
The Sheffield Hallam University Built Environment Research Transactions

2010 Volume 2 Special Edition

ISSN 1759-3190

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Purpose of the Series

The aim of this publication is to provide an opportunity for students to publish the findings of their undergraduate or postgraduate work. Guidance on publication will be given by staff who will act as second authors. It is hoped that by providing a guided transition into the production of papers that students will be encouraged throughout their future careers to publish further papers. Guest papers are welcomed in any field relating to the Built Environment. Please contact E.A.Laycock@shu.ac.uk. A template will be provided on request.

Acknowledgements

The editorial team would like to acknowledge and thank Will Hughes, Reader in Construction Management and Economics, University of Reading for permission to use the ARCOM template and the associated resources.

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EDITORIAL

This special edition showcases the work of students on the Sheffield Hallam University MSc real estate course in Warsaw and the MSc course run jointly with Nottingham Trent University in Prague. David Parsons, course leader of the real estate programme in Warsaw has acted as assistant editor, initially suggesting Dissertations and Consultancy Projects for re-writing as journal papers. He would like to thank the students who have carried out this extra work and the staff who acted as co-authors to help prepare them for publication.

The articles deal with a range of property sectors including retail, offices and logistics and topics include occupier satisfaction, investment decisions and financial appraisal. The papers demonstrate the quality of our students' work, their imagination in dealing with familiar areas in new ways and the wide range of professional work the courses qualify them to carry out.

The Editor would like to thank all contributing authors and staff co-authors for their efforts in writing and editing these papers, and to all of the members of the editorial team for their continued engagement, enthusiasm and support and their constructive feedback to the authors. Without the help and support of colleagues none of this would be possible.

Dr Elizabeth Laycock
Editor, Built Environment Research Transactions

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THE PROSPECTS FOR NEW INVESTMENT VEHICLES BASED ON REAL ESTATE IN POLAND: A REVIEW OF THE MARKET AND DEMAND FROM POTENTIAL INVESTORS.

Przemysław Ciupek¹ and Tony Cheetham

Przemyslaw is Head of Investment and Collateral Management at DZ Polska SA. He has degrees in economics and finance and postgraduate professional qualifications in banking and Real Estate. His professional experience spans over eight years in banks, real estate sections of large companies and major consultancies. Tony is a Senior Lecturer and MSc Course Leader at Sheffield Hallam University. He is a member of the Royal Institution of Chartered Surveyors, has a degree in economics and post-graduate qualifications in property appraisal and management. His professional experience spanned 15 years as a practicing Chartered Surveyor prior to joining the university in 2007."

Over the last twenty years both real estate and capital markets in Poland have been transformed. The mechanisms for saving and investment have evolved, both in terms of the quality and quantity of options available, and these are of great interest to many Poles. This paper places the current market in context and identifies the investment alternatives related to these markets, particularly from the perspective of an individual potential investor. Until recently, the mechanism by which individuals have been able to invest in real estate has been limited to the purchase of specific assets such as land, houses or apartments. Secondary research was used to place the current Polish real estate market in context, investigate the potential performance of different sectors of property as investments and the forms a new investment vehicle could take, for example funds, trusts or other financial instruments backed by broader property assets. The appetite for such a financial product was then explored by the first author who carried out a survey to investigate the attitudes of a sample of fifty people selected from differing professional and social backgrounds.

Keywords: Real Estate, Investment, Poland, Market, Attitude survey.

INTRODUCTION AND HISTORICAL BACKGROUND

In the years from 1989 to 1993, Poland and other Central and Eastern European (CEE) countries experienced a series of interlinked economic problems including falling production levels, rising unemployment and rising inflation. Poland led the regional transformation process from a centrally controlled to market-led economy. This transformation was achieved through what could be described as 'shock therapy', including experiencing a severe drop in production (-11.6% in real GDP in '89 and -7.6% in '90) plus hyperinflation, peaking at 586% in 1990. The government adopted a series of policies, including the privatization of previously state-controlled enterprises, designed to adjust the Polish economy from a centrally controlled model to a market-led mixed economy quickly, but painfully.

Other countries, notably the Czech Republic and Slovakia (previously Czechoslovakia) and Hungary, decided to carry out these economic reforms over a longer time period with less social and economic pain. The Polish 'shock therapy', despite the upheaval and problems associated with the swift move to a more liberal economic model, was broadly successful in economic terms, so that by 1993 Poland was experiencing over 4% GDP growth, whilst other CEE countries' economies were still shrinking.

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Inflation, however, remained a problem for all of the countries in the region for almost a decade. Detailed data on the first four years of transformation process in CEE region is presented in Figure 1.

As part of the transformation process following the collapse of the Soviet Union, many CEE countries aspired to European Union membership. From 1989 onwards, income per capita was far lower in CEE countries than the EU and even the richest countries from the former Soviet block had wealth levels of only approximately 35-45% of the EU average. Despite, or perhaps because of, the economic disparities between the east and the west, and recognizing the significant problems that were intrinsic to political and economical transformation, western EU countries targeted the aspiring EU member countries. These countries, with almost 100 million inhabitants/consumers had great potential for economic growth in terms of new markets, new investment opportunities and increased international trade (leading to potential improved profitability), within an enlarged EU. Foreign direct investment started to flow quickly into the region, concentrating mainly on Poland, the Czech Republic and Hungary. In the late 1990's this expanded to Slovakia and Romania following improved tax incentives within the recipient countries.

Annual growth of GDP (%)

Country	1990	1991	1992	1993
Poland	-11,6%	-7,6%	1,0%	4,0%
Czech Republic	-1,9%	-14,5%	-6,7%	-0,3%
Slovakia	-1,3%	-16,4%	-8,0%	-4,1%
Hungary	-3,5%	-11,9%	-4,5%	-1,6%
Albania	-10,0%	-27,7%	-9,7%	11,0%
Bulgaria	-9,1%	-11,7%	-7,7%	-3,8%
Romania	-5,6%	-12,9%	-13,6%	1,0%

Source: National data, EIU (2010); IMF (2000)

Consumer Price Index (CPI inflation)

Country	1990	1991	1992	1993
Poland	586%	70%	43%	35%
Czech Republic	8%	61%	13%	21%
Slovakia	8%	62%	10%	23%
Hungary	29%	35%	23%	23%
Albania	0%	36%	226%	86%
Bulgaria	22%	334%	83%	72%
Romania	5%	161%	210%	256%

Source: National data, EIU (2010); IMF (2000)

Figure 1 - Annual growth of GDP and Consumer Price Index

Accession to membership of the EU was achieved by ten states, including Poland, in May 2004 followed by a further two (Romania and Bulgaria) in January 2007. Full membership status within the EU accelerated the process of economic development both for new and old EU members, allowing further market liberalization, an inflow of EU funds, continued privatization processes and increased competition. Currently, the majority of the major infrastructure projects in new EU members, e.g. construction of highways, airports, sea ports, etc are largely financed through EU budgets.

RESTRICTIONS TO INVESTMENT OPPORTUNITIES WITHIN THE REAL ESTATE MARKET

Throughout the centrally controlled era, real estate investment possibilities were mainly restricted to the direct acquisition of real estate in the form of land, apartments or houses. Financial products considered to be more “sophisticated” in terms of direct or indirect investment within the real estate sector were not offered by financial institutions. State owned banks were not interested in these operations and foreign banks did not operate in Poland.

Stock or bond exchange markets in CEE did not operate for almost forty five years following the Second World War. Therefore, it was not possible to invest directly in companies via share acquisition or indirectly via investment funds. A bond market related to real estate securities therefore also did not exist, let alone more sophisticated structured funds or hedge funds. Following the collapse of the communist system, the Warsaw Stock Exchange (WSE) was reactivated and today is the primary stock exchange in the CEE region in terms of capitalization. It attracts companies and investors both from the region and from non European countries. In terms of the number of initial public offerings (IPOs) WSE is the regional leader and successfully competes with European leaders: London Stock Exchange, Euronext, Deutsche Boerse and SME (Spanish Exchanges).

As recently as twenty years ago, savings and investment patterns within less market-orientated CEE economies looked very different to the situation that exists today. Prior to 1989, savings and investments possibilities were mainly limited to simple deposits in current accounts in the state-owned bank. The high inflation experienced in the early 90's discouraged saving, because real interest rates were negative, thus eroding purchasing power. Low savings ratios contributed to the inability of the banking sector to lend to commercial ventures such as real estate development thus restricting the opportunities for development.

Polish citizens were allowed to own 'property', however ownership was largely restricted to land or residential apartments or houses. The scope for ownership also differed between countries, with Poland and Hungary being comparatively liberal when compared to the former East Germany, for example where commercial real estate assets such as offices, retail schemes or warehouses, were predominantly state owned either directly or indirectly via state owned companies. The first modern privately owned retail scheme in Poland was constructed and opened in the early 1990's. Currently, Poland is one of the fastest developing real estate markets in Europe, attracting both developers and investors involved in schemes for apartments, commercial and infrastructure projects developed to Western European standards.

THE CURRENT ECONOMIC SITUATION

Today, the financial landscape has been completely transformed with the privatization of previously state owned banks and the introduction of competition from international financial institutions. Market liberalization and technological advancement, for example internet banking has contributed to the modernization of the banking system accompanying increased prosperity and transparency within the CEE region.

An overview of the current relevant key economic data within CEE countries is presented below. The majority of states still have GDP per capita in the range €13-15,000, but recent financial turmoil has particularly affected some of countries. The Baltic States of Estonia, Lithuania and Latvia experienced a 10% drop in GDP in 2009. The only country within the EU that maintained positive GDP growth in 2009 was Poland. Key economic indicators for Poland since joining the EU in 2004 have been very favorable, with stable GDP growth of around 4-6% p.a.; decreasing unemployment and comparatively low inflation. Recent economic trend data is illustrated in Figure 2.

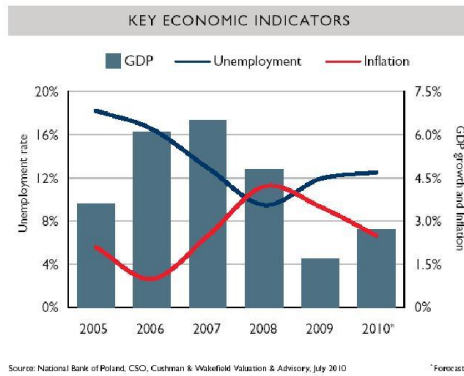


Figure 2 Key economic indicators (National Bank of Poland (2010), CSO (2010), Cushman & Wakefield 2010)

Today, Poland is a large, fast developing, well located country in the centre of Europe with a domestic market of approximately 40 million inhabitants. The stable democratic political system is highly valued by international investors. However, whilst the inflow of foreign direct investments per capita in Poland has been relatively large compared to most other CEE countries it is still smaller than other export oriented nations (e.g. Hungary and the Czech Republic).

THE RESIDENTIAL PROPERTY MARKET

Over the last two decades Poland has witnessed a significant expansion in terms of the quality and quantity of newly built residential units. Figure 3 illustrates the extent of activity within the sector through data relating to the volume of issued permits and development data relating to the last nine years. The gap between the volume of issued permits and construction starts was relatively small until 2007 as developers from Spain, the UK and Ireland were aggressively buying sites for developments, increasing land prices to unrealistic levels (Report on investment land in Poland – Prodevelopment, November '09). During the last two years, the number of issued permits significantly exceeded the number of developments started as the constraints on external finance restricted activity.

In Q1 2009, the majority of residential projects were put on hold virtually overnight by developers due to the crisis within the financial markets. Currently, the majority of “frozen” projects have restarted, with confidence amongst entrepreneurs growing (PMI index for Poland and gradual improvement in GDP growth), banks increasing mortgage lending and the situation generally slowly improving. The main issue, however, remains the access to long term capital. The supply of completed residential dwellings in Poland over the last ten years is presented in Figure 3.

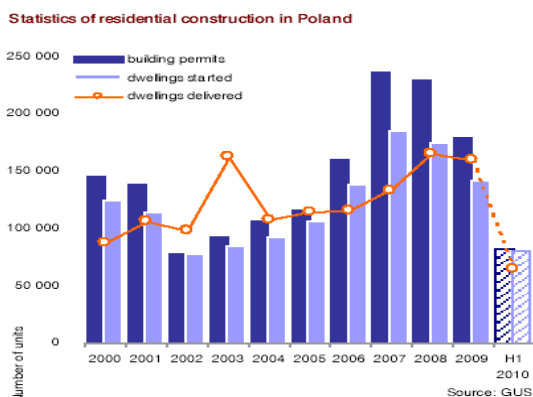


Figure 3 Development of residential market in Poland (Source: REAS (2010b))

Warsaw, with almost 2 million inhabitants, dominates all statistical analysis. Kraków, ranked second, established itself as an important academic and business offshore centre (competing directly with

Wrocław and Łódź). Almost all the major developers are present within the Warsaw market, as high demand and prices can provide higher business profitability. It is anticipated that economic development of regional cities will reduce the price disparity between these cities and Warsaw.

The number of units in the market offer

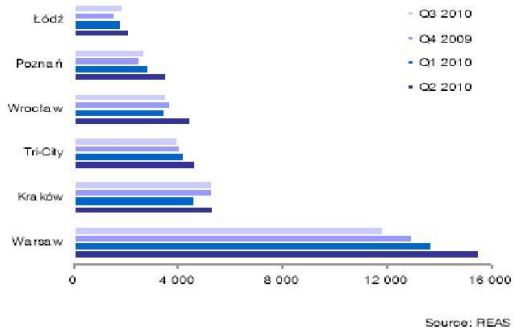


Figure 4 Number of units in the market offer in major Polish cities Source: REAS (2010b)

Figure 5 Average prices of residential units in the market offering Source: REAS (2010b)

Warsaw has the largest number of residential projects and the highest level of average prices in Poland (Figure 4 and Figure 5). The above cities were mainly targeted by international and Polish investment funds shortly before or just after joining the EU. Apartments in new projects were bought in “packages” at a very early stage of the development process. Buyers were anticipating that strong increases in value would result from Poland joining the EU as had happened previously in Spain. This scenario was partially realized as prices reached peak in 2007/8. However due to the global financial crisis many investors decided to exit by selling apartments to individuals. Many of them are now left with financial problems having purchased development land without being able to raise development finance or recover the costs of land acquisition. The value of investments in completed schemes has depreciated as prices for apartments have dropped.

THE COMMERCIAL PROPERTY MARKET

The development of the modern commercial property market in Poland has a relatively short history, dating back as to the mid 1990's when the first modern retail scheme was constructed. The following years witnessed no significant development in terms of quality, with developers focusing their efforts on unimaginative homogenous standalone hypermarkets. This sector was dominated by foreign developers with international institutional investors funding projects. These developers and investors were able to copy projects from their home market, applying their domestic criteria with respect to both construction and subsequently lease management.

Warsaw was established relatively quickly as a major office market within both Poland and the CEE region, with the capital inflow from international companies relocating to Poland stimulating the development of office market. The risk of developing in secondary or tertiary cities remains a significant factor limiting investment, with insufficient tenant demand restricting development. The first modern 'grade A' office buildings in Warsaw were developed in the late '90s, but the majority of them today are treated as a lower grade A as technological specifications advance, with newly built higher specified schemes (e.g. Rondo 1 – skyscraper) representative of the current prime 'grade A' asset.

Industrial/warehouse markets are dominated by a few large developers (e.g. Panattoni, ProLogis and SELGRO) who provide together almost 90% of the total supply in only a few locations, typically at major highway intersections. After completion, the majority of developers choose not sell their assets.

This has created a relatively small and illiquid investment market which is typical of the situation in other emergent CEE countries.

Retail Market

The supply of retail space has gradually increased with the majority of stock delivered in the form of shopping centres, whilst the share of standalone hypermarkets has gradually decreased (Figure 6). Stable retail supply growth was facilitated by expansion within secondary Polish markets. Major cities such as Warsaw, Poznań, Kraków or Wrocław are considered to be saturated with new schemes considered high risk. These cities were the main target for investment property funds, while today the whole country is almost covered, but less risk averse investors' focus on these cities.

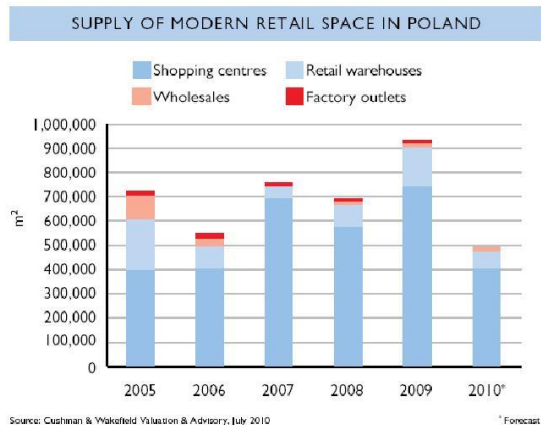


Figure 6 Supply of modern retail space in Poland (Cushman & Wakefield 2010a)

Office Market

Modern office space in Poland is mainly concentrated in Warsaw, with supply driven by strong demand from national and international companies locating their headquarters in the capital city. Modern office stock of 3.1 million m² exceeds the total stock of all the secondary cities combined. Rental levels presented are prime rents, but even in Warsaw there is plenty of available prime quality space with rents of 14-16 Euro/m²/month, although not in prime locations. Future growth is expected in secondary cities, primarily in Wrocław, Katowice and Łódź, rather than in Warsaw (Figure 7).

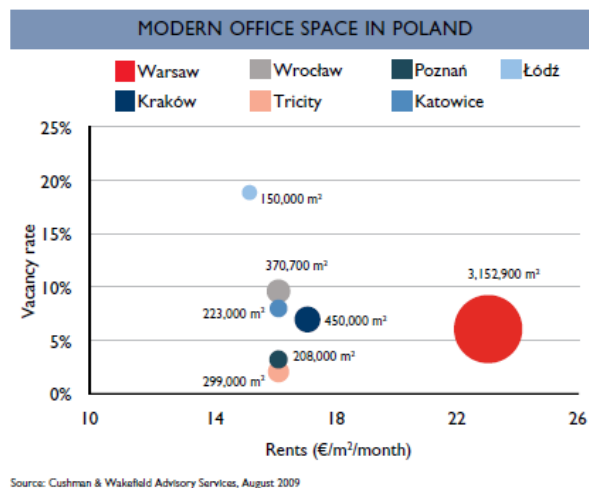


Figure 7 - Modern office space in Poland (Cushman & Wakefield 2009b)

Industrial Market

The development of industrial/warehouse space is directly correlated with development of transport infrastructure. The poor quality of the road system is still a major issue for many investors, but recently development has accelerated, stimulated by infrastructure development related to the Euro 2012 football championships, creating logistic hubs. The main industrial hubs border Warsaw, Poznań, Łódź and the Silesia Region. Supply is not speculative, but provided in-line with identified occupier demand (Figure 8).

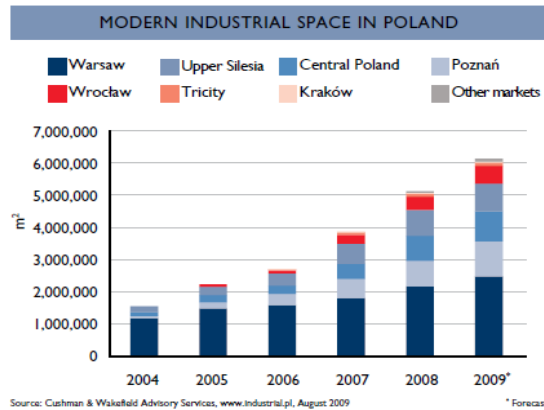


Figure 8 Modern industrial space in Poland (Cushman & Wakefield 2009c)

THE INVESTMENT MARKET

Overview

The real estate investment market in Poland reached a record level in 2006, with over Euro 5BN of transaction volume, mainly in the office and retail sectors. Due to the financial crisis, limited access to bank financing and financial problems of many investors and developers the volume decreased to only Euro 0.5BN in 2009. According to many real estate consultants the Polish market reached its lowest point in 2009 as already in 1H 2010 investment volume was higher than in the whole of 2009. Office deals dominate as these assets experienced strong decrease in capital value throughout the previous three years through a strong decrease in rents and increase in yields.



Figure 9 – Total investment deals in Poland; Cushman & Wakefield (Autumn 2010)



Figure 10 - Index of real estate developers listed on the WSE(Autumn 2010)

The strong correlation between the real estate investment volume of commercial properties and index of real estate developers can also be observed (Figure 9 and Figure 10). The development of the real estate market in Poland can therefore be summarized in the table shown in Figure 11.

Date	Before '90	'90-'02	'03-'07	'08-'09
Economical situation	Social economy. Lack of free market.	Sharp drop of production. Since '93 gradual recovery. Strong growth till '01 (internet boom). Market crash in '02.	Slow recovery after internet crash. Since '04/5 gradual growth till peak in '07.	Start of US crisis, followed by troubles in financial sector. Finally production sector strongly hit.
Construction sector	Dominated by state owned companies.	Foreign companies enter Poland. Private sector booms. Market growth fuels new constructions.	Excellent years for development of commercial property market.	Lack of external finance. New developments cancelled or stopped.
Investment market	Did not exist.	First funds created. No deals done. A lot of speculation. Investment focused mainly on residential market.	International and domestic funds created. Volume of deals rapidly grows.	Capital markets in crisis. Recovery of capital markets since Q2 '09. Real estate market is still "frozen".

Figure 11 - Summary of the commercial property market

The Maturing Market

The quality of both residential and commercial investment products is maturing with vehicles now available that would be familiar to those operating within the western EU market. The market is well structured, organised and regulated with strong competition within the markets for land acquisition, design, construction, letting and sale. Major consulting firms are well established in Poland, e.g. Cameron McKenna, Linklaters, Clifford Chance, White & Case (legal); EC Harris, Euromost and DIL (engineering); Cushman & Wakefield, JLL, CBRE, Knight Frank and King Sturge (property consultancy).

One impediment to development concerns legal issues. For example, courts in Poland have a reputation for being procedurally quite slow and in many cities ownership disputes dating back to World War Two land reparation have not yet been resolved.

Investment securities based on real estate assets

As recently as ten years ago, no funds operated in Poland dedicated to investing in real estate, whether residential or commercial. Investors willing to invest in the property market from abroad were only able to enter the market through direct acquisition, thus exposing themselves to currency risk.

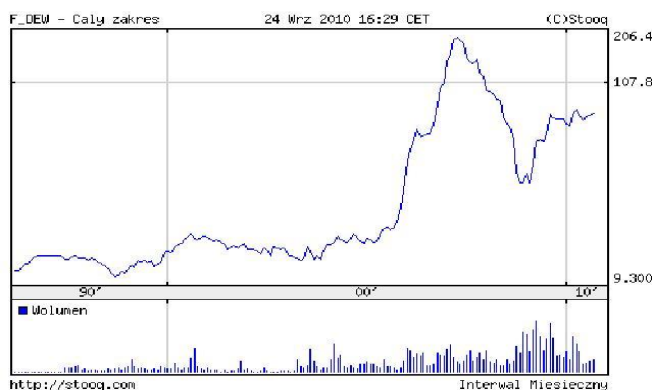


Figure 12 - Sector index of real estate development companies quoted on the Warsaw Stock Exchange (2010)

Figure 12 illustrates the “real estate developer’s index” on the Warsaw Stock Exchange since its inception. Gradual growth during the 1990s was followed by rapid growth. Years 2007 and '08 have been extremely painful, including bankruptcies.

Strong price and earning volatility of real estate development companies was also reflected in price/earning (P/E) and price/book value (P/BV) indicators. In Q4 2007, share prices were extremely expensive with P/BV ratios reaching over 5:1 and P/E over 35:1, which could be interpreted as shares were yielding approximately 3.0%. An enormous real estate bubble existed (similar to the internet bubble at the start of the century) when market values exceeded reasonable valuations. In 2008 prices declined, bottoming in early 2009 when confidence was at a minimum level. Prices were shown to be extremely undervalued at that point (e.g. P/BV < 0.5 in majority of quoted companies), therefore when wider economic prospects improved, a sharp rebound of price levels was observed across the market.

Investment patterns in Polish society

Data regarding the volume and structure of saving and investment in Poland is measured on a regular basis by a number of authorities, including several governmental agencies, institutions, the National Central Bank of Poland and many private companies. These databases, however, do not disclose the full picture of the market situation because a significant share of savings by Poles is stored in the form of cash in homes and is neither registered by banks nor disclosed within any official statistics. As of 2009 almost 23% of the population in Poland does not even have a bank account – according to a report provided by the National Bank of Poland (NBP, Treasury Department, December 2009). Often salaries are divided into two parts, the 'official' part and the 'unregistered' part, which are used mainly by small and middle size companies as an income tax avoidance technique to increase net salaries. This limits the reliability of official data regarding savings, which in reality is much higher than is recorded by official statistics.

The financial crisis impacted when some assets (mainly equity based) depreciated thus reducing the value of total savings. The decline in investment fund values and shares pushed the savings ratio from a record level of 62% in 2007 to 55% in 2008 (Source: Analizy Online, 2008).

The economic impact of Polish emigration should also be noted. According to analysis by Capital One Advisors and Euro-Tax.pl, Poles have earned almost €125BN within the last 5 years working in Ireland or the UK, and sent officially (registered) back to Poland €21BN. This makes Poland among the top global countries in terms of the value of money sent back to their home country by emigrants, and perhaps the largest contributor in terms of per-capita contribution, given Poland's comparatively small population (vs. India or China for example).

Additionally, the savings and investment profile of Polish households has been transformed over the last ten years. At the beginning of this period savings were predominantly in the form of bank deposits or cash, with only 10% allocated in any other form. However, reform of the pension system in 1999 resulted in a rapid increase in the proportion of savings invested in pension funds and investment funds. The situation significantly changed in 2007, fueled by the swift withdrawal by investors from higher-risk products.

The immaturity of capital markets within Poland restricts the availability of some asset classes to individual investors. For example, the bond market is relatively poorly developed and is dominated by government bonds. International venture capital funds operate within the CEE, but capital is mainly Anglo-American and access for individuals from Poland is restricted.

THE SCOPE FOR INVESTMENT VEHICLES

Direct Investment

Residential property is the major sector for investment in real estate by individuals. The rapid growth of this sector has been partially fueled by developments in bank financing as fourteen years ago mortgage financing in Poland simply did not exist and very few individuals had the wealth to purchase property outright. The demand for property ownership has grown, particularly among young professionals. Support systems from the banking sector were complex whilst increasing prices made loans necessary for potential purchasers with limited equity and also made apartments and houses an attractive investment through capital growth. These dynamics stimulated interest in external financing using mortgage loans from the demand side and the financial sector developed new mortgage products. Some individuals within the higher income tax brackets are now using finance to buy their second apartment as a form of investment.

An analysis of the major advantages and disadvantages in direct investment in real estate which apply to all sectors is presented in the Figure 13.

DIRECT INVESTMENTS IN REAL ESTATE	
ADVANTAGES	DISADVANTAGES
<p>Stable annual returns generated by properties in the form of rental income</p> <p>Value appreciation of assets over time</p> <p>Lower historical volatility of returns than shares</p> <p>Stability over time, bankruptcy is not as likely (depending on leverage) as might be the case with shares</p> <p>High leverage in property acquisition increases returns</p> <p>Mortgage on property can provide funds for other investments</p> <p>Access to larger assets can be achieved via investment in property funds; however some fees will have to be paid to fund managers.</p>	<p>Large investment volume of individual asset, therefore bank financing is required – on the other hand bank financing leverages returns.</p> <p>Market knowledge is essential to select good properties – e.g. with regards to technical aspects of assets.</p> <p>Individuals can afford only apartments, and access to large investments is restricted e.g. commercial properties, offices, shopping centres and warehouses.</p>

Figure 13 – Advantages and disadvantages of direct investments in real estate

The Securitisation of Real Estate

An interesting opportunity for investors is now the indirect investment in real estate through the acquisition of shares (or certificates) in a company that owns or operates within this market. Through the purchase of shares, an individual investor can anticipate dividends and increases in capital values. The main advantages and disadvantages of investing in capital markets are presented in the table below.

A proposed investment in shares or certificates of listed property companies could be achieved in one of the following ways:

- Direct acquisition of shares of listed companies on the stock exchange. Acquisition and sale fees would cost approx. 0.8% of acquired shares. Profits would be taxed at 19% .
- Acquisition of shares within funds investing in the property market. An acquisition fee of 2-4% would be charged, coupled with a management fee of 1-2% of invested amount per annum. Profits would be taxed at 19% paid by the fund at shares redemption.

INDIRECT INVESTMENTS IN REAL ESTATE BY USING CAPITAL MARKETS – SHARES OF PROPERTY COMPANIES	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> • Investor can decide in what shares to invest. A portfolio of shares (to spread the risk) can be easily created. • Profits can be generated either in a form of dividends or capital gains. • Shares can be easily sold and bought at a relatively low cost. • Taxes are calculated by brokerage houses (but paid by investor), therefore no problem with tax calculations for individual investors. • Investors can invest in firms focused on a specific sector or country. Investors can spread the risk by selecting companies operating in different countries and sectors. • Acquisition and sale costs are low. • No special market knowledge is required. • Property companies usually have a large capitalization, which attracts also institutional investors (e.g. pension funds) and brings stability. 	<ul style="list-style-type: none"> • High volatility of returns and uncertainty related to capital markets. • Analysis of target companies is required; therefore knowledge in the area of finance and economics is essential. • In most of CEE countries, stock exchanges are poorly developed, with very small capitalization and only a few listed companies – e.g. in Czech Republic and Hungary there are approximately 40 listed companies. A positive exception here is Poland. • Shares of listed companies might move in a cyclical or counter-cyclical way with respect to those of other companies. • Limited control over investment decisions is not taken by individual investors.

