

# **Assessment of Ukraine as an outsourcing destination for Nordic IT Companies**

YEVGENIY  
PROTSYUK



**KTH Industrial Engineering  
and Management**

Master of Science Thesis  
Stockholm, Sweden 2012

# Assessment of Ukraine as an outsourcing destination for Nordic IT Companies

Yevgeniy Protsyuk

Master of Science Thesis INDEK 2012:62  
KTH Industrial Engineering and Management  
Industrial Management  
SE-100 44 STOCKHOLM



KTH Industrial Engineering  
and Management

## Assessment of Ukraine as an outsourcing destination for Nordic IT Companies

Yevgeniy Protsyuk

Approved 2012-05-21	Examiner Terrence Brown	Supervisor Terrence Brown
	Commissioner Ingela Sölvell	Contact person Yevgeniy Protsyuk

### Abstract

In the modern competitive situation on globalized market it is extremely important to find a comparative advantage that could place the company on the edge of rivalry on the market, either internal or international. Many companies face the issue of the lack or unaccessibility of resources. In such circumstances companies can find appropriate solution in *outsourcing* or *offshoring* their processes. In addition, many companies not only adopt outsourcing into the working process, but also build their business around Information Technology Outsourcing (ITO) as a *core competency* of the company. Outsourcing in Information and Communication Technologies (ICT) Industry becomes a leading trend in many areas of economy enabled by fast development of communication technologies.

In this paper we studied outsourcing in general, outsourcing in ICT sector as well as the modern position of Ukraine on the global ITO market and its perspective of cooperation with Nordic companies.

Theoretical data were analyzed in static, reflecting modern state of affairs in this industry branch, and dynamic way, showing the outcomes of development of the industry in the country during the last few years. Empirical study was fulfilled through a case study. Ukrainian ITO industry was shown as an attractive outsourcing destination for companies from Nordic region, with some drawbacks.

### Key-words

IT outsourcing, core competency, Ukraine, outsourcing destination

## TABLE OF CONTENT

1. Introduction	
1.1. Background .....	5
1.2. Purpose of the study.....	6
1.3. Delimitations and methods.....	7
2. Theoretical base	
2.1. Academic view on outsourcing.....	8
2.2. Introduction of Ukraine.....	10
2.3. Evaluation frameworks.....	11
3. Empirical study .....	15
4. Analysis: Assessment of Ukraine's ITO.....	17
5. Conclusions and implications.....	22
List of references.....	24
Appendixes.....	26

# 1. INTRODUCTION

## 1.1. Background

Nowadays competitive market sets a high level of requirements for companies that want to remain on the edge of the market rivalry (Stutz and Warf 2009). Many companies strive to gain comparative advantage to reach this goal. One of the ways of gaining that advantage is an access to resources and effective management of resources involved in company's operations. Motivated by global forces, organisations are increasingly focused on their core competencies and are looking to outsource non-core processes to partners who can carry out this process better. The question to discuss is the process of accessing and utilizing resources outside the country or company in situation of high demand. This is the part of *IS Outsourcing Strategy* (Schoeman et al, 2010), specifically on the *Outsourcing Configuration* stage, aimed to determine what, where and how the company will outsource. We will define outsourcing more precisely in the next part of the paper. Most common reasons of applying outsourcing are the followings (Outsourcing Europe, 2010):

- Cost of the labor
- Lack of the qualified resources in a home country
- Specifically skilled labor
- Ease of access to the labor in off-shore

The main types of outsourcing are traditionally distinguished as Informational Technology Outsourcing (ITO), Business Processes Outsourcing (BPO), and Human resources outsourcing (HRO). The area of interest for this paper is outsourcing in ICT field, which is specifically named as ITO.

The Nordic Information Technology(IT) market is growing constantly. That gives, together with other objective factors that influence IT market and related HR market, good perspective for those who work in outsourcing area.

The Swedish IT market is the largest in the Nordic region and despite economic headwinds it is projected to grow at a compound annual growth rate (CAGR) of 5% over 2011-2015. The addressable domestic market for IT products and services is projected by BMI to reach US\$16.2bn in 2011 and US\$19.5bn by 2015 (Ovum 2010). According to Arbetsförmedlingen forecast, for the year 2012, Sweden is expected to be a propitious market for IT specialists, for programmers and developers in

particular. System engineers and programmers are included in the list of professions of the highest demand. This demand will likely grow according to report of Statistiska Centralbyrån.

On the other hand, high living and salary standards in Swedish, and Nordic countries in general, raise the costs of IT projects. In addition to stated above, we can assume that the need for IT specialist cannot be satisfied in short term perspective (5 years) by local human resources pool due to the significant decrease (up to 58%) in number of students admitted in fall 2011 to various Master programs at Swedish universities in comparison to Fall 2010.

In 2011, the number of Swedish non-outsourcing companies outnumber those that outsource their IT by 13.2%, while in 2010 the non-outsourcers outnumbered the outsourcers by 22.1%, which proves the growing need of ITO services in the region (Outsourcing Europe, 2010).

Conclusion to foresaid is the following – due to the rapid growth of the IT market and constant lack of qualified manpower, there is a growing demand for ITO services and favorable conditions on the market for companies in IT outsourcing services sector due to the reasons stated above. Nordic companies will apparently look for external resources and outsourcing destinations, so the question of ITO industry evaluation in a certain county is of a current interest.

