



2C11

**Business Economics and Entrepreneurship**  
**Lesson 8**

**Risk Management Systems for Construction  
Projects**  
**Risk Assessment and Success Criteria of  
International Projects**

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# INTRODUCTION TO INTNL CONSTRUCTION

- **International construction contracting:** the type of business activities based on supplying international projects and/or when the contractor is engaged in a permanent business activity of its subsidiary abroad
- **Why Contracting?** - the main potential asset of construction business is the contract awarded to the contractor as a result of a bidding process
- **Problems of the construction industry :**the not predetermined form and scope of the products (projects), overall riskiness of the bid assesment and pricing, problems of perfomance in given site, existing high competition in the construction market.

## The goals of the lecture:

- to examine the problems international contracting business on the example of Czech construction industry
- to formulate the possible steps for improving the situation in construction export generally and specifically in Czech market conditions

Within the frame of the main problem, the following lecture **subquestions** should be answered:

- What are the obstacles and factors preventing the quicker increase of the construction export?
- What is the influence of a well-prepared construction firm strategy on the company's export success including the Risk Management procedures?
- What are the criteria measuring the degree of success in international contracting of the construction firms?
- What could be the possible improvements of the Czech government policy in supporting the Czech construction export? Government and Company's risk mitigation procedures

# Main Marketing Concepts and Possible Outcomes

- There exists a real opportunity to reach the better results towards increasing the total volume of works abroad and so to raise the share of exports of the total construction output, connected with realizing the appropriate government measures and corporate level steps.
- Outcomes: There exists possible practical measures and steps of the government and the construction firms to raise the volume of annual construction exports. The supposable contribution of such an approach could be to assist in clarification of the above mentioned obstacles and in defining the factors and measures to reach more efficient usage of the long existing prerequisites of any construction industry.

## The Nature of International Construction Contracting – Procurement Forms and Risk Assessment

- Management tools and best practice that are applicable also in the international contracts and other international activities were studied and published in literature (see article for home study in lesson web pages)
- The essential areas of tools for a proper management of international activities of a construction firm can be selected as :
  - Specifics of general and international contracting,
  - Bonding,
  - Risk management,
  - Relations to project management theory,
  - Forms of contract arrangements,
  - Global service providing.

# The Nature of International Construction Contracting – Contract Types, Risk Management Approach

- Particularly the contract arrangements ( above mentioned ) are a vital part of international projects - in this connection the individual types of FIDIC standard contracts are to be explained here. The hierarchy of different levels of the international contracting culminates in global service providing as the highest level of predominantly international contracting (procurement types and Risk Management Systems)

## Possible conclusions from reviewing the existing literature

- The literature about the strategy and practice of the international construction is, in essence, relatively rare and the existing international literature predominantly covers the project (field) level of construction contracting
- The corporate level of construction management is not covered sufficiently. Topics connected with international contracting follow this tendency - most of the literature about the international contracting is oriented on single projects and not on the international business as a whole and the possible methods of corporate level support of international projects and subsidiaries.



# Case: Analysis of the Czech Construction Export and Import incl. obstacles preventing better results – impact of poor risk management procedures )

## Forms of Import of Construction Works into the Czech Republic

- Subcontracting firms from Ukraine or Slovakia with their cheaper labor force,
- Traditional forms of one-shot projects executed by a foreign contractor not registered in the Czech Republic,
- Construction project management performed by foreign consultants and/or construction management firms,
- Autonomous Registered Branch Office / Business Branch,
- As the most important : Acquisitions of local contractors - foreign capital participations or complete acquisitions of the medium and large size local companies.

# Current situation in European Construction

Construction production index - monthly data - (2005=100) (NACE Rev.2)

