ignores a number of factors which are clearly significant in negotiations. For instance, the perception, beliefs and mental models (interpretation of occurring situations) and internal motives, such as emotions (mental state of the decision-maker) and attitudes (the relation between the psychological tendency of a decision-maker to have a certain perception of his/her personality and the a specific phenomenon in his/her environment) may influence decisions in negotiations. Besides, the memory of former decisions and their outcomes is a critical cognitive function, which also makes huge impact on the direct decision-making (The Nobel Foundation, 2002). Therefore, Bazerman et al. (2000) believe that researchers, in their studies of the negotiation process, should consider how such factors as cross-cultural differences, social relations, egocentrism, motivated illusions, emotions, mental models of negotiators, ethics, fairness and preparation of negotiations for more than two parties affect the subjective perception of negotiations by the negotiators.

Recent research in the area of negotiations most often considers the aforementioned insights of Bazerman et al. (2000); it also focuses on the ways to help negotiators make use of the integrative (win-win) potential of negotiations. Among other works, Druckman and Olekalns (2008) analysed the influence of emotions in negotiations; Moran and Ritov (2007) analysed the influence of previous experience on integrative negotiations; Steinel et al. (2007) analysed the influence of experience and negotiation skills on the achievement of the integrative result in negotiations; De Dreu et al. (2000) analysed the influence of social motives on integrative negotiations; De Dreu (2003) analysed the influence of the time pressure and closing in negotiation; Valley et al. (2002) analysed how communication can improve efficiency of negotiations; Nutt (2007) analysed the influence of the process of infor-

mation gathering on decision-making; Stuhlmacher et al. (2007) analysed the different ways of negotiation determined by gender in virtual negotiations; Gibler and Nelson (2003) analysed the behaviour of real estate consumers. Some researchers tend to re-examine previous works related to the issues they have selected and to repeat previous experiments taking up a perspective of a new paradigm.

Gulliver (1979) states that scientists of social sciences, who analysed negotiations, took up a more reality-oriented approach. In studies of negotiation tactics, their approach is not as abstract as that of the scientists dealing with the game theory.

4. THE CONCEPTUAL MODEL OF MULTIPLE CRITERIA ANALYSIS OF CONSTRUCTION AND REAL ESTATE NEGOTIATIONS

In order to improve efficiency of negotiations, proper preparation is important, considering all stages of negotiations: from data accumulation through initial goal setting to the completion. The process of negotiations must be planned and executed considering the aims of the participating stakeholders, the opportunities, the decision-making process and the external micro and macro environment which affects the real estate prices and negotiation efficiency.

Analysis of scientific studies and achievements in the area of negotiations helped to develop the model for multiple criteria analysis of construction and real estate negotiations which is also based on the A. Kaklauskas' work Multiple criteria decision support system for building life cycle (Kaklauskas, 1999). The multiple criteria model for building life cycle, created in the above mentioned work, have already been applied for Lithuanian construction industry development (Kaklauskas and Zavadskas, 2002; Zavadskas and

Kaklauskas, 2008), sustainable development of Vilnius (Zavadskas et al., 2007), housing credit access (Zavadskas et al., 2004), facilities management (Lepkova et al., 2008). Also the multiple criteria decision making methods created and described in the above mentioned work have already been applied to a variety of problems in construction and real estate sector (Kaklauskas et al., 2005, 2007a, 2007b; Zavadskas et al., 1994, 2008).

The developed model for multiple criteria analysis of construction and real estate negotiations (Figure 2) provides a thorough and integrated conceptual and quantitative description of the negotiation process (stages, strategies and tactics), the participating stakeholder groups and the external micro and macro environment affecting them. The model enables complex analysis of the negotiation process, the participating stakeholders groups and the relevant macro and micro environment. The following stages make up variants of the negotiation process: the determination of alternative goals, the information gathering, the setting of negotiation goals, the selection of the strategy, the development of the negotiation plan, the selection of tactics, the negotiation process, the completion, the contract signing and the use (post-negotiation stage). This model for multiple criteria analysis of construction and real estate negotiations will be integrated into the web-based construction and real estate negotiation decision support system (DSS), because the use of DSS can be the best tool in negotiations, which helps to be up-to-date and competitive thus improving the efficiency of negotiations and the value granted to stakeholders by negotiations.