## **1.2 Purpose of the study**

Although the research in the field of outsourcing is being conducted for more than 15 years, there are many fuzziness and obscurity in the base of knowledge. Most of the research conducted is case-based and builds theories to explain the studied phenomena. In this way, many contradictions and exceptions are missing and not covered. The shift from theory-generating to theory supporting and illustrating approach should be triggered (Rouse 2009). This was taken into consideration while building the structure of the paper. Main theoretical underpinnings of the outsourcing together with results of the country assessing framework will be considered in this paper as the theoretical base. Later the country's ITO industry will be assessed with the help of real life data gathered through interviews.

According to Rouse (2009), despite the amount of researches and papers done in this area, academic knowledge in outsourcing field is still insufficient. There is a need

to move from building theory to proving it on practice. This was taken into account in the empirical part of current study.

The empirical study is aimed to evaluate Ukraine and its ITO Industry as an outsourcing destination for companies from Nordic region using the feedback from companies with significant experience and presence on the market.

As a concluding result of the research we expect to present to the reader a two-way evaluation of Ukraine and Ukrainian ITO industry by combining both theoretical and real life data. The level of analysis are the companies that design IS Outsourcing Strategy, defined by Schoeman et al (2010). This information could be as well of interest to anyone who is related to resource or project management and could influence the decision making process in IT field.

### **1.3 Delimitations and methods**

In this paper we do not develop the topic of effective use of resources, leaving it outside of the scope. Only factors of importance during decision making process and evaluation of future outsourcing destination are studied.

The choice of Ukraine in this case is motivated by the fact that Ukraine fits top-three country selection criteria from companies non-ITO-users – geographical proximity, cultural proximity and language skills, according to OE Report 2010. Moreover, Ukraine accounts for more than 20% of CEE Outsourcing activities. Most of the companies prefer nearshore outsourcing while designing IS Outsourcing strategy. Comparing to the biggest competitor countries, Ukrainian companies are associated with notions of better quality and reliability.

The question of detailed assessment between countries lies outside the scope of the paper. The aim of practical part is to concentrate on Nordic companies and was chosen due to several factors. First, the cooperation between two regions is active and growing. Second, Swedish, same as Nordic, IT market is growing regardless the shakes of world economy crisis. And finally, Nordic countries, as well as Ukraine, were chosen because of the convenience of access to information, setting up interviews, and language factor.

The methodology combines literature review, primary data gathering in form of two case studies with direct structured interviews, and secondary data analysis. Interviews are specially effective as a collection of opinions and thoughts from high-responsibility

representatives about decision making. This strategy allows also the use of unplanned prompts and questions, and broadens the scope of the information received from interviewee. In this case distance interviews were conducted using VoIP technology solutions. The number of respondents was stipulated by the limited personal accessibility of potential interviewees. The most recognized frameworks for evaluation of country's ITO will be defined based on the literature review. Later, those frameworks will be compared to each other and compiled to one general framework. The process of including or excluding factors will be reasoned using the data gained from case studies. In the final part, Ukraine will be evaluated according to a new framework. For some parameters, previous works in this area from 2002-2004 together with secondary data will be used to show development dynamics.

## 2. THEORETICAL BASE

### 2.1. Academic view on outsourcing

The phenomenon of buying or using services in IT from another vendor is not new. It is known since the first commercial implementation. The term "outsourcing" became well-known in the late 80s, following the fundamental change in the way industry and businesses organize, produce, deliver and utilize ICT services.

Outsourcing can be defined as "the strategic use of outside resources to perform activities traditionally handled by internal staff and resources" (Griffiths, 1999). According to Willcocks and Lacity (1998), outsourcing is about "handing over to a third party [the] management of IS/IT assets, resources and/or activities for required results".

Companies build their IS Outsourcing Strategy aiming to acquire external resources or use of external parties (Schoeman et al, 2010). Authors offer the following scheme of Outsourcing Strategy designing process depicted on Fig. 1.

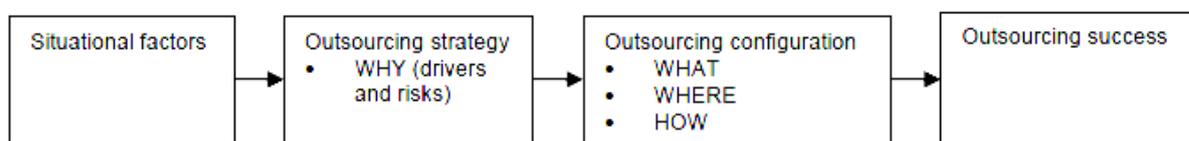


Figure 1. IT Outsourcing Strategy (Schoeman, 2010).

*Situational factors* are factors of surrounding environment as well as internal factors of organizational character. Situational factors determine the possibilities of IT outsourcing, enlisting *scenarios, plans, directives, decisions, and business objectives*. *Outsourcing configuration* describes *what* to outsource (functions, activities, systems, etc.), *where* (onsite, offshore), and *how* (number of suppliers, type of relations, etc.). *Outsourcing success* is measured by case specific dimensions on the last stage.

Since there is no single well-recognized outsourcing theory, several theories from various fields, as economics, marketing and management, are involved in building the knowledge base (Rouse, 2009). The most valuable parts of combined theory are further described.

The *resource dependency theory* and the *resource-based view* are two underlying theories in our case. *Resource dependency theory* states that companies will try to eliminate or decrease dependency on external provider of certain resources that can be characterized as key resources (Cobb and Davis, 2009). The main factors of that kind of dependency are switching costs and limited set of resource suppliers. *Resource-based view* stresses the importance of resources as a way to comparative advantage (Barney, 2002). Following this logic, outsourcing firms may utilize resources they do not own and concentrate on capabilities they actually possess, which may potentially be more successful and develop them to *core competencies*. *Core competency* is a piece of theory from Strategic Management that argues the way companies can develop their key processes into competitive advantages paying most attention to them while delegating all non-core functions to external providers. Many companies make outsourcing services as their core competency and build business around it.

