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THE ROLE OF STATE-OWNED ENTERPRISES IN THE INTERNATIONALISATION OF LOCAL COMPANIES: THE CASE OF EESTI ENERGIA'S SHALE OIL PRODUCTION

Master's Thesis

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I, hereby, declare that the current
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Abstract

In many countries, state-owned enterprises have played a vital role in the development of the local manufacturing sector. This study analyses the role that Estonian state-owned enterprise Eesti Energia has had in the internationalisation of local companies. A framework is proposed that can be used for in-depth analysis.

Keywords: state-owned enterprises, value chains, system of innovation, internationalisation, capacity building

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1. Introduction

Economic development is one of the most intriguing topics both in real world and academia. A very interesting research topic has been how developed countries or countries with some very competitive sectors managed to promote growth while they were still developing countries. If looked at the literature that covers the development of Asian Tigers, Brazil or even Scandinavian countries like Sweden and Norway, then we can see that in all these countries the state played an important role in promoting development. If necessary the state regulated the market, e.g through import substitutions (Reinert 2013). Also, the state coordinated the operations between different actors or was directly involved in the business through state-owned enterprises (Chang 2007; Fridlund 2000; Cumbers 2000).

In addition to natural monopolies (Lawson 1994, 284), state-owned enterprises (SOE) have also been used for industrial development where they have played a crucial role. For example, states have used SOE-s to build up competencies in certain sectors in the country (Sæther *et al*. 2011) or to create externalities that benefit other manufacturing sectors (Chang 2007).

One of the ways how SOE-s can help building up competencies in the country is by involving local companies to its value chain and use them as suppliers of equipment and services. Good examples are Brazilian Petrobras and Norwegian Statoil (Paz 2014; (Sæther *et al*. 2011). However, SOE-s' exact influence on local companies also depends on how the cooperation between them actually works. For example, Gereffi *et al*. (2005, 84) identify five different governance types between the companies: market, modular, relational, captive and hierarchical. The exact governance type depends on the complexity of information and knowledge transfer required to sustain a transaction, the extent to which this information and knowledge can be codified and transmitted efficiently and on the capabilities of potential suppliers (*Ibid*., 85).

The fact that local suppliers are included into the SOE-s' value chain can also affect their activity on the international level. For many companies, it is very important to find foreign markets. This is especially the case when home market is small which in turn prevents specialisation and also raises up everyday running costs because of the small orders. From a small country perspective, it is very important that the companies could find export markets as export is one of the main sources of economic growth.

However, there is a number of barriers that can make internationalisation hard for the companies. The barriers can be internal and be related to marketing, information and company's everyday functioning or external and be related to export procedures, the general environment on foreign markets *etc* (Leonidou 2004, 283). As each value chain governance type means also a different level of cooperation between the companies, it can be expected that each of them also affects the internationalisation of suppliers differently. The more there is exchange of knowledge and information between the companies, the more positive can the influence of the leading company be on its supplier. For example, the latter gets a chance to build up competencies, can use the leading company as a good reference or get new business contacts in the leading company's network. Through this, the leading company can also influence its supplier's internationalisation.

In addition, the cooperation between the leading company and its suppliers can be influenced by other factors. These include regulations, ministries, other companies, universities, and also habits that are in place (Edquist 1997; Edquist and Johnson 1997). This means that SOE-s are influenced by the system of innovation where they operate.

The current analysis is a case study based on Estonian SOE Eesti Energia and its shale oil production. The basis of this thesis is hypothesis stating: "Eesti Energia has a limited influence on local companies' capacity building because of the market-based governance structure between Eesti Energia and its local value chain's suppliers related to the government policies and therefore its positive influence on local companies' internationalisation is limited."

Although SOE-s can have a positive influence on local companies and they have been used for industrial development, the active involvement of SOE-s depends on

government's ability to set clear roles for them. As has been pointed out by Tõnurist (2015), the Government of Estonia does not have a long-term strategic vision for Eesti Energia which also means that the company does not get direct guidelines for investments. The only concerns are related to energy independents and dividends from ownership (*Ibid*.).

In 2015 Estonian Government approved the document of owner's expectations for Eesti Energia.[1] The document states that the company has to develop shale oil production and contribute to strengthening Estonian position as oil shale competence centre through investments in R&D and international cooperation. However, this document does not give direct guidelines for the company to contribute to the local value chain.