In the next chapters an analysis of some components of the model, such as the negotiation object, parties and stakeholder groups in negotiations on construction and real estate, and the macro-environment will be presented.

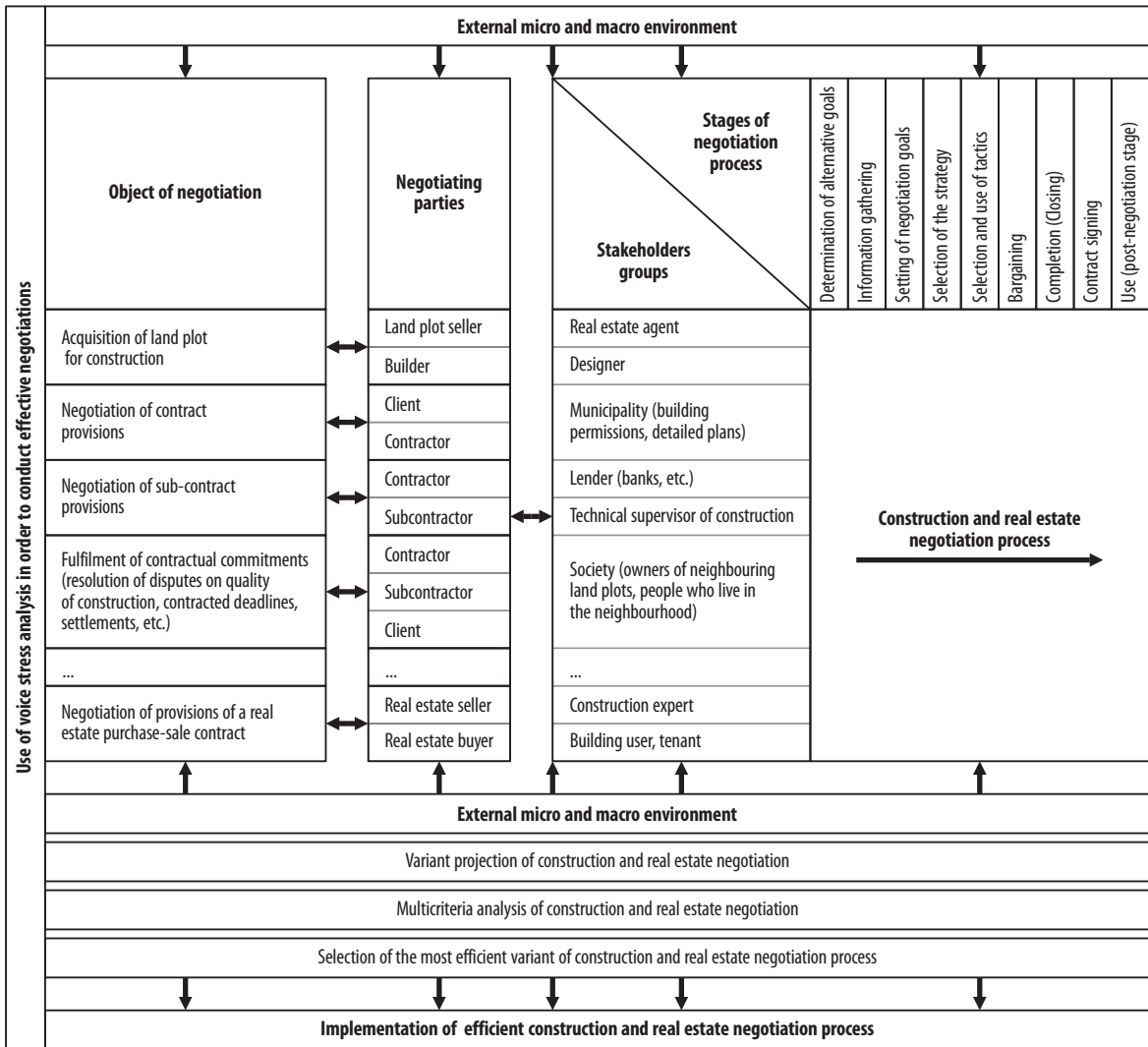


Figure 2. The model for multiple criteria analysis of construction and real estate negotiations