Usage of resources from outside the company is related to transaction costs, described in transaction cost theory, *TCT* (Williamson and Masten, 1999). The decision between two opposite forms of service provision is discussed as between in-house delivery involving organizational hierarchy or delivery from the market. This is the key theory for outsourcing, according to which, total cost for each choice consists of production cost and actual transaction cost – cost of finding, contracting a vendor and managing relations through cooperation. In many cases transaction costs are hard to forecast and they exceed the estimations, decreasing the expected outcomes of the project. Dealing with the external service provider may be related to *agency theory* (Laffont and Martimort, 2002). Theory differentiates motivating sets for supplier and

purchaser, caused by information asymmetry and implies the various methods of control for different kinds of service. Borrowed from Marketing theory, notion of *service quality* (Parasuraman and Zeithaml 2002) can be also applied to the case of outsourcing.

Outsourcing can be practiced in several forms, including business process outsourcing (BPO), “off-shore outsourcing” or “off-shoring”, “application service providers” (ASP), and “Software as a Service”(SaaS). The difference between the first two types is often fuzzy since by definition they can overlay and are often used as synonyms. The general rule for distinguishing is commonly set in delegating the “how?” responsibility and retaining decision power on “what?”. Basic difference is underlined in the comparison chart (Tabl. 1).

*Table 1. Comparison chart – Outsourcing and off-shoring*

	<b>Offshoring</b>	<b>Outsourcing</b>
Risks and drawbacks:	Transferring jobs to other countries. Geopolitical risk, language differences, poor communication etc.	Misaligned interests of clients and vendors, increased reliance on third parties, lack of in-house knowledge of critical business operations etc.
Definition:	Getting work done in a different country.	Contracting work out to an external organization.
Benefits:	Lower costs, better availability of skilled people, getting work done faster through a global talent pool.	Advantage of specialized skills, cost efficiency.

## **2.2. Introduction of Ukraine**

After the fall of Soviet Union in 1991 Ukraine rised again as an independent country on the political map of the world after more than 70 years being a part of huge geopolitical entity. Ukraine is the second largest country in Europe, bordering the Black Sea, between Poland and Russia, having also common border to Belarus, Hungary, Moldova, Romania, Slovakia. The country is situated in the geographical center of Europe and has a total landmass of 603,700 square kilometers, ranked #49 by area, with a population of 45.96 million people (for 1 Jan 2010, SCS).

Having GDP per capita as low as \$7200 (2011 est.) places the country as #132 in the world. Ukraine possesses 22.09 million people of labor force, being #29 in the world. With the labor force percentage involved in industry of 18.5% and in services of 65.7%, Ukrainian labor market receives every year more than 7000 graduates from

programmes that give them the possibility to become software specialists (Gendler, 2003). Since Ukraine was a major hub of scientific research in the USSR, there is still availability of highly skilled human resources not only in areas with low entrance barrier like Web programming, but also in research- and scienceintensive fields. Many analytics point out the gap between the university education and companies' needs. However, market demand still exists, thanks to the fact that many companies start industry specific educational courses and many graduates return to the universities with industry experience. Up-to-date knowledge situation is now changing positively.

With second largest population in Eastern Europe after Russia, having almost twice more people as in Romania and around 10 million inhabitants more than in Poland, Ukraine has the least education budget per capita (5,86% in 2010, SCS). Though, due to the government initiative to rise this ratio to 6,52%, it can become the highest in the region. Despite the country lags behind the average in receiving Foreign Direct Investments (FDI), which signals about possible risk of investing outside the EU, significant cost arbitrage is still possible due to poor economic conditions (32% below the poverty line in 2009, The World Factbook) and low living standards.

### **2.3. Evaluation frameworks**

As a result of literature review, three major frameworks for country assessing in terms of decision making for choosing outsourcing destination were discovered – Critical factors in software Exports, developed by Heeks and Nicholson (2002), further developed by Carmel in 2003; Diamond Model of Industry evaluation by Michael Porter (1990) and Terdimans Country Selection Framework (2001). The comparison chart below (Tab. 2) shows the similarities and differences in the approach of each of the frameworks. Using that comparison, we will extract the common part among criteria used by different authors and complete it with missing important factors. Later, using the synthesized extended frame, information on modern state of industry gathered with the help of interviews and works on similar topic from 2001-2002, we will evaluate the nowadays condition of Ukrainian ITO Industry.

Table 2. Framework comparison

Country Selection Framework, Terdiman et al.	Critical factors in software exports, Heeks et al	Diamond model, Porter
<p>1. Human Expertise and Resources: Availability of skilled resources Educational system English proficiency Marketing skills, etc. Software/hardware</p> <p>2. Country Infrastructure: Political stability Government support Regulatory environment Communications infrastructure, etc.</p> <p>3. <b>Cultural Issues:</b> Work style Communication techniques Reverse hierarchy, etc.</p>	<p>1. Demand</p> <p>2. National vision and strategy</p> <p>3. <b>International Linkages and trust</b></p> <p>4. Software industry characteristic</p> <p>5. Domestic input factors/Infrastructure</p> <p>Human capital Technology infr. Finance (government support) Research and Development</p> <p>Other (certification, etc)</p>	<p>1. Factor conditions (skilled labor, governmental policies, infrastructure)</p> <p>2. Demand conditions (both domestic and external will be reviewed)</p> <p>3. Strategy, Structure and Rivalry (plus collaboration and clustering )</p> <p>4. <b>Related and Supporting Industries</b></p>

To design the overall framework for most complete assessment of the country's ITO industry, those existing should be evaluated, compared and completed.