As the government has not given to Eesti Energia any direct guidelines for investments, the value chain governance between Eesti Energia and local suppliers is mostly market-based, meaning that most of the input that Eesti Energia acquires from local companies is easily produced. The second reason for this is related to a fact that shale oil production is in its nature a production- and capital-intensive sector with a mature market structure where companies are big and most of the processing technology is produced in-house (Pavitt 1984, 358-359).

For the analysis three interviews were conducted with the representatives from local private companies. The list of all interviewees can be found in Appendix 1. All three companies are active in the field of engineering and/or technological design. The companies were chosen through the search in the Estonian e-procurement environment and Google search. Company A is a subsidiary of a local holding company and specialises in the design and production of steel structures. The whole concern has around 350 employees. Company B is active in the development, implementation and maintenance of hardware and software based data collection and process control systems. The number of employees in Company B is around 30. Company C specialises in the electrical design and also provides consultation services. The company currently has 14 employees. The aim of the questions was to find out the governance structure between the companies and Eesti Energia, what are the biggest barriers for

[1] The document can be found from the homepage of the Ministry of Finance - http://www.fin.ee/riigi-osalusega-ariuhingute-ja-sihtasutuste-aruanded

internationalisation and how has Eesti Energia influenced their internationalisation. The interview questions can be found in Appendix 2.

Also, one interview was made with two representatives from Eesti Energia (Appendix 1). The aim of the interview was to find out how Eesti Energia chooses its suppliers and partners, why certain suppliers were chosen for the construction of Enefit 280 and how Eesti Energia sees its role as a SOE. The questions for interviewees from Eesti Energia can be found in Appendix 3.

In addition, a number of documents were analysed. These include the procurement procedure of Eesti Energia, Public Procurement Act, the introductory paper of Eesti Energia's factoring programme, Eesti Energia's owner's expectations document and Eesti Energia's financial reports.

The current thesis is structured as follows: first, the role of SOE-s is discussed from the historic and system of innovation perspective. Second, the value chain of SOE-s and the chemical industry is discussed together with barriers that prevent upgrading of skills and internationalisation. In the next part, a framework is suggested for analysing the role of SOE-s in eliminating the barriers of upgrading and internationalisation.

It is followed by the introduction of Eesti Energia. Also, the results of the interviews are introduced together with the analysis of the value chain governance between Eesti Energia and the companies interviewed, and the internationalisation barriers of those companies. The results are later analysed using the framework created. In addition, a number of proposals are suggested which could benefit the local companies.

2. State-owned enterprises as players in national systems of innovation

2.1 SOE-s and their historic role

The way how the role of SOE-s has been seen is very contradictory. However, there are many rationales behind state ownership. Lawson (1994, 284) points out that the main economic reasons behind SOE-s are the existence of natural monopolies, industrial intervention, and redistribution of power, wealth or income. Natural monopolies reflect a situation – mostly in a context of utilities - where because of the technical requirements of an industry only one supplier can operate (Chang 2007, 12). More specific reasons behind natural monopolies are the wish to avoid the duplication of utility distribution systems (Demsetz 1968) and high capital costs (Lawson 1994).

Efficiency-related questions were one of the main reasons behind the SOE-s' decline of relevance during the 1980s because of the growing scepticism towards central planning that emerged with Thatcher and Reagan (Pollitt and Bouchaert (2011, 9). Agency theory brought out performance issues related to information asymmetry and control in a manager-owner relationship (Jensen and Meckling 1976, 29). As the managers of SOE-s do not own any shares then it has been argued that they have weak incentives to take a long-run view of its development and also they try to increase their wealth through non-pecuniary benefits (Lawson 1994, 289; Jensen and Meckling 1976, 56). Soft budget constraints under which SOE-s operate may lead to serious fiscal problems (Jefferson 1998). This obviously can lead to increased monitoring by the government.

However, at the same time, the managers must cope with different tasks that are given by the government which may also lead to suboptimal performance because it is not clear which task is more important (Lawson 1994, 300-301). This means that the suboptimal performance may be the government's fault as it fails to set clear tasks for SOE-s. On the other hand, Bai *et al*. (2000) argue that often SOE-s have to fulfil multiple tasks for social stability reasons as they provide a social safety net for workers

in countries where social welfare system is not developed. They further argue that as social stability has been seen as one of the most important conditions for foreign investments, Chinese SOE-s had to allocate their resources between production and provision of social stability (*Ibid*., 733-734). It can be said that the Chinese case is a good example how SOE-s are used as tools for wealth and income redistribution.