5. THE OBJECT AND THE PARTIES IN NEGOTIATIONS ON CONSTRUCTION AND REAL ESTATE

Cases of negotiations on construction and real estate may be various. We can view a project on real estate development and construction as a set of repeating negotiations, which involve many parties, take place at various times and are the arena for discussion of various issues.

Negotiations on construction and real estate can be analysed by their object (why the negotiations take place) and by the involved parties.

The classification by the object can be as follows:

1. Negotiation of contract provisions (construction, services, management, maintenance, etc.) when companies want to be hired for the following tasks:
 - various construction-related tasks (construction contract),

- preparation of technical design documentation for construction (designing contract),
 - designing and building of a construction works,
 - preparation of a real estate development project or an investment project and construction,
 - management of the construction process (contract on management of the construction process, when it is not related to contractor services),
 - services of technical supervision of construction;
 - other.
2. Fulfilment of contractual commitments (resolution of disputes on quality of construction, contracted deadlines, settlements, etc.);
 3. Negotiation of provisions of a real estate purchase-sale contract.

Parties in negotiations on construction and real estate may be as follows:

- Land plot Seller and Builder;
- Client and Contractor;
- Contractor and Subcontractor;
- Contractor, Subcontractor and Client;
- Real estate Seller and Buyer;
- Other.

Negotiations on construction and real estate, especially on projects related to development and construction of real estate is a very complex process with abundant stages and issues, which demands a substantial input of time and money. The type and scope of a contract, as well as the stage of a construction project, may determine changes in the negotiating parties, stakeholder groups and their number.

The following two main stages of real estate development may be determined: land plot development and construction – each has a separate round of negotiations, which, however, affect the overall outcomes. Land plot development includes the procurement of the land plot

and the detailed planning. Construction means the entire process of building construction: from designing and getting a building permit to the official completion when the building is accepted as suitable for use and registered in the real property register. Real estate development projects may encompass construction of both separate buildings or structures and entire residential districts or even settlements.

In contrast to negotiations on commissioning of construction services, a real estate development project additionally includes a number of negotiation issues related to the land plot. First, the procurement of the land plot must be negotiated; then, the future builder attempts to bargain for the most favourable, financially, solutions of the detailed plan with all related institutions. Construction often has a form of an investment, i.e. the goal is to use the constructed building for manufacturing of other products or provision of services seeking financial gain. In such cases, the funds invested into construction are expected to return during the economic lifecycle of the constructed buildings, they must grant sufficient financial gain and, most often, must generate sufficient funds for reconstruction of an old building or construction of a new building. The available options of best use of a land plot determine the future maximum financial gain generated by the building. Obviously, some negotiating parties will benefit more if, let's say, a hotel builder is allowed to add a penthouse to a planned seven-floor building in a place attractive for business, when the neighbouring buildings have only five floors. While some other stakeholders – for example, owners of the neighbouring buildings – may be discontent.

The immediate parties in negotiations on construction projects are the client and the contractor (when contractor services are used in construction). In such cases, negotiations are usually done by teams; each party may be represented by a negotiation team with specialists of several areas. Construction com-

panies and real estate developers often have sufficient specific knowledge (economic, technical, legal, etc.) required to make a deal, they have information about the market situation and prices, they are experienced and skilled in negotiations, they employ competent negotiators or, due to more financial resources available, they can hire qualified specialists for the negotiations.