The majority of the important and overall factors, which authors are approaching, are shared between all three frameworks. They are: *skilled labor resources, governmental policies, infrastructure*. While Porters Diamond encompasses general approach for industry analysis with few parts and no strictly defined checkpoints, Terdiman et al and Heeks et al offer more detailed structured list of criteria crafted specially for ITO industry analysis. Terdiman scheme is the most detailed, also enlisting the *Cultural issue* section, which other schemes don't have. At the same time, interviewed experts in both cases stressed on the importance of the cultural issues, therefore, it should be included in the resulting framework. Since the Terdiman scheme is more catch-all and corresponds most to the data gained from case studies,

we will create our final scheme by elaborating it with points taken from other schemes.

Heeks and Porter argue the importance of characteristics of *Demand* on the market, both internal and external, for development of industry. This factor is involved in the market development, which, as it was mentioned by Case 2 representative, is being looked upon while making a decision about outsourcing destination. This conditions the presence of this factor in the resulting framework.

*International Linkages and trust* are crucial factors in Critical factors in software Exports by Heeks et al. They describe the crucial role of international linkages for success of software exports. Authors include also geographical proximity to this section. According to case studies this factor plays an essential role and, thus, it will be used in the following assessment. Terdimans scheme does not involve such a substantial section as the one regarding the *industry characteristics*, in contrast to other frameworks. *Related and Supporting Industries* characteristics block can be distributed between other blocks, for example between *Country Infrastructure*, *Software Industry Characteristics* etc., but we believe it needs to be shaped into separated block for better descriptiveness. *Certification* from *Others* section in Heeks et al, could be included to *Software Industry Characteristics*. The other factors from all frameworks would be gathered according to their relations and importance. Hereby, the following recombination of structural elements of frameworks considered can be graphically presented as on chart below (Fig. 2).

The resulting framework in form of complete list of factors that play a significant role in assessing of ITO industry is stated in *Appendix 2*.

In the following part the framework will be used on practice. Brief characteristic of the country's ITO will be given, comparing with the past data from similar works when it is possible.

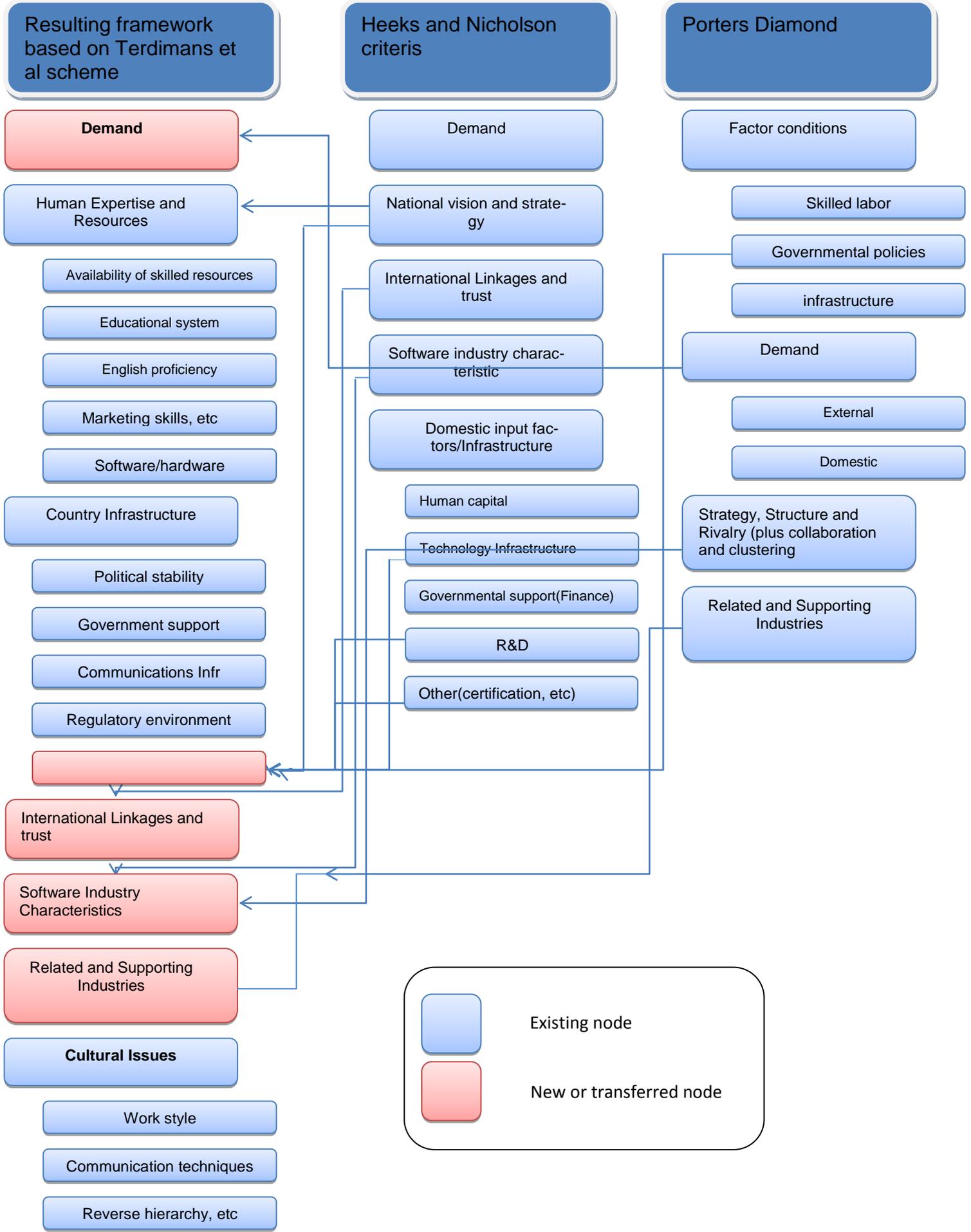


Figure 2. Building the General Assessment framework.