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Last update: 09-12-2010

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TIME	GEO												INDIC_BT
													Volume index of production
NACE_R2	S_ADJ												
Construction	Data adjusted by working days												
TIME	2009M11	2009M12	2010M01	2010M02	2010M03	2010M04	2010M05	2010M06	2010M07	2010M08	2010M09	2010M10	
European Union (27 countries)													
European Union (15 countries)	96.36	89.31	73.55	75.15	91.54	90.35	91.25	102.36	91.00	79.56	95.14		:
Euro area (16 countries)	94.17	85.64	73.93	75.55	91.73	89.87	90.03	100.66	89.13	76.70	92.49		:
Euro area (16 countries)	95.38	84.43	73.11	71.81	89.16	89.25	89.07	100.77	86.53	68.67	89.76		:
Belgium	95.39	84.44	73.14	71.87	89.22	89.29	89.07	100.78	86.51	68.61	89.75		:
Bulgaria	93.33 (p)	71.30 (p)	84.38 (p)	84.18 (p)	113.45 (p)	104.96 (p)	95.06 (p)	115.82 (p)	56.10 (p)	95.62 (p)	114.30 (p)		:
Czech Republic	112.38 (p)	113.01 (p)	94.98 (p)	94.98 (p)	114.26 (p)	113.12 (p)	110.47 (p)	117.94 (p)	116.09 (p)	113.55 (p)	109.34 (p)		:
Germany (including former GDR)	149.20	123.50	46.30	51.80	70.00	88.50	106.20	116.00	115.10	123.30	136.40	138.90	
Spain	121.20	84.00	49.30	55.40	105.10	123.20	122.80	127.60	132.50	124.50	133.70	133.30	
France	72.62	91.94	73.72	60.22	67.37	62.19	57.03	83.52	41.32 (p)	40.35	43.06 (p)		:
Italy	100.90	80.70	87.40	89.50	103.60	95.10	98.80	105.40	101.60	57.90	102.10		:
Luxembourg	: (cp)	: (cp)	: (cp)	: (cp)	: (cp)	: (cp)	: (cp)	: (cp)	: (cp)	: (cp)	: (cp)		:
Hungary	113.53	82.74	85.72	91.13	119.56	116.82	114.83	118.59	118.08	63.91	119.61		:
Netherlands	76.70	111.70	37.20	50.90	65.80	61.30	65.20	75.90	68.70	79.50	82.60		:
Austria	108.10 (e)	74.40 (e)	92.60 (e)	92.30 (e)	104.20 (e)	107.60 (e)	102.40 (e)	110.30 (e)	81.80 (e)	56.20 (e)	113.60 (e)		:
Poland	129.90	131.00	64.50	68.10	87.20	92.10	100.80	111.30	112.90	107.20	118.20 (p)		:
Portugal	165.90	235.90	75.20	76.50	103.50	119.80	144.10	178.50	172.50	185.20	205.10	214.00	
Romania	83.70	76.20	77.10	75.90	81.10	78.80	80.90	74.80	78.30	68.70	73.70		:
Slovenia	207.10	235.60	86.00	81.60	108.30	117.70	127.10	184.30	131.10	143.80	170.20	171.10 (p)	
Slovakia	124.30	108.70	71.80	73.40	99.50	98.80	117.50	120.00	112.30	119.20	109.90 (p)		:
Finland	138.25	114.74	66.79	72.38	89.41	115.21	122.09	129.36	132.70	142.62	131.78		:
Sweden	113.20 (e)	128.90 (e)	79.10 (e)	85.30 (e)	100.80 (e)	104.70 (e)	111.60 (e)	143.70 (e)	114.60 (e)	141.80 (e)	: (ce)		:
United Kingdom	123.90	115.50	115.60	119.20	113.20	129.00	126.30	134.70	101.00	109.00	126.70		:

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Available flags:

- b break in series
- e estimated value
- f forecast
- p provisional value
- r revised value
- s eurostat estimate
- :c confidential
- :n not significant
- :u extremely unreliable data

Special values:

- not applicable or real zero or zero by default
- 0 less than half of the unit used
- : not available

**Table : Construction companies in CZ with over 100 employees under foreign control in 2005**

	<b>Total of companies</b>		<b>Companies under Foreign Control</b>		
	<b>value</b>	<b>2004=100%</b>	<b>value</b>	<b>share in %</b>	<b>2004=100%</b>
<b>Number of contractors</b>	271	104.20	29	9,20	120,80
<b>Number of Employees</b>	75 555	103.90	13 277	16,80	108,50
<b>Total sales in mil. CZK</b>	255 813	111.90	59 817	24,20	108,10