The client and the contractor face serious difficulties in negotiations on large projects. Any construction project must follow specific design documentation and specifications, and keep to the provisions of a construction contract and the future purpose of the building. Each construction project is unique considering the soil in the land plot, people who work on the project, social and political climate, etc. Increasing complexity of a real estate development and construction project means increasing number of stakeholders, who want to develop a successful project, and more issues which must be negotiated. A real estate development and construction project may have the following negotiating parties and stakeholders, which make direct or indirect impact on the negotiations: the client (real estate developer/builder); the real estate agent (procedure of land plot procurement, procedure of sale/rent of a completed building); the land plot owner; the party preparing the detailed plan; the (owners of neighbouring land plots, people who live in the neighbourhood); the designer/architect; the expert of the design documentation (if required by the law); the contractor; the technical supervisor of construction; sub-contractors; suppliers of materials, products, equipment and machines; trade-unions; municipalities and other state institutions (process of land plot planning, approval of design documentation, getting a building permit, acceptance as suitable for use, infrastructure fee, etc.); financial institutions and other lenders; insurance companies (mandatory third party liability insurance of the designer and contrac-

tor); the end investor (buyer of the building); the user (tenant). Other entities which have an indirect influence on real estate development and construction projects negotiations could be: legal institutions (mortgage office in case of mortgages, notary for confirmation of purchase-sale contracts, courts in case of debts and disputes); the real property register (registration of ownership rights); and the organiser of supervision and administration of the constructed building.

Construction projects involve numerous contracts concluded with most part of the stakeholders. The contracts may be concluded either through a procurement procedure (tenders) or through negotiations. The largest real estate development and construction projects have hundreds of issues and highlight numerous tacit or explicit interests, thus the client and the contractor usually have rather complex negotiations. Project details are usually negotiated through intensive, often lengthy, communication of the client and the contractor. For example, announcement of the construction company Constructus as the winner in the procurement procedure on construction of the centre for Vilnius City Municipality was followed by negotiations and discussion of numerous contracts which took up more than half a year. When the contracts were signed, amendment of the preliminary design documentation and the construction procedure started (Constructus, 2004).

Perhaps the simplest form of negotiations on construction and real estate are the negotiations between real estate buyers, who want to buy a residential real estate for themselves, and sellers, who want to sell it. The buyer and the seller are the immediate parties in negotiations on provisions of a real estate purchase-sale contract. Representatives of these parties may be a real estate agent and a construction expert, if they are hired for such occasions. Real estate co-owners, family members and other persons may also take part, directly or

indirectly, in the negotiations and affect the outcome. Whereas a loan is usually taken for housing, a bank, another financial institution or lender, which grant the loan (first stage includes negotiations on loan between the creditor and the debtor: the latter determines the size of the loan, the interest and the manner of payment, the requirements for the housing being constructed or considered for procurement, etc.), take part in the negotiations on real estate purchase-sale indirectly and make a considerable impact. Legal institutions also have an indirect influence on real estate negotiations: a notary (who may refuse to confirm a deal if it does not include the mandatory contract provisions or if the agreed contract provisions contradict the current laws and other legal acts); the real property register (which registers the ownership right to a certain dwelling and possible limitations thereof); the mortgage office (in case real estate is mortgaged); and courts (in cases of arrears, seizures, divorce and when a certificate about the composition of a family is required). Negotiations may be also influenced by: insurance companies (conditions and the size of a mortgage loan determine whether the loan is insured and whether the borrower must have life insurance) and the government through taxes (real estate tax, which is not yet applicable to natural persons; notary fees; charges for registration in the real property register, for mortgage to a bank, for property valuation, etc.), through income tax exemptions (people who take mortgage loans are eligible) and through loans on easy terms (granted by the state to young families).

6. ANALYSIS OF MACRO ENVIRONMENT

The highest level, which determines the demand and the supply of the construction output, i.e. real estate, as well as the efficiency of negotiations on construction and real estate, is the macro level.

At this level, the process of negotiations on real estate deals, on real estate development and on implementation of construction projects is affected by political, economic, social, cultural, legal and other factors of the external environment. Under certain conditions, each of the factors may be crucial – affecting the efficiency of real estate negotiations or even ruining a project on real estate development or construction.