### 3. EMPIRICAL PART.

For empirical part we used the outcomes of interviews conducted during case study with two Nordic companies that cooperate with Ukrainian ITO sector. That helped in practical aspect of country-assessment and in building frame for country evaluation. For this part we conducted direct interviews with representatives of EDB Group and Conscencia.

The two cases studied in depth were the Infopulse company, Kiev, Ukraine, now the part of Norwegian EVRY and Conscencia – Danish company with outsourcing facilities in Lviv, Ukraine. Infopulse was chosen because of the leading position on the market, comprehensive service offer and long history. The company was established in 1991 when the Soviet Union fall and two former scientists got the opportunity to start the business within IT (Infopulse, web). Later in 1992 the first international contracts were secured and the company began to grow constantly. In the end of 90s tight cooperation with companies from Netherlands and France helped the company to gain high reputation in Europe and in 2007 Infopulse was bought by Norwegian EDB ErgoGroup. Recently the name of corporation has been changed to EVRY. The interview was held with Ihor Starepravo, IT Operation Services director at Infopulse. Kiev. We will refer to this case as to **Case1**.

Ihor characterized industry as slowly growing, cooperation between Ukrainian and management team as smooth. For main factors of importance during country selection he named industry reports (such as Gartner), political stability, resource pool and cultural proximity. There is a problem in time perception in this case – such notions “soon” or “urgent” may mean different things for Ukrainian team and team in Scandinavia. For EVRY and for IT industry in general the period of crisis passed, according to Starepravo. There is still a problem of finding new customers, but already established cooperation is growing. After improving of political situation and business environment, including tax legislation and permission system, ITO Industry will definitely receive a positive push, says Ihor.

Conscencia, referred later as to **Case2**, was taken into research as an example of company that was initially built to be an offshoring center of foreign company. This company was established as subsidiary of other Danish company that already existed on the market in Ukraine, fulfilling tasks associated with specialized technology. Due to demand from clients in the home country, the spin-off company was created to pro-

vide wider range of services. Decision was made to stay in Ukraine. Line Milters, Relationship Manager at Conscensia, answered to interview question set and gave the characteristic of Ukrainian ITO Industry.

For Conscensia's customers, outsourcing comes as a full package, and employees are trained to handle matters like language, cultural differences and an extra need for dialogue and feedback.

To increase the understanding between Denmark and Ukraine, all new employees at the Conscensia development centre start by following two courses: one gives a cultural picture of Denmark and compares Ukrainian and Danish culture. The other is a course in communications, which concentrates on making new employees as useful to the customer as possible through dialogue and through feedback. This makes it easier to build up a team for the customer.

After the crisis decision making process on the client side became longer, clients think more, customers tend to make right, well-researched decisions. The sales department reports longer times for new customers to make a deal or come to agreement. On the other hand, existing clients grow much faster, as it is easier for them to scale up since relations are already established.

Case2 shows no crucial issues about communication inside the company between local team and off-shore team. In the new outsourcing country they will look to establish the similar structure as they have in Ukraine.

Main concerns of Conscensia Ukraine:

1. Salaries are rising constantly and become closer to European level.
2. Political system and its instability regarding safety for clients to travel.
3. New tax legislation increased total costs of services. Main reason to outsource is to save costs. Next outsourcing destinations are waiting for customers.
4. 5 years ago Infrastructure was bad, now it is improving – EURO 2012, airports etc.
5. People lack practice after university, ability to cooperate and communicate. Sometimes members need support to find each other in the team.

## **4. ANALYSIS: Assessment of Ukraine's ITO**

### **5.1. Demand** (Heeks at al, Porter et al)

As mentioned before in Background, the market demand is growing in the Nordic Region and forecasts claim this trend to sustain for at least 3 years more (Ovum, 2010). As stated by Yaroshchuk (2008), demand can be threatened by increased service prices that are based among others on salary. Salaries were undermined by increasing real estate prices and headhunting activities. Now real estate market prices are on the lowest level since the recession (Economical Truth, Feb 2012) and unreasonable headhunting activities are not in game anymore (Case1). Since most of the companies choose nearshore destinations because of distance and culture (Outsourcing Europe, 2010) the conclusion is that the external demand factor is strong today. Internal demand according to proIT (Apr 2012) is stagnating, following the general state of economy, thus releasing resources for external needs or lowering the costs of resources. Company's analysts forecast this year's external market for Ukrainian ITO to be around \$1billion, while internal around \$200million. For Porter (1990) internal market is important in terms of capability to build industry for software and IT-services export, but now it is probably not the case since Ukrainian ITO is older than 15 years (Case1).

### **5.2. Human expertise and resources** (Heeks at al, Terdiman et al, Porter)

#### *Availability of skilled resources.*

According to Gendler (2003), there were around 7000 graduates each year that related to IT Industry in Ukraine. Taking into account liberalization in educational legislation, establishing new IT-oriented schools and popularity of IT sector among students, we can assume that this number is at least on the same level now if not rising. One of the main advantages of Ukraine is human accessible resource pool (Case2).

#### *Educational system*

The rich scientific legacy after Soviet Union is neither abandoned nor forgotten (Rouse, 2009). Despite the significant brain drain in other areas, IT scientists stayed due to still good financing or employment possibilities. Case studies show that the level of education in high schools is more theoretical, but with deep level of knowledge. Interviewees point out that graduates lack practical experience, what can be solved by changes in educational programmes.