Remark: Later data after 2005 are not available

# Construction Export – Main Issues from the Analysis Performed

- General improvement of the construction companies' condition and rise of their production and orders resulting from the Czech economical growth have been enabling the better financial position and financial capacity required for formulating the strategies to go abroad.
- There are commonly two groups of the potential exporting contractors. The larger one is represented by large contractors controlled by international companies from the Top 100 of the European market and oriented on exports corresponding with overall strategy of the holder. Another part of exporters comprises Czech owned medium and small companies with mostly single construction projects or engineering and construction management type of activities (one exception is Czech 2nd largest contractor Metrostav)

## **Czech Construction Export – Main Issues from the Analysis Performed – contd.**

Medium and small companies are oriented on individual projects rather than on founding subsidiaries abroad. Their activities are flexible and diverse, forms varies from general contracting to consulting, engineering or supervising.

The last named activities are typical for small design, engineering and consulting offices, which are relatively common in the long industrial tradition in steel construction. Typical projects delivered to Russia, Ukraine and Kazachstan are the steel construction hypermarket stores halls supplied for chains like Macro, Tesco etc.

## Analysis continued : Factors Preventing the Quicker Increase of the Czech Construction Export

- **Territorial Factors** - From a general perspective, even now, while the country is a full member of the European Union, Czech construction has limited access to its nearest markets (employment restrictions)
- **Unsufficient Awareness of International Contracting** - unsufficient cognizance of construction export and emphasis on it from the state authorities providing support of export by using both general and specific tools for the purpose.
- **Capital and Finance Problems** - rendering the necessary working capital (especially for the medium or small firms, which are usually not overcapitalized) is crucially important.

## Analysis continued : Factors Preventing the Quicker Increase of the Czech ( or any other Country's Construction Export)

- **Lack of strategic approach to companies' international activities as part of corporate strategy** of individual firms, due the fact that constructors companies have been using the advantage of a growing home market , lower acceleration of the exports is connected with the limited strategic orientation of most of the contractors. Vice versa the deficit of strategic foresight can lead to company's failure in international operation
- **Shortage of export oriented engineers and construction businessmen** able to cope with the perilousness and specifics of the international construction business and above all, willing to go abroad into the today's turbulent international environment

# International Construction - Success Criteria and Case Studies

Selection of the individual companies for the case studies :

- correspondence of a given company with the chosen criteria, importance in the Czech construction market (subjectively assessed),
- degree of possible knowledge contribution to a generalization of a given business case,
- degree of the data and information accessibility plus the interviewees' availability.



Table : Case studies' selection criteria

	<b>Czech contractor doing business abroad</b>	<b>foreign contractor doing business in the Czech Rep.</b>
<b>success in an international activity</b>	case study 1 <b>PSG Intl. Corp. Zlín</b>	case study 3 <b>Skanska CZ, a.s.</b>
<b>failure in an international activity</b>	case study 2 <b>Montované Stavby Corp.</b>	case study 4 <b>Hochtief VSB, a.s.</b>

# **General Success Criteria of International Contracting**

## **1. Foreign Subsidiary's Success**

- **Assessed the same way as the standard company results are - the sustainable total shareholder return (TSR) and through usual criteria like ROE, ROI, ROCE, Value Added, etc.**
- **Backlog, success rate of bidding specific for the construction industry**
- **The final success of a foreign subsidiary is connected with the degree of the risk of profits repatriation and the foreign currency exchange rate risk.**

# General Success Criteria of International Contracting contd.

## 2. International Projects Success

Standard project success criteria have to be adapted and can be defined as follows:

- fulfillment of all the contract requirements according to the schedule and in the required quality, including all the contract amendments and client changes without any arbitrations,
- realization of the planned profit, its repatriation home, without calling the bonds,
- demobilisation of all the equipment and/or other assets from abroad,
- safe return of all the staff from abroad,
- keeping the company's goodwill and acquiring a new contract in the given market,
- satisfaction of the project team members connected with their willingness for a new deployment.

## Summary of the Case Studies

- Practically applicable criteria for recognizing and measuring the degree of success of the international project abroad were set and used (case study 2)
- Recognition and usage of the success criteria of the long-term international activities (case studies 1, 3, and 4).
- All this was demonstrated in the case studies, concretely in their four variations (Czech or foreign x success or failure).