Figure 14 – Indirect investments in real estate by using capital markets – shares of property companies

Capital Markets and Funds

INDIRECT INVESTMENTS IN REAL ESTATE BY USING CAPITAL MARKETS - INVESTMENT IN FUNDS FOCUSED ON PROPERTY COMPANIES	
ADVANTAGES	DISADVANTAGES
<ul style="list-style-type: none"> • No market knowledge is required in the area of real estate. • Shares of property funds can be easily bought and sold with little or no cost. • Very well diversified portfolio can be created, focusing market segments: e.g. retail, office, hotels. 	<ul style="list-style-type: none"> • Fees and management costs might decrease returns. • Limited control over investment decisions.

Figure 15– Indirect investments in real estate by using capital markets – investments in funds focused on property companies

THE SURVEY

The purpose of the primary research undertaken was to investigate the attitude of potential Polish investors to alternative investment real estate products. The survey was carried out with respondents from differing professional and social backgrounds. The aim of this preliminary survey was to gain an insight into the likely scale of interest to assess whether more systematic and extensive market testing would be worthwhile and if so to guide its design.

The questionnaire was designed to eliminate ambiguity and to encourage honesty and was limited to ten questions to encourage engagement. Biographical questions were used to identify the characteristics of the sample population, and then attitudes to saving and investment were investigated. The key findings are discussed below.

1. Age of respondents

The research subject group consisted mainly of young and mid-career aged people, usually in their second or third job after university graduation. Almost half of the interviewees were aged between 30 and 40 years old; a group most likely to have significant income and to be actively considering

diversifying their savings and investment portfolios. According to a survey carried out by WSE, a similar group profile is active on the stock exchange.

In Poland, young people under 30 years old do not, as a group, have sufficient financial resources and experience to invest. They are focused upon paying for education, holidays, accommodation, or expenses associated with raising a young family, etc. A similar situation limiting their engagement with investment opportunities concerns those over 50, who did not grow up within a capitalist economic system and, with limited private resources, are currently either unable or unwilling to participate in private investment opportunities.

2. Current professional activity

Identifying the professional activity of the responding group is important. Almost half the respondents are employed within the finance, banking or investment sectors. The next most represented group, legal and administration, includes both public and private sector employees. Some respondents did not provide clear answer, or were unemployed. This population suggests that those questioned should have an above average knowledge of finance and investment.

3. The percentage of monthly disposable income allocated to investments.

Poles are generally reluctant to provide answers related to their personal finance. However, as almost 75% of the above responders are employed within the finance or legal/administration profession, this implies significantly above average salary levels. Data from the statistical office indicates that this can be 2 to 3 times higher than the national average.

Usually, high salaries directly correlate with high disposable income, and therefore a potentially high proportion of saving or investment. This data may be skewed, however, because Poles may consider the repayment of a property (e.g. apartment) loan as a form of investment. Almost 80% of respondents allocate less than 30% of income in savings.

4. What do you consider to be the best options for saving and investment?

Relatively safe and low risk products are not perceived by many as the best option for saving or investment. Generally in Poland, bank-based saving is popular among older people, reluctant to take financial risks. Riskier alternatives, e.g. equity investments or investment certificates, are understood by responders. This does not mean, however, that this type of equity-based investment is actively participated in by this group, because the associated risk may alienate conservative investors. Real estate, ranked third, may potentially attract funds dedicated to this sector. Only 10% responded in favour of debt securities. In reality, these types of assets are in fact a major core component of all pension funds and mixed type investment funds.

5. Do you use professional support in planning your investment decisions?

Respondents are generally willing to make investment decisions by themselves even though investment requires some level of market knowledge. A common problem in Poland is tax liability, which frequently changes and is regularly traced by tax professionals. Most investors require some form of professional support. With rapid market development, individual investors are not able to keep up to speed. Professional advisors, therefore, offer services ranging from simple investments to complex financial products, including financial, tax and insurance components.

6. What is your risk / return profile when investing?

This is an interesting question, because respondents are quite often lured by potential returns thus forgetting about risk. Returns (mainly historical data) are easy to measure and (in the case of good results) were often and widely published by investors. Risk, however, is approached differently. All investment products have a section in their prospectus describing the potential risks associated with the product, but average investors do not find this interesting and may not engage with it. All the more sophisticated forms of investment involve risk.

7. What are the main advantages of investing in real estate from your perspective?

Investment in real estate within Poland is generally perceived very positively. This is mainly due to historical reasons, because during communism times, real estate was one of the only saving/investment possibilities. In the 1990's during the high inflationary period, real estate was perceived as a good protection against rapidly rising prices. Nowadays, with the market and political situation more stable, property is perceived to be a good form of investment, yielding certain annual returns (from rents) with potential for capital gains.

8. What are the main disadvantages of investing in real estate from your perspective?

Although the advantages of property investment are well known to the general public, people are also aware of the associated problems. Whilst, for example, the choice of apartment to be purchased is determined mainly by personal preference; the commercial investment landscape is more complex. The complicated terminology of yield, discount rate, financial leverage etc seems to be unclear. These terms are in daily use for property professionals when quoting and comparing real estate investment opportunities, but are alien to lay investors.

The primary impediment to investment, however, is the large capital requirement to facilitate this investment. For many, the acquisition of an apartment is very often a highly leveraged deal made once in a lifetime. Commercial assets, even simple small retail stores, are unobtainable for the majority of individuals. Therefore, the commercial property market - retail, commercial and industrial - is dominated by institutional investors.

This situation, however, creates excellent possibilities for individual investors. The majority of these institutional investment funds are publicly quoted thus enabling investors to purchase shares, rather than being limited to engaging through direct acquisition. This reduces these impediments to investment and these funds, targeting individual investors, have become increasingly active within the Polish media over recent years.

9. What other alternative investments based on real estate are you interested in?

Alternative investments in Poland are becoming popular, but one of the most popular international types of investment, hedge funds, is still not known to the general Polish public. There are only a handful of these funds created by Poles; hence clients generally have to use foreign investment managers. Other investment structured products, e.g. bonds plus options, are now being introduced, but their performance over the last two to three years of operation in Poland does not inspire confidence.

Investing in the shares of funds focusing upon the real estate sector appears to be an excellent investment option for people wishing to combine above average returns with stability and flexibility. The direct acquisition of real estate involves many difficulties, mainly related to the large capital required to do so. Alternative investment opportunities available to the potential real estate investor permit both financially small investment and the easy withdrawal of funds at any time.

10. Would you consider investing in alternative investments based on real estate?

The final question indicates that the alternative/secured real estate investment market has great potential in Poland. Whilst 20% of the sample had already invested, a further 70% of respondents would consider investment, but further information, probably in the form of professional advice, would be needed. Only 10% of the sample population would not consider investing in alternative investments related to real estate.

CONCLUSIONS

Over the last two decades, Poland has proved that it is able to successfully transform itself from a social to liberal, market-led economic model. The political system has been transformed from a one party communist state to a modern democracy. During this period, the country has joined both NATO

and the European Union. Currently, Poland is ranked in 18th position in the world in terms of economic potential (International Monetary Fund, World Bank and CIA World Factbook). Poland has also managed to go through the recent financial crisis without falling into recession – the only country within the European Union with positive growth in 2009.

Poland is still undergoing an economic, political and social transformation. Some of these changes can be easily traced by analysing statistical data, whilst others, predominantly social transformation, are more complex and not easy to measure.

This work began with a general economic review of the economy and discussed the related changes within Polish society in order to place the investment attitudes within an appropriate context. With regards to the investment attitudes of Poles, the research highlights the major characteristics and shows the potential for development.

The analysis of investments and saving patterns suggests that there is scope for more sophisticated and complex tools and products within the Polish market. Today, simple savings deposit accounts held in a bank do not satisfy many people. The research suggests that there would be a market serving those individuals with sufficient disposable income for broader investment vehicles.

The historical overview of investments related to real estate and capital markets showed that real estate is considered to be a reliable long term investment option, though there are both advantages and disadvantages of direct investment. Real estate companies and funds have performed relatively well over the last ten years in terms of capital growth.

The research indicated that Poles employed within the financial and professional sectors of the economy are likely to be interested in new investment opportunities based upon the real estate market. The main obstacles to investment, however, were related to both complexity and lack of knowledge. This could potentially be overcome through improved financial education thus reducing the perceived complexity of these products.

Accordingly, it is hoped that real estate investment can be an excellent opportunity for many people, perhaps forming part of a wider portfolio. New investment vehicles would not only benefit individual investors but could also provide funds for further development of the Polish economy.

Further research should focus upon further identifying and resolving the perceived barriers to understanding that currently inhibit public engagement with real-estate related financial products.

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EXPANSION OF INTERNATIONAL RETAILERS IN THE CZECH REPUBLIC

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This paper analyses the penetration of the retail market in the Czech Republic by international retailers. In outlining the development of the market over time, key data on its growth is set out to highlighting key stages in the development process. The paper concludes that most retailers expanded to the Czech Republic from neighbouring countries dominated by German retailers. The retailers were driven by location and property type in their expansion, whereas outer city shopping centers and most populated cities were most preferred expansion targets.

Keywords: retail expansion, retail development, retail investment, shopping centers.

INTRODUCTION

The Development of the Retail Market

The Czech retail market has undergone substantial expansion over the last 15 years. This growth has been connected with the transformation from a centrally planned economy to one based on an open market and with the overall growth of the economy. Higher levels of disposable income led to increased consumer demand for a wider range of "western goods" which in turn generated demand from retailers to enter the market and exploit the opportunities.

Figure 1 sets out a series of macroeconomic indicators to illustrate change over time. There was a steady growth in GDP from 1999 peaking at 6.8% in 2006 and slowing slightly in 2007 and 2008. Inflation and unemployment rates were low and stable creating a favourable business climate. Another very encouraging factor to retailers is the GDP growth per capita that tripled over the last ten years increasing the purchasing power of the inhabitants. It was also supported by strengthening of the Czech crown against EURO, which in real terms meant even higher growth of purchasing power. Grocery retailers first entered the market with K mart, Carrefour and Tesco being the pioneers, followed by furniture operators such as IKEA, DIY operators (for example Bauhaus, OBI, Hornbach) and then fashion retailers (for example H&M, C&A, Marks & Spencer). These retailers came mostly from Western Europe and challenged local operators in terms of prices, quality and services. The demand from retailers generated a demand for properties to accommodate their businesses which was met by international real estate investors, developers and consultants who entered the market. The first western style shopping centre, Centrum Černý Most, was opened in 1997 in Prague and a new market has developed since then. Figure 2 lists the largest shopping centres in the Czech Republic by size, measured by number of stores and includes names of the developers and investors of the schemes including their country of origin.

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Figure 2 shows that the developers and investors were mainly western European companies and that they concentrated on the largest cities first. This was a self-reinforcing process as the availability of suitable property further encouraged the entry of international retailers.

	GDP grow %, Y/Y, real changes	GDP per capita CZK	GDP per capita €	Unemployment rate %, average in the year	Real income change %, Y/Y, CZK	Inflation rate %, Y/Y	CZK/EUR average
1993	.	.	.	4.3	.	20.8	.
1994	.	.	.	4.3	.	10.0	.
1995	.	141,957	.	4.0	.	9.1	.
1996	4.0	163,183	.	3.9	.	8.8	.
1997	-0.7	175,772	.	4.8	.	8.5	.
1998	-0.8	193,929	.	6.5	.	10.7	.
1999	1.3	202,357	5,487	8.7	.	2.1	36.88
2000	3.6	213,110	5,985	8.8	.	3.9	35.61
2001	2.5	230,064	6,750	8.1	3.9	4.7	34.08
2002	1.9	241,593	7,841	7.3	6.1	1.8	30.81
2003	3.6	252,617	7,933	7.8	5.7	0.1	31.84
2004	4.5	275,770	8,644	8.3	3.4	2.8	31.90
2005	6.3	291,561	9,789	7.9	3.0	1.9	29.78
2006	6.8	313,868	11,074	7.1	4.0	2.5	28.34
2007	6.1	342,494	12,337	5.3	4.3	2.8	27.76
2008	3.0	354,410	14,209	4.4	1.9	6.3	24.94

Figure 1 Macroeconomic indicators of the Czech Republic 1993-2008 (Balcar & Karásek 2009 cited Czech Statistical Office, 2009; Czech National Bank 2009)

rank	shopping center	city	opening	developer	investor
1	Centrum Chodov	Prague	2005	Multidevelopment (Holland)	Unibail Rodamco (France)
2	Palladium	Prague	2007	EPD (Germany)	Hannover Leasing (Germany)
3	OC Letňany	Prague	1999	Tesco (UK)	Tesco (UK)
4	Nový Smíchov	Prague	2001	Ségécé (France)	Ségécé (France)
5	Palác Flora	Prague	2003	Africa Israel Inv. (Israel)	Quinlan Private Golub (Ireland)
6	Metropole Zličín	Prague	2002	Portland Trust	CGI (Germany)
7	Olympia Brno	Brno	1999	Tri Stannifer (UK)	Somerston (UK)
8	Galerie Vaňkovka	Brno	2005	ECE (Germany)	HGA Capital (Germany)
9	Plaza Plzeň	Plzeň	2007	Ségécé (France)	Ségécé (France)
10	Olympia Plzeň	Plzeň	2004	Multidevelopment (Holland)	ING Real Estate (Holland)

Figure 2 .Largest shopping centres of the Czech Republic Source: Shopping Centre & Hypermarket 2008 (Incoma Research)

Key Stages in the Development of the Retail Market

Edge of town locations

Shopping centres started to be built on the edges of especially larger towns starting with the capital city of Prague. This was mainly because it was easier in terms of legislation and less expensive to start in these locations than in city centres, where the development process takes much longer. Initially shopping centres were typically anchored by hypermarkets

Shift to urban and residential areas or town centres

Shopping centres next started to be developed in dense residential areas and the first projects in town centres were started.

More international tenants

Shopping centres accommodated increasingly larger number of international tenants. The entrance of operators such as New Yorker, Marks & Spencer, Next, H&M, and C&A encouraged the developers to invest in this property segment and also further international retailers came to the market as suitable accommodation became available.

Extensions of successful shopping centres

Schemes where demand from consumers and retailers was high were seen as low risk by developers and investors and extensions were developed. Examples include Avion Ostrava, Nisa Liberac, Olympia Brno, Metropole Zličín and Centrum Černý Most.

INTERNATIONAL COMPARISONS

Figure 3 shows the market saturation of modern shopping centre stock in European Union countries. The European Union has an average of 214.2 sq. m of space per 1,000 population compared to 185.7 sq. m per 1,000 in the Czech Republic. This would seem to suggest that there is still potential for further development but other factors need to be taken into account. Norway and Sweden have the highest provision per head, probably since the cold weather makes enclosed centres more comfortable and convenient. The high seasonal temperature variation may also favour this type of shopping provision in the Czech Republic. Germany and Belgium were significantly below the European average since both have had planning regimes which discourage out of town retail development, demonstrating the influence of policy over the future of the Czech market.

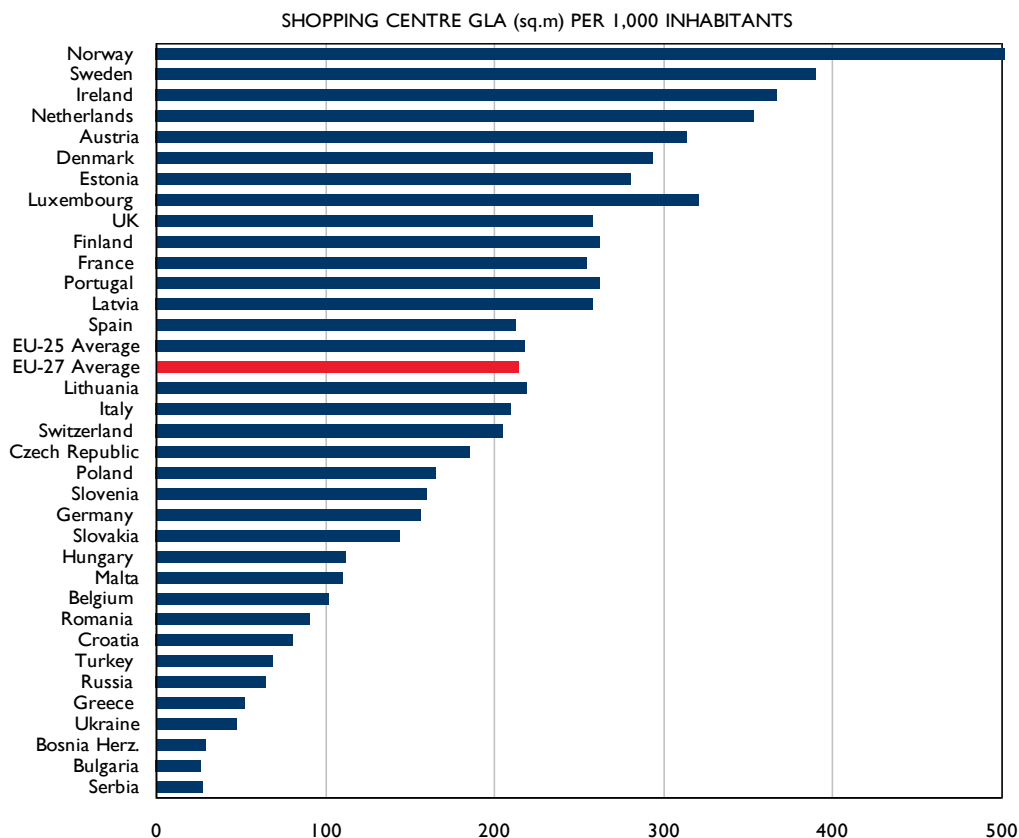


Figure 3 .Shopping centre GLA per 1000 inhabitants across Europe (Cushman & Wakefield, July 2009)

Distribution of modern retail stock within the Czech Republic

This section analyses the development of retail parks and new shopping centres between 2004 and 2008. Data from Cushman and Wakefield shows that 510,174 sq. m of retail parks was developed

leading to a total of 804,017 sq. m; and 1,420,495 sq. m of modern shopping centre space was developed leading to a total of 1 956 319 sq. m.

Figure 4 shows the future predictions of Cushman & Wakefield (2009). A general picture of the development and distribution of retail parks and new shopping centres was assembled by producing maps of density of provision by sq. m of space per head of population. This process showed that some areas have no modern shopping facilities and some areas have both retail parks but not shopping centres and vice versa. Retail parks are more widely distributed than shopping centres. The initial expectation was that the main driver for the spatial distribution would be population density and this with other causal factors is explored in the analysis section.

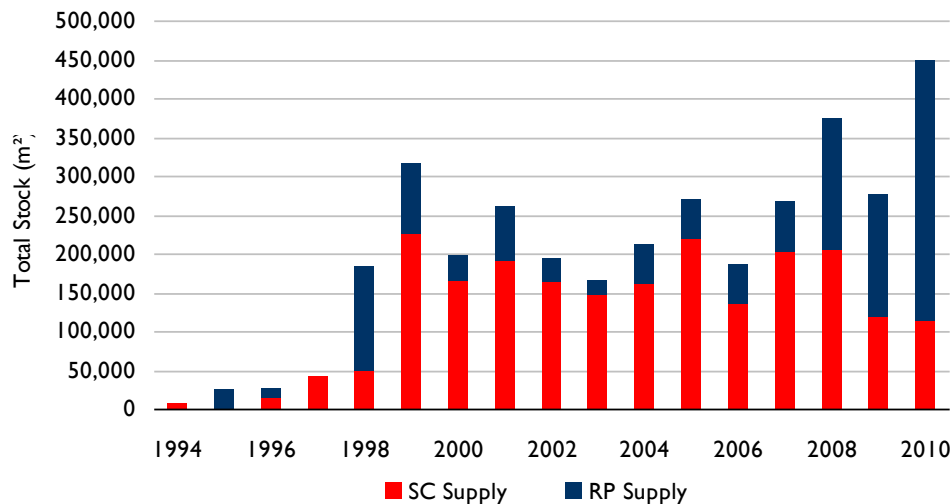


Figure 4 .Retail park and shopping centre development in districts in the Czech Republic (Cushman & Wakefield, 2009)

LITERATURE REVIEW

International retail expansion has been a recurring theme in the academic literature especially since the 1990's. The main reason was the increasing globalisation of the market place as successful companies exploited the growth potential of other markets. Most of this work concerned the very large Asian markets, primarily India and China. Interest in Central and Eastern Europe will increase as their economies expand, and with the accession of states into the European Union. This study is intended to contribute to an understanding of the dynamics involved. The relevant literature covers the following basic themes in terms of international retail expansion:

- direction of retail expansion
- motivational factors behind international expansion
- branding issues related to international expansion
- entry modes into foreign markets

Direction of retail expansion

One theme in the literature is that it is considered easier and less risky for retailers to expand to countries which are close geographically or culturally and the entry is then usually more successful. As Robinson and Clarke-Hill (1990) noted, for European retailers, initial foreign expansion was invariably confined to geographically, psychically and culturally close foreign markets. To mention few examples here, the US retailers use the UK as an entry market to Europe, which is an example of cultural proximity. However, expansion into neighbouring or culturally proximate states is typical among European retailers. For example French retailers, especially hypermarket operators, tend to expand to Spain, German retailers expand to Austria and Denmark, whereas Swedish retailers typically expand throughout Scandinavia first. "Core European structure is driven by retailers from the markets of France and Germany" (Myers & Alexander, 2007). This is illustrated in Figure 5.

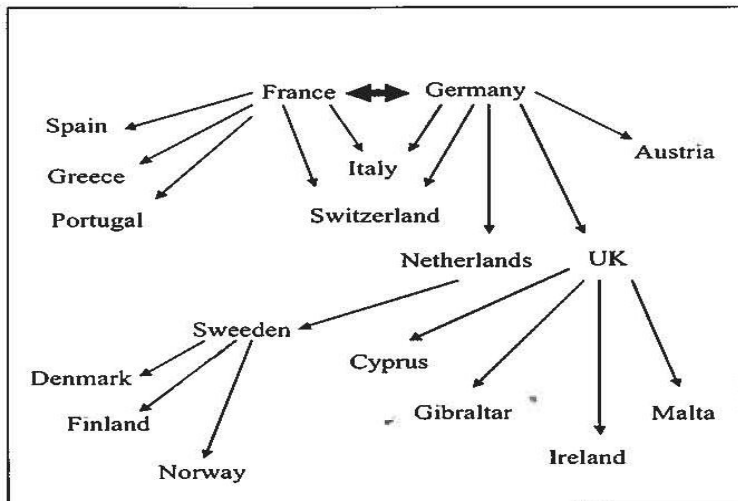


Figure 5 Expansion patterns of European retailers (Myers and Alexander, 2007)

Motivational factors behind international expansion

The motives for international expansion are usually divided into push and pull factors (Akehurst & Alexander, 1996). Among push factors are saturation of the home market, regulation, legislation, trading conditions etc. The pull factors are mainly concerned with opportunities for the existing offer of the retail operators. Some authors classify motivation as either a reactive or proactive approach (Alexander, 1996). Alexander would characterise the approach described above as reactive, because expansion is a result of either internal or external factors in the home market. A proactive approach is taken by companies who actively seek foreign expansion as an integral part of their strategy. Factors which motivate or inhibit international expansion may also be external or internal. Internal factors could include the negative attitude of senior management towards foreign expansion, internal organisational structure that is not ready to absorb and adapt to foreign expansion, lack of resources, organisational culture or environmental factors. External factors include ownership or taxation issues, exchange rate fluctuations or political instability (Vida 2000). For example Russia has lately seen decreasing trend in shopping centre development and investment partly due to political and economic instability. On the other hand, Slovakia gained its international reputation by becoming member of the EURO zone thus getting rid of the fluctuating exchange rate problem which with favourable tax conditions has attracted more foreign direct investment. During the recent credit crunch crisis the willingness of the banking sector to support companies in their expansion activities has increased in importance.

Akehurst & Alexander (1996) identify aspects of the domestic market such as niche opportunities, growth prospects, market size and the uniqueness of the retail offer which may affect decisions about foreign expansion. International trends encouraging the globalisation of retailing are identified as maturity of domestic markets and consequent limited growth opportunities, technological advances, geo-political rebalancing resulting in the lowering of trade barriers, the internationalisation of financial markets and a trend towards concentration of ownership in the retail sector (Evans & Bridson 2008). The same authors also point out that company strategies and their responses to these forces will change over time.

Branding issues related to international expansion

The relationship between branding and internationalisation of retail activity is complex. The wider spread of a brand may dilute its aura of luxury and exclusivity but on the other hand may generate much higher income. Moore, Fernie and Burt (2000) show how this has worked out in a study of fashion designers transition from private to public companies. Paswan a Sharma (2004) in their study looked at the country of origin in relation to the brand image. They argued, that "consumer knowledge of brand's country is crucial for this transfer of country of origin image to brand image." Hence a "consumer's perception of the country of origin is likely to influence the perceptions of a brand from that country, only if the consumer is aware of the brand's COO." Paswan and Sharma

(2004) studied the same phenomenon and demonstrated that country of origin can affect international performance.

Entry modes

There can be different modes of entry into new markets, where the following are the most frequently cited ones:

Cross border acquisitions

The company enters a market by acquisition of a local company a strategy often undertaken by Tesco, such as in the acquisition of K mart in the Czech Republic

Mergers

The two companies merge into one brand, for example Telefonica and O2 merged into one company that carries the Telefonica O2 brandname in most markets.

Joint ventures

The development of joint ventures is often used in geographically distant markets where the foreign investor does not have a sufficient level of knowledge of the local market and but has the resources for expansion. For example Marks & Spencer initially founded a joint venture with a local Czech partner and took over the company after a successful launch of the brand and company operations were established.

Franchising

To offer a franchise is a concept developed by US companies and now used internationally. As Paswan and Sharma (2004) note "international franchising has been suggested to be a key growth area, especially in the context of emerging markets." It is a safe strategy where the risk is taken by the franchise partner. Also, because the franchisee pays for the franchise, it is very cost effective to the franchisor. At the same time, the franchisor does not lose control over the transfer of brand and the brand know-how is part of the franchise.

METHODOLOGY

An objective, quantitative approach based on the analysis of hard statistical data is appropriate to this process testing ideas already generated. A qualitative approach would have been more appropriate to develop explanatory theories and hypotheses (Naoum 2008).

A database of secondary data describing the behaviour of international retailers was created and this was analysed using statistical techniques in order to assess the extent to which those theories can explain the dynamics involved in the Czech Republic. The study was intended to develop the analytical approach as well as providing conclusions in its own right. This quantitative, statistical approach has several advantages over the alternative qualitative approach. It can be expanded in breadth as more factors can be included and further analysis can be carried out of the same material. It is comprehensive, as secondary data for all major international retailers have been collected whereas, a qualitative approach involving interviews would have been partial since interviews concerning every retailer would have been beyond the resources of the study. The approach is also dynamic and will facilitate analysis of change over time by using the current results as a benchmark to be updated.

Data was collected on major international retailers present in shopping centres in the Czech Republic from Cushman and Wakefield's database on Shopping Centres and the Czech Statistical Office which provided information on turnovers. An initial sample of 501 operators was selected. This was refined to 101 by application of two criteria. Retailers with a presence in only the Czech Republic and Slovakia were excluded as not being truly 'international' taking the sample to 166 and operators with less than five stores were excluded as not being 'major' resulting in a total of 101. At interview, four retail experts from the profession suggested a further 5 operators be added to the sample taking the total to 106.

Comprehensive information was collected for each retailer for the aspects set out below.

Fascia

That is the name of the trading name of retailer by which the concept is known among the customers, sometimes the word brandname is used.

City

The name of city in the Czech Republic where the store is located.

Property address

Exact property address in the city, this was especially used to identify all the retailers in one property, e.g. shopping centre or retail park.

Region

A name of the administrative region in which the particular city is located. This enables wider geographical look at retailer's presence.

District

A name of the administrative district in which the particular city is located, because some official statistical data (e.g. about unemployment) are published by districts. It is typically the smallest statistical unit used in the Czech Republic.

Population

Number of inhabitants in the particular city according to the Czech Statistical Office.

Geographical type of location

Three location types were: city centre, inner city, out of town. These are used to identify geographical location within particular city.

Retail property type

Further location types were identified as: high street, shopping centre, retail warehouse or secondary high street. This identifies particular location in terms of type of property where the retailer operates.

Type of retailer

Classification used by Cushman & Wakefield (2008) was used to identify the type of retailer's operation. Figure 6 summarises the retailers included the number of stores and number of brands for each country represented in shopping centres in the Czech Republic.

ANALYSIS

The themes from the literature review were summarised as research topics and established statistical techniques were used to analyse the data gathered. The themes investigated were:

- International retailers and country of origin
- Distribution of stores in regions across the Czech Republic
- Distribution of stores in different types of locations
- Distribution of retail sectors
- Comparison of retailers from neighbouring vs. other countries of origin
- Unemployment and number of stores

A hypothesis or hypotheses were set up for each of the themes. These were assessed by comparing aspects of the data to what would be predicted by the hypotheses. Descriptive techniques such as graphs and charts were used to analyse issues of distribution. Correlation analysis was used to probe likelihood of causal relationships. "Correlation is a technique that measures the strength of the relationship between two variables. It establishes the degree to which a change in one of the variables is reflected in the change (or not) of the other" (Mansfield & Hoxley, 2008). It is recognised that this cannot prove that one of the variables is causing the change in the other but it can establish a link without which the existence of causality would be disproved. Furthermore the fact that the hypotheses were drawn from the literature may be seen as triangulation of research with the research from one source being tested by a different technique in another context.

RESULTS

Country of Origin

This section provides an overview of where the international retailers have mainly come from to the Czech Republic and who are the most active retailers on the market

The following hypothesis is drawn from the literature review: "Retailers from geographically proximate countries are the most active retailers in the Czech market. "

Figure 7 clearly demonstrates the domination of stores of German retailers in the Czech Republic, where 40% of the stores included originate in Germany. The next highest representation is from

international operators from the Czech Republic. This supports the hypothesis as Germany has the longest border with the Czech Republic. The other significant retailers in terms of number of stores are French, Spanish, British and Americans. The low representation of other neighbours such as for example Polish retailers at 4% is probably due to the 40 mil. population market size and lower willingness or resources of mainly fashion Polish retailers to expand.