### *English proficiency*

Foreign languages are playing important role in educational system in Ukraine. English, German or French according to parents' selection are taught from 3<sup>rd</sup> grade in elementary school. The majority of universities include foreign languages for 2 years during Bachelors programmes and 1 year of Masters programmes. According to Case studies, the overall English proficiency is high among employees (Case1, Case2). Moreover, many companies offer free courses for their staff.

### *Marketing and Other Business Skills*

According to Zatolyuk (2004), despite good technical expertise, business practices are still immature in Ukraine. Only big companies can afford MBA graduates or experienced expatriates or other specialists from abroad, many of which lost their positions during or after crisis period. However, the number of local MBA graduates is growing from year to year.

### *Software/ Hardware*

Even though Ukraine is not ranked in top list of hardware producers, there are big companies that assembly hardware for different segments of market and work with system integration of larger scale. One of examples is Versiya-Consulting that won the tender competition for supplying EURO-2012 UEFA Championship with IT and communication systems (Versiya, web). Regardless this situation, most of the human resource pool is oriented on software production and other "soft" services.

## **5.3. Country and its Infrastructure**

As for general infrastructure due to the preparation to EURO 2012 UEFA Championship, since 2008 four new airport terminals and many hotels in major cities were built and road system repaired for match eurostandards and many other improvements for visitor infrastructure were made.

### *Political stability*

Now it is the most important factor that decreases the international reputation of Ukraine for investors and prospective clients. The rate of FDI for 2011 is the lowest for last years (SCS). After president elections in 2010 Viktor Yanukovich with help of illegally created majority in parliament changed Constitution and now many observers talk about authoritarianism in Ukraine. European politicians warn Ukrainian Government about possible international isolation of Ukraine or even economical sanctions. Experts in both study cases say it influences decision taking process of new customers, yet already established relation allow continuing the cooperation. Political situation inside the

country is also close to critical because of declining support of the president and government's inability to conduct reforms.

#### *Government support*

Zatolyuk (2003) and Yaroshchuk (2008) both mention government and presidential IT support programmes that were started or planned to start. However, none of those took place. As reported by Association ITUkraine, December 2011, IT Industry supporting law received primary acceptance in Ukrainian Parliament. This is to create unique experimental environment for Ukrainian IT industry with full governmental support. One of the aims is to reach \$10billion in IT services export in the next few years. Experts from ITUkraine took part in creation of that law and they express very optimistic feelings about the impact of it. For example, VAT for IT companies will be cancelled, income tax decreased from 21% to 16% for companies and from 15% to 10% for sole traders in the period of 2012-2016. The dedicated committee members hope this law could work as a signal for foreign investors about the positive situation in IT sector.

#### *Regulatory environment and governmental policies*

Strongest concerns are expressed by interviewed case representatives about the new Tax legislation and taxation rates that came into power since the beginning of the year. According to it many cost optimization methods are not working, what increases the total cost of services. In this point we observe strong negative dynamic compared to previous years.

#### *National vision and strategy*

According to ITUkraine, there is no consolidated national vision or strategy. The first official event related to this area was public discussion on the First National TV Channel in March 2011 where problems and perspectives of IT Industry were discussed. The next part of the discussion is planned to deal with IT-related education in the country, which currently has no support (proIT, web).

#### *Technological Infrastructure*

The success of IT is dependent on quality of telecommunication infrastructure, internet penetration and PC use. According to Yaroshchuk (2008), Ukrainian telecommunication market reached in 2006 nearly 32 billion UAH in delivered services. According to proIT, in 2011 it reached 39.2 billion UAH, and expected to reach around 47 billion until 2016. The number of Internet users is now around 13.65 million which is 43% of adult population comparing to 4 million in 2008 (Yaroshchuk). Cellphone penetration is more than 100%. The price for unlimited broadband Internet connection has fallen from \$100

in 2004 to around \$10 in 2010. Summing up we can state the positive dynamics and a good Tech-infrastructure of Ukraine.

#### *Research and Development*

Most R&D in Ukraine is held in companies and universities. For example, Webomatics shows 45 academic Research and Development Centres in Ukraine. Such International corporations, like Samsung, Natec and Motorola, have R&D centers in Ukraine. Moreover, Ukrainian IT Offshoring Market is primarily driven by R&D activities – 45-46% compared to 30-32% in average in CEE in 2008 (Ukrainian Hi-Tech Initiative).

#### **5.4. International Linkages and trust.**

Heeks and Nicholson (2002) describe the necessity of linkages for software exports because they give access to markets and therefore to customers and sales. Ukraine possesses unique position due to one of the largest diaspora in the world, which often gives needful connections. Many companies are started by diaspora members. The geographical position of Ukraine is also beneficial. It takes around 1 hour of flight from most major European cities. This criterion can only be influenced by political reasons described above in Political stability. The dynamics in international recognition of Ukraine can also be indirectly followed by increased number of clients and market volume.

#### **5.5. Software industry characteristic: Strategy, Structure and Rivalry.**

The division between external and internal market in 2008 was 75% to 80% respectively, according to Yaroshchuk (2008), in contrast to 80% to 20% in 2011 (proIT). 80% of vacancies published during the 2011 were in Software development, 20% - in other ITC related areas. From 400 IT companies in 2007 (Yaroshchuk, 2008) to 900 in 2010 and from 24,000 employed to 35,000 we may call significant growth (hi-tech.org.ua).

As for clustering – there are five professional communities and organisations.