The political environment is very significant for negotiations when parties come from different countries (international deals). Political instability may repel foreign real estate investors. The policy of a national government determines the type of possible economic deals related to real estate. For instance, Lithuania imposes certain limitations on foreigners who want to buy land, thus negotiations of foreign investors on real estate procurement may take a different turn considering other alternatives.

The government controls the monetary policy, raises and reduces interest rates. Through fiscal policy, the government regulates real estate and other taxes and their exemptions in order to cover its expenditures and to ensure welfare and safety of most citizens (Graham and Gruneberg, 2000). The government is the largest client of the construction sector, and it may commission builders (construction of social housing, construction of factories in areas with high unemployment rates, etc.) in order to alleviate economic recession, unemployment and inflation. All these actions, through the supply-demand ratio of real estate market, affect negotiations on construction and real estate.

The government regulates construction markets through funding (allocations, subsidies, funding programmes for refurbishment of residential houses) and legal control (urban and territorial planning, zoning, limitations of land use). For example, refurbishment of inefficient multi-apartment houses – the legacy of the Soviet times – is currently insufficiently profitable for construction companies. Thus

construction and real estate development companies, together with municipal specialists in charge of refurbishment, suggest an integrated approach to this issue: builders construct a new object by increasing the density of a district, and use the related profit to cover part of the refurbishment expenditures. Such suggestion is an object of negotiations. Should the government support the idea, construction companies would get a new profitable market. Let's turn to another example. The governmental policy enables use of the financial support of EU Structural Funds: if not directly through the construction sector, then through other investors (especially state organisations); thus more construction projects can be commissioned.

Economic environment. The political and the economic environment are inseparable (Tung, 2002), because a national political system determines the type of the economic system (market, central planning, mixed), which, in turn, determines forms of economic cooperation. The economic policy enacted by policy-makers determines economic development of a country (available capital, technological know-how and skills of workforce), and foreign investors should consider these factors before making a decision to invest. National goals and priorities of a country determine which projects of what industries will be supported at certain moments.

The economic environment is very important for negotiations on construction and real estate, because it makes a direct impact on the real estate supply-demand ratio and, as a consequence, on real estate prices and negotiation opportunities. A market with prevailing buyers, when the supply is higher than the demand, brings more opportunities for buyers to negotiate, and they can impose their conditions on real estate sellers. Such market gives real estate buyers the best chances to bargain for the lowest price and the best contract provisions. A market with prevailing sellers is the opposite; here, the sellers control real

estate prices. Thus, in order to successfully buy a dwelling, the buyer must take a loan in advance and must have a possibility to immediately inspect new housing offers brought to the market. In such market the success of negotiations depends on the fact whether the seller really wants to sell and on the real reason behind the selling. Slow down of national economy usually brings about falling real estate prices and a shift towards the "buyer" market, in which the buyer is in a position to maximise negotiations and has more real estate alternatives for choosing.

Efficient negotiations on products of construction and real estate demand awareness of the current economic situation and understanding of the main factors affecting the supply and the demand. Some factors of macro environment have indirect impact on negotiations, while the impact of others is direct.

Real estate is an expensive product. It is not part of daily or monthly purchases: if a person is not interested in real estate investment, he usually buys or sells real estate only on several occasions in a lifetime, depending on the phase of a family lifecycle and on certain circumstances. The price is among the main factors with the biggest share of impact on demand and supply of buildings; prices are negotiated the most frequently. Real estate is not a homogeneous item: even two identical flats may have a different price due to information diversity or negotiation skills of a buyer.

The interest rate and its fluctuations are very important in real estate and construction markets, because these markets usually get funds from borrowed capital. The issue of funding is very important in construction and real estate negotiations; it is among the issues which affect the general result of negotiations. High interest rates restrict purchasing of real estate and reduce the profits from territorial expansion, thus the negotiators find it more difficult to bargain for lower prices of a newly developed and constructed real estate. In order

to cover a higher interest rate, a real estate investment project must be relatively more risky. When banks impose tighter conditions on loans and raise interest rates, the real estate demand falls dramatically.