	Country of origin	No. of brands	No. of stores
1	Germany	29	953
2	France	11	211
3	United States of America	11	137
4	Italy	10	98
5	Great Britain	7	142
6	Poland	7	107
7	Czech Republic	5	291
8	Denmark	5	73
9	Spain	5	180
10	Austria	4	91
11	Hungary	3	18
12	Australia	2	15
13	Sweden	2	18
14	Switzerland	2	16
15	Belgium	1	11
16	Ireland	1	17
17	Slovakia	1	18
	TOTAL	106	2,396

Figure 6. Overview of international retailers' representation in the Czech Republic (Source: author)

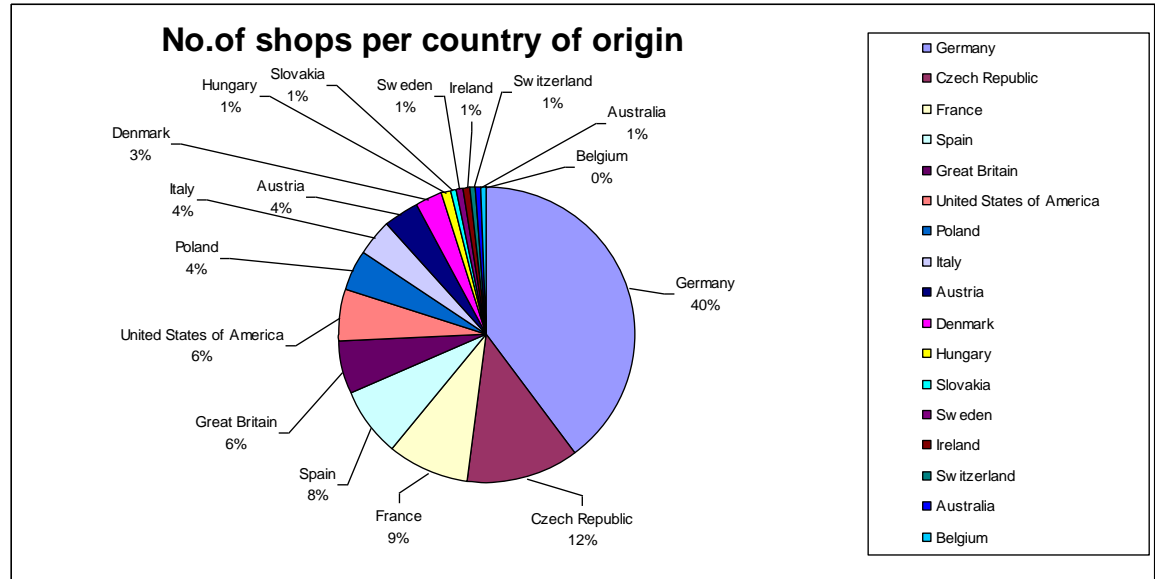


Figure 7. Graph - Shops share per country of origin, whole Czech Republic (Source: author)

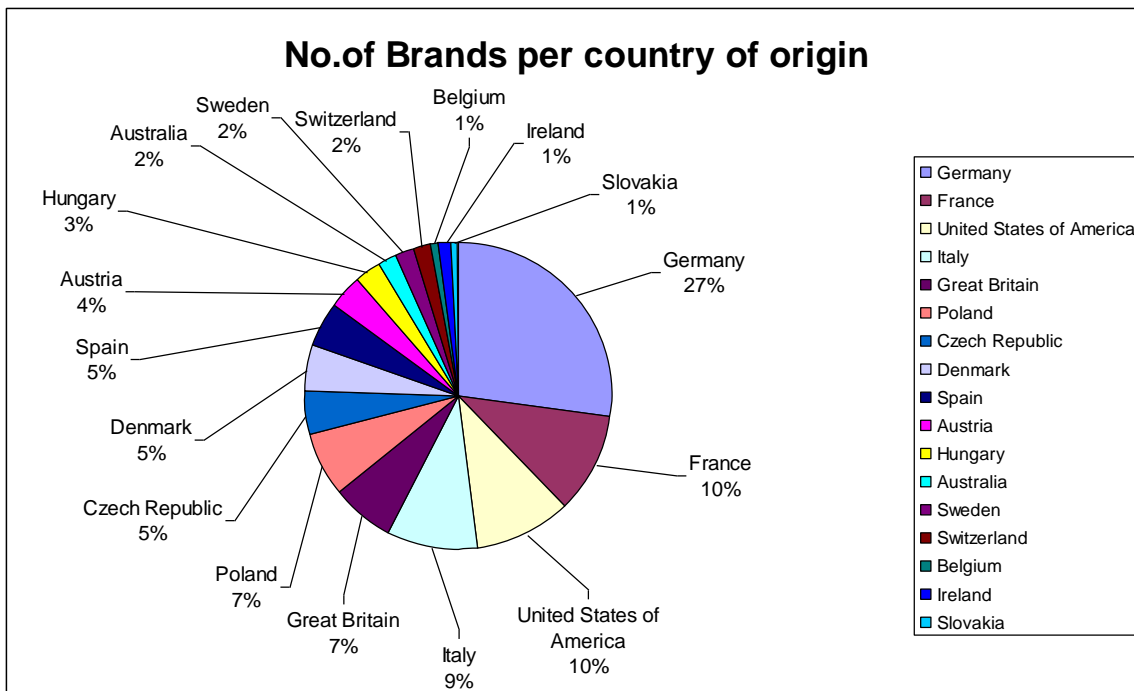


Figure 8 .Brands share per country of origin, whole Czech Republic (Source: author)

Figure 8 tests the extent to which the results are influenced by high levels of activity of a few retailers. The operators that stand out in this respect are DM Drogerie and Rossmann who are chemists from Germany and the Spanish telecommunications operator Telefonica O2. This again generally supports the hypothesis with Germany dominant and France second of European operators. The presence of retailers from the United States does not support the primacy of geographical proximity but the strength of the global American brands may be seen as representing "psychic proximity" as in Robinson and Clarke-Hill (1990).

Representation of International Retailers in Regions

This section analyses the representation of international retailers in the regions of the Czech Republic. The first hypothesis tested is that different regions attract different levels of international retail activity with Prague being the most attractive region. The second hypothesis is that population is the main attractor of international retailers.

Figure 9 sets out the number of stores per region and the number of stores per 1,000 inhabitants and this is illustrated by the chart. The first hypothesis that different regions attract different levels of international activity is clearly true. The average for the index is that 0.23 stores serve 1,000 inhabitants in the Czech Republic. Correlation analysis was calculated to see the dependency between number of inhabitants and number of stores. It shows that the correlation between number of stores and number of inhabitants is 0.65. This suggests some correlation, but the explanation is not complete. The results indicate, that the region with the highest number of stores per 1000 inhabitants is Prague with 0.61 stores per 1000 inhabitants, supporting the second hypothesis. Other regions are typically in the range of 0.19 stores. The regions with lowest number of stores per 1000 inhabitants are Hradec Kralové and Vysočina. These regions have the lowest penetration of modern retail stock and low population density which probably explains this. The Central Bohemian region has low saturation with 0.13 stores per 1000 inhabitants. This is most probably caused by the proximity of Prague, as a lot of people from this region work and shop in Prague. Also, large regional shopping centres on the edges of Prague attract customers from whole Central Bohemian region. Therefore, there is no reason for developers to develop competing retail schemes in this region.

whole Czech Republic			
Inhabitants	Region	Number of stores	no. of stores per 1 000 inh
636,328	Jihočeský Region	134	0.21
1,147,146	Jihomoravský Region	248	0.22
308,403	Karlovarský Region	72	0.23
554,520	Královéhradecký Region	69	0.12
437,325	Liberecký Region	104	0.24
1,250,255	Moravskoslezský Region	216	0.17
642,137	Olomoucký Region	112	0.17
515,185	Pardubický Region	73	0.14
569,627	Plzeňský Region	146	0.26
1,233,211	Praha	747	0.61
1,230,691	Středočeský Region	160	0.13
835,891	Ústecký Region	161	0.19
515,411	Vysočina	62	0.12
591,412	Zlínský Region	92	0.16
10,467,542	Grand Total	2,396	0.23
Correlation			0.65

Figure 9. Number of stores per 1 000 inhabitants in regions (Source: author)

The relationship between the number of brands and the number of inhabitants was tested by a linear regression model which worked out the dependency between the number of fascias and the number of inhabitants.

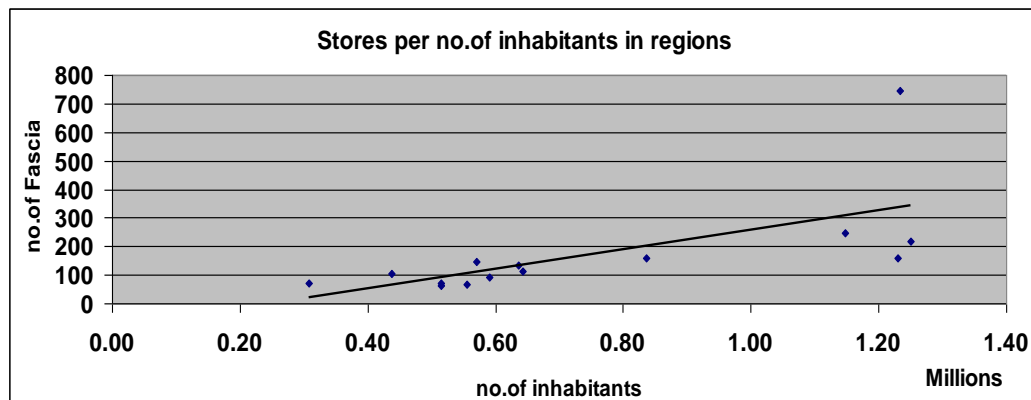


Figure 10. - Number of stores per number of inhabitants in regions (Source: author)

Figure 10 shows a strong relationship between number of stores per millions of inhabitants generally with an outlying figure for Prague which will have affected the results of the previous correlation analysis. This is confirmed by the following descriptive statistics. Descriptive statistic suggests that 95% of the values are in the interval 0.142 - 0.282 with a median value of 0.184 with the sample affected by one extreme value represented by the capital city of Prague. To investigate this further analysis that excluded the capital city of Prague was conducted. Without Prague the average number of stores per 1 000 inhabitants is 0.18 with a correlation coefficient of 0.85 between number of inhabitants and number of stores. This suggests a much higher correlation level when the capital city is excluded. The hypothesis that number of stores depends on number of inhabitants in the regions is supported particularly when the capital city of Prague was excluded from the sample. It perhaps also indicates that Prague is too saturated with retail stock.

Figure 11 demonstrates the comparison with other capitals of Central European cities and indicates that Prague is the most saturated with retail stock of all these capitals and also has high levels of prime rents in shopping centres and on the high streets. The saturation suggests that there may not be scope for more retailers or retail development but on the other hand the high rents suggest a high level of demand. This may be due to income levels in the local economy or spending from tourists. These dynamics could be further investigated in later work. The hypothesis that the locations chosen by retailers from nearby countries would be different from those further afield (Robinson and Clarke-Hill 1990) was tested.

Figure 12 separates the retailers into those from neighbouring countries and others. This demonstrates a fairly even spread of countries of origin for most regions with the exception of Prague which has a higher representation of retailers who are not from neighbouring countries. Further analysis showed that retailers from neighbouring countries and further afield do not differ in their preferences for types of location or within the city or by type of property with two major exceptions. International retailers from Slovakia and Poland tend to occupy almost exclusively premises in Shopping centres. It might have been expected that retailers from neighbouring countries would firstly expand to the regions of the Czech Republic closest to them. However this does not seem to hold true as the spread of neighbouring retailers is quite even in all the regions. For example the German retailers have highly penetrated the North Moravian region despite the fact that it is the most distant region from their border. So geographical distance does not seem to explain the way that the international retailers have expanded on the Czech market.

Country	Slovakia	Hungary	Czech Republic	Poland
Capital city	Bratislava	Budapest	Prague	Warsaw
Metropolitan Area Population	710 000	2 470 000	1 620 000	2 600 000
retail stock in mil. sqm (HS, RP, SC)	0.32	0.75	0.94	1.34
Prime SC rents	35-45 €	50-113 €	50-110 €	58-92 €
Prime HS rents	40 €	100 €	170 €	84 €

Figure 11 .Comparison of CEE capital cities (Cushman & Wakefield, 2009)

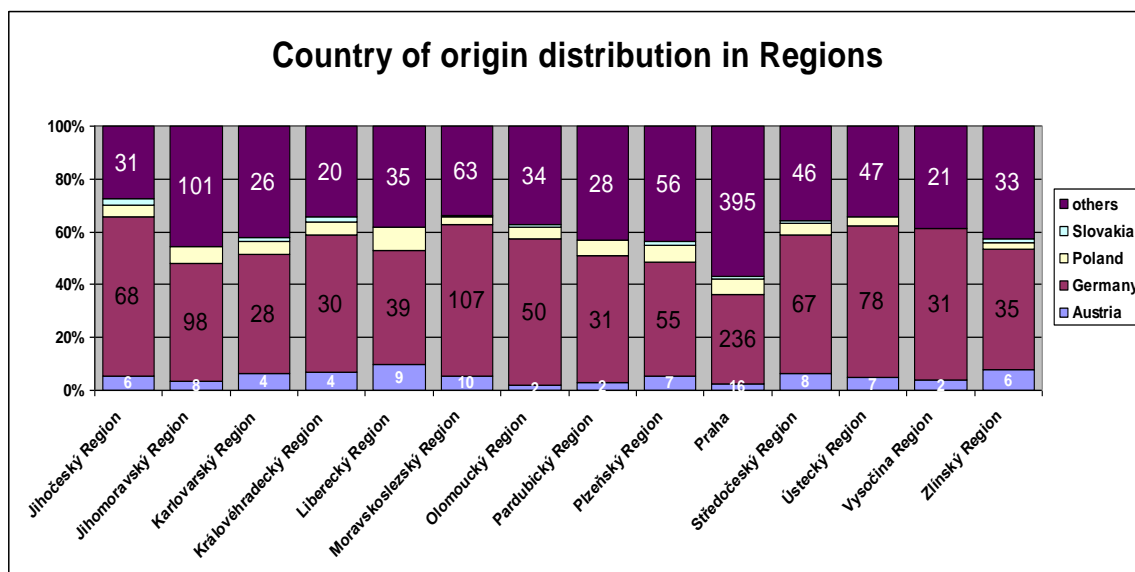


Figure 12 .Distribution of retailers in regions, neighbouring vs. other countries of origin (Source: author)

Property Type by Region

This section investigates the preferences for types of retail property by international retailers in the Czech Republic as a whole and by region. The graph indicates the clear dominance of shopping centres which accommodate 59% of the stores from the database. It is quite interesting that retail parks represent only 14%. One of the reasons may be that retail parks accommodate operators with large formats and far fewer outlets than shopping centres so the analysis by total area would be probably different. The hypothesis that different regions tend to accommodate different types of property is supported by Figure 13 and Figure 14. It was determined that Prague and the larger cities have a higher proportion of international retailers in shopping centres. It is interesting, that most retail parks are built in cities between 10 000 – 30 000 inhabitants with then a decreasing popularity of the format with city size. The share of shopping centre stock rises from the cities of 50 000 inhabitants.

The high streets are also very popular in smaller cities, between 10 000 - 30 000 inhabitants. The availability of modern stock may well explain these patterns with shopping centres being developed in larger cities and retail parks and warehouses in smaller ones. This suggests that further work investigating the distribution of centres as well as retailers and probing the motivations and forces influencing developers and investors in shopping centres would provide further explanation and could explore the potential for strategically located new shopping centres.

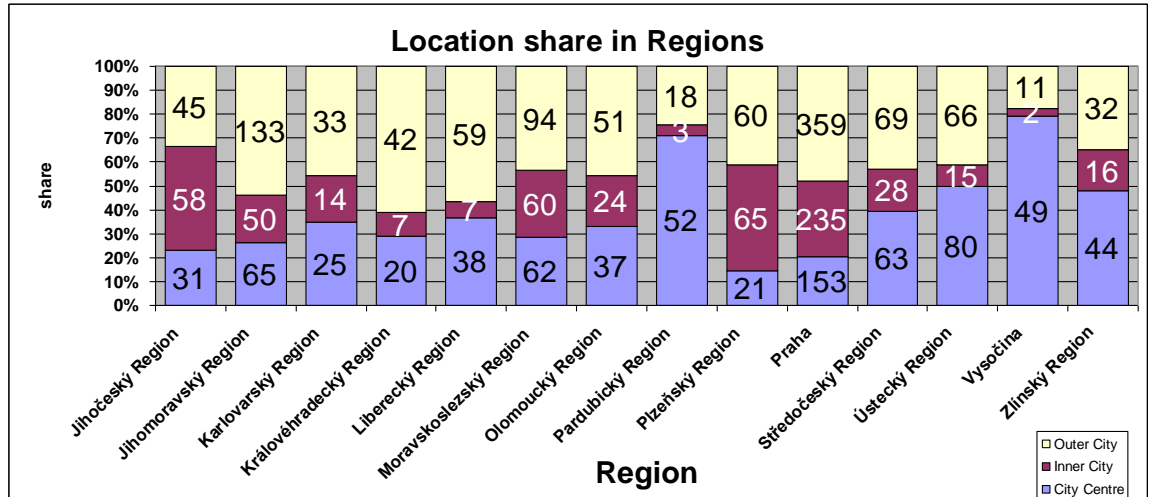


Figure 13 .Distribution of stores into city locations in regions

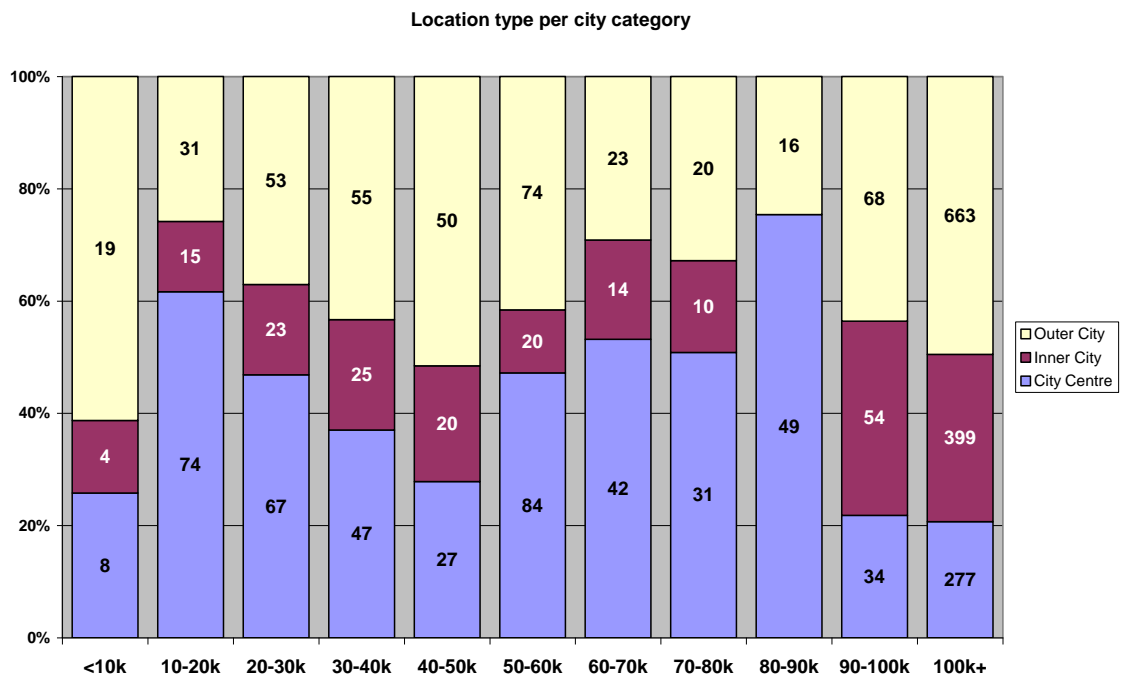


Figure 14 Distribution of stores in city locations per city size and correlation between city size and no. of stores in location (source: Author)

The final part of this analysis was to assess the hypothesis that there is a link between geographical locations and types of properties themselves, and that retail parks and shopping centres tend to be located in the outer city. The analysis (Figure 15 & Figure 16) showed that the highest correlations were between shopping centres and inner city (0.97) and between shopping centre and outer city locations (0.99) suggesting that new centres have tended to be developed in the inner city or on the fringes. There was a surprisingly low correlation (0.63) between the retail park format and the outer city where they may have been expected. This is most probably because in smaller cities, retail parks can be also found in the inner city or city centre. Typically smaller cities are not as densely developed

and it is possible for developers and retailers to find cheap land plots even in locations closer to city centres. The high correlation between high street and city centre (0.86) is logical given that high streets by definition tend to be in city centres. No clear patterns emerged from the other correlations possibly due to difficulties of definitions particularly between high street and secondary high street in the smaller cities.

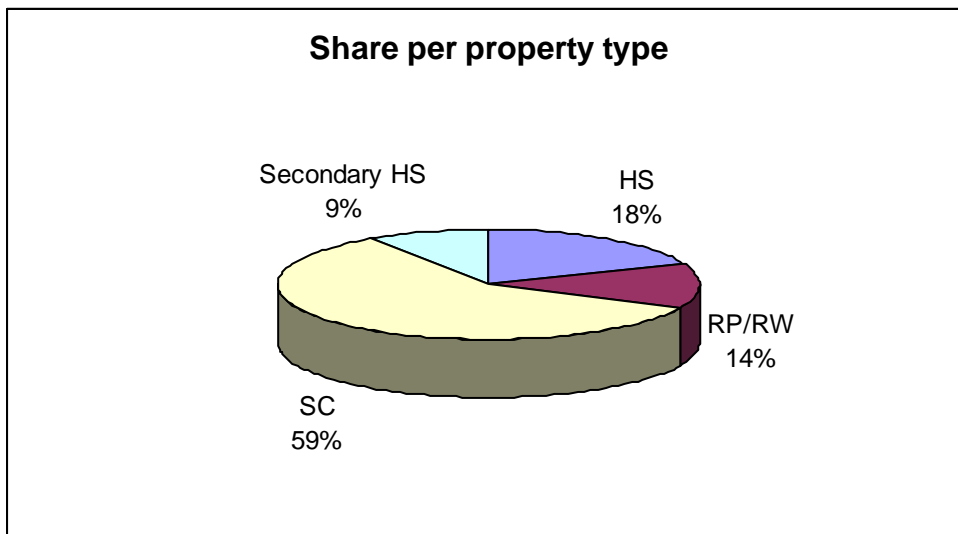


Figure 15 .Penetration of international retailers per property type (Source: author)

incl Prague	City Centre	Inner City	Outer City
HS	0,86	0,67	0,80
RP/RW	0,71	0,61	0,63
SC	0,87	0,97	0,99
Secondary HS	0,86	0,97	0,97

Figure 16 Correlation between property types and city locations(Source: author)

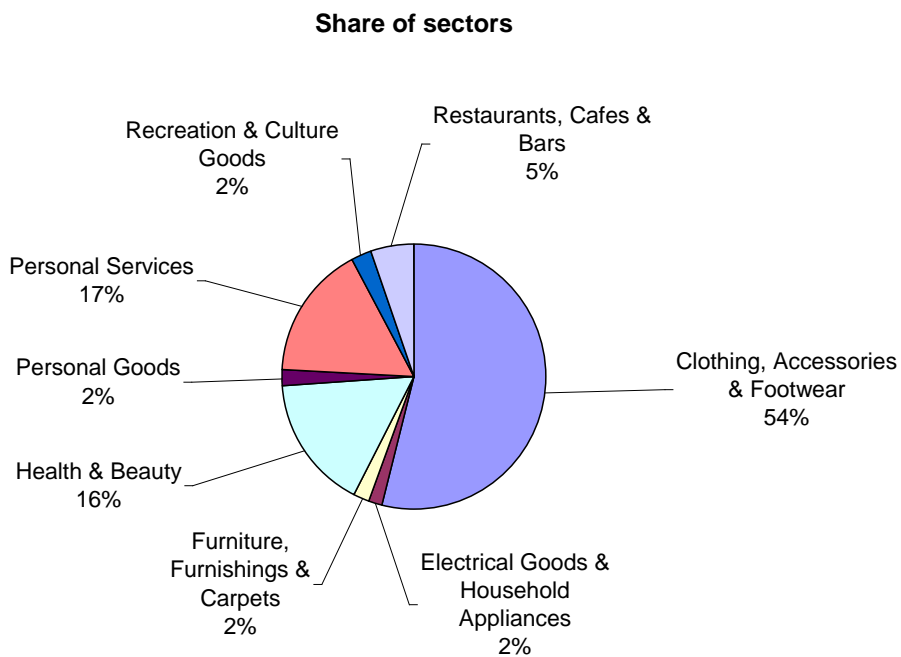


Figure 17 .Graph – International retailers in sectors (Source: author)

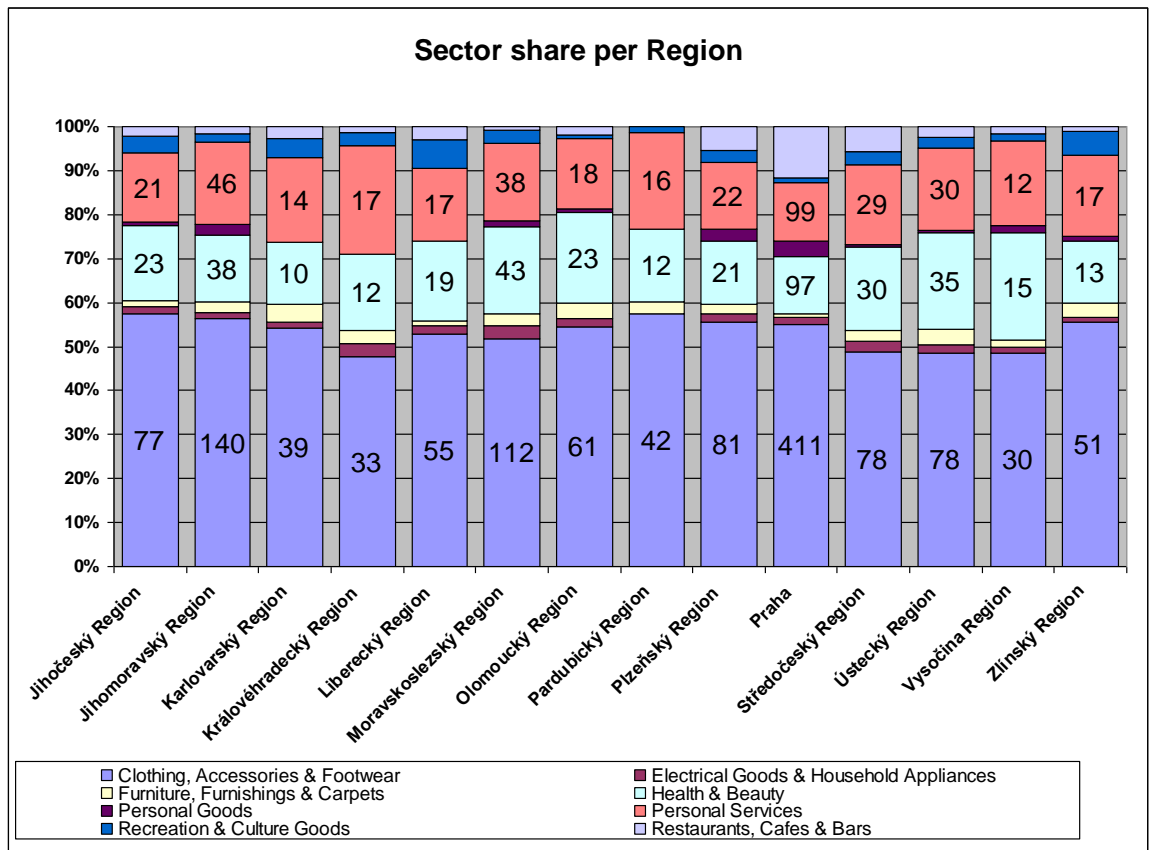


Figure 18 .Distribution of sectors in regions (Source: author)

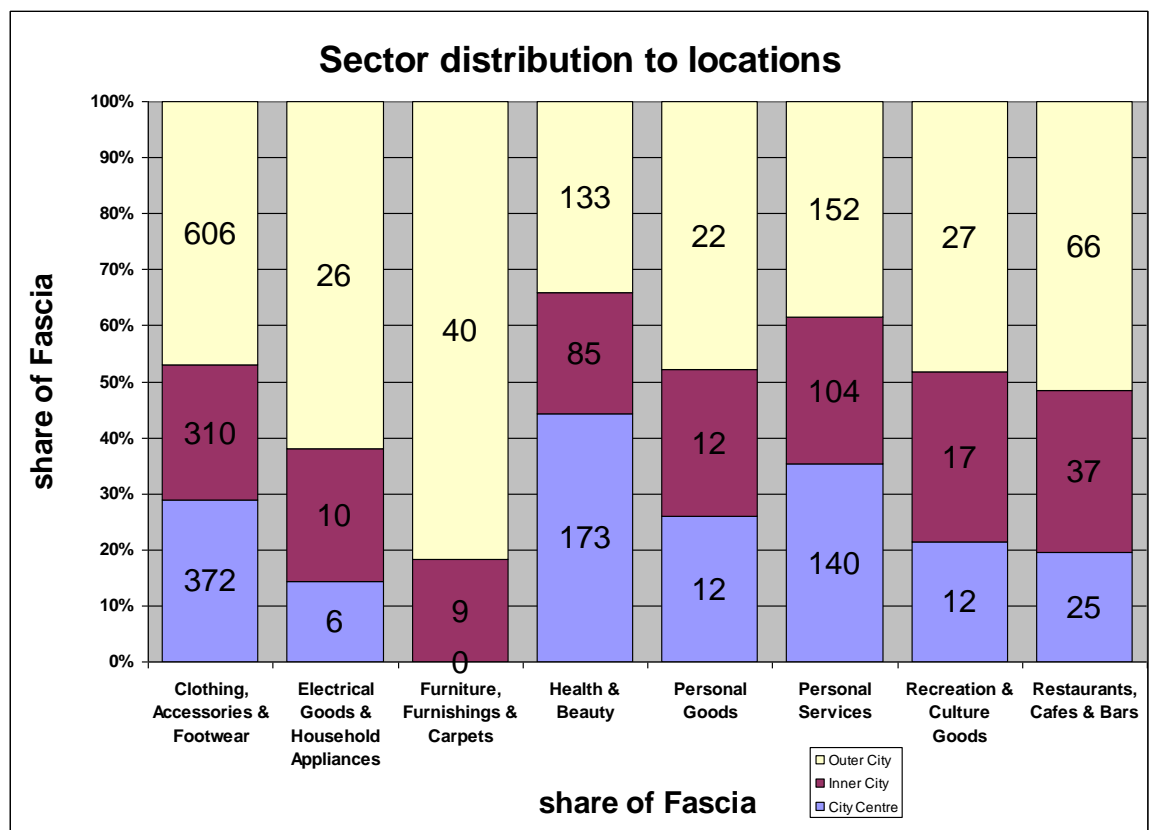


Figure 19 .Distribution of sectors to city locations (Source: author)

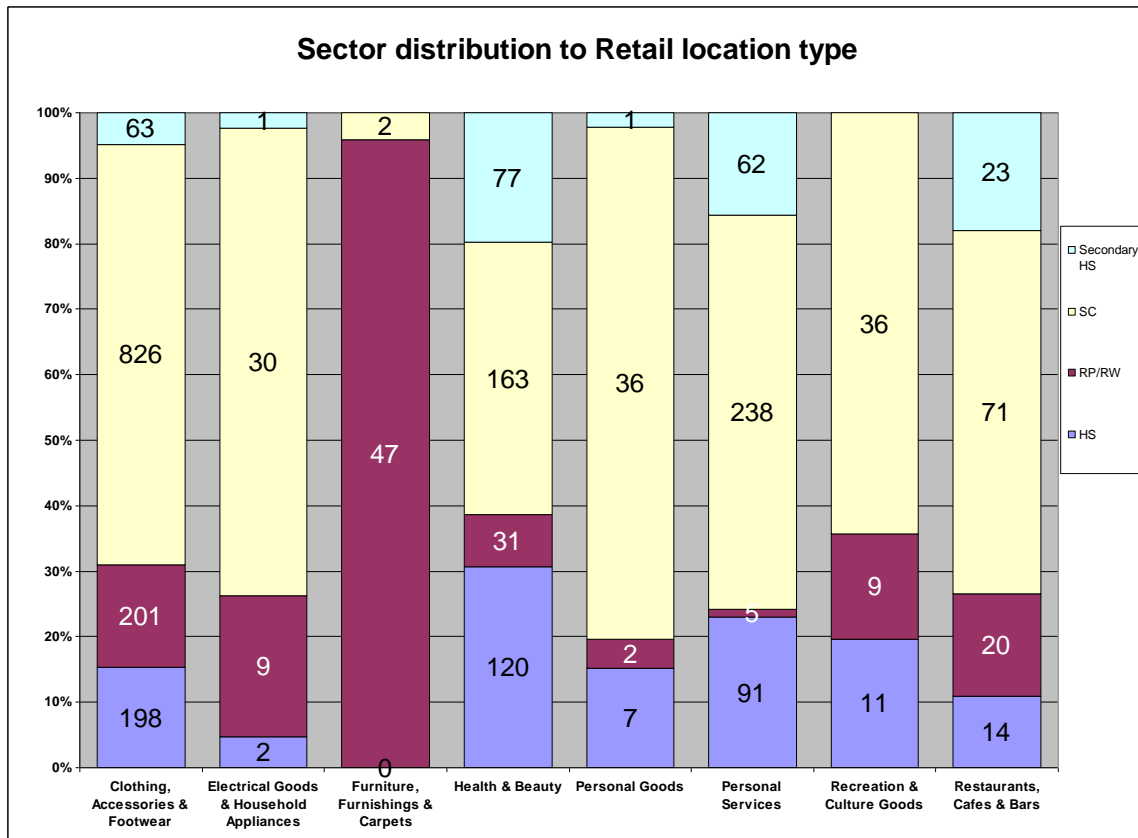


Figure 20 .- Distribution of sectors to property types (Source: author)

Locational Preferences by Retail Sector

This section investigates whether retailers in different sectors prefer particular types of retail location and whether this varies around the country. shows the overall representation of international retailers in the Czech Republic by sector. The representation of clothing and footwear stores (54%) is the highest in the data sample. Personal services and health and beauty sectors are also well represented (17% and 16%). Other sectors operate a relatively small number of stores.