1. *Ukrainian IT-Initiative* (hi-tech.org.ua) – association of companies providing IT-outsourcing services (50+ companies with 4500+ employees).
2. *ITUkraine* (itukraine.org.ua) – association of Ukrainian software development companies (28 companies).
3. *Developers* (developers.org.ua) – community of Ukrainian IT developers.
4. *JUG Ukraine* (jug.org.ua) – community of Ukrainian Java developers.

5. *Association of IT companies of Ukraine* (apitu.org.ua) – association supporting development of IT sphere. Includes “heavyweight” like AMD, CISCO, HP etc.

National Technical University “Kyiv Politekhnik” breaks the ice in terms of close cooperation with international leaders in IT, coupling with Microsoft, CISCO and HP.

### **5.6. Related and Supporting Industries.**

Related and supporting industries for Ukrainian ITO Industry, according to Porter and Case2, are banking and finance, healthcare, energy, telecommunications and game development industries.

### **5.7. Cultural Issues.**

As for cultural issues, both study cases show the cultural proximity between Ukrainians and Nordic people. Not taking into account language barrier both groups share common values, history and even many holydays.

### **5.8. Work style**

In case of working style, there are differences between business behavior and approaches. For example, the notion of urgent task is perceived slightly different. While for Ukrainian it means “I need it now”, for Scandinavian it may sound like “till the end of the week” (Case1). There is an issue with the trust as well. For Northern Europeans trust is a given thing due to historical realities. For Ukrainian people trust should be earned. People are sometimes not open enough (Case2). However, company developed a successful training programme for faster adaptation of new employees in the company.

### **5.9. Communication techniques.**

There is an issue with openness in the team. Most of the people prefer to work after receiving their task, while European tradition includes a lot of communication. In the team members often need support in finding each other. For Ukrainians it is hard sometimes to adapt to the organization structure, if it is not strictly hierarchical.

It could be hard to find responsible or decision making person in the head office without explaining the structure during the training. As explained, tasks are fulfilled normally (Case2)

### **5.10. Reverse hierarchy.**

There is no data regarding this parameter in our study.

## 6. CONCLUSIONS AND IMPLICATIONS

In this paper we studied the phenomenon of outsourcing in Information Technology sector. Detailed study was conducted on the example of Ukraine country as an outsourcing destination for companies from Nordic region. Theoretical background was given to outsourcing. We compared three different approaches to ITO Industry evaluation by their criteria. The importance of criteria from each framework was evaluated based on the data gathered during case studies. Overall framework was constructed using building blocks from frameworks compared earlier.

Evaluation of Ukrainian ITO Industry was accomplished on the next step with the help of the new framework. As a result, we observed incremental growth in most of the parameters. Criteria like Country Infrastructure, Industry Structure and Rivalry, Human Resource Pool and Demand factors show positive dynamics and allow making optimistic forecasts. In addition, new legislation supporting IT-sector was created together with Industry Associations. On one hand, it includes significant tax legislation changes and creates fertile environment for IT companies. On the other hand, Political situation inside the country is characterized as instable with several points of tension in Foreign Affairs area. This affects international image of Ukraine. Furthermore, the new IT supporting law is still not completely accepted.

According to the case study there are some cultural differences that may affect working process but they are insignificant and could be eliminated by training.

The most interesting thing in case of Ukraine is that the industry was growing successfully during almost 20 years absolutely without state support, despite the lack of modern marketing skills and business practices. One more fact is that even during the recession existing clients were continuing cooperation with suppliers. Moreover, analysts claim that crisis cleaned the market and taught the hard lesson of cost-cutting and survival. That was essential for young companies created between 2002 and 2008 during the rise of the IT sector in Ukraine.

To summarize, Ukraine is still an attractive outsourcing destination for companies from Nordic region, despite the rise of salaries and costs. However, to prolong and increase cost arbitrage some actions should be taken by the state and market players. According to the case studies, the recommended actions for state would be as follows.

- Create favorable tax legislation.

- Improve attractiveness and reputation of Ukraine to return investment flow and customers.

- Develop specialized education.

- Stability and safety of the country is the key parameter.

Recommendation for market players is to create more organizations to enable better cooperation within Industry.

Fulfilling those recommendation or creating other supportive national or regional programmes, legislation or actions can help to sustain Ukrainian ITO competitive on global market.

### **Possible future research direction**

As market grows, lack of human resources becomes reality for new segments of companies. According to Outsourcing Europe's Report 2010 for Sweden, more than half of surveyed companies do not implement outsourcing into business process because they perceive themselves as too small to deal with outsourcing. This means they have limited access to external resources. Research aimed to define what means to be too small to outsource, find possible patterns and develop a method of outsourcing implementation for these small companies could be scientifically interesting and have extensive practical application.