Another important macroeconomic factor is the household income. If the government is not interfering, the main reason of poor living conditions and why most families cannot afford a larger and/or newer dwelling is low income.

The suspense that the prices will grow raises the demand. Witnessing the changes in the market, real estate developers and buyers are less willing to negotiate as they hope to buy at current prices and to sell easily at higher prices in the future. However, if a fall of prices is expected, people usually refrain from buying or tend to bargain for real estate prices with more ardour. Lack of unbiased information in the market helps to shape and maintain expectations. Many announcements about the situation in real estate market are initiated by real estate agencies, which are interested to keep the prices rising (National Development Institute, 2006).

Socio-cultural environment. The cultural environment is more significant when representatives of different cultures negotiate. It affects negotiations on construction and real estate in three ways:

1. How people perceive, process and interpret information. People of different nationalities may have different perceptions and interpretations of the same information (Tung, 2002);
2. Culture affects how people perceive right, valid and acceptable things, thus affecting selection of the negotiation strategies;
3. Cultural differences determine differences in decision-making and negotiation style, the selection of ways to settle conflicts (Gibler and Nelson, 2003).

In the real estate market, the influence of cultural and social values is obvious. Cultural norms affect the lifestyles thus affecting real

estate value, demand and real estate negotiations. For example, each child in a US family must have his/her own bedroom but can share a bathroom. The trends to work at home will increase the value of houses with a home office. If people are bound to organise social gatherings or parties at home, the value of houses with more space for bedrooms will decrease but the value of houses with larger living rooms will increase.

Housing can be considered a symbol of belonging to a certain class. Property owners want to express their individuality and status through specially designed and built houses. For example, a fireplace at home may be considered a sign of the social position of the household and the social value of the dwelling (Gibler and Nelson, 2003). Pursuit of status and attribution of oneself to a certain social class determines selection of the residential environment, and the available income determines selection of a particular house. In most part of developed countries, a detached family house with a yard means that the owner is independent and successful, especially among men (Somerville, 1997). Any social class considers a detached house a sign of improved social position. Therefore, it is possible that even an elderly house owner, seeing his/her health getting worse, would not be willing to sell the family house and move to a smaller dwelling just because publicly this may mean moving to a lower level in the society. Thus the socio-cultural environment determines attractiveness of housing and the willingness of a buyer to negotiate for a certain real estate.

Developers of real estate projects and builders must understand the structure of a social class, as well as its priorities, and design houses and residential districts based on the expectations and the image of the members within the target social class. Such information is important when selecting the territory for construction, when determining prices of newly constructed real estate and when planning

the future sales and negotiations with future buyers. Builders would gain more profit if they would identify the lifestyle trends and adapt designs of residential houses respectively. real estate sales representatives would improve their work efficiency, if they would select for negotiations and show only such houses which correspond to the lifestyle of potential buyers.

Legal environment. The legal and the economic environment are also closely related (Keršulienė, 2008). The legal environment affects the results of negotiations on construction and real estate in three main ways:

1. Through legislation (laws and other legal acts), which regulates construction and real estate laws (investment, real estate taxes, etc.), and through the mandatory form and contents of contracts;
2. By setting the procedure for litigation and available ways of conflict solving;
3. By defining relations between business and government (collaborative or not).

Beside the general laws, such as the Constitution, the Civil Code, etc., the sector and/or the development process of construction and real estate is affected by a number of specific laws: Territorial planning, Construction, Land and other related laws and a number of legal acts. Abundance of laws and legal acts forces to have specific knowledge in order to apply them correctly. Availability of this type of knowledge is crucial for negotiating parties in order to have successful negotiations. All structures/buildings are closely related to land, thus legal regulation of land must be considered in any construction. Therefore, the construction industry depends on the conjuncture in the land market. A builder must be an owner of the land plot or must control it in other legal ways. Any project on construction or real estate development may belong to one of the two main categories: land plot development and construction; thus the process of territorial planning is a very important part of any real estate development project. Construction

may start only when a detailed plan, which allows construction in a certain land plot, is prepared, negotiated and approved.