The analysis will now concentrate on how particular retail sectors represented in regions and the Czech Republic to investigate the hypothesis that different types of sector are attracted to different regions. Figure 18 shows that the sectors are fairly evenly distributed across the country. A clearer pattern emerged from the analysis of distribution of the sectors by size of the city. This showed a tendency for the health and beauty sector to account for a higher proportion the smaller the city and for clothing etc. to be higher the larger the city. However retailers in the furniture and electrical goods stores are more likely to be present in out of town locations (Figure 19).

Figure 20 provides some explanation of these trends. Furniture tends to be in retail parks and warehouses and electrical goods tend to be in shopping centres both of which tend to be in outer locations. Health and beauty operators tend to occupy high street locations or shopping centres accounting for their presence in the city centre. The surprisingly high proportion of cafes and bars in outer locations is probably due to their preference for shopping centres.

Correlation analysis was used to assess the hypothesis that there is a tendency for certain types of retailers to locate together. The results showed high levels of correlations between electrical goods , clothing and recreational goods. As the previous figures showed these all have a tendency to be in shopping centres. There was also a relatively high correlation between electrical goods and furniture which is explained by their presence in retail parks and warehouses in outer locations. The previous analysis shows that shopping centres are present in both inner and outer locations. It would be an interesting line of further enquiry to assess whether the electrical goods retailers in shopping centres tend to sell smaller electrical goods but the data would need re-classifying to do this. It would also be worth checking whether they tend to occupy shopping centres in outer locations. Finally the

hypothesis that the number of stores in districts is dependent on the unemployment rate in the district was tested. There was a negative correlation of 0.147 between the number of stores in the district and the unemployment rate suggesting that the higher the level of unemployment the less likely retailers will locate in that region.

CONCLUSIONS

Origin of retailers

The most active expansion on the Czech market in terms of numbers of stores was by retailers from geographically proximate countries. Overall, German retailers dominated by representing about 40% from the sample.

Penetration of stores of international retailers correlated with number of inhabitants

The number of inhabitants of the catchment area was one of the main criteria for expansion. The penetration has been quite even with similar levels of saturation for all regions except Prague which has attracted a higher level, particular of international retailers from further away.

Retailers were driven by location and property type in their expansion

There were discernable patterns between types of retailer and geographical location within city (city centre, inner city or outer city) or retail property type (shopping centre, retail warehouse, high street or secondary high street). Hence, the location and suitability of property are key drivers behind retailer's behaviour.

Outer city shopping centres most preferred

Outer city shopping centre is the preferred location of international retailers in all sectors except for furniture and electrical goods. Most development activity has occurred in outer locations. The fact that retail parks are not typically located in the outer cities is also an interesting finding.

Carpets, furniture and electrical goods found in outer city locations

Carpets, furniture and electrical goods typically occupy outer city locations

Clothing, personal services and health and beauty most active in expansion

Retailers from sectors of clothing and footwear, personal services and health and beauty opened highest number of studied stores on the Czech market. Clothing and footwear were predominant sector with 54% of the sample, whereas personal service represented 17% and health and beauty 16%.

Retail warehouse/retail parks mostly found in cities between 10 000 – 30 000 inhabitants

The highest number from the studied stores in retail parks were found in cities between 10 000 – 30 000 inhabitants.

Shopping centres mostly found in larger cities above 90 000 inhabitants

Shopping centre stores are mostly found in cities above 90 000 inhabitants. This indicates that the retail park concept is a proffered in smaller cities, whereas shopping centres tend to be located in larger cities.

Clothing and restaurants and bars and health & beauty and personal services preferred neighbours

Clothing and restaurants sectors and health & beauty and personal services sectors showed high correlations in their location being mostly found in shopping centres, but also having quite a high representation on high streets. Restaurants more represented in shopping centres with a high number of fast food operators in this category in the sample.

Retailers from neighbouring countries show similar behaviour to the other international retailers

The study did not prove that retailers from neighbouring countries would act significantly differently from other international retailers studied. However, they were more active in expansion and opened higher number of stores (55%).

International retailers occupy locations with lower unemployment rate

The study indicated that the lower the unemployment rate in the district, the higher the number of stores operated by international retailers. Therefore, unemployment rate is one of the decision-making criteria for store location by international retailers.

Future trends. Implications and Further Research

This section sets out ideas for the way in which these dynamics could be used for future development and how the research could be taken further. Shopping centres are the most popular form of development and attract retailers from all sectors other than furniture. Their location can be in inner or outer areas and tends to be driven by population levels. The regions of Vysočina, Pardubice and Central Bohemia are the least saturated in terms of modern retail stock so strategically placed schemes with access to these markets could have potential. Research into the motivations and influences of developers and investors could shed light on this. Retailers already present in the Czech Republic and especially those currently only in Prague could be a suitable target market. As most development has taken place in the outer cities so far, there may be potential in further development of city centre and high street locations rather than building new schemes outside the city. Clothing dominates outer city and high street locations and is likely to stay an important tenant target group of any successful scheme. (NB supermarket and DIY sectors were not part of the analysis). The study could be taken forward by treating this as a benchmark to be updated by future data and for further areas of Central Eastern European Countries.

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AN INVESTIGATION INTO VIABILITY OF RESTORATION AND REUSE OF A LISTED PROPERTY: A CASE STUDY OF PROJECT HALA LOCATED IN WARSAW

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The purpose of the study is to provide an overview of the methods of restoration and reuse (R&R) of brownfield sites assessment. The research will concentrate on the viability of R&R by comparing a listed building in Poland with a hypothetical new construction development. The research commences with a literature review which observes the methods of economic evaluation of restoration and reuse of buildings, and is followed by a descriptive case study which includes analysis of the information discovered. It was decided that the most suitable approach to examine the viability of a project would be to adopt a residual approach. The findings of the study showed that although there are several methods of restoration and reuse assessment, the practical utilisation of such within the industry were limited. The publications used within the literature review supported the concept of R&R, and the overall perception is that the reuse of buildings serves the key to sustainability. The case study also revealed that R&R is feasible in the current market climate, though demolition and new construction provides a higher rate of return. However, the cost analysis proved the economic climate does have a considerable affect on the level of investment profitability.

Keywords: Listed Building, Poland, Restoration, Retail Performance, Reuse.

INTRODUCTION

Over the past few years developers and investors have been paying more attention to brownfield sites or sites developed with underutilised or derelict buildings. These properties often have historic value and in many cases are listed. Therefore issues of legislative compliance and heritage constraints, including proposals to demolish them in order to undertake new development on the site where those properties are located; or requirement for interventions such as facade retention, may discourage potential investors from development on such sites even without prior examination of viability of that investment opportunity.

There are few possible approaches towards such properties, if demolition and new construction are not allowed. These approaches include:

- Restoration – a process that returns a building to the condition it was when originally constructed;
- Renovation – modifies a building so that it meets current standards and does not involve a change in use;
- Reuse or adaptive reuse is a combination of improvement and conversion. Bullen (2007) defines adaptive reuse as finding a new use for a building. It is “a process that retains as much as possible of the original building while upgrading the performance to suit

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modern standards and changing user requirements". It may include renovation and rehabilitation of existing building or structure.

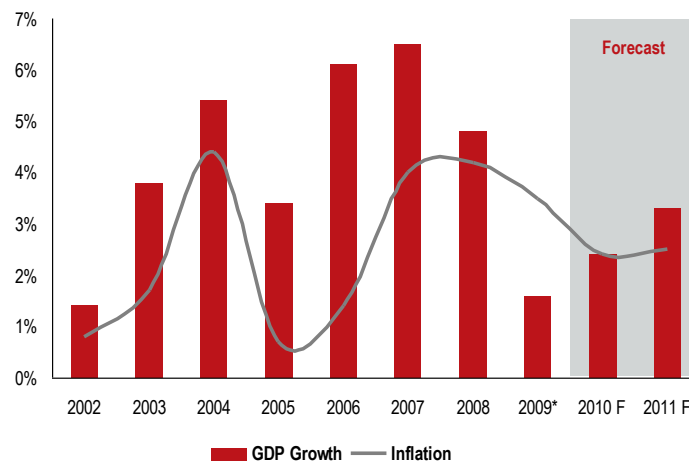
Every city has older and underutilised properties and they often occupy good, central locations and therefore have the potential to become valued developments. There are arguments that it is more profitable to develop on greenfield site than to invest the required capital to restore and/or reuse (R&R) the old structure (Bullen, 2007), and that there are advantages with demolishing the old building and replacing it with a new over undertaking R&R. On the other hand, a number of studies in the literature presents economic benefits of R&R. As noted by Bullen (2007), adaptation is gaining recognition as an effective strategy to improve the sustainability of existing buildings by lowering material, transport and energy consumption and pollution.

There are a variety of methods of evaluation of such properties considered in the literature. However no study creates a total picture of benefits and disadvantages of R&R or finds clear formula for R&R profitability. The objective of this study is reviewing the approaches to R&R assessment and examining viability of listed building R&R using the case study of the mixed use, retail and residential, project in Warsaw, Poland in order to provide a professional guideline to the investors. The study examines other hypothetical scenarios for the subject property and the effects of the recent credit crunch on the property. The method applied in the study is residual appraisal, that is a simplified form of cost-benefit analysis. The study makes the case for needed improvement in the field of R&R assessment.

Polish Economy Overview

Poland is the largest economy in Central Europe, with over 38 million inhabitants. It is a market larger than those of the Czech Republic, Slovakia and Hungary combined. Within the European Union it ranks as the sixth largest overall economy. Poland became a member of the European Union on the 1st of May 2004. Relatively low labour costs and proximity to Western Europe, attracts foreign investors. The economy has been expanding and has been supported by robust export growth since accession to the European Union. In 2008 the increase was reduced due to the global financial crisis, and was reported at 4.9% in 2008 and 1.7% in 2009. This marks out Poland as the only country in Europe to avoid recession in 2009. The prognosis of the GDP growth for 2010 oscillates around 2.7% and around 3.4% for 2011 (Consensus Economics Inc., 2010).

Since 2002 the increase in prices had been restrained, which was followed by very low inflation reported in 2003 and a few reductions in interest rates. In 2008 the consumer price inflation increased to 4.2% and in 2009 it was reported at the level of 3.5% (Consensus Economics Inc., 2010). According to the Consensus Economics forecasts consumer prices will reach the level of 2.4% and 2.6% in 2010 and 2011, respectively. The GDP and Inflation reported from 2002 are shown in Figure 1.



* Consensus latest estimate concerning GDP level in 2009

Figure 1 GDP and inflation (Jones Lang LaSalle 2009 / Consensus Economics Inc. 2010)

From February 2006 and throughout the year, the base interest rate stabilised at the level of 4.0%. The following months brought further increases of the interest rate, resulting in a peak at 6% in the middle of 2008. In the second half of the year the market reacted to the global economic and financial crisis and the rate significantly decreased. In December 2008, the base reference interest rate was set at the level of 5%. This has decreased afterwards and was set at 3.50% in June 2009. The unemployment rate is still an issue. It has been gradually decreasing since 2004 from the level of approximately 20% to approximately 9.5% at the end of December 2008. This was a result of improving economy and business activities accelerating. However due to the global financial crisis, a general slowdown of the Polish economy and the return of workers from overseas, the unemployment rate rose to 12.7% in January 2010 (Consensus Economics 2010). After long negotiations with the European Union, Poland has set out plans for adopting the euro in 2015.

Warsaw Retail Market Overview

The Warsaw retail market has been on the fast track from mid 1990s. A number of new shopping centres and new retail formats have emerged during this period. The most recent large format scheme is the Złote Tarasy (developed in the centre of Warsaw in February 2007), and the most recently developed scheme is Galeria Rembelińska, constructed in 2009 as a part of a residential building. Factors that contributed to decrease of the retail supply provision from 2007 include the economic slowdown, together with changes in administrative procedures including the introduction of restrictions for obtaining building permits for large format schemes, increasing land costs, lack of zoning plans combined with the developers' change of focus on expansion into regional urban centres.

RATIONALE

There is still scope for further development of retail schemes in Warsaw. In order to attract part of the city of Warsaw's spending power, there is a need to develop new retail concepts that differ from the existing ones. There is also a growing interest in utilisation of Brownfield sites and restoring and/or reusing (R&R) old buildings because resources of developable land are limited and Greenfield sites are generally available in the better locations within the city limits. However, the process and constraints of R&R is more complex than to produce a new building and at times may be challenging in order to preserve parts of the existing building's features. As noted in the research conducted by Kurul (2007) this is one of the crucial barriers to enter this sector of property market.

Only a small number of studies about the economic status of individual R&R projects exist in literature, although R&R has significant support as a positive strategy to make the built environment more sustainable, and is perceived as a sound investment (Bullen, 2007). This perception stands in opposition to opinions shared amongst developers in Poland that it is better to demolish old structures and develop a building from the scratch, or build on greenfield sites than to restore, re-use or re-develop old buildings. The planning regulations and implications in Poland such as the lengthy processes and restitution claims that started to appear in recent years that are relatively restrictive in terms of listed buildings have so far been possible reasons for discouraging development either on Brownfield sites or sites where listed buildings are situated.

To date, no official study has been carried out in Poland to assess the economic feasibility of R&R projects including listed building refurbishments or the investment performance of historic buildings. Moreover, there are no simple tools widely known for such assessment projects. Therefore, there is a requirement for compiling data and investigating issues relating to refurbishment projects, including exploring the methodologies of assessment of such projects, which could test the project viability and facilitate in the decision making process.

After conducting market analysis and a feasibility study of a selected property, a suitable concept for the building shall be identified and the results of the study will be beneficial to the owners of the property to assist them in their decision making process.

METHODOLOGY

The study involved parallel research activities which comprise predominantly of literature review and analysis of a case study appraisal of a listed building.

The first stage of the research involved a review of academic literature and publications. The literature researched covered areas such as the economics of adaptive reuse, rehabilitation and refurbishment of buildings. The study also looked at the issues connected with the preservation of historic buildings, with the main focus on the methodologies of adaptable or refurbished properties. The second stage of the research comprises a case study which involved a Residual Appraisal of a Listed Building in Poland.

The case study Project Hala, is a historic building of unique architecture, and is traditionally renowned as an indoor retail market with a wide range of fresh food produce. The building was completed in 1908 and refurbished after World War II. It is prestigiously located in the centre of Warsaw in Poland, in the vicinity of the district city centre. The location is characterized by the presence of pre-war tenement houses with small unit shops and restaurants located on the ground floors of the residential buildings, which are interspersed with narrow streets. Though it is a city centre a number of commercial properties, such as offices and also some modern residential buildings have appeared in the neighbourhood recently. The location differs from the remaining part of the district and the sense of the place has remained. The style of the building and its location may be associated with Covent Garden Market in London, currently a well known speciality shopping centre and historically a fruit and garden market.

The subject building consists of approximately 14 metres high main hall of steel construction and two 3-level outbuildings which previously were used for administration purposes. The main hall is of steel construction that is typical for the large scale developments in Europe from the end of the nineteenth and beginning of the early twentieth century. The property possesses a significant architectural and historical value and is listed in the Mazowieckie Voivodship's Monuments Register. At the time of writing this paper the building was in a very bad state of repair as confirmed in the technical surveys relating the site and the building. This made the building unsuitable for further use without a general overhaul and it has remained vacant from 2005.

The current owner of Hala Project is a privately owned company. Due to the special requirements for listed buildings set by the local conservation office work on the building revitalisation and site re-development has been delayed for a relatively long period of time. Demolition is not possible as the external elevations and main construction elements are to remain unchanged. The most recent project proposal includes the renovation of the old market hall, incorporating 10,000 sq m of new retail facilities. In addition, it envisages construction of approximately 200m high standard residential units in three new residential buildings with underground parking spaces adjacent to the retail scheme (Figure 2). The residential buildings are to be modern in character to offer architectural division to neighbouring buildings and the new apartments are to be offered for sale in an unfinished condition, except for common parts which will be finished to a high standard.



Figure 2 Hala Project visualisation prepared by APA Wojciechowski architects (Warsaw Gazette 2010)

The property owners, by the date of this paper were still considering whether to undertake this investment opportunity or dispose the site and seemingly there was still no final decision and concept for the property. There were rumours on the market that residential space might be replaced with offices. Moreover, the owner's hesitation has deepened as the result of the impact of credit crunch that started in 2007 in the U.S.

METHODS OF ADAPTIVE REUSE ASSESSMENT

According to Kurul (2007) property R&R is more complex than undertaking new construction therefore it is crucial to identify the stages of the process. Kuril (2007) identified that appraisal should be the first stage in the project, prior to any planning application. The importance of appraisal as part of the investment process is supported in a number of studies. The approaches to the appraisal of R&R have developed over decades. A selection of the approaches are briefly outlined in .

In addition authors such as Mason (2005) considered in broader terms the methodologies identified that specifically can be used in historical properties assessment which are listed below;

- Basic cost studies –financial calculations, such as cost-benefit analysis, consisting of calculation of return on investment or comparison of estimated market costs of alternative actions.
- Economic impact studies – a search into how the process of historic preservation contributes to the regional economies (measured in terms of job creation, income creation, tax revenues and property values)
- Regression analysis –statistically examining the relation between multiple variables and the market price of the property.
- Contingent Valuations and Choice Modelling (Stated-preference studies) These methods create hypothetical situation and are based on surveyed consumer preferences rather than actual market data.
- Case studies – qualitative assessments involving descriptive statistics on a particular case.

The methods proposed do not provide a full picture of the income side of the investment, nor are they straightforward to apply when decision is to be taken. However these approaches can serve well in assessing non-financial (e.g. social) benefits or costs of R&R (Mason, 2005). Other sources (summarised by Manewa et al., 2009) suggest simple payback, cash flow, internal rate of return, net present value as tools which can be used for economic evaluation or reuse concepts. After consideration, the author of this paper selected cost-benefit analysis as this offers a sound option for evaluating R&R and can assist the investor's decision. The quantitative cost-benefit analysis approach remains prominent in the literature as it relies primarily on maths and statistics (Mason, 2005). Thus the Residual Appraisal, which may be compared to simplified cost benefit approach, was adopted in order to determine whether the R&R project is viable considering a limited set of costs and benefits which may be expressed in money terms.

The case study was compared to the data gathered in the first stage of the research which is used to test project viability. This method together with the Residual Valuation method is applied by Property Investors and those who value property, when a project is not typical and when a simple valuation based on comparables or Discounted Cash Flow (DCF), is not possible. This method was found to be suitable for the evaluation of adaptive reuse of buildings. The residual method is in fact a composition of income and cost methods which consists of estimating the development value from which development costs are deducted. The costs include hard and soft costs of construction, marketing and leasing of premises, the cost of investment financing, and land acquisition costs or developers profit depending on whether the calculation has a form of appraisal or valuation. future indexation.

Author and Focus	Key areas / findings
<p>Needleman (1965.)</p> <p>Developed formula to evaluate redevelopment and rehabilitation</p>	<p>Rehabilitate if</p> $C > R + M \left(\frac{1 - (1 + i)^{-n}}{i} \right) + \frac{C}{(1 + i)^n}$ <p>Where:</p> <p>C – cost of constructing a new building R – cost of rehabilitation of the old building M – annual savings in maintenance cost with a new structure rather than a rehabilitated one n – the life of the present structure following rehabilitation i – the interest rate of the rate of discount.</p> <p>The formula is based on comparative costs and does not have regard for revenues and benefits that a property brings. The advantage of rehabilitation increases the higher the interest rate.</p> <p>Later versions also consider capital value of the building. Does not include income generated from new project</p>
<p>Pugh (2007a, 2007b)</p> <p>Refurbishment in shopping centres.</p> <p>Reviews new construction versus rehabilitation cost</p>	<p>He provides principles of economic appraisal in such properties and reviews considerations which are relevant to investment.</p> <p>Net Present Value (NPV) calculation (Pugh, 2007b) highlights the importance of obsolescence, which in case of shopping centres progresses quickly. This is considered not only in terms of physical deterioration, but encompasses economic, social and management change as consumer tastes change in favour of different types of shopping.</p> <p>Undertake the process if:</p> <p style="padding-left: 40px;">NPV of the refurbished scheme > NPV of the existing scheme.</p> <p style="padding-left: 40px;">NPV of refurbished scheme is: $Rr - [Cr + Mr + Dr]$</p> <p style="padding-left: 40px;">NPV of the existing scheme is: $Re - [Ce + Me + De]$</p> <p>Where: R – rent receivable C – capital costs (i.e. the costs of construction, appropriately depreciated or in the other words the opportunity cost of the depreciated capital sum represented in the buildings) M – maintenance costs (are associated with the age and condition of the building) D – the rate of obsolescence/depreciation r – the relevant rates after refurbishment e – the relevant rates of the existing buildings.</p> <p>Does not allow consideration of income if site has not been operating prior to evaluation</p>
<p>Manewa et al. (2009)</p> <p>Whole Life Analysis (WLA)</p>	<p>The technique takes into account the present value of future costs and benefits of a property and uses discounted methods to evaluate them in monetary terms</p> <p>$WLA = f \{ (\text{Expected future income}) - (\text{Initial capital cost} + \text{Cost of functional adaptation} + \text{Maintenance and operation cost} \pm \text{Cost of demolitions}) + \text{Risk} + \text{Performance} \}$</p> <p>If the answer is positive the building adds more value for its end users.</p> <p>However it is difficult to measure Performance in monetary terms and there is lack of framework for collecting relevant data such as reliable cost data. Therefore the approach can be taken into account at the early stage of design and in setting initial budgets</p>

Figure 3: Literature on formal economic appraisal (source: author)

APPRAISAL

This paper presents the comparison of the cost of realisation of the Hala Project as planned by the investor, with a hypothetical new construction project, including the demolition of the existing structure. The ‘cost per sq m’ comparison was made based on rates published by professional companies dealing with construction costs (KNR, 2009), as well as information from demolition companies. The study also evaluates a hypothetical scenario which assumes the market has not been influenced by the credit crunch, and adopts all the variables for the calculation based on the market

data as of the second quarter of 2008. This is due to the effects of the downturn in the economy starting to appear in the third quarter of 2008 in Poland. The method applied to R&R analysis is residual appraisal. It consists of estimating the Gross Development Value (GDV) and costs that need to be incurred to realise the project. The result of the calculation is Return on Investment, providing indication of the possible Developer's profit that may be obtained through the sale of the property. The assessment has been prepared for 3 scenarios described in Figure 4.

The above assessment requires a thorough analysis of the supply and pricing of retail space, as well as the condition of the investment market, in order to establish the relevant capitalisation rate. The research reviewed the current rates for retail space in Warsaw. Based on the above, it was possible to prepare an estimate of achievable rental band for particular retail branches (different rental levels are achieved for clothing, shoes, food, restaurants), with regards to the retail category and the size band of the required floor space (rent-grid). The results were subject to simple statistical quantifications, such as calculating the mean between rental levels. The main aspect to be approached is estimating whether the project is viable at a given construction budget. Therefore, the 'Rate of Return' for a particular investment could be calculated.

Assumptions for Scenario 1 - Estimated Rental Value and Development Costs

It is envisaged that the project may be of interest to some upmarket brands. Fashion retailers are planned to occupy approximately 45% of the total space. A large area within the centre is intended to be leased to the operators of cafes and restaurants, with the remaining space will be designated for a delicatessen.

Based on current market conditions, analysis of quoted rents and recently negotiated lease transactions in Warsaw's existing shopping centres, the average minimum base rent within the subject scheme (not including the delicatessen) is estimated at EUR 28 per sq m per month approximately. This rent mentioned above does not include service charge, nor any potential turnover premiums or

It was assumed that leases would provide for the full recovery of building operating expenses, property taxes and insurance, however due to current market situation an allowance in respect of non-recoverable expenses and vacancy was provided at the level of 1%. As a result, the estimated Net Operating Income for retail space within the subject property is at the level of EUR 2.99 million and the development value of the retail element calculated on the basis of capitalisation rate of 7.5% amounts to EUR 39.96 million. The income from residential development with parking spaces was estimated at EUR 48.35 million assuming average apartment price at the level of approximately EUR 4,300 per sq m (equivalent for PLN 17,000), reflecting approximately 10% decrease in apartment prices compared to 2007 when the market was booming (REAS, 2010). The sale price of a parking space, based on comparables within the subject location, is estimated at approximately EUR 14,000 (equivalent for 55,000 PLN). The above are net prices, not including VAT at 22%. The total estimated development value is therefore EUR 88.32 million.

For the purpose of the case study, capitalisation rate at the level of 7.50% was adopted. It reflects high potential of the property to become a prime retail destination after construction. Therefore the rate adopted incorporates 50 bps⁴ premium, comparing to prime retail products in Poland.

The assumed cost of restoration and construction was based on the detailed calculation provided by the quantity surveyor. Estimated project hard costs (not including infrastructure fees and construction contingency) were at the level of EUR 1,954 per sq m for restoration and retail scheme redevelopment, and at the level of EUR 2,665 per sq m of residential space. Infrastructure and construction contingency were estimated at the level of 1.25% and 5% of hard costs, respectively. In the result total project hard cost was calculated to be EUR 51.94 million, with other project costs (including compensations for residents of neighbouring buildings and tenant incentives) EUR 3.04 million; technical services (including project management and architectural design at 5.5% and planning at 2.2% of construction costs) EUR 4.02 million; Marketing (at a level of 2% of 1 months rent) and letting (at the level of 8% of 1 months rent) EUR 1.32 million. Taking into account the above assumptions the total construction cost of the project is EUR 60.33 million.