## LIST OF REFERENCES

1. Arbetsformedlingen  
<http://www.arbetsformedlingen.se/Om-oss/Statistik-prognoser/Prognoser/Prognoser/Riket/6-29-2011-Stark-arbetsmarknad-for-data--och-teknikyrken-%C2%A0.html>
2. Arbetskraftsbarometern  
[http://www.scb.se/statistik/\\_publikationer/UF0505\\_2010A01\\_BR\\_AM78BR1003.pdf](http://www.scb.se/statistik/_publikationer/UF0505_2010A01_BR_AM78BR1003.pdf) (p.56 - Behov på kort sikt)
3. Association IT Ukraine, <http://www.itukraine.org.ua/>
4. Cobb J.A., Davis G.F. (2009). Resource Dependence Theory: Past and Future. Ross School of Business University of Michigan.
5. Corporate website of the Conscensia A/S, [www.conscensia.com](http://www.conscensia.com)
6. Corporate website of the Infopulse Company, [www.infopulse.com.ua](http://www.infopulse.com.ua)
7. Gendler E. B. (2003). Ukraine and Success Criteria for Software Exports Industry. The Electronic Journal of Information Systems in Developing Countries. ISSN: 1681-4835. [www.ejisdc.org](http://www.ejisdc.org).
8. GOAL Europe. Outsourcing Ukraine 2007: The Capital and the Provinces. [www.Goaleurope.com](http://www.Goaleurope.com)
9. Griffiths D. (1999). The Theory and Practice of Outsourcing. Kudos Information Ltd.
10. Heeks R., Nicholson B. (2004). Software Export Success Factors and Strategies in 'Follower' Nations. *Competition & Change*, Vol. 8, No. 3, 267–303.
11. Heeks R., Nicholson B. (2002). Software Export Success Factors and Strategies in Transitional and Developing Economies. Working Paper, No. 2002-12, Institute for Development Policy and Management, University of Manchester.
12. High Tech Initiative Ukraine, [www.hi-tech.org.ua](http://www.hi-tech.org.ua).
13. Internal IT market is stagnating, proIT, 14 Apr 2012, <http://www.proit.com.ua/news/soft/2012/04/13/115915.html>
14. Nordics Market Trends 2010: IT Services Analysis, Ovum
15. Outsourcing Europe. Swedish ITO Intelligence Report 2011. [www.itsourcing-europe.com/uploads/Swedish\\_ITO\\_Intelligence\\_Report\\_2011.pdf](http://www.itsourcing-europe.com/uploads/Swedish_ITO_Intelligence_Report_2011.pdf)- IT Sourcing Europe

16. Paliy I. (2012). Real Estate: No chances for rise of the prices, Economical Truth.  
<http://www.epravda.com.ua/publications/2012/02/8/315441/>
17. Porter M. E. (1990). The Competitive Advantage of Nations, New York: Free Press.
18. Research and Markets. Sweden Information Technology Report Q4 2011.  
[www.researchandmarkets.com/research/ffa33d/sweden\\_information](http://www.researchandmarkets.com/research/ffa33d/sweden_information)
19. Schoeman S., Bakker N., van Hillegersberg J., Moody D. (2008). Bridging the gap between the theory and practice of IS Outsourcing Strategy Design, Second Information Systems Workshop on Global Sourcing: Services, Knowledge and Innovation.
20. State Committee of Statistics of Ukraine, SCS, [www.ukrstat.gov.ua](http://www.ukrstat.gov.ua).
21. Stutz F.P., Warf B. (2009). The World Economy, Prentice Hall.
22. Verket för högskoleservice. <http://www.vhs.se/sv/Statistik1/Master-och-IK/>
23. Versiya-Consulting, history of the company  
<http://versiyaconsulting.com/content/view/41/92/>
24. Webometrics Ranking Web, Ranking Web, January 2012.  
<http://research.webometrics.info/index.html>
25. Yaroshchuk M.(2008). Drivers of IT Industry in Ukraine, Bulgaria, and Romania. IT Outsourcing News.
26. Zatoryuk S., Allgood B. (2004). Evaluating a Country For Offshore Outsourcing: Software Development Providers in the Ukraine. Information Systems Management, 21:3, 28-33.

## **APPENDIX 1.**

### **Standardized interview question set for IT company representative.**

1. What made your company to look for outsourcing? What were the reasons that made your company to be interested in outsourcing?
2. Do you see outsourcing activities as one of your company's core competences?
3. What factors were taken into consideration when evaluating of outsourcing destinations/countries were made?
4. Which factors influenced mainly that decision-making process? (2-3). Factors of biggest influence?
5. Which country features specific to Ukraine played the role?
6. Are you satisfied with cooperation with Ukrainian company/team?
7. Can you compare this experience with similar of company from another country? Do you work with teams/parts from another country?
8. What kind of problems most often appear between your local (management) team and off-shore team ?
9. Which of those problems related to country/nationality specific features and which are general outsourcing problems?
10. How are things going now in industry, with your company in particular?
11. What would you like to improve in nowadays cooperation/situation?.
12. How do you evaluate the future perspectives of cooperation with Ukrainian IT sector?

This set of questions was the approximate scheme of interviews. Additional questions were set according to the information disclosed by interviewees and they were not limited just to answering the questions but were asked to be more narrative and open. Information in interviews recorded is completed by various unplanned prompts. Interview outcomes together with secondary data analysis composed each of case studies.

## **APPENDIX 2.**

### **General framework for ITO industry evaluation.**

1. Demand(both domestic and external(Heeks,Porter))
2. Human Expertise and Resources(Terdiman):
  - 2.1. Availability of skilled resources
  - 2.2. Educational system
  - 2.3. English proficiency
  - 2.4. Marketing skills, etc.
  - 2.5. Software/hardware
3. Country Infrastructure(Terdiman):
  - 3.1. Political stability(Terdiman),
  - 3.2. Government support(Finance(Heeks)), Regulatory enviroment(Terdiman), Governmental policies(Porter)
  - 3.3. Communications infrastructure(Terdiman), etc
  - 3.4. National vision and strategy(Heeks)
  - 3.5. Technological Infrastructure(Heeks)
  - 3.6. Research and Development(Heeks)
4. International Linkages and trust(Heeks)
5. Software industry characteristic(Heeks) Strategy, Structure and Rivalry (plus collaboration and clustering (Porter), Technology, Certification(Heeks)
6. Related and Supporting Industries(Porter)
7. Cultural Issues(Terdiman):
  - 7.1. Work style
  - 7.2. Communication techniques
  - 7.3. Reverse hierarchy, etc.