The value of a land plot is determined by its future purpose and a permission to build a structure or building, which will generate the highest profit to its owner. The purpose of land makes a considerable influence on its price: agricultural land is cheaper compared to other types (for construction of multi-storey or low residential buildings, private property, etc.). Owners of agricultural land tend to be more flexible in negotiations, especially if they are aware that possibilities to change the land purpose are vague. The procedures of purpose changing and preparation of detailed plans are very long.

In case of profit-generating buildings, the allowed number of floors and the allowed build-up intensity of a land plot have a direct impact on the possible profit. To have efficient negotiations on a project related to real estate development and construction, all these factors must be considered beforehand. While a detailed plan is not available, it is not clear which land plots will be affected by construction, legal or other limitations of build-up.

In order to start construction, the builder must have approved design documentation and a properly issued building permit. The process related to building permits is also complex.

Both builders, which construct buildings, and regular real estate buyers, who buy housing, encounter the issues of ownership right. The legal environment is very important for negotiations on construction and real estate, because it includes the legislation which regulate real estate, ownership rights and the trust (servitude, usufruct, right to mortgage, long-term rent, hypothec, pledge). Different ownership rights to real property generate different negotiation scenarios. The legal environment determines real property ownership and other material rights to fixed objects and registration of their limitations in the Centre of Reg-

isters. Before negotiations, it is necessary to check whether the real estate considered for buying is registered, is not pledged, etc.

Contracts are the main tool in the process of negotiations. A house will be sold and a bridge or any other structure (building) will be built as a result of negotiations and a contract. The legal environment regulates the contract law and the types of contracts (construction contract, contract on mediation, preliminary contract, contract on real estate purchase-sale, lease contract, contract on land plot purchase-sale), the contents of contracts, their security, registration in a public register, payments under preliminary contracts, ratio of advance payment and deposit, failure to fulfil a contract, civil liability, rights and commitments of the contracting parties.

Natural conditions and environment may affect negotiations on construction and real estate in two ways:

1. Construction and real estate sectors depend on seasonal fluctuations determined by weather conditions;
2. Natural and ecologic conditions affect creation of atypical real estate products, their supply and price, the process of information gathering for negotiations on an innovative real estate and the criteria of negotiations.

Winter brings construction into hibernation, because severe weather conditions make the construction process more expensive and longer. This may instigate negotiations on failure to fulfil the contractual commitments (quality of construction, terms, payments). In summer, on the other hand, fewer deals on real property purchase-sale are usually made (and fewer negotiations take place), because many people have their vacations.

The society is increasingly concerned about safe and healthy residential environment. In order to reduce the pollution which causes the greenhouse effect, energy saving and alternative energy (wind, solar) is becoming more important in buildings. New markets emerge:

of “green” (ecologic) buildings, “passive” buildings (independent of external energy sources) and intelligent houses (with systems enabling efficient energy saving at home). We witness new trends to make flats in refurbished unused buildings of old factories. To encourage energy saving, the government uses various programmes and projects, provides support for building refurbishment. A real estate buyer, who is getting ready for negotiations, should know that the value of a refurbished flat usually increases considerably. Heating is expensive; however, its prices are different in various houses. As the prices of heating increase, real estate buyers should search for a flat in a house with modernised heating system or in a house of new construction with autonomic heating.

Encounters with the aforementioned innovative real estate products or other houses of atypical construction (ecologic, straw, with a lawn on the roof, etc.) make a buyer search for additional information in order to assess peculiarities of such real estate and have efficient negotiations on its price. Besides, the negotiations may take longer in such case, because the buyer may be forced to see and compare more atypical houses.

Technological environment. Science and technology (the level of development of fundamental and applied sciences, the level of IT and computer penetration, the level of industrial and manufacturing technology, communication, etc.) affect the efficiency of the negotiation process and the requirements applicable to its participants.