⁴ bps or Basis point is a unit of percentage measure equal to 0.01%. Basis points are commonly used when discussing changes to interest rates, equity indices, and fixed-income securities (Farlex, 2009). 50 basis points would indicate an increase of 0.5%

The calculation also assumes the following:- Financing cost – EUR 2.56 million (3 month Euribor +3.5% bank premium); Land acquisition cost and fees – EUR 13.19 million; As a result the total estimated project costs excluding developer’s profit amount to EUR 76.07 million. Taking into account the above, the residual approach indicated the developer’s fee according to the high quality property type, at the level of EUR 12.24 million, equivalent to 16% of total development cost. Figure 6 shows the residual appraisal for Scenario 1.

Scenario	Detail
Scenario 1	Restoration/reuse of currently existing building, according to current regulations/restrictions for listed buildings. This option assumes developing the site according to the local Heritage Conservator Office restrictions, i.e. main construction elements and the facade of the building are to remain unchanged. 10,000 sq m retail scheme and 11,000 sq m of residential space in the three new buildings to be constructed.
Scenario 2	Development of new structure, assuming demolition is permitted. This hypothetical scenario is based on the option of demolishing the existing old buildings and constructing a new structure. The new building has the same use and parameters as the real reuse project. This option assumes demolition costs are incurred for buildings removal.
Scenario 3	Is based on the assumption that office space is constructed instead of residential space, so that the project will comprise 10.000 sq m of retail and 11.000 sq m of office area.
Scenario 4	Is based on the assumption that investment with the same parameters and specifications as in Scenario 1 is realised in the period of economic boom, when no effects of the credit crunch were visible (Q2 2008)

Figure 4: Scenario details

Assumptions for Scenario 2

Based on the available publications (KNR, 2010) and information from developers it was found up that the cost of realising new high quality shopping centre is in the area of EUR 1,500 – 1,600 per sq m. This is approximately EUR 400 per sq m lower than in the case of the subject shopping centre R&R. Additional cost of demolition of EUR 352,000 (according to an offer from demolition company) and increase in infrastructure cost up to 5% of hard costs were assumed. Other parameters remain the same as outlined in Scenario 1.

Assumptions for Scenario 3

Assumptions for the retail element are the same as in Scenario 1. The following assumptions have been adopted for office element; Market rent based on the analysis of prime office rents in the city centre – EUR 21 per sq m per month; Capitalisation rate of 7.75%. which is 50 bps above the prime yields reported for offices; Cost of construction based on published cost data for office buildings up to 7 upper floors, incorporating underground parking is EUR 2,000 per sq m of usable area;

Assumptions for Scenario 4

Rental levels, capitalisation rate, construction costs, finance cost have been found to be affected by the credit crunch. Differences in assumptions adopted include: Market rent for retail space – EUR 30 per sq m per month, Selling price of flats – approximately EUR 4,600 (equivalent for PLN 18,000), Bank interest charge is 6.65% and compounds of 3-Month Euribor at the level of 4.65% and bank margin of 2%. The provision has been adopted according to recent data for the construction market that construction hard and soft costs were approximately 10% higher in Q2 2008.

A summary of the findings from each of these scenarios is given in Figure 5.

Research limitations

The study presents assessment methodologies which can be used at the initial stage of the development process, as noted by Kurul (2007). However, it was found that most of the appraisal methods used do not account for social and environmental costs, or benefits (pollution, traffic congestion, travel costs, beneficial effects on third party). These methods mainly focus on the costs and benefits of the individual Investor. It would be possible, with relevant amendments, to include those costs, however these are often intangible and difficult to present in money terms. In fact, no study was found to provide a proper tool for measurement of those.

A further limitation of the research is that of the appraisals used, as they are only valid for that given point in time. They may appear bias towards static conditions of the methodology, whereas the market is fluctuating (e.g. significant change in investment yields during 6 months in Poland – Q4 2008 and Q1 2009). Even though the investment process may take longer the reality may provide a different rate of return than expected, or may even turn out not feasible in a quickly changing market conditions.

Finally, a major limitation on the research is the fact that there are no published data on costs that need to be born on R&R of Listed buildings. Another constraint is the lack of willingness of developers to share financial data. The study is based on the calculation of costs prepared by the Quantity Surveyors for this particular building. Each Listed building may require investment of a different extent as obsolesces usually have different degrees, and return on investment depends on capital input. Therefore, the results of the study may not be generalised, or related to the market of listed buildings.

	Scenario 1 retail+resi	Scenario 2 new construction	Scenario 3 retail+offices	Scenario 4 no crisis
GDV	88 316 356	88 316 356	77 141 471	106 847 506
Land cost	13 188 871	13 188 871	13 188 871	13 666 584
Hard costs	51 940 898	50 329 855	44 259 703	57 134 988
Soft costs	4 026 036	4 026 036	4 026 036	4 428 640
Other costs	3 042 702	3 042 702	3 042 702	3 042 702
Marketing	1 320 395	1 320 395	615 600	1 396 150
Financing	2 555 648	2 487 402	2 200 408	4 535 105
Total costs	76 074 550	74 395 261	67 333 320	84 204 169
ROI	16%	19%	15%	27%

Figure 5: Table of results from the four scenarios

DISCUSSION

From the data gathered relating to the appraisal methods used the results show that R&R can be assessed using quantitative and/or qualitative methods. It is recommended that an appraisal is to be undertaken at the early stage of the decision making process in order to examine a project's viability. The methods of R&R assessment evolved from 1965, however, it was found that some theories are difficult to apply in practice, and do not take into account all the variables connected with this non typical and complex property market sector. It should be noted that some benefits and the negative effects of the process are not measurable in financial terms and therefore any economic evaluation does not fully reflect the value of R&R of a listed property. The analysis carried out using the Residual Approach revealed that investment into the listed building project, in current market conditions, is viable, though less profitable compared to the hypothetical new build project.

The rate of return on investment, calculated on costs (developer's profit) in the case study is estimated at 16% (Scenario 1), which is relatively high compared to the return on safe securities such as 10-year Polish Government Bonds (yield at the level of 6.2% in 2009). The realisation of a new development, assuming the demolition of the existing structure (Scenario 2), could provide additional gain to the developer of approximately EUR 1.68 million. This reflects an increase in the developer's profit of 3% compared to the investment consisting of R&R of existing buildings with the construction of 200 new residential units

Furthermore, due to the effect of the credit crunch the return on this particular investment (Scenario 1) is 11%, which is lower than the years of economic boom (Scenario 4). Though the effect of the credit crunch has decreased property prices, investors can still obtain relatively good profits in the current market conditions. This is influenced by the decrease of construction costs of approximately 10% year-on-year, compared to the costs reported in 2008 (Interia, 2010), as well as the lower costs of financing due to the decrease in interest rates (even though financing is more difficult to obtain during this period).

RESIDUAL APPRISAL - Project Hala, Scenario 1

1.0 Estimated annual income - Retail element						
	Rentable area (sq m)	Rent €/sq m/mth	Income € pa	Vacancy & Non-rec. Costs	NOI € pa	Total NOI € pa
Retail & services	8,000	28	2,688,000	1%	2,661,120	
Supermarket	2,000	14	336,000	0%	336,000	
Total retail space	10,000					2,997,120
Car parking for clients (no. of spaces)	100	-	-	-	-	-
2.0 Estimated Gross Development Value - Retail element Capitalisation @ 7.50% € 39,961,600						
2.1 Estimated Gross Development Value - Residential element						
	Usable area (sq m)	Price €/sq m	Income €	Non-rec. Costs & Incentives	Total Income €	
Residential area	11,000	4,370	48,071,979	5%	€ 45,668,380	
Car parking (no. of spaces)	200	14,139	2,827,763	5%	€ 2,686,375	
						€ 48,354,756
2.2 Total Estimated Gross Development Value € 88,316,356						
3.0 Land acquisition cost						
	Area (sq m)	€/sq m				
	9364	1,290		12,082,262		
Site acquisition fees	2.7%			326,221		
Land finance @ over (years)	4.15%				12,408,483	
	1.5				780,387	
						13,188,871
4.0 Estimated project hard costs						
	Area (sq m)	€/sq m				
Restoration works - retail	10,000	1,954		19,543,616		
Construction - residential	11,000	2,665		29,315,424		
Infrastructure @	1.25%	of construction costs		608,482		
Construction contingency @	5.00%	of construction costs		2,473,376		
						51,940,898
5.0 Other costs						
Compensation for residents				2,742,702		
Tenant incentives				300,000		
						3,042,702
6.0 Technical service fees						
Construction management @	5.54%	of total project hard costs		2,877,457		
Design and planning @	2.21%	of total project hard costs		1,148,579		
						4,026,036
7.0 Marketing & letting						
Costs @	2.00%	of 1st year rent and total revenue		1,078,475		
Letting agents (retail space)	8.00%	of 1st year rent		241,920		
						1,320,395
8.0 Carried interest charges						
Construction financing @ over (years)	4.15%	(3.5% +3M EURIBOR)				
	2.0					
applied to (%) of costs	50.00%					2,555,648
						60,330,031
9.0 Estimated total development cost € 76,074,550						
10.0 Development fee						
Capital Return on Value						€ 12,241,806
Capital Return on Costs						14%
						16%

Notes:

EUR/PLN rate according to National Bank of Poland as of 25 March 2010 - 1 EUR = 3.89

Figure 6: Example of Residual Value calculation for Scenario 1

Sensitivity Analysis

The approach adopted enables an easy check of the project efficiency. As assumed in Scenario 1 the project is to comprise retail and residential use. This use has proved to be the most effective – is the best use (realistic) scenario. Incorporating residential use (apartments and parking spaces for sale) has a significant influence on the project viability as it enables maximisation of density and plot ratio. If

the decision of the investor was to provide only retail space, then the project appears to be not viable (developer profit is negative).

Comparing the 'best use scenario' to the scenario incorporating offices instead of residential space (Scenario 3) there is a 13% difference in Development Value against offices, which reflects 1% loss on return on the entire investment cost. The development including residential space (Scenario 1, 2 and 4) is more effective due to unfavourable conditions for the office sector in the current stage of the market. Based on the market data analysis, the hypothetical Scenario 4, which assumes pre-crisis market conditions (this in fact is the most effective scenario), demonstrates that the effects of the market crisis has had an influence on the profitability levels of the property market. These effects could discourage investors from undertaking the investment activity.

CONCLUSION

A range of aspects connected with the process of R&R investment decisions have been considered in this study. Evaluation methods of R&R together with barriers and obstacles as well as analysis of the individual project viability provide a useful insight of some of the issues faced when embarking on such projects. The decision to undertake investment and reuse the building can be approached in analytical and technical methods of appraisal. The adaptation of the Residual Approach that was applied in the case study is recommended as a straightforward check of project viability.

The case study revealed R&R is economically grounded in the current state of the economy and is more costly and less profitable than new construction. However, R&R of a listed building provides a number of non-monetary advantages, connected with aspects such as prestige and social benefits. In many cases it enables a secure prime location in the city, which is the key to success of any commercial scheme. The Hala Project in Warsaw should not be left derelict and exposed to further deterioration due to its prestigious location and historical value. The concept presented in this study is recommended for the subject scheme. It was discovered that in the case of subject R&R project there is high potential to receive a return that significantly exceeds the level of yield reported for safe securities.

It is expected that adaptive reuse will play an important role in meeting demand for facilities and the regeneration of the cities, although some scepticism remains about the viability of adaptive reuse due to its focus on economic criteria. Furthermore, this emphasizes the need for further research into that topic in order to improve the tools for a more suitable assessment of the process including other financial aspects like sustainability criteria. This could facilitate investors' decisions, which is fundamental in the early stage of the process when considering the project's feasibility and making a decision to invest.

Further work should concentrate on building up a database on refurbishment, renovation and reuse costs in a similar way that exists for construction cost of new buildings. Classification criteria for redevelopment, reuse or ultimately demolition should be generated to establish if investment is feasible. Estimating such costs is complicated and difficult especially with regard to historic buildings, nevertheless this information could be analysed and published to provide valuers, property developers or other property related professions with information to facilitate their work. In addition, as valuation of listed properties is difficult in general (in fact, it is difficult to assess whether listing enhances or detracts from the market value of a building) a separate data bank with values and yields for listed buildings would be expedient in making the market more transparent. Additionally any property data bank with transactional data publicly available would be essential in Poland (an existing example is the Investment Property Databank in the UK).

More work would be necessary in the field of administration procedures in Poland, including government subsidies and tax incentives. Current lack of legislative backup for R&R discourages entrepreneurs from undertaking such projects. Governmental bodies should provide more initiatives and incentives for instance, tax relief with regard to listed buildings. More incentives such as grants should be available to investors and developers, to make investment more profitable and encourage private companies to undertake activities that contribute to city revitalisation.

The current situation of the property market in Poland should not discourage investors and property developers, as there is still plenty of scope for potentially lucrative investment opportunities.

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OCCUPIER'S SATISFACTION WITH TECHNICAL STANDARDS OF MODERN INDUSTRIAL PROPERTIES IN THE CZECH REPUBLIC

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Modern industrial facilities tend to use a similar set of technical specifications though they accommodate tenants in a wide range of businesses. This paper presents the results of an empirical study of occupiers of leased modern industrial property in the Czech Republic which assesses the extent to which these specifications meet their expectations and satisfy their requirements. This research analyses the results of a survey sent out to 179 occupiers of modern industrial facilities in the Czech Republic. Altogether 43 managers responded to the questionnaire, 29 in electronic version and 14 by interviews using the same questionnaire. Structural technical specifications (clear height, floor and column grid) are studied in detail from three perspectives: the satisfaction of occupiers, the importance for occupiers and the adequacy. Six other non-structural technical specifications are studied from the perspective of adequacy and importance. Non-parametric (the chi-square) test is used to test the hypotheses of occupiers' satisfaction regarding rental levels, and the quality of the accommodation in the light of their expectations. The research identifies the key characteristics of the specification of industrial properties concerning occupiers and concludes that they are generally satisfied with their premises. However some suggestions have emerged for areas where design flexibility could be introduced to improve levels of satisfaction. These differ for manufacturing and logistics businesses. Rental levels are found not to have a significant effect on satisfaction while the prior expectations of occupiers affect their perceptions. The implications for the provision of new premises are considered in the conclusions.

Keywords: industrial property, logistics, manufacturing, satisfaction, technical specifications.

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INTRODUCTION

Industrial property is, according to Holmes (1948), a property which is used for the conversion of materials into finished manufactured products including warehouses and minor processing plants. Industrial property is one of the factors that support economy and its growth. Ambrose (1990, p356) defines industrial property as light manufacturing and warehouse space containing varying amounts of office space, usually concentrated along major transportation routes and confined to light industrial/commercial complexes.

WHAT IS INDUSTRIAL PROPERTY?

Czech industrial property market

Based in the heart of Europe, the Czech Republic is considered together with other CE countries to be a good location with strong prospects for both logistics and manufacturing (Thompson, 2005). Cushman & Wakefield's most recent European Distribution Report (2008) ranked the location of the Czech Republic as the 4th best out of 25 European countries.

As a result of 40 years long communist reign in the Czech Republic most of the existing industrial properties built in the early 90's has become obsolete and unsuitable for modern use. The earliest modern industrial buildings were developed in the second half of the 90s as owner occupier facilities for foreign companies entering the new open economy in Central Europe. The first modern facilities for lease were developed in 1998 in the Prague region. Since that time, the industrial market has expanded beyond the borders of the capital and today, modern industrial buildings for lease are available in all major regions.

Czech industrial property stock

The Czech Republic has experienced steady growth of modern industrial space in recent years, as seen in Figure 1. By the first quarter of 2009, there over 3.178.000sqm of modern industrial facilities was built in the Czech Republic, Figure 1, of which over 1.569.000sqm is located in the greater Prague area. From 2006 till the end of 2008 the growth of warehouse stock was driven by speculatively built facilities. The vacancy rate on the Czech industrial property market grew and the rate is at present at the level of 15.5%, according to the latest industrial real estate market report from Cushman & Wakefield (Q1/2009). This translates to about 492,000sqm of vacant industrial space and about 2,686,000sqm of occupied industrial space. In recent months developers stopped speculative construction as the take up on the market slowed down, vacancy has grown and financing of industrial developments became difficult to be obtained without a pre-lease.

There are 6 major developers of facilities with units larger than approx. 1,000sqm on the Czech industrial real estate market: CTP, ProLogis, VGP, SEGRO, Panattoni and Pinnacle. Together they have about 80% share of the market and use similar technical specifications (Figure 2).

The technical standards of industrial facilities

Ambrose (1990, p367) concludes that the most important technical aspects determining the property asking price are:

- Building size and layout
- Loading docks and drive ins
- Sprinklers and fire prevention installations
- Office and sanitary content (size and built-to-suit)
- Rail siding

According to Ambrose (1990, p367) the presence of a sprinkler system, the building's age and ceiling height does not appear to have an impact on the property value. Fehribach et al. (1993, p375) believe that industrial property values are effected by building size, age, office content, ceiling height and number of dock doors. Tsolacos et al. (2005) in accordance with the above statements concludes that physical factors are among the key factors of industrial property value.

TOTAL STOCK Q1/2009
3 178 783 sqm

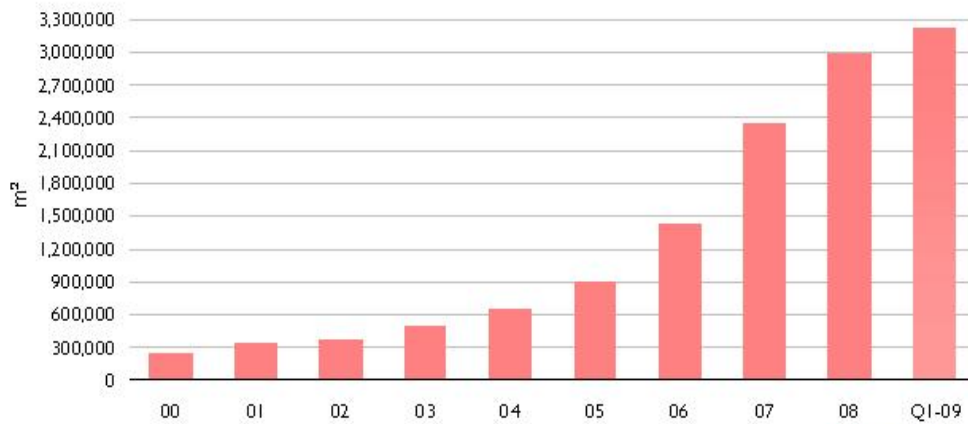


Figure 1 Total stock of industrial space for lease in the Czech Republic (Cushman & Wakefield, May 2009)

Developers market share by Take Up 2008
TOTAL 574 015 sqm

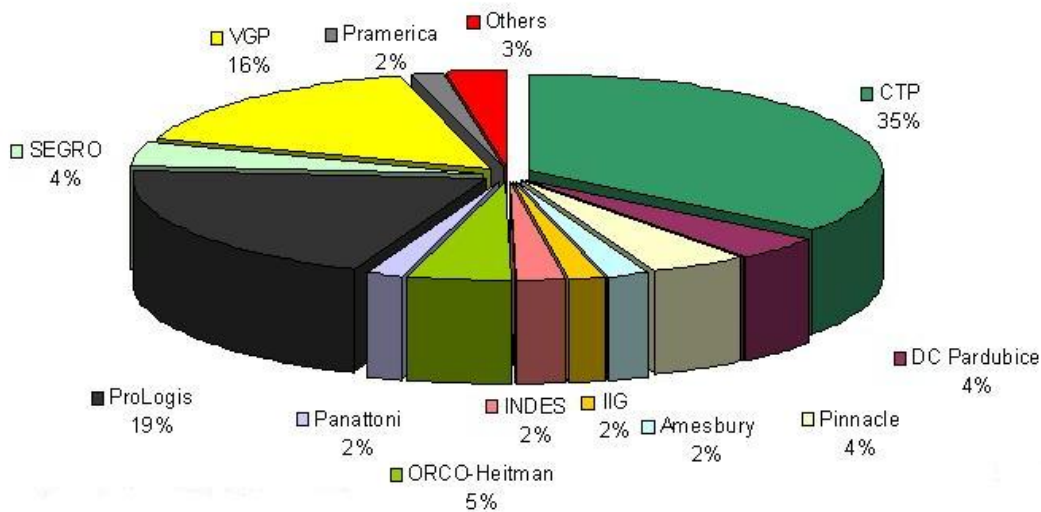


Figure 2 Developers' market share in the Czech Republic by take up in 2008 (Cushman and Wakefield, May 2009)

The Czech industrial market is young but the technical standards and the business terms institutionalized over time are designed to allow maximum value in respect of flexibility of the space for occupiers.

THE SPECULATIVE CONSTRUCTION

Logistics and distribution companies do not have overly specific accommodation requirements (Henneberry, 1991a, p213). Henneberry (1991a, p214) postulates that speculatively built facilities are not necessarily designed to minimum standards and are built to a perceived average to achieve flexibility of use. New construction techniques allow for the development of adaptable, inexpensive, single storey light industrial buildings and shorter construction periods permit more flexible adjustments (Henneberry 1991a, p213). These techniques allowed the developers to build on speculative basis without having pre-lets from tenants.

The database of occupiers in the Czech Republic

By the first quarter of 2009 there were 280 occupiers of units bigger than 1,000sqm in 46 existing parks bigger than approx. 5,000sqm throughout the Czech Republic. Figure 3 shows a map of the Czech Republic with locations of modern industrial parks for lease.

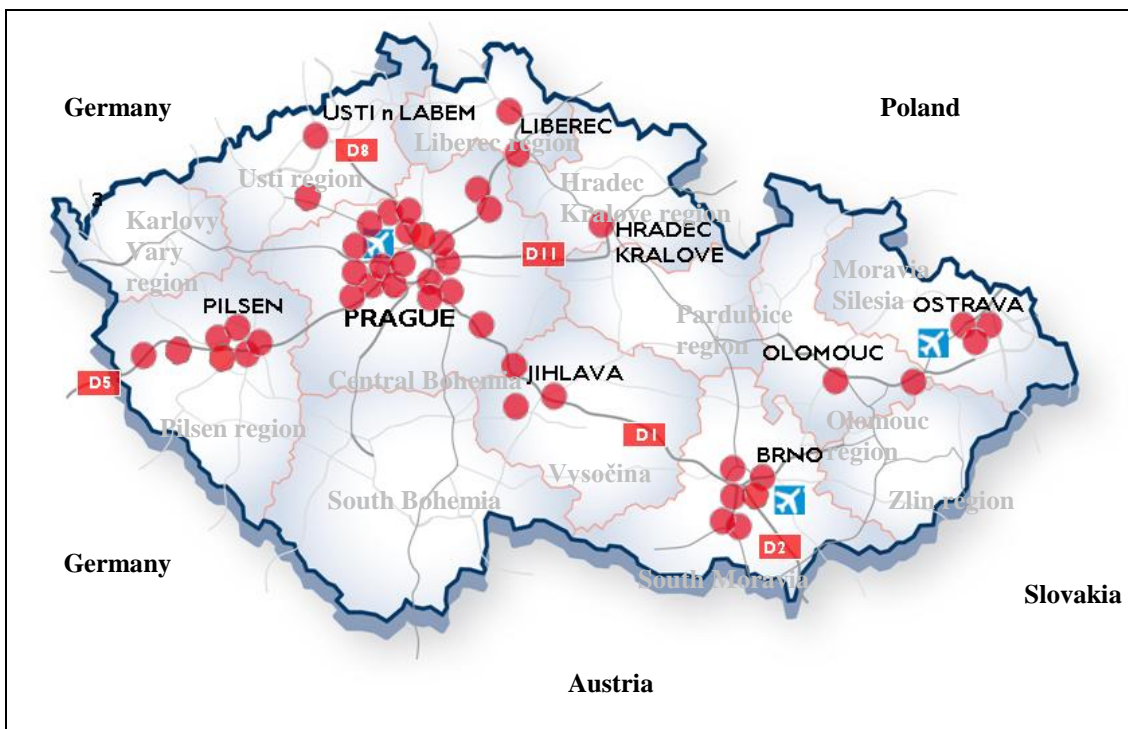


Figure 3 : Map of the Czech Republic with industrial parks (Cushman and Wakefield, May 2009)

The majority of the industrial space is occupied by logistics companies (47%) followed by manufacturers (33%), wholesalers (12%) and retailers (7%). The rest of the space is occupied mainly by other service providers and repair centres (Figure 4). Sixty seven percent of the occupiers use their premises for warehousing purposes, 33% of the occupiers use their leased premises for manufacturing related purposes (Figure 6).

Main factors influencing occupier's satisfaction

Services provided by the landlord, business terms, quality of the facility, fulfilled expectations, location and other factors influence the satisfaction but in the end it is about the rent that the occupiers are willing to pay for the space. Tsolacos et al. (2005, p312) identified that occupiers are willing and afford to pay the rent subject to the profitability of their business and the standard technical specification must be in accordance with the net operating costs the occupiers will be able to achieve in the premises.

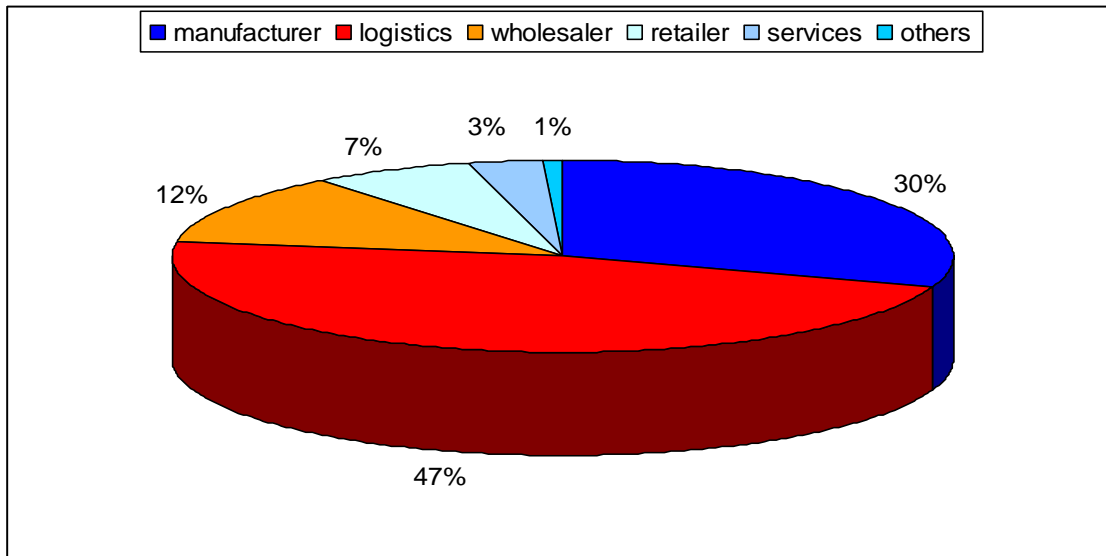


Figure 4: Industrial space in the Czech Republic by occupier's business type (Cushman and Wakefield, May 2009)

LITERATURE REVIEW

While broader work on satisfaction and on technical specifications has been done there is a need to look in more detail at the relationship between the two to assess which aspects of the design is particularly significant for the occupier.

There is limited information about the Czech industrial property market generally and only one study organized by ATOZ Publishing (publisher of logistics magazine "Systemy Logistiky") in cooperation with real estate consultancy firm Cushman & Wakefield and statistics advisory firm STEM/MARK has been prepared regarding satisfaction of occupiers with industrial parks. The survey was based on questionnaire delivered to occupiers in 6 pre-selected parks (these parks were nominated by landlords). The main aim of this survey was to assess the overall satisfaction with pre-selected parks. The study concluded that occupiers are satisfied with overall technical standards of the pre-selected parks, but are not satisfied with level of services provided and generally with the parks. It did not provide in depth analysis of key factors of satisfaction.

In contrary the occupier satisfaction index (OSI) which is measured and presented in the UK annually by the Property Industry Alliance and Corenet Global UK is based on broader sample of properties. The UK OSI in 2009 was for the industrial property market at the level of 54 points where 100 points mean excellent, 80 points mean good and 60 points average. The index measures satisfaction of occupiers with performance of industrial parks and not satisfaction with technical specifications. There are 13 questions in the survey and none of them is related to technical specification.

Drury's (1977) classification of the types of production leads Henneberry (1991a, p216) to the conclusion that the higher the production plant intensity, the more frequent production plant change rate and the greater mechanical handling and services intensity, the more likely that the industrial facility will not be able to meet occupier's requirements. Based on the behavioural analysis Henneberry (1991a, p217) suggests that the managers opinion of the suitability will vary according to changes in factory's function, changes in firm's product or success/failure on firm's market or because of the technical changes in methods of production, changes in design of product, and changes in demand for product. Overall the longer the lease term the greater the need for change throughout the period of occupation. The life-cycle theory of product leads Henneberry (1991a, p218) to

conclude that the industrial property is likely to accommodate only first two stages of the product lifetime.

In 1988 Henneberry (1991b) surveyed 600 occupiers in Yorkshire and Humberside and analysed their responses. Two tests were made relating to the “fit” and “adequacy” of the unit. Henneberry defined “fit” as relation of the tenant to the amount of floor space required to pursue their business adequate concluding that bad fit tends to result from growth of the tenant’s business. In contrary “adequacy” was the function of the technical specification. Henneberry identified the supply side of the market as the main source of inadequacy. On the other hand the study did not provide information about what are the adequate technical specifications.

The above studies of Henneberry are focused on manufacturing companies. Thomson (2005) provided implications of further EU economic growth and regulation on specification of warehouses:

- connectivity (large amounts of data transferred and need for faster information flow);
- cross-docking (saves time and cost for warehousing);
- super flat floors (due to usage of automated warehousing systems);
- clear height (standard 10-12, trend to be 12m);
- span (30m span to be preferred in the future);
- security and fire protection: sprinklers, smoke detectors and fire doors becoming standard due to insurer led costs.