## Conclusions : Case Studies 1 and 2

- PSG is a positive example of a medium-sized international contractor with a clear formulated and fulfilled strategy, tradition and know-how, but lacking the sufficient capital resources for the possible growth.
- The case study of Montované Stavby, a.s., showed the applicability of previously formulated criteria, by which the international construction project in Israel was assessed in detail. In the case study conclusions, there are four factors of an unsuccessful project development recognized - size of the project exceeded the contractor's potential, lack of risk management approach, non realization of any pilot project, unawareness of the possibility of the client's unfair intentions.

## Conclusions : Case Studies 3 and 4

- Skanska's case study is showing an example of a successful foreign acquisition, thanks to the enlightened approach of the acquirer towards the local top management, leaving them the necessary managerial space to use their local know-how and providing enough capital resources for further development.
- Hochtief's VSB acquisition, dealt with in the last case study, is an example of a not so successful one, because it did not bring expected necessary support of the large Hochtief Group and partly even transmitted the group's own problems to the acquired contractor.

## Proposals of Possible Ways to Increase Czech Construction Exporting Activity ( Chapter 5)

The proposed measures are structured as:

- Government's and governmental agencies' steps
- Activities at the corporate level

# Proposals of Possible Improvements of the Government Policy in Supporting Contractors Going Abroad ( here the example of Czech contractors)

- The Ministry of Industry and Trade should accept the long-term strategy of the construction exports' support.
- Overcoming the territorial obstacles in relation to neighbouring Germany and Austria and reaching the settlement of the currently unbalanced situation in the possibilities of operating in the German/Austrian and Czech construction markets, consisting of measures like: enabling the Czech contractors to function in German/Austrian public biddings equally, guaranteeing the work permits at least to the extent provided to the German/Austrian staff in the Czech Republic.



## Proposals of Possible Improvements of the Czech Government Policy in Supporting Czech Contractors Going Abroad - contd

- Government should widen the scope of activities of its already existing pro-export agency CzechTrade with a construction division. It is about activities like territory consulting, market information, marketing support, business opportunities and assistance abroad.
- Government should assist with the necessary credit lines for their international activities and, through its reinsurance bank EGAP, provide them with the required surety. The orientation of it on the small and medium-size contractors (their probable low bondability).
- The educational system of the technical universities and other technical schools should concentrate more on educating the future engineers in the international construction business and to provide it also at the postgraduate level.

## **Proposals of Corporate Strategic Steps in Achieving Better Utilisation of Exporting Potential of an Individual Contractor**

Success of contractor is connected with the need to be equipped with a corporate international strategy and with a "package" of the standard operating procedures for every project performed abroad and the system of support from the company headquarters at home (It is evident that without an overall international strategy and company standard operation procedures the company can get into the big trouble (see Case study No. 2), which means that the contractor's entrance on the foreign market should be completely within the declared strategy and the actual steps should be gradual (e.g., starting with the small pilot project in given territory).

# Concluding Remarks:S

Summarizing the above said inference ...

1. There were defined criteria for measuring the success in international construction business. The case studies conclusions helped in better understanding the international contracting and formulating a proposal of possible measures for enhancing the construction exports generally on the case of Czech construction export.

# CONCLUSIONS - contnd

2. There exists a real possibility to reach better results (measured by a total volume of works abroad) and to raise the share of exports of total construction output through realizing the suitable government and corporate level steps.

The history of construction export supportive policies and measures in many world countries shows that direct and indirect government support can bring very efficient and long-lasting results both in international turnover and profits.

## Conclusions - contnd

**3. Risk Systems:** Company's willingness to go abroad has been clearly connected with the international contracting risk. The assessment and comparison of home market and foreign market risk is the key issue. That is why the utilisation of elaborate company **risk systems** enables to some large and medium firms do international construction works so prosperously and sustainably for many years. These systems are based upon long time accumulated knowledge and excellent staffing of international subsidiaries and branches. Here see the case of PSG Zlin (tradion, selected markets' orientation, policy of proper financial tools and bonding etc.

A grayscale architectural rendering of a modern city skyline. The scene features several tall, rectangular skyscrapers with grid-like window patterns. In the foreground, there is a curved, ribbed structure that resembles a modern architectural element or a bridge. The overall style is clean and minimalist, with a focus on geometric forms and perspective.

End of presentation