Possibility to use modern IT, to work with large databases, fast exchange of information and use of modern research methods enable creation, development and improvement of the product of a construction organisation. Contemporary IT helps real estate companies to improve efficiency of the real estate purchase-sale process, to be better prepared and to conduct negotiations.

A negotiator may influence the process of negotiations and its results by selecting the

means of communication. Selection of such means depends, to a large extent, on the situation of negotiations. Face-to-face negotiations might speed up development of mutual relations and might reduce the cases of misunderstandings and cheating. However, if the parties have already developed mutual relations and/or if the negotiators are very nervous, exclusive use of audio communication might make the negotiations easier. For example, the absence of direct eye contact may help to avoid intent look of the other negotiator who seeks to dominate. This limits the use of pressure tactics, which may cause hostility (conflict) and lead negotiations to a deadlock. Computerised negotiations may bring certain benefits, such as increased equality of negotiators. IT helps the negotiators to feel more comfortable and, possibly, to avoid the influence of social hierarchy. IT considerably facilitates exchange of information between negotiating teams thus enabling them to make more profound decisions and to achieve an agreement in negotiations.

7. CONCLUSIONS

Today, negotiations are an important issue and are analysed by many scientists from various fields. Review of the scientific publications shows that the most frequent are cases when a researcher takes up one narrow scientific field dealing with negotiations (e.g. game theory, auctions, psychology, consumer behaviour, etc.).

The analysis of literature revealed a global practice to use negotiation models in very specialised areas. An integrated model covering the entire process of negotiations has not been developed yet. Methods suggested by other authors consider neither factors of macro and micro environment nor the participating stakeholder groups seeking their goals.

An original model for multiple criteria analysis of construction and real estate negotiations was developed.

The model allows to analyse a combination of the real estate negotiation process, improvement of its efficiency through use of decision support and voice stress analysis technology, the participating stakeholder groups seeking their goals and the external macro and micro environment affecting them. The components of the model for multiple criteria and voice stress analysis of construction and real estate e-negotiations are discussed thoroughly.

The model provides a detailed analysis of macro (political, economic, socio-cultural, legal, nature and technical) and micro (characteristics of negotiators) environments and their influence on construction and real estate negotiations.

The model provides a detailed analysis of stakeholder groups, which make decisions in construction and real estate negotiations. The results of the analysis are used to assess the needs of target groups.

Face-to-face negotiations provide a lot of important information through observation of the behaviour, gestures, facial expressions, voice and other features of the opponents; this helps to have a better understanding or to guess intentions of the other negotiators, or to interpret their words. E-negotiations bypass the direct interpersonal contact; therefore, the voice stress analysis technology can be useful in such cases.

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SANTRAUKA

KONCEPCINIS STATYBOS IR NEKILNOJAMOJO TURTO DERYBŲ MODELIS

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Derybos nuolatos vyksta daugelyje veiklos sričių, neaplenkdamas ir statybos bei NT sektorių, kur jos yra neatsiejama nekilnojamojo turto pirkimo ir pardavimo proceso dalis. Straipsnyje analizuojami mokslininkų tyrimai derybų srityje ir pristatomas sukurtas statybos ir NT derybų daugiakriterinės analizės modelis. Nagrinėjant statybos ir NT derybų procesą bei taikomą paramą derybų sprendimams priimti, būtina tai nagrinėti išsamiai, kreipiant dėmesį ne tik į ekonominius, bet ir į politinius, teisinius, socialinius, kultūrinius, psichologinius, vartotojų elgsenos, technologinius, gyvenimo kokybės ir pan. klausimus. Sukurtas modelis leidžia analizuoti NT derybų procesą, jo efektyvumo didinimą, taikant sprendimų paramos ir balso analizės technologijas, joje dalyvaujančias ir savo tikslus norinčias įgyvendinti suinteresuotas grupes bei jas veikiančią išorinę makro- ir mikroaplinką kaip visumą. Straipsnyje aptartos sukurta modelį sudarančios sudėtinės dalys.