	CTP Log/Flexi	ProLogis	VGP	SEGRO	Panattoni	Pinnacle
Clear Height (m)	10/7	10	10	10.8	10	10
Floor load (t/m ²)	5/5	5	5	5	5	5
Column grid	12m x 24m	11m x 22m	12m x.24m	11m x 22m	12m x 25m	12m x 25m
Direct access (sqm/1 DA)	4000/1500	5000	4000	4000	5000	5000
Docks with hydraulic ramps (sqm/1 HR)	700-1000	700-1000	400-1000	400-1000	400-1000	700-1000
Electricity	No standard	No standard	No standard	No standard	No standard	No standard
Skylights (%)	Min 4/8	Min 2	Min 2	Min 2	Min 2	Min 2
Lighting (lux)	300	200	300	200	200	200
Heating system	No standard	No standard	No standard	No standard	No standard	No standard
ESFR sprinklers	Yes/No	Yes	Yes	No	Yes	Yes

Table 1 Comparison of technical specifications of major developers on the Czech industrial real estate market (Web sites and technical specification of respective developers including CTP, ProLogis, Pinnacle, Segro, Panattoni and VGP)

Table 1 compares key technical specifications of main industrial developers in the Czech Republic. It is apparent from Table 1 that the basic technical specifications are similar. CTP has two different concepts of industrial design: logistics and so called flexi for manufacturers. ProLogis, Pinnacle and SEGRO develop standard warehouses and are less flexible to adjust the units to suit production

purposes. Panattoni and VGP built rather standard logistics facilities and are ready to change specifications to meet specific requirements of tenants.

In conclusion, the literature review shows that only limited research has been done on the subject of occupier's satisfaction with technical specification of industrial facilities and this research does not provide suggestions for newly constructed developments.

SURVEY APPROACH

Since occupier's opinions on satisfaction with technical specifications have not been studied in previous research this project needed to be based on new primary empirical data. The opinions of the occupiers were the subject of the study so a qualitative attitudinal survey was used. The aim was to draw broad conclusion about the whole of the stock in the Czech Republic so it was necessary to include as wide a sample as possible. The number of potential respondents ruled out the use of interviews as the process would have been beyond the resources of the study and the diversity of response would have been difficult to analyse (Naoum, 2007, p117). A structured questionnaire based upon the key aspects identified in the literature review, informed by the authors experience and discussions with occupiers has therefore been used to gather the data. The questionnaire structure devised by the Author is shown in Table 2.

Section	Category	Type of questions
Structural technical specifications	- clear height - floor loading capacity - column grid	- factual question (checklist or open ended) - importance (Likert scale) - satisfaction (Likert scale)
Operational technical specifications	- direct access - docks with levellers - day light intensity - artificial lighting intensity - electricity capacity - heating system	- factual question (checklist or open ended) - importance (Likert scale)
Questions on satisfaction	- in relation to the rent - in relation to the experience with the facility - in relation to expectations before start of the lease	Likert scale
Basic factual questions	- region - type of facility - size of unit	Checklist or open ended

Table 2 Questionnaire design

Database of occupiers

There are 280 industrial units for lease bigger than approx. 1,000sqm in 46 locations/parks in the Czech Republic. Ninety one occupiers are manufacturing companies (32.5%), the rest (189) use their premises for logistics purposes (67.5%). Industrial units in the database can be split to following categories (see also Figure 5):

- 55 units from 1,000 to 2,000 m² (20%)
- 103 units from 2,001 to 5,000 m² (36%)
- 95 units from 5,001 to 15,000 m² (34%)
- 27 unit bigger than 15,001 m² (10%)

These 280 units are occupied by 225 different companies as some companies occupy more than one unit.

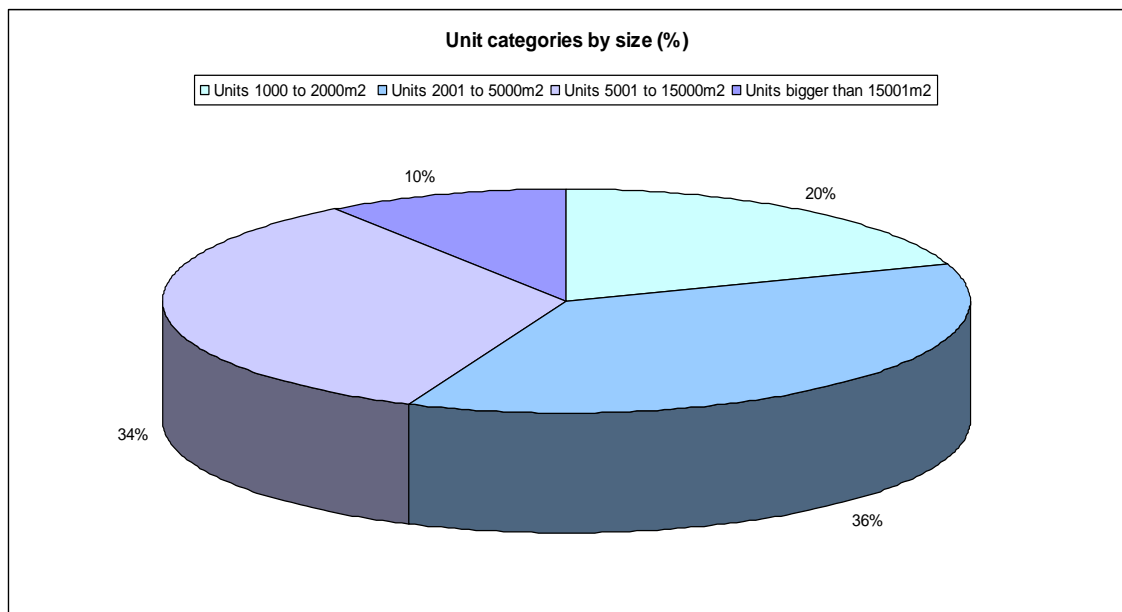


Figure 5 Distribution of the units in the database by size (Cushman and Wakefield, May 2009, N=280)

Characteristics of respondents

Forty three responses were received, 29 responses via electronic questionnaire and 14 responses by managers filling in the questionnaire via interview. The response rate is 24% from the sample of 179 occupiers to which the questionnaire was sent and 17.7% among the total 225 occupiers in the Czech Republic. This is in line with response rate of other similar surveys (usually 19%-25%). With regards to the size of studied units, the respondents occupy approx. 318,000sqm of industrial space which means about 12% of all occupied space in the Czech Republic.

Respondents by business type

Logistics companies form 46% of respondents and manufacturers 33% of the respondents. Retailers and wholesalers are the rest. This is in line with market situation.

Respondents by unit use and building type

79% of the manufacturers who responded to the survey occupy standard units out of which 28% occupy units without extra installations. 21% of the manufacturers who responded occupy built to suit facilities. 65% of the logistics respondents occupy standard units out of which 62% occupy units without any extra installations. 35% of the logistics respondents occupy built to suit facilities. Logistic occupiers need less extra installations in the standard industrial units.

74% of the units used for logistics purposes are standard and 55% of these units are standard without any extra installations. 81% of units used for manufacturing purposes are standard out of which 69% are with extra installations. Based on the experience and on the interviews standard industrial units for lease rather fit to logistics purposes and can be used for manufacturing but must be adjusted. The overall majority of respondent occupiers are located in standard facilities (77%) out of which 55% are in standard units with extra installations.

Respondents by unit size

Figure 6 shows division of the respondents by number in categories according to unit size. Most respondents are in the subgroup of units from 5,001 to 15,000sqm followed by respondents with units from 2,001 to 5000sqm. In comparison with Figure 5 this is in contrast to the other respondent subgroups (units from 1,000 to 2,000sqm and units bigger than 15,001sqm) are in line with the division of the whole database.

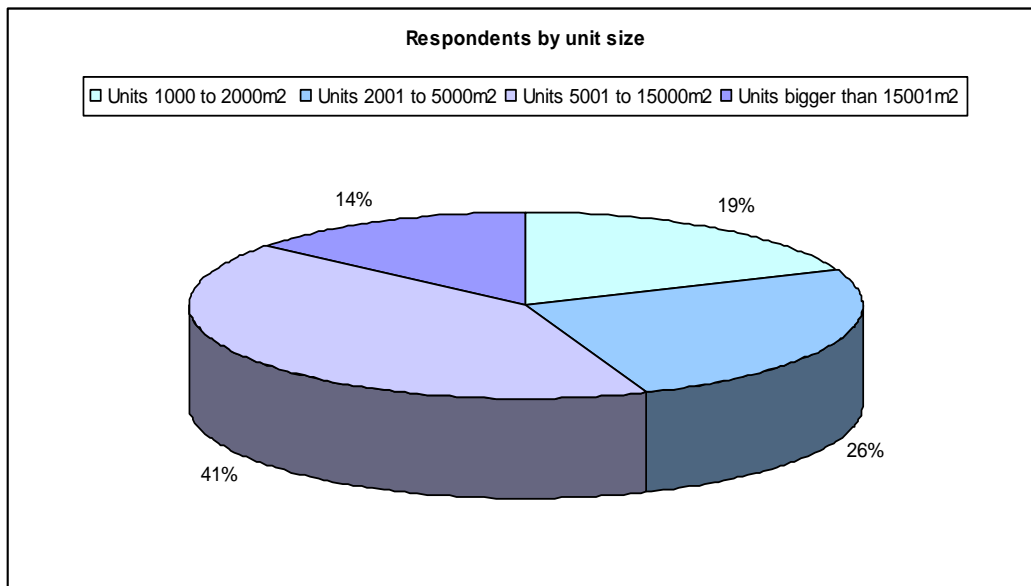


Figure 6 : Respondents by unit size N=43

Manufacturing units are mostly represented within the category 5,001 to 15,000sqm, logistics units are mostly represented within the category of 2,001 to 5,000sqm (Figure 7). Standard units with extras are mostly represented in the category of 5,001 to 15,000sqm which is mainly units for manufacturing use. Built to suits are mostly represented in the category of units bigger than 15,000sqm which are mainly units for logistics use.

Analysis of the collected data

Satisfaction and importance for each technical specification is quantified as an average of received responses (points from 1 to 5 on the Likert scale representing scale from Dissatisfied to Very satisfied) and as a percentage of received points from the maximum points in total.

Main hypotheses

The following main hypotheses are analysed:

"the type of unit use can have an effect on occupier's satisfaction with the key technical specifications of modern industrial facilities in consideration of the rental level."

The type of unit use can have an effect on occupier's satisfaction with the key technical specifications of modern industrial facilities in consideration of the expectations before start of the rent."

The type of unit use can have an effect on occupier's satisfaction with the key technical specifications of modern industrial facilities in consideration of the quality of the building."

“The satisfaction with basic technical specifications of modern industrial facilities in consideration of the quality of the building does not differ between occupiers with manufacturing operation and with warehousing operation.”

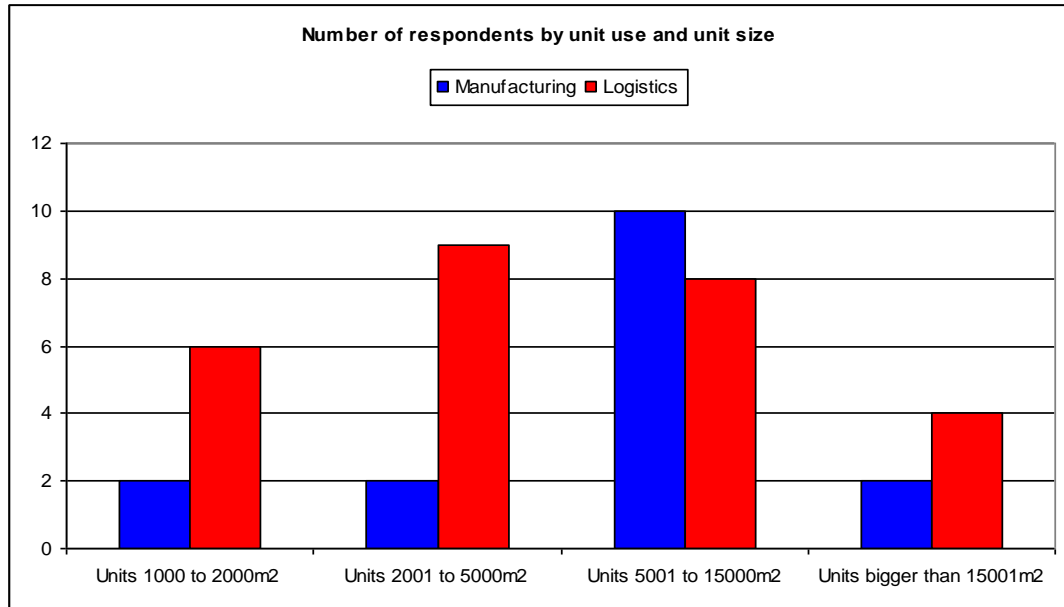


Figure 7: Respondents by unit use and unit size, N=43

Non-parametric (the Chi square) test is used to test the above hypotheses. Naoum (2007) suggests this test can be used in case the data is nominal, the research subjects (respondents) can be allocated into categories and the sample is large. The database of responses is in accordance to these criteria.

Following formula is used for the Chi square calculation:

$$\chi^2 = \sum (O - E)^2 / E$$

where,

- O...observed frequencies for each category;
 - E...expected frequencies for each category;
 - Σ...sum of the results calculated for each category.
- Discussion and analysis of the results

Clear height

Clear height under the beam is one of the key technical specifications. Ten meter clear height allows stacking of pallets in 5 or more levels. Thomson (2005) concludes that 12m clear height is the trend in warehousing. On the other hand manufacturing or cross dock operations prefer a clear height lower than 10m as it might be cheaper on heating and easier to bring light to the shop floor.

More than 67% of respondents consider clear height as important factor for their operation (average 3.86 points). The most important is clear height for respondents in units from 2,001 to 5,000sqm (80% importance) and in units above 15,001sqm (80% importance). The least important is the clear height for respondents in small units from 1,000 to 2,000sqm (72% importance). Small units are primarily for local representation (buffer warehouse), cross docking or light manufacturing and not for warehousing.

Clear height is more important for logistics respondents (81% importance) than for manufacturing users (71% importance). Eighty six percent of respondents are satisfied with their existing clear height (average satisfaction 4.35 points), although 19 out of 43 respondents would prefer a different clear

height than the existing one. 10 of these 19 would rather prefer higher and 9 lower clear height than existing. The most satisfied with clear height are respondents in small units from 1,000sqm to 2,000sqm (95% satisfaction) followed by units bigger than 15,001sqm (93% satisfaction). The least satisfied are occupiers in units of 2,001 to 5,000sqm (78% satisfaction). Further analysis shows that occupiers of small units have mostly 10m clear height which is also their preferred clear height. Occupiers of units from 2,001 to 5,000sqm have mostly 10m clear height but they would rather prefer clear height around 12m.

Occupiers mostly prefer clear height around 10m (26% of respondents) which is also the most common clear height used in existing industrial facilities. Other preferred clear heights are around 12m (19% of respondents) and 6-7m (19% of respondents).

The difference in satisfaction between logistics users (87% satisfaction) and manufacturing users (86% satisfaction) is minor. In the sample the units with manufacturing use are more frequently with clear height around 7m and the units with logistics use are more frequently around 10m and this is the preference of occupiers by business use. Manufacturers rather prefer lower buildings (about 6m). For warehousing operations a clear height of 10m or 12m is preferred as it allows efficient storage of goods. However, some of the logistics companies prefer clear height at about 5m or 6m as they use the warehouse for cross-docking operations where the goods move mainly on the floor and it is more important to have more docks with ramps rather than a higher building. Across the unit size and building type categories clear height from 10m to 12m is the most preferred.

Floor loading capacity and quality of the floor

Floor shall allow movement of forklifts, storage of pallets in several levels and installation of manufacturing technology. Floor loading capacity is one of the main floor characteristics, other characteristics are point load and flatness of the floor (important in case of racking system), net of dilatation joints, thickness of the floor and foundations.

Seventy two percent of respondents consider floor loading capacity as an important specification for their operation (average 4.12 points). The most important is floor loading capacity for respondents in units from 5,001 to 15,000sqm (88% importance) and in units from 2,001 to 5,000sqm (85% importance). The least important is the load for respondents in small units from 1,000 to 2,000sqm (65% importance). As already mentioned in the section about clear height small units are not meant for warehousing purposes but mainly for local representation, cross docking and light manufacturing. As such loading capacity of the floor is not as important.

Loading capacity of the floor is more important for manufacturing users (88% importance) than for logistics users (79% importance). Manufacturers have technology in their facilities which very often need special foundations.

Eighty one percent of the respondents are satisfied with the load capacity of the floor in their units (average 4.23 points). Sixty percent of the respondents consider the floor load capacity as adequate and 40% as inadequate out of which 94% would prefer a higher floor load. The most satisfied with the floor load are respondents in units bigger than 15,001sqm (87% satisfaction) but the occupiers in other unit size categories are satisfied on the similar level around 85%. There is a difference in satisfaction between logistics users (87% satisfaction) and manufacturing users (81% satisfaction). 75% of manufacturing respondents have 5t/sqm in their present units. Most manufacturing users consider 5t/sqm as adequate (50%) but about 40% respondents would prefer higher floor load. On the other hand logistics users mostly prefer 5t/sqm (63%) and only 28% would prefer higher floor load capacity. Production technology very often requires higher loading capacity of the floor which can be overcome by special foundations under the machinery.

The occupiers prefer the floor loading capacity of 5t/sqm (61% of respondents) which is the most common floor loading capacity in existing industrial facilities. Sixteen percent of the respondents would like to have 7t/sqm in their units.

Some of the respondents commented on the quality of the floor. Only 57% of respondents are satisfied with quality of their floor which means 3.76 points on average. The biggest problem is the crumbling of the dilatation joints and movement of the floor decks due to the forklift truck movement.

Column grid

Column grid determines how the facility can be split to units because landlords prefer to split the facility to units by walls built in between the columns. Column grid determines the flexibility of size of the units and flexibility of the internal layout, be it manufacturing or warehousing operation.

Sixty five percent of the respondents consider column grid as important for their operation (average 3.76 points). The column grid is more important for managers of logistics operations (83%) than for managers of manufacturing operations (64%). Interviews provided the answer: column grid is more important for logistics operations due to optimization of racking system layout, i.e. for instance to optimize the layout columns should be in between the racks and isles should be as narrow as possible just to allow the forklifts to manoeuvre.

The lowest importance has the column grid for occupiers of small units (65%). This is again in line with the results for clear height and floor load as small units are not primarily meant for warehousing purposes.

Eighty four percent of the respondents are satisfied with their present column grid (average 4.09 points) and this satisfaction is similar in all unit categories (by size, by use, by building type) although 65% of the respondents consider column grid in the facility as inadequate. This is mainly due to the fact that 45% of the respondents answered that no columns would be preferred but they realize that this is not possible. Small units from 1,000sqm to 2,000sqm sometimes do not have columns at all. In general the wider the grid the better the diversity of the space as columns restrict flexibility of the space and are limiting flow of the goods and the facility layout. Most of the existing units have column grid 12m x 24m and this column grid is also preferred by 25% of the respondents

Direct access

Direct access to the unit is used for forklift trucks to go in or out of the unit, for trucks to get into the building and to allow side loading and unloading. Standard size of overhead doors is 4.2m x 4.0m which allows the truck to enter the building.

Seventy nine percent of the respondents consider direct access to the facility as important (average 4.30 points). Direct access is more important for companies with logistics operation (88% importance) than for companies with manufacturing operation (82% importance). The highest importance of direct access is for respondents in units from 2,001 to 5,000sqm (94% importance) the lowest importance is for respondents in units bigger than 15,001sqm (77% importance) where mainly hydraulic ramps are used to load and unload trucks.

Thirty five percent of the respondents consider number of their access doors as inadequate out of which 73% would rather see more direct accesses.

Twenty six percent of the respondents prefer to have one and 37% two direct accesses. Number of direct accesses depends on the type of operation in the unit. It also depends on size of the unit. 1 direct access per 944sqm of is enough for units between 1,000 and 2,000sqm. Units from 2001 to 5000sqm should have 1 direct access per approx. 764sqm. Occupiers in larger units do not need as many direct accesses and in units bigger than 15,001sqm it is necessary to have only 1 direct access per approx. 5,370sqm.

Manufacturing respondents need on average less direct accesses (1 per approx. 3,399sqm) than logistics respondents (1 per approx. 2,003sqm). In general logistics operations need better accessibility than manufacturing ones.

Hydraulic ramps

Hydraulic ramps allow flexible adjustment of the entrance to the facility/truck in order to maintain good flow of goods in and out of the facility. The ramp is installed at the level of 120cm at the level of the floor of the unit and at the height of 120cm from the truck yard. Sectional doors are usually 3.0m by 3.0m.

Eighty one percent of the respondents consider hydraulic ramps as important for their operation (average 4.28 points). Hydraulic ramps are more important for companies with logistics operation (90% importance) than for companies with manufacturing operation (78% importance). Logistics operations in general require more accesses in order to allow easy flow of the goods.

The highest importance of hydraulic ramps is for respondents in units from 2,001 to 5,000sqm (91% importance) and for respondents in units from 5,001 to 15,000sqm (90% importance), the lowest importance is for respondents in small units from 1,000 to 2,000sqm (75% importance). This result is caused by the fact that in small units the flow of goods is not too fast and therefore number of access points is not that important.

Thirty percent of the respondents consider number of their hydraulic ramps as inadequate out of which 77% would rather see more hydraulic ramps.

Existing number of hydraulic ramps by unit size is in all 4 categories higher than the number actually required by occupiers. Manufacturers in general require less hydraulic ramps (1 per approx. 2,237sqm) than is provided on average in standard (1 per approx. 1,071sqm). This means that the standard number of hydraulic ramps is closer to the requirements of logistics companies who on average need 1 hydraulic ramp per approx. 802sqm.

Eighty one percent of the respondents consider day light as important for their operation (average 4.18 points). The differences in importance among the unit size categories are minor (+/- 2%). Day light is considered as more important by managers of manufacturing operations (88%) than by managers of logistics operations (81%). This was expected as manufacturing process needs more light in general.

Sixty percent of the respondents are satisfied with the intensity of day light in the unit. Average satisfaction is at 3.58 points, the most unsatisfied are occupiers of small units (52%).

Twenty six percent of the units have skylights with 2% to 4% coverage of the roof. Roof with 2% to 4% coverage of skylights is the standard for warehousing facilities for which hygienic regulations stipulate such intensity of day light. Twenty eight percent of units have skylights with 8-10% coverage of the roof. This is mainly used by CTP in their flexi space concept.

Day light and artificial lighting

Day light on the shop floor is provided by sky lights or by windows on the façade. It is required by legal norms but also it saves electricity on artificial lighting. It is necessary to provide more day light in the space where workers spend most of their time, in warehouse this is in the inbound/outbound area in front of the docks, in a manufacturing unit at the working stations.

Artificial lighting is required by legal norms at permanent working stations and is necessary for operations with more than one shift per day. For some manufacturing operations it is important to equip the unit with specific lighting systems which prevent so called stroboscopic effect (CNC and other rotating machines). Another important factor is the allowance of the lighting to be switched on and off in sections.

Ninety three percent of the respondents consider artificial light as important for their operation (average 4.49 points). The highest importance of artificial lighting is for occupiers of small units. Artificial light is, similarly to day light, more important for manufacturing managers (94%) than for logistics managers (87%).

Thirty percent of the units have artificial lighting with an intensity between 100 and 200lux. This is the standard for warehousing facilities. Manufacturing units have higher intensity of the artificial light (400lux to 500lux) due to hygienic regulations.

Light is important in labour intensive operations. An interesting solution provided by the developer VGP is painting the interior in white to make the unit lighter. One of the respondents commented that it would be helpful to have lighting system which would be possible to flexibly move in order to fit to the different racking systems and isles.

Adequacy was not studied as the day light and artificial light must meet local and national regulations which are considered as minimum requirement. As mentioned above some companies adjust lighting in their units to meet higher requirements.

Electricity capacity

Sufficient electricity capacity is important to maintain the operation at satisfactory level without interruptions. Some companies with continuous operations require back up generators.

Seventy seven percent of the respondents consider electricity as important for their operation (average 4.11 points). The most important is the electricity for managers of manufacturing operations (93%) and it is not that important for managers of logistics operations (76%). This result was expected as manufacturing operations consume more electricity than logistic ones. Ninety eight percent of the respondents consider installed electricity capacity as adequate. Higher capacity is installed in units with manufacturing use.

Almost 10% of logistics managers did not know the installed electricity capacity, in contrast 100% of manufacturing managers knew it. The parks have reserve electricity power in case of expansion or for the case that manufacturing company comes to the park.

Heating system

Heating systems are required by law. There are minimum temperatures that the heating system must maintain, in warehousing operations the temperature can be lower (min. 15C) than in manufacturing operations with permanent working stations (min. 18C).

The heating system is important for 65% of respondents (3.86 points on average). It is more important for respondents who use the units for manufacturing purposes (82.5% importance) than for those with logistics operation (74% importance). The highest importance has the heating system for respondents in unit size category from 2,001 to 5,000sqm (85% importance). Respondents in other unit size categories view heating systems with a similar importance at the level of about 75%. The level of importance in respect of facility type is also similar for both built to suit and standard facilities.

Sixty seven percent of the respondents are satisfied with the heating system they have in the unit (3.56 points on average). The least satisfied are respondents in the unit size category from 2,001 to 5,000sqm (60% satisfaction). Respondents in other three unit size categories are satisfied in similar level of about 75%. Companies which are more satisfied are those with manufacturing operation (75%) as opposed to those with logistics operation (69%) in the unit. The reason is that developers must install better heating system in manufacturing units than in those for logistics purposes. Seventy percent of the units have gas heated blowers usually mounted on the walls and 63% of respondents are satisfied with this system. Gas heated infrared heaters are in 16% of the respondents' units and 71% respondents are satisfied with this system.

Ventilators are considered by some respondents as noisy especially when the vents run on the highest power. Other respondents commented that the regulation system should allow the occupier to fully control the environment in the unit.

Sprinkler system

Sprinkler systems are part of the fire prevention of buildings. ESFR sprinkler systems are the most commonly used system in the Czech Republic. Some landlords and occupiers require sprinkler system because of their insurance policies. On the other hand some occupiers can not have sprinkler system for instance in the ADR storage (chemicals) or in case they store electronics or paper. In such case the sprinkler system should be able to be switched off in some sections.

Sprinkler systems are considered by 44% of the respondents as important for their operation (average 3.23 points). A sprinkler system is the least important for respondents in small units (only 53%). In contrast the highest importance of a sprinkler system for is occupiers of units bigger than 15,001sqm (93%).

Sixty percent of the respondents answered that they have sprinkler system in their unit and only 17% of the respondents that do not have sprinkler system in their unit would like to have it.

a sprinkler system is required by the fire regulations in case of larger units. The maximum size of unit without a sprinkler system is about 7,000sqm (depends on local regulations). The maximum size of unit with a sprinkler system could be up to 10,000 or even 12,000sqm. Therefore in concepts which focus on small units it is not necessary to have a sprinkler system. Only 38% of the small units from 1,000 to 2,000sqm have sprinkler systems on the other hand 100% of the units larger than 15,001sqm have sprinkler systems.

About 60% of both manufacturing and logistics units have sprinkler system. One of the respondents commented that it is good to have sprinkler system and even better is not to use it.

Satisfaction with technical specifications in consideration of rental level

Sixty percent of respondents consider the technical specification in accordance with rental level of the modern industrial facilities. Eighty three percent of occupiers of units bigger than 15,001sqm are satisfied which is much higher number than in case of smaller units (please see Figure 8).

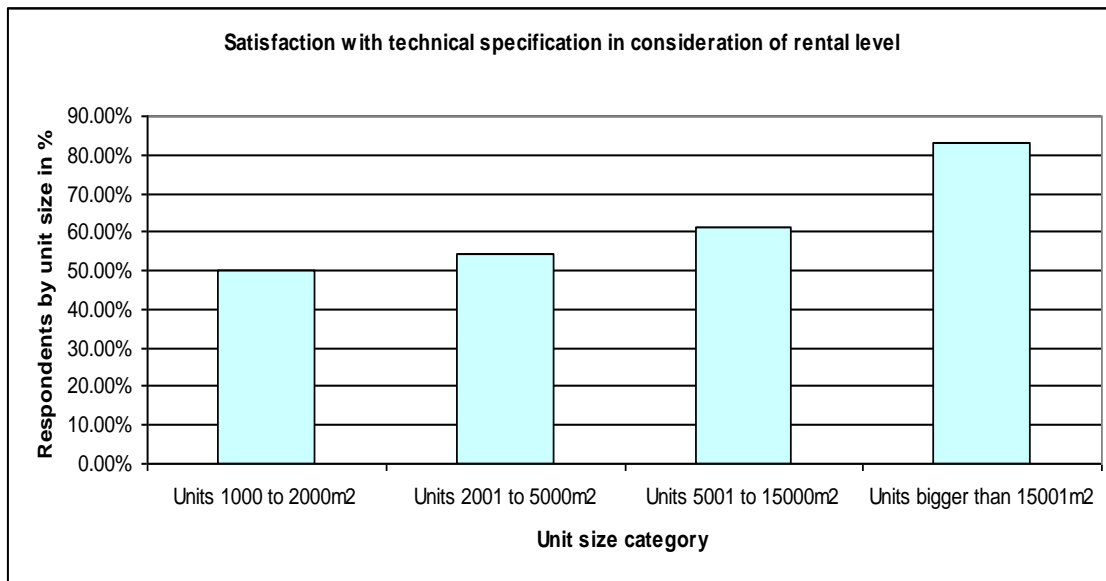


Figure 8 Satisfaction with specification in consideration of rental level by unit size N=43

More manufacturing respondents (69%) are satisfied with technical specification in consideration with rental level (Figure 8) than respondents who use the facilities for logistics operations (56%). Occupiers with manufacturing operations have their units adjusted and count with these extra installations in their project budgets. Logistics users take the space without many extra installations on shorter lease terms and their dissatisfaction is mainly driven by constant pressure from their clients to cut the costs.

The result of the test of the hypothesis 1 is not significant at 5% or 10% probability level and the null hypothesis can not be rejected. The satisfaction with basic technical specifications of modern industrial facilities in consideration of rental level does not significantly differ between occupiers with manufacturing operation and with warehousing operation. Both manufacturing and logistics respondents mostly comment that the technical specification is in good standard but the rent is higher than they would expect for such standard.

Satisfaction with technical specification in consideration of expectations and present experience

Sixty seven percent of respondents consider the technical specification in accordance with expectations before the start of the lease (Figure 9). The lowest satisfaction in this respect is in the category of units from 2,001 to 5,000sqm, the highest in the category of units more than 15,001sqm (100% respondents are satisfied in this respect)

More manufacturing respondents (81%) are satisfied with technical specification in consideration of expectations than respondents who use the facilities for logistics operations (56%). From experience manufacturers spend more time on preparation of their new manufacturing project than logistics operators who sometime, when they win a logistics tender, need to take the space immediately without prior deep knowledge of the facility.

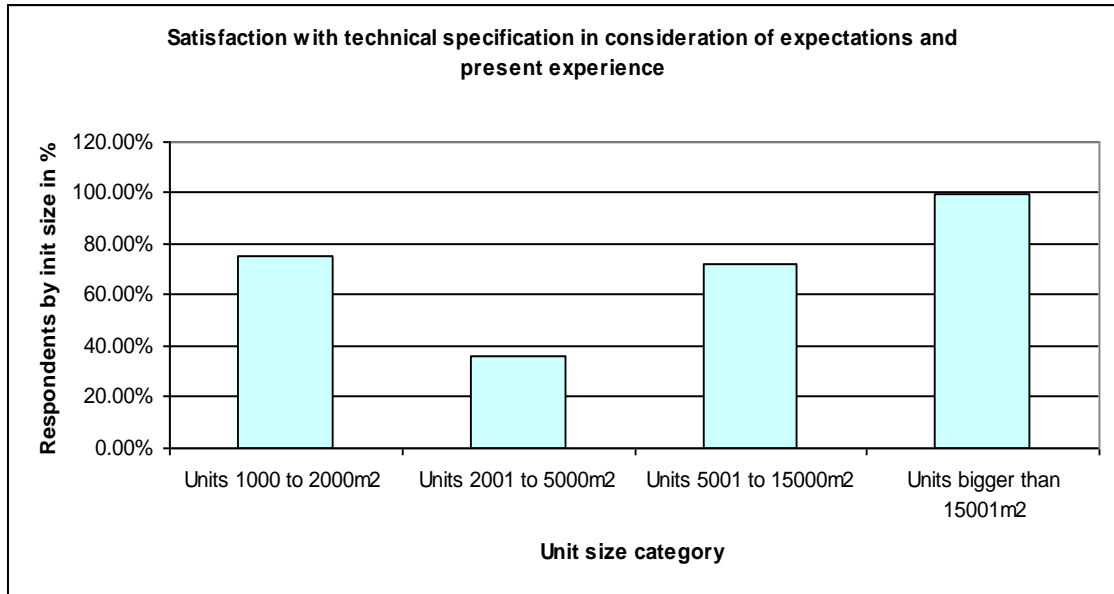


Figure 9: Satisfaction with technical specification in consideration of expectations and present experience, N=43

The result of the test of the hypothesis is not significant at 5% probability level but is significant on the probability level of 10% since the χ^2 value is higher than the critical value for $P < 0.10$. Thus the null hypothesis can be rejected on the 5% probability level but on the 10% probability level the results are significant. The unit use has an impact on the satisfaction of the occupier in regards to the expectations. This may be caused by the fact that manufacturers spend more time in the project preparation phase and they adjust the units to fit their operation.

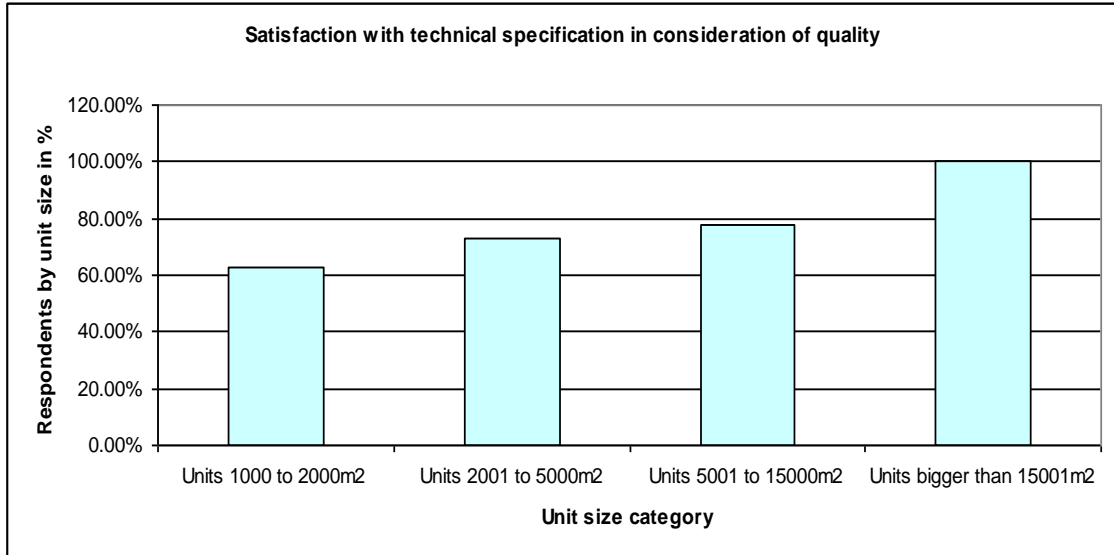


Figure 10: Satisfaction with technical specification in consideration of quality, N=43

Satisfaction with technical specification in consideration of quality

Seventy seven percent of respondents consider the technical specification in accordance with quality of the facility. The lowest satisfaction in respect of quality is in the category of small units (Figure 10).

The result of the Chi square test for the hypothesis 3 is not significant at the 5% or 10% probability level and the null hypothesis can not be rejected. There is no difference between manufacturing and logistics operators in regards of satisfaction with quality of the industrial facilities which is also the result of interviews.

CONCLUSIONS

This research confirmed that the technical specifications of modern industrial facilities currently provided are acceptable for the occupiers across all unit sizes and unit use categories (Table 3: Technical specifications preferred by occupiers by unit size. However there is some variation in the preferences of occupiers of different sized units and the requirements of logistics companies are different to those of manufacturing businesses for certain aspects of the specification. The key aspects of the specifications are set out below in the tables which also identify the differences in preferred specifications.

Technical specification	Unit size			
	1,000 - 2,000m ²	2,001 - 5,000m ²	> 15,000m ²	Bigger than 15,000m ²
Clear Height (m)	<10m	<11m	10m-12m	<12m
Floor load (t/m ²)	>3t/m ²	>5t/m ²	>5t/m ²	>5t/m ²
Column grid	None	12m x 24m or none	12m x 24m or none	12m x 24m or none
Direct access	944m ² / 1	764m ² / 1	3,474m ² / 1	5,370m ² / 1
Docks with ramps	871m ² / 1	672m ² / 1	896m ² / 1	1,506m ² / 1
Skylights (%)	< 10%	< 10%	2% - 8%	2% - 10%
Lighting (lux)	100 - 500lux	100 - 500lux	100 - 500lux	100 - 400lux
Electricity	< 400kVA	>400kVA	> 400kVA	> 400kVA
Heating system	No preference	No preference	No preference	No preference
Sprinklers	Not necessary	Rather necessary	Rather necessary	Necessary

Table 3: Technical specifications preferred by occupiers by unit size

For manufacturing operations the most important specifications are lighting and electricity, which are necessary for the production process. For logistics operation number of direct accesses and number of hydraulic ramps are the key specifications. Clear height, floor load and column grid is not viewed by occupiers of small units from 1,000 to 2,001m² as important as light in the unit. For bigger units most important are ramps, direct accesses (not in unit bigger than 15,001m²) and light.

The research did not prove that there is a difference in satisfaction with technical specifications in respect of rental level and quality between manufacturing and logistics operation managers. Both view the quality of the facilities as good but both would expect lower rent for such a standard. The research concludes that there is a difference between manufacturers and logistics in satisfaction in relation to expectations. Manufacturers spend more time when preparing the project and extra installations. Those manufacturers are more satisfied with the rent as they do expect the budget to be higher due to extra installations.

Technical specification	Unit use	
	Manufacturing	Logistics
Clear Height (m)	>6m	>10m
Floor load (t/m ²)	>5t/m ²	>5t/m ²
Column grid	12m x 24m or none	12m x 24m or none
Direct access	3,399m ² / 1	2,003m ² / 1
Docks with ramps	2,237m ² / 1	802m ² / 1
Skylights (%)	< 12%	< 10%
Lighting (lux)	< 500lux	< 400lux
Electricity	> 400kVA	< 400kVA
Heating system	No preference	No preference
Sprinklers	No preference	No preference

Table 4: Technical specifications preferred by occupiers by unit use

Technical specification	Importance					
	1,000 - 2,000m ²	2,001 - 5,000m ²	5,001 - 15,000m ²	> 15,000m ²	Manufacturing	Logistics
Clear Height (m)	72%	80%	77%	80%	71%	81%
Floor load (t/m ²)	65%	85%	88%	83%	88%	79%
Column grid	65%	76%	77%	83%	64%	83%
Direct access	80%	94%	87%	77%	82%	88%
Docks with ramps	75%	91%	86%	90%	78%	90%
Skylights (%)	85%	84%	82%	87%	88%	82%
Lighting (lux)	95%	89%	87%	93%	94%	87%
Electricity	83%	82%	80%	90%	93%	76%
Heating system	72.5%	85%	74%	77%	82.5%	74%
Sprinklers	52.5%	58%	64%	93%	67.5%	63%

Table 5: Importance of technical specifications by unit size and unit use

RECOMMENDATIONS FOR FURTHER STUDIES AND PRACTICE

This research answered many questions and also identified areas for further research:

- what other technical specifications are important to tenants and how satisfied are they with them?
 - what would be the existing and preferred specifications of small business units (unit smaller than 1,000m²)?
 - are there differences between the requirements for headquarter or local branches regarding technical specifications?
 - is there a link between location and technical specifications?
- are manufacturing firms better informed about technical specifications and do they therefore make better judgements about the suitability of the property they occupy?

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CORPORATE REAL ESTATE OUTSOURCING IN THE FINANCIAL SECTOR IN POLAND: THE CLIENT'S PERSPECTIVE

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This paper presents findings from primary research seeking to establish how developed the corporate real estate (CRE) outsourcing market in Poland is. A mixture of qualitative and quantitative research was conducted among CRE managers representing the financial sector in Poland. Financial companies mostly outsource individual functions within facility and transaction management areas. The research data suggests that outsourcing of space planning, moves and valuation, is utilized by approximately 50% of researched CRE managers with Portfolio and Project Management determined as the most unpopular real estate (RE) outsourcing areas. In relation to motivation to outsource, the participants of the research cited “cost reduction” as the key motivator followed by “improved service quality” and “focus on management and strategy”. Improved business flexibility seems to be the least important factor justifying potential RE outsourcing decisions. At the moment the most popular model of outsourcing is to diversify outsourced functions. Companies generally prefer to have as much control over the CRE management as possible and therefore decide to keep the management function in house. Where the RE service providers demonstrate the benefits of their services, in terms of service quality and cost reduction, CRE managers are willing to overcome the issue of control and trust and consider long term co-operation.

Keywords: [corporate real estate, cost reduction, facility management, outsourcing, property management, portfolio management, real estate outsourcing, real estate service providers, transaction management].

INTRODUCTION

Today the corporation is not a unified entity with a single purpose. It is a conglomeration of many departments and service functions each with their own targets. Some functions, including the real estate management function, do not contribute to profit thus appear to have little to do with the

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strategic purposes of the organization. Such functions are retained in-house because of the conviction that controlling and managing such necessary resources is in company's best interest. From the economic point of view, cost saving appears to be a good reason for splitting off non-strategic functions. The mechanism by which this cost contraction might be achieved involves the transfer of processes, people and assets in a company where they do not directly contribute to the core strategic objectives of the business, to an external specialist supplier. This is where the idea of outsourcing came from (Farncombe and Waller, 2005). The general philosophy behind outsourcing is that firms should focus their energy and resources on their core competencies to achieve high efficiency levels and provide high quality service to their clients (Gibbler and Black, 2004) allowing management to pay more attention to areas that might produce competitive advantage. One of these non-core functions is corporate real estate. Companies require premises to undertake their business but the majority of them do not specialize in RE management. The choice is either to maintain costly RE staff to manage their properties, outsource all of real estate management activities or hire CRE management staff to handle strategic and managerial decisions retaining control over external RE service providers dealing with specific CRE functions (Lei and Hitt, 1995). Depending upon the nature of outsourcing the CRE managers' role is to determine functions to be performed, manage quality, provide an interface between senior management and RE service providers, co-ordinate with internal procedures and systems, integrate activities into the corporate mission and evaluate the service. (Gibbler and Black, 2004). The corporate real estate department may become a knowledge centre that evaluates internal real estate resources and capabilities and coordinates relationships with external service providers (Krumm, 2001).

REAL ESTATE OUTSOURCING BASED ON AVAILABLE RESEARCH WORK

Real estate functions are defined differently across published studies. Therefore the results of such research could be misleading. However the studies are helpful in establishing the importance of outsourcing. They describe the characteristics of CRE outsourcing and indicate the issues that require further examination. (Gibbler and Black, 2004)

A study conducted by Kimbler and Rutherford (1993) revealed that the most commonly outsourced RE functions were valuation, brokerage and environmental engineering. Key complaints were that service providers did not understand company or culture, did not provide thorough work on time and have problems with proper regular reporting. On the other hand, based on the opinions of real estate service providers, real estate managers do not have clear objectives, do not provide honest feedback and require effective implementation within impossible timeframes.

Another survey conducted by Ernst&Young (2002) and Columbia University shows that real estate services most often outsourced are project management, facilities management, space planning/moves and transaction management. The highest motivation behind outsource decisions was cost reduction (76%), focus on core competency (64%) and improved service quality (59%). Among those who had already outsourced real estate functions 80% had achieved at least the cost reduction they had expected and 83% had experienced improvement in quality of service.

International Association of Corporate Real Estate Executives (NACORE) research reported by Bergsman (1994) revealed that 55% of respondents reported that outsourcing real estate management was more costly than previous internally based solutions.

Gibbler and Black (2004) set the views of corporate real estate managers against service providers on corporate real estate outsource issues. Although the two parties share a common vision of the role of corporate real estate, providers focus more on traditional real estate tasks than on corporate business strategy. Therefore, the client must effectively communicate the company's objectives and expectations to the provider to ensure the service provider uses real estate to achieve the corporation's goals. A danger exists in that the service provider will either not understand the client's objectives or behave in a self-serving manner reducing the benefits to the client from outsourcing. To provide the optimum balance companies require CRE management staff that understand the overall corporate strategy and culture and are able to effectively communicate them to the real estate service providers as well as monitor outsourced tasks. (Gibbler and Black, 2004)

The study of Manning, Rodriguez and Roulac examines benefits and negative consequences of RE outsourcing to determine which CRE management functions should be outsourced. As recent trends

and the literature suggest, CRE executives are increasingly successful in outsourcing some of the CRE functions where previously many internal CRE staff were needed.

ENABLERS AND BARRIERS

As previously discussed CRE may be viewed as a non-core activity and therefore considered an appropriate function to outsource. However, many companies don't have a real estate strategy tied to overall corporate strategy. Corporate decision makers do not consider RE as an important asset with potential to generate financial and operational value to the company (Nourse and Roulac, 1993). Some of the research conducted indicates that the CRE managers might not be properly placed in the organization having little direct contact with top decision makers and opportunity to influence the corporate strategy (Carn, Black and Rabianski, 1999; Gibler, Black and Moon, 2002). Therein lies the risk that the CRE function is vulnerable to outsourcing, because the corporate real estate executives might not have a chance to demonstrate its strategic value to the firm (Gibler and Black, 2004). On the other hand, there is a growing awareness of the benefits of CRE outsourcing.

OPPORTUNITIES FOR RE OUTSOURCING

Most of the widely-quoted benefits of outsourcing are financial. The promise of reduction in costs is tempting for companies and seems to be the usual trigger for outsourcing. However there are additional benefits to the corporations and their shareholders which are sometimes recognized as even more crucial than reduction of cost base. Sale and leaseback of assets provides cash, increasing overall liquidity. The external expertise might help to generate non operational profits. One could also expect to see improvements in quality of the outsourced services, as they have been transferred to specialized organization.

The potential of outsourcing lies in the following areas:

- efficiency gains from economies-of-scale;
- efficiency gains and effectiveness from economies-of-scope;
- lower transaction costs for routine tasks;
- timely updates of market values on real estate holdings;
- other real estate reporting improvements. (Manning, Rodriguez and Roulac, 1997)

New technical solutions provided with the RE outsourced service include complete documentation and regular reporting, including direct client access. In addition to the technical skills provided through outsourcing this adds value for companies with a complex organizational structure and extensive reporting requirements (Rollins-Hinkle, 2001)

RISKS OF RE OUTSOURCING

Outsourcing CRE has also disadvantages. The complexity of the internal procedures and processes transferring activities from inside the outside company might result in losing the ability to communicate effectively across the company. Furthermore, outside RE service providers might not feel the subtle, often unspoken, cultural factors of the corporation that determine how an organization does business. Another disadvantage of outsourcing occurs when the competition on the RE services market is limited and the outsourced function includes complex transactions and processes. In such situations, there is always an option to apply more efficient review and monitoring processes to evaluate the service provider's performance reducing the potential opportunism. This is in contradiction with the idea of taking the additional time consuming control function away from CRE managers (Manning, Rodriguez and Roulac, 1997)

Extensive reliance on outside providers decreases the company's operational control and can reduce investment in internal skills. As a result short-term savings reflected in financial measures may not reflect the long-term strategic costs of the outsourcing decision (Lei and Hitt, 1995).

Last but not least, service providers may believe superior expertise enables them to evaluate client needs thus providing self-developed solutions. However practices, standards and procedures

appropriate for one client may not be successful with another resulting in disputes between the client and CRE service provider (Gibbler and Black, 2004).

WHAT TO OUTSOURCE AND HOW TO OUTSOURCE?

Companies should recognize that determining functions to outsource and the method of cooperation with the external RE service provider is extremely important. Such decisions might be enhanced by using an experienced consultant and is strongly advised when the CRE strategy is tailored to the corporate strategy and where there is no space for testing. In addition, external consultants might bring expertise and a broader perspective on the issues compared to the internal executives (Manning, Rodriguez and Roulac, 1997).

Internal CRE management staff is required to create and monitor quality long term relationships between the company's business units and the CRE outsource service providers Kimbler and Rutherford (1993), Bergsman (1994) and Lambert (1995),

Therefore the corporate real estate management role would include:

1. overseeing outsource contract relationships
2. co-ordinating the work of the outsource contractors with the internal operations of the business
3. translating internal issues to the outsource firm
4. translating real estate inputs provided by the outsource firm to business unit managers

Internal CRE staff executives have valuable organizational knowledge leading to better control of providers and CRE service cost and quality. Additionally, CRE management equipped with expertise and experience would curb the possible opportunistic behaviour. (Manning, Rodriguez and Roulac, 1997).

PURPOSE OF THE RESEARCH

This research investigates how Polish companies are following the world's trends in relation to CRE management and outsourcing. The financial sector has been selected for several reasons. Firstly, the sector is mature in terms of corporate management practices. As active market players, companies from this sector are pushed to respond rapidly to the dynamically changing economic environment through effective management of its assets, including RE. Furthermore, financial corporations such as banks, insurance companies, etc., usually manage large portfolios of RE they use for operations or as investment. The majority of the researched companies representing the financial sector in Poland are subsidiaries of international corporations. It might be expected that they implement efficient corporate management solutions including RE outsourcing within local markets. However it is not obvious whether they can find satisfactory services and hence what their outsource decisions are.

The objectives of the research are:

1. To provide a general overview of the corporate real estate outsourcing market in the financial sector represented by banks.
2. To assess the level of utilization of external RE services and its structure.
3. To examine main motivations standing behind outsource decisions.
4. To explore banks' assessment of real estate services they are utilizing.
5. To describe the most desirable cooperation model to be more widely adopted by the Polish banking sector.

The main research questions are:

- Do the banks outsource real estate services and what is their motivation behind outsource decisions?
- Which of the real estate functions do they outsource?
- What are the banks' preferences regarding outsourcing model?
- Is there any correlation between the quantity and structure of property portfolio and certain decisions regarding RE functions outsourcing taken by the clients?
- How are the current CRE service standards being assessed by the clients?

There has been no research of this kind done so far in Poland, so the intention of this paper is also to be a base for further research initiatives.

METHODOLOGY

The research was both qualitative and quantitative in approach with questions grouped in three integrated areas. The first included crucial questions considering the main targets of the research. It was supposed to provide some objective data (number of properties, total property portfolio area etc.) and facts. The objective data was then the subject of descriptive statistical analysis to determine facts about Polish RE outsourcing market.

The remainder of the study was based on attitudinal research to gather the opinions of CRE managers participating in the research about elements of cooperation with RE service providers as well as their judgement of current service practices and standards. The investigation was informed by the literature reviewed. There was no particular theory involved for this research to be placed in. It was expected that the ideas and some theory should emerge during the data collection and analysis. (Naoum, 2007)

Data collection and sampling

The primary data collection was based on structured questionnaire interviews with CRE executives in Polish financial sector. This was a significant advantage compared to the postal questionnaire originally considered. This approach has been selected from available techniques because of the three major reasons:

- to collect high quality data
- to achieve the highest possible response rate
- to keep control over the process

The banks were considered in terms of their position in the market and type of banking services. The sampling was stratified and extended from small players to medium and the biggest banks in terms of market share. Additionally, two insurance companies have been approached. The aim was to interview top CRE management, as they were expected to have current and broad CRE knowledge.

Data analysis

For the research purposes the descriptive analysis was implemented. It was applied to the results of the first part of the research to provide diagnosis of the current RE outsourcing market. The 2nd and 3rd phases comprise the attitudinal research. The idea was to convert data from the subjective judgments into numbers using a Likert scale. This data was not intended to be the subject of thorough analysis because of the limited research potential in that form. It could however provide excellent material for analysis when put together with the same set of data obtained from an alternative source which in this case should be RE service providers.

Identified risks

During the data collection it was noted that the definition of outsourcing and particular CRE service groups used in the research were interpreted differently among research participants. The interview process allowed for clarification but there is a risk that misinterpretation remained.

RESULTS

Among the total number of 23 financial companies selected, operating across the country, 15 were contacted (response rate of 65%). 2 companies refused to participate in the research and 4 couldn't be interviewed within the timeframe required. Representatives of 9 companies have been successfully interviewed.

The research has been split into three sections. The first section included objective data. The aim was to provide an answer to the main research questions.

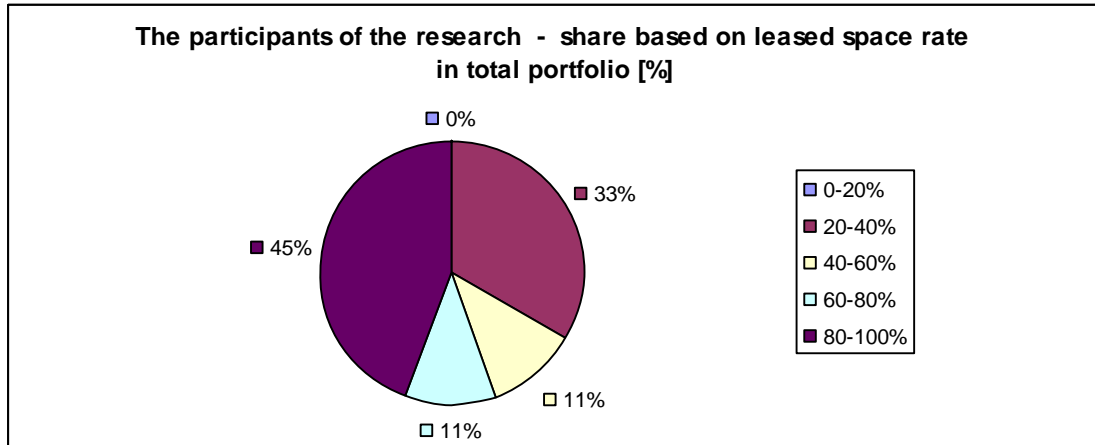


Figure 1 The participants of the research: share based on leased space in total portfolio.

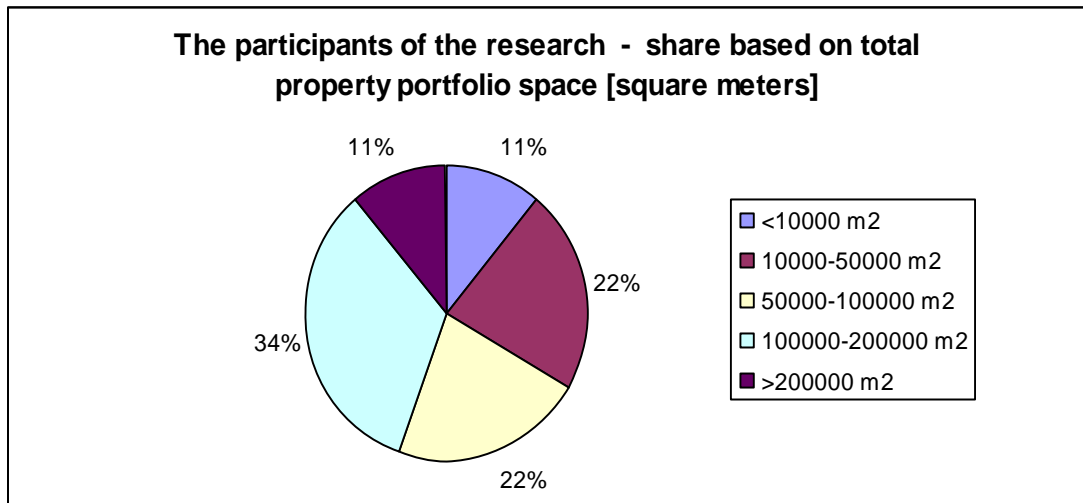


Figure 2 The participants of the research: share based on total property portfolio space.

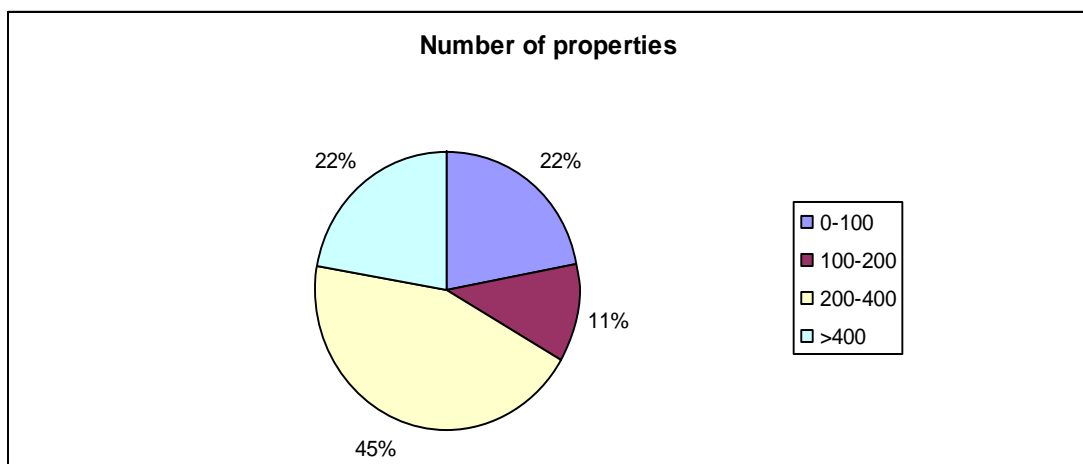


Figure 3 The participants of the research – number of properties.

The two remaining sections included attitudinal statements to determine the subjective opinion of the respondents in relation to cooperation with external service providers and how they assess the standard of service they presently receive. As previously stated, banks which agreed to participate in the research are different in terms of their characteristics (corporate, consumer, universal), assets and capitalization. They were also diverse in terms of the area of property space managed and the structure of property portfolio as Figure 1, Figure 2 and Figure 3 show. At the stage of analysis special attention has been given to the possible correlation between these parameters and other data gathered in the first section of the research.

All of the interviewed participants occupy high managerial positions within their CRE departments, with an average 8.6 years of managerial experience in CRE. When asked: “Do you outsource RE services?” 67% of interviewees were sure about their answers given. The others – 33% didn’t give an immediate answer wondering whether services they utilise could be considered as outsourcing. Finally 67% (5 votes) of the interview participants confirmed that they outsource RE services, 11% (1 vote) denied and 22% (2 votes) decided not to give an unambiguous answer at all (see Figure 4 Do you outsource RE services?)

The next logical step was to consider the nature of CRE services subject to outsourcing. At this stage an important observation was made which influenced the approach. Originally in this research there have been certain areas of integrated RE functions identified which could be considered as complex and coherent RE service packages such as:

- Facility Management (including all services connected with property maintenance including helpdesk, cleaning, ground keeping, waste management, security, technical inspections of installations, environmental management etc)
- Portfolio Management (including legal and financial aspect of lease management as well as day to day communication with landlords/tenants etc)
- Space Planning/Moves
- Transaction Management (including property acquisition, negotiations of new leases, RE brokerage services etc)
- Valuation
- Project Management (including budgeting, tendering, construction supervision and inspection, dealing with payments etc)

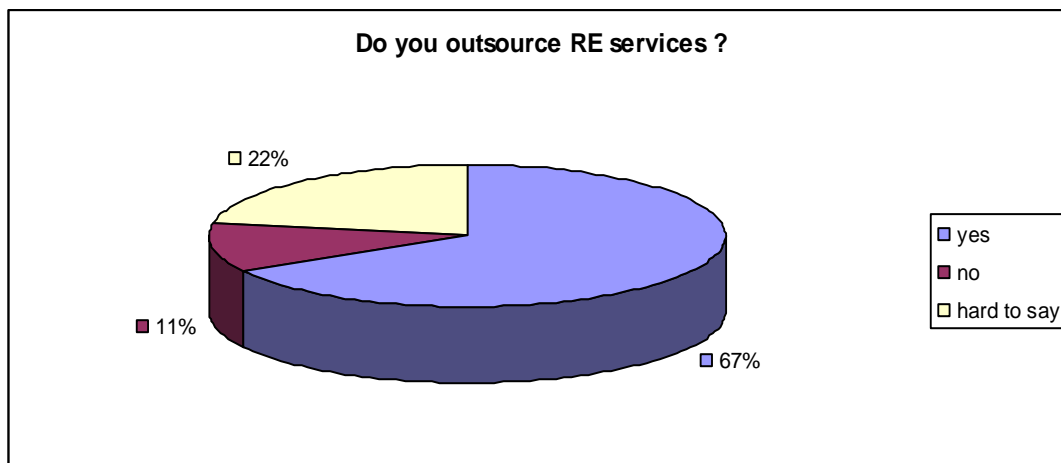


Figure 4 Do you outsource RE services?

The purpose of presenting CRE services in this manner in the questionnaire was to simplify the research and investigate whether integrated functions are outsourced as a whole. During the interviews it was noted that in many cases the participants indicated that they used external services providers to secure only certain functions within integrated service areas whilst remaining tasks were dealt within internal sources and expertise. Therefore the results have been double-analyzed. The

two versions of results below represent the average voting (Figure 5 and Figure 7) and the structure of votes (Figure 6 and).

The first interpretation relates to the original research assumptions and includes only votes given with no reservation or doubt regarding the scope of service. In other words it doesn't include outsourcing of individual CRE functions.

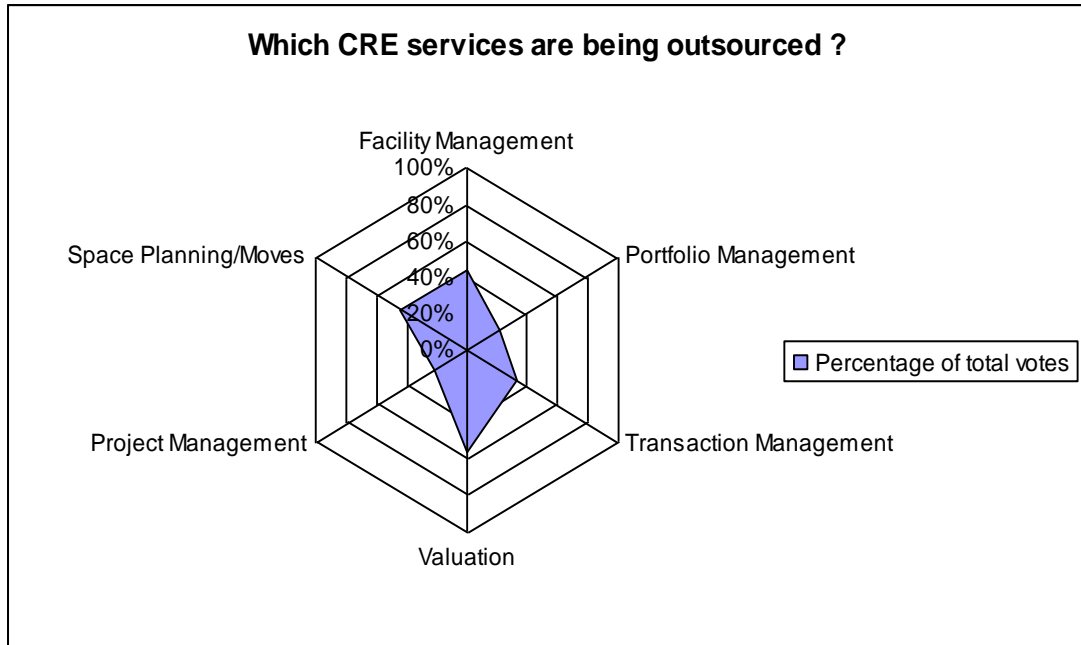


Figure 5 Which CRE service do you outsource? – integrated outsource areas included only

The results show that the most popular RE external complex service utilized by the banks is valuation (56 %), followed by facility management and space planning/moves (44%), transaction management (33%) and both, portfolio and project management (22%). Among the CRE service areas valuation is the function that could not be split into separate sub-functions. On average, around 40% of banks declared they outsourced more than one of the integrated CRE services and 33% do not use any of the listed RE service areas at all.

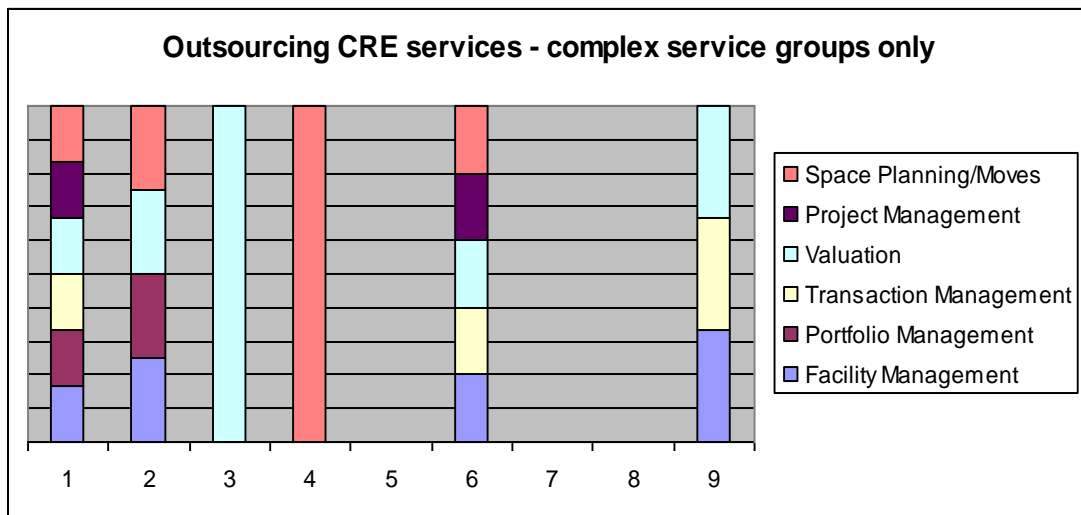


Figure 6 Outsourcing CRE services - complex service groups

Figure 7 and presents findings relating to any vote regarding any RE function outsourced that interviewees have allocated to service areas proposed in the questionnaire. In this interpretation it is

not important whether RE services are outsourced entirely or as separate functions only within the defined service areas.

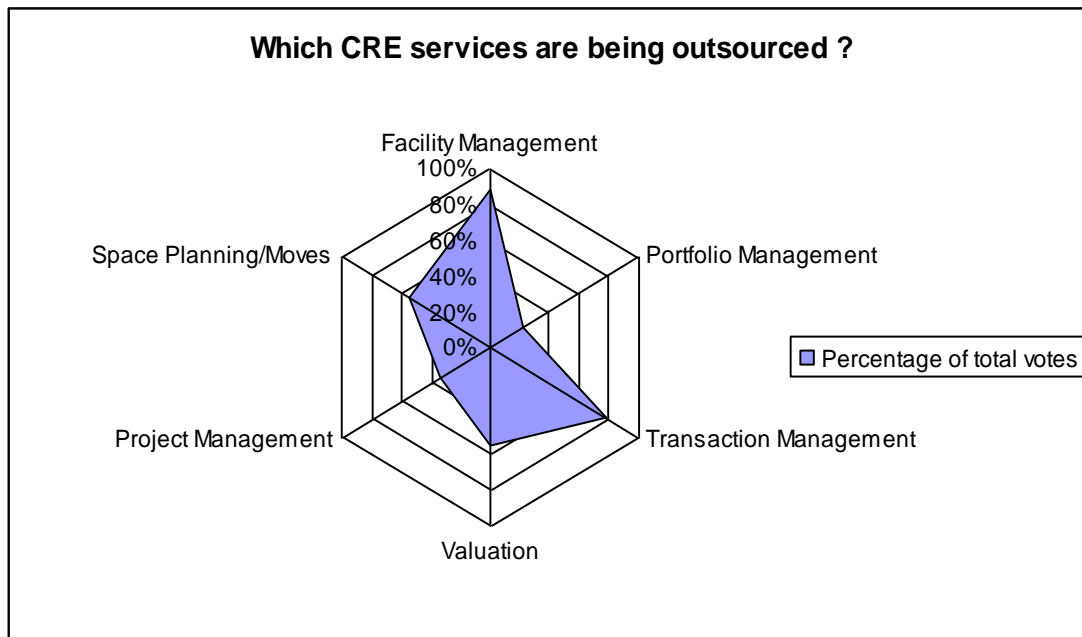


Figure 7 Which CRE service do you outsource? – All votes regarding outsourcing any RE function included

We observe a significant increase in CRE outsourcing within facility management (89% compared to previous 44%) and transaction management (78% compared to previous 33%). Two of the listed RE services kept the same number of votes in both data interpretations: valuation (56%) and portfolio management (22%)

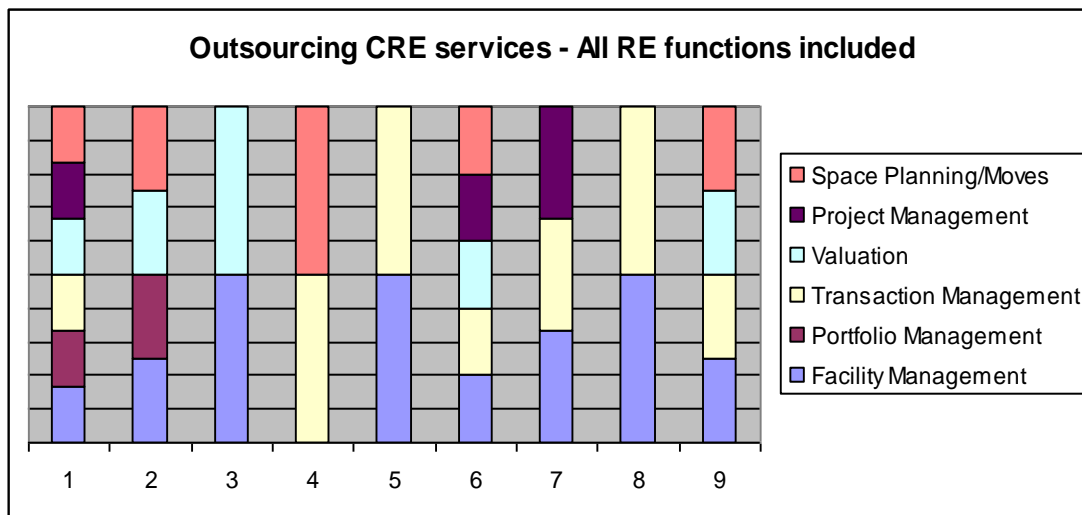


Figure 8 Outsourcing CRE services - All specific RE functions Included

The banks usually outsource CRE functions that could be allocated to at least two RE service areas. 33% keep the same structure of the service outsourced in both combinations of data which might suggest this group of banks is strongly focused on the complexity of RE service delivery. answers the question of what is the level of CRE outsourcing in terms of the service profile. It helps to evaluate how much the banks outsource in general but fails to indicate how complex these services are. All of the companies being interviewed are owned by the international financial corporations.

67% of participants declared that CRE outsource decisions are taken together with the regional management of the main shareholder. There seems to be a clear distinction between local and regional management roles in the process. 22% of the participants make their outsource decisions locally and 11% are fully dependable on the regional decisions (Figure 9).

Where the decisions regarding CRE outsourcing are taken ?

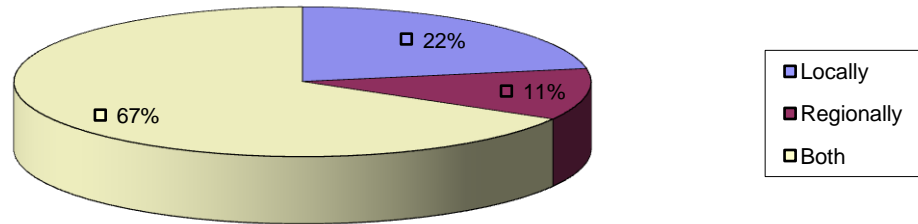


Figure 9 Where the decisions regarding CRE outsourcing are taken?

When asked details regarding contract management 78% of interviewees declared that they prefer separate contracts to manage different RE functions and 22% declared they also include in their policy frame contracts for multiple functions to be taken by one company. The same proportions are maintained with regard to typical contract period – 78% declare they signed contracts for less than 3 years and only 22% for 3-5 years. No one declared they signed long term contracts for more than 5 years.

	mean	σ (standard deviation)	n
Cost Reduction	1.77778	0.666666667	9
Improved Quality	2.44444	1.236033081	9
Focus on management/strategy	2.44444	1.236033081	9
Improved flexibility	3	1.118033989	9

Table 1 Main motivations behind outsourcing – mean values

The second key question in the research was about the motivations behind outsourcing decisions. The research participants have been asked to put the motivations described in the questionnaire in an order of importance (1-most important, 4-least important). Similarly to the question about external RE services used there was always an option to add some more factors that interviewees could consider as important in case the proposed set of answers was not satisfactory. Nobody used that option. Those extensively outsourcing RE services were evaluating their motivations based on their experience and those without such experience presented their expectations in terms of benefits of outsourcing. The mean ratings have been shown in Table 1. They indicate that on average the most desirable motivation to outsource is cost reduction. Improved service quality has the same rating as focusing on

management/strategy. The improved business flexibility has been assessed as least important among all options.

On the other hand the rate (1), which is equivalent of “the most important motivation”, was given to three options with the same vote frequency rate (33%):

- Cost reduction
- Improved quality
- Focus on Management/strategy

The next rate (2) was definitely attributed to cost reduction (63%). The rate (3) was given with equal frequency of again 33% to:

- Improved quality
- Focus on Management/strategy

The least important motivation to outsource RE is improved business flexibility which was confirmed by the votes of 44% of interviewed (Figure 10).

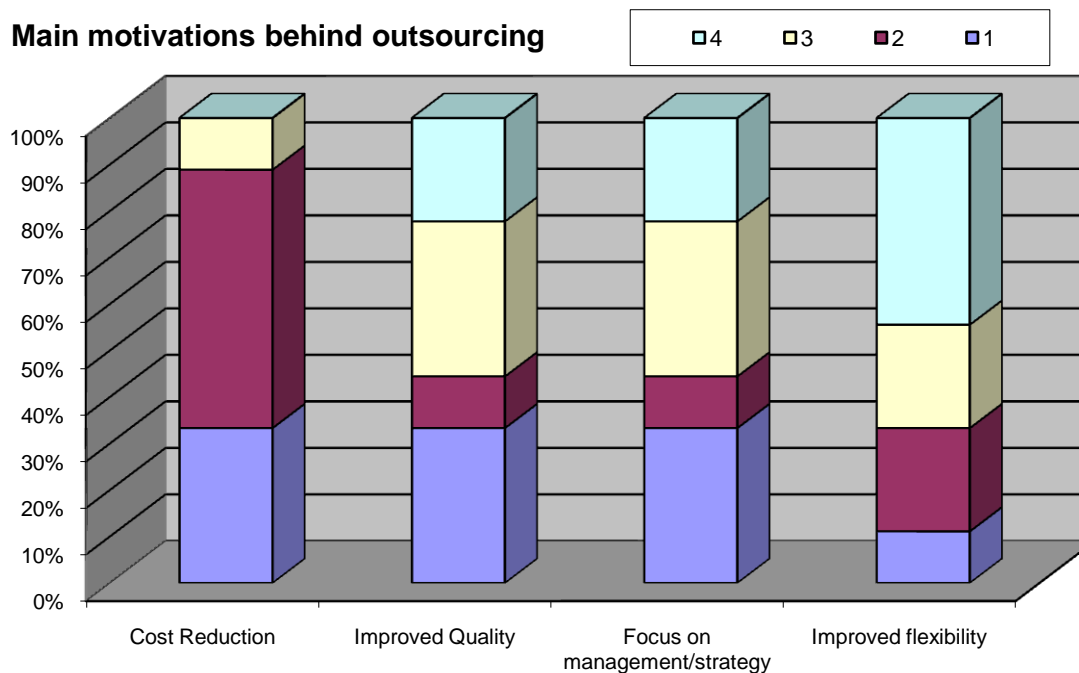


Figure 10 Main motivations behind CRE outsourcing

The final questions in the first part of the survey asked respondents to consider if they had increased the range of RE services outsourced in the last five years or planned to do so in the near future. The results are presented in

Figure 11 to Figure 14 . 56% declared they did not expand their RE outsourcing policy in the last five years, while 44% did increase the range of such services during that time.

When discussing the plans for RE outsourcing in the future 56% of interviewees were not sure if they are going to outsource more, 22% confirm to extend the number outsourced functions and 22% definitely exclude such option in the nearest future.

Have you increased the range of RE services outsourced in the last 5 years ?

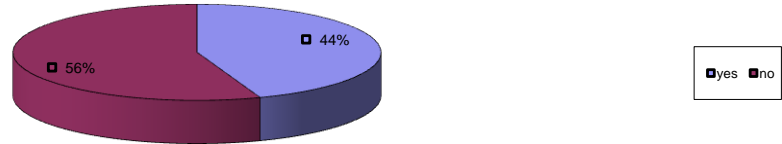


Figure 11 Have you increased the range of RE services outsourced in the last 5 years?

Do you plan to increase the range of CRE outsource services in the forthcoming years ?

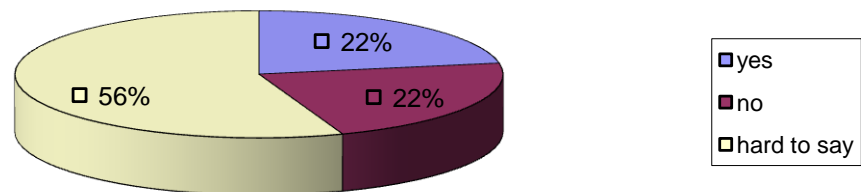


Figure 12 Do you plan to increase the range of CRE outsource services in the forthcoming years?

Two initial parameters were requested in the interviews: total property area (in square meters) and the structure of the portfolio managed, to allow consideration of connections with other data from the first section of the questionnaire. It was decided that the reasonable approach would be to select the clearest distinction considering any of the two parameters mentioned above.

45% of all banks participating in the research reported the leasehold rate to be within the range of 80% - 100%. To be more specific it is above 96% of total space managed. The remaining 55% of banks declared the leasehold rate less than 80% of total property portfolio. As a result we receive two almost equal groups of banks, first with leasehold rate close to 100% and second less than 80%.

This distinction seems to be quite reasonable because it includes banks whose portfolio of space is held leasehold as opposed to the banks with at least 20% rate of freehold. We might assume that leasehold and freehold might produce different requirements in terms of CRE activities. Banks with almost 100% of leasehold might present a different approach towards CRE outsourcing.

Using the distinction presented a simulation has been made to compare the two groups of banks in terms of CRE services they outsource. The results are presented below:

The group of banks with no freehold property fully outsources transaction management (100%) while keeping the portfolio management function inside. The low utilization of valuation services could be easily explained by the lack of property freehold. There is also increased utilization of project

management (50%). The second group of banks is using less transaction management (60%) and project management (20%) but much more portfolio management (60%) and valuation (80%). The second part included statements regarding facts and expectations. The interviewees were given an opportunity to express their attitude to statements using the rating scale (1-strongly disagree, 5-strongly agree). The results have been presented in Table 1. All of the results indicate the interviewees' opinions range from "neutral" (3 on the scale) to "strongly agree" (5 on the scale). They mostly agree with the statement saying they effectively communicate all necessary updates regarding current strategy and expectations to RE Service Provider. This statement was given the highest mean rating (4.65) close to "strongly agree" and additionally the standard deviation of 0.5, which is one of the lowest in this research section indicates that this opinion was shared with similar rating by most of the interviewees.

Which CRE services are being outsourced ?

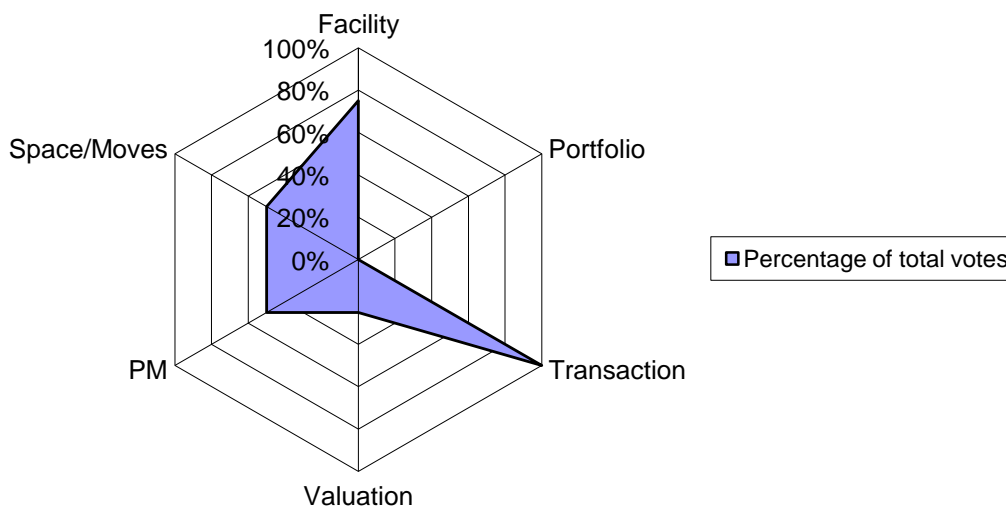


Figure 13 Which CRE service do you outsource? – banks with leasehold rate of more than 96%

Which CRE services are being outsourced ?

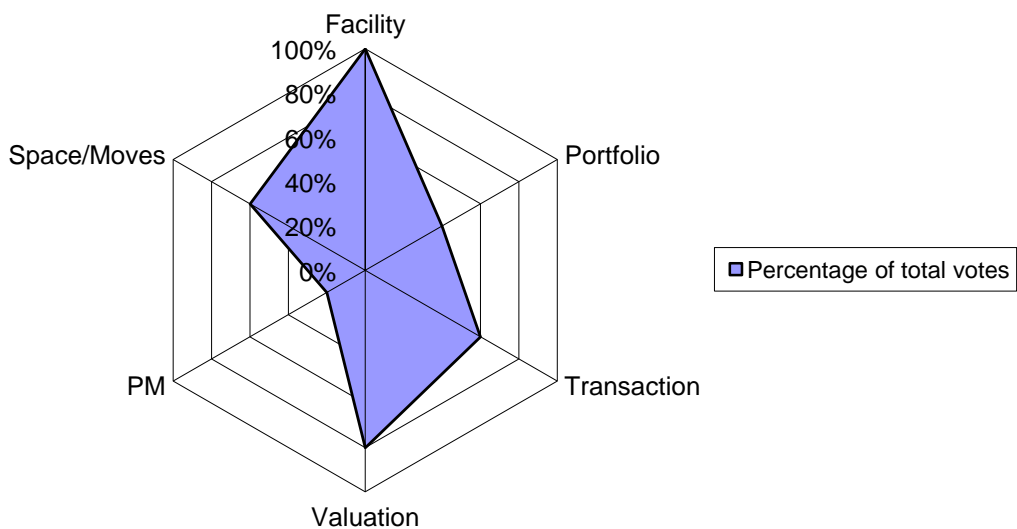


Figure 14 Which CRE service do you outsource? – banks with leasehold rate of less than 80%

The other, almost unanimous rating (standard deviation of 0.46) was given to the statement regarding banks' expectations that the RE service provider should propose KPI's as well as monitoring tools which could improve effective measurement and control of services delivered. One of the lowest mean rates was given to 2nd and 4th statements, both of which indicate the ability of the banks to monitor and measure outsourced RE services as well as provide processes and procedures to be adopted by the external RE service providers. Both statements have been rated between 3 and 4 which is equivalent of "neutral" and "agree" and have the highest standard deviation value (>1.3) suggesting there is opinion discrepancy among the participants of the research.

	mean	σ (standard deviation)	n
We are looking for the long term cooperation	4.125	0.83452296	8
We have tools to effectively assess outsourced RE services / monitor service provider's performance	3.375	1.302470181	8
We expect the service provider/s to develop KPI's/ monitoring tools	4.25	0.46291005	8
We have the full set of procedures and processes in place to be adopted by service provider/s	3.875	1.356202682	8
We expect RE service provider/s to suggest such processes based on his best professional experience	3.875	1.246423455	8
We expect RE service provider to bear the risks of business downturn together with us.	4.25	0.707106781	8
The financial benefits of the contract are motivating for RE Service Provider to constantly improve and go beyond what could be called as standard service.	4.125	0.991031209	8
We effectively communicate all necessary updates regarding current strategy and our expectations to RE Service Provider.	4.625	0.51754917	8
We expect RE service provider to verify the current corporate strategy and make sure he is following the current requirements.	4.125	0.83452296	8
We may clearly identify the benefits and added value of RE outsourcing we use.	3.875	0.991031209	8

Table 2 Elements of cooperation – client's view

The third part of the research demonstrates the attitude of the interviewees to the subject of service quality and standards. This time the opinions range from "disagree" (2 on the scale) to "agree" (4 on the scale), Table 2.

There is one RE service quality factor that all interviewees rated identically (standard deviation = 0). All of them agree that their RE service providers understand their goals and expectations. This was the highest rating in this part of the research and it was most commonly justified by the fact that it was absolute condition to continue cooperation. The lowest mean rating was given to the statement saying that RE service providers and their employees show creativity and offer more than expected.

CONCLUSIONS

The issue of RE outsourcing is relatively new in Poland and the market is still at the development stage. Property remains very important from the operational point of view in Banking, yet CRE management is far removed from the core business. Adopting RE outsourcing within corporate strategy appears to be a natural way forward for financial institutions as they are dealing with significant RE portfolios.

The research shows we are at the beginning of that process. The CRE executives demonstrate increasing awareness of the available market tools to manage CRE more efficiently. The banks are already outsourcing and RE services are more professional and competitive increasing the chances of finding a reliable partner.

During the research there has been one particular problematic area – the definition of outsourcing and outsource services being currently utilized. Outsourcing is interpreted differently across the market. The universal definition of outsourcing understood as transferring the process, resources and management to the external service provider in order to achieve previously set objectives does not match the reality of financial sector in Poland. It is however quite understandable.

	mean	σ (standard deviation)	n
RE service provider demonstrates good awareness of corporate culture	3.85714	0.690065559	7
RE service provider understands my goals and expectations	4	0	7
RE service provider provides its services at the time it promises to	3.42857	1.133893419	7
RE service provider ensures suitable reporting if necessary	3.71429	1.253566341	7
RE service provider ensures prompt and effective business communication	3.42857	0.975900073	7
RE service provider and his employees show creativity and offer more than expected	2.85714	1.069044968	7
RE service provider and its employees have experience relevant to the service I require	3.85714	0.899735411	7

Table 3 RE service assessment – client's view

The specifics of financial sector, which is very complex in terms of management structure, require strong management control over any services delivered from outside. Entrusting the management of CRE to external services providers carries potential risks. Therefore a model adopted by the financial sector is likely to be based on transferring processes of CRE management and retaining the control/coordination function in house. In this scenario RE service provider delivers the full package of service allowing CRE manager to have a simple structure and efficient reporting. This form of cooperation is still used by the minority of banks. The most popular idea which is also considered to be outsourcing has much to do with contract management. Financial companies keep the management function including much of the expertise in-house to manage multiple short term contracts covering the individual RE functions such as cleaning, security, air conditioning inspection, waste management, energy supply, market research, moves etc. The most important element differentiating it from the previously described model is focusing on management and control over multiple service providers securing detailed areas of CRE.

The most obvious implications of such approach for the banks might include but are not limited to:

- the need to manage the multi-providers relationship

- strong involvement in controlling process
- less focus on the strategy and effective liaison with the business units and top company executives
- most of attention put to coordinate oftentimes cross functional work
- the need to develop numerous processes and procedures
- the time consuming adaptation of any service provider is multiplied by the number of providers.

There might be several reasons why the companies prefer to keep and develop competencies inside e.g. lack of trust that external RE service providers will achieve satisfactory results, possible opportunistic behaviour as well as keeping confidentiality. The other important factor would be the aversion to the risk of entrusting much of important operational processes to an external provider and becoming dependent on him.

In terms of contract management companies usually prefer separate contracts for different outsourced CRE functions rather than frame contracts for integrated service. Most of them hire multiple service providers to perform the required tasks and the relationship is usually based on the short term contracts of less than three years.

Banks with a high leasehold rate are more task oriented and perceive RE outsourcing as using outside expertise to complete particular projects including relocation (PM) and market research for space acquisition (Transaction Management) within given timeframes. On the other hand banks with large property portfolios look for complex solutions to improve overall RE management tending to retain a significant number of CRE staff.

Decisions regarding outsourcing seem to be more dependent on the corporate policy tied to current strategy than local requirements and is often attributed to the regional management. Therefore the ability to influence these decisions by local management is significantly limited.

CRE managers are usually very experienced and knowledgeable about CRE. They are aware of the challenges they need to face as they are aware of the potential opportunities and benefits outsourcing might bring as well. At the same time their decisions are influenced by the institutional limitations such as corporate procedures and so on. They understand the cost saving factor is not the most crucial when it is about delivering a good quality service. They appreciate expertise and a professional business approach. On the other hand they expect RE service providers to put some effort to understand the company's goals and make contributions to help achieving them.

To conclude, it would appear there is a potential in CRE outsourcing but much of the initiative is in the RE service provider's hands. The service providers should try to place their service to match client expectations, concentrating on service quality and efficiency to build long term relations.

Suggestions regarding further research

This research touches upon the basics of RE outsourcing market in Poland, giving useful hints for future directions. The questionnaire used for this research could be adapted to investigate the RE service providers and the two parties of the RE outsourcing process, client and service provider could meet to discuss views on cooperation and service standards as in research presented by Gibler and Black (2004).

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