As countries, especially in Latin America, experienced increased debt burdens which lead to an emphasis on efficiency that was influenced by the general neoliberal notion and Washington Consensus, privatisation of SOE-s was seen as a rule of thumb (Ramamurti 1999, 143; Grugel *et al*. 2008; Babb 2013). In Latin America, most of the SOE-s were established during the 1950s in the fields of energy, telecommunication, transportation, but also in heavy industries (Katz 2001, 5). The privatisation of SOE-s in Latin America enabled rapid technological modernization but it also brought contraction of domestic R&D infrastructure (Katz 2001). This means that the role of SOE-s in the economic development was largely neglected. However, for a long time countries in Latin America and Asia used SOE-s and import substitution policies for industrial development (Chang 2007). This helped them to avoid the situation where the market is overrun by foreign enterprises which can happen if a country's manufacturing is underdeveloped (List 1921, 278).

Although Latin America, Taiwan, and South Korea pursued protectionism it is clear that the Latin American countries failed to do it successfully. When South Korean and Taiwanese SOE-s and private enterprises were pursued by the government to focus on new technologies for the world market, then Latin America protected mature industries which were focused on satisfying local demand (Katz 2001; Amsden 2004; Reinert 2006). Also, SOE-s like steel producer POSCO in South Korea or Taiwan Mask Corporation were established for supporting other local enterprises while Latin America had to cope with limited cooperation between producers and suppliers in general (Amsden 2004; Reinert 2006; Chang 2007).

Despite the fact that Latin America's failure in pursuing industrialisation through import substitution and SOE-s put a serious toll on state interventionism, during the recent years, their importance has steadily grown again. Between 2010 and 2012 the number of state-owned transnational companies rose from 650 to 845 and their foreign direct

investments flows amounted to $145 billion (United Nations Conference on Trade and Development 2013, 4-5). Although 2014 saw the decline of internationalisation of SOE-s (United Nations Conference on Trade and Development 2015, 17), they still continue to play an important role in global trade.

China has put a lot of effort in the attempt to catch up with the West and SOE-s have a crucial part to play in it. SOE-s in China have experienced a managerial transformation from traditional clan and hierarchy orientation to a marked-based 'dynamic dynamos' which makes them very similar to foreign companies (Ralston *et al*. 2006, 839). Chinese largest multinational enterprises are often SOE-s or under considerable influence of the state, and are very active in expanding outside of China for strategic assets and natural resources (Child and Rodrigues 2005; Lai *et al*. 2015). Chinese SOE-s often seek for natural resources in lower income countries with the unstable political environment (Amighini *et al*. 2013).

2.2 The role of SOE-s in the innovation system - building competencies and creating demand

SOE-s are often large companies with enough resources and under significant government control, which makes them a useful tool for developing the local economy. The cases of South Korea and Taiwan were already mentioned where SOE-s were used to develop new technologies and create externalities. SOE-s are also often operating in natural resource-based sectors and can be used to create numerous backward and forward linkages (Chang 2007, 30). If a SOE active in natural resources' industry starts to upgrade its production and technical capacity then it should open up possibilities for local suppliers. However, governments must have a clear strategy for industrial development which includes understanding the role that SOE-s can play and be able to give clear directions to the managers of SOE-s. This means that SOE-s have to be included in the discussions related to industrial and innovation policy, otherwise their commitment to follow these goals is low (Tõnurist 2015, 11).

In the 1970s and 1980s, there was a major shift in economic policies towards market liberation and less state intervention which meant that industrial policy lost its ground. It continued during the 1990s with the realisation that a broader and more system-based understanding is needed which addresses the shift towards 'learning economy' and

grasps national specificities in the context of internationalisation (Marceau and Basri 2001, 292; Soete 2007, 278).

The most comprehensive theoretical concept is national system of innovation which was first mentioned by Lundvall (1985, 27-29), expressing a certain division of tasks between different actors like universities, industry, public agencies, and research organisations who operate in geographical and cultural proximity which makes the establishment of communication channels and codes of information less costly, change of information more efficient and gives local producers and users a competitive advantage over foreign competitors. Knowledge exchange between different actors must be dense as much of it is tacit knowledge (Ernst 2002, 502).

The theory was later made more comprehensive by including "all important economic, social, political, organisational, institutional and other factors that influence the development, diffusion, and use of innovations" (Edquist 1997, 14). Organisations are defined as formal structures with explicit purpose who act as players or actors and institutions are defined as "sets of common habits, routines, established practices, rules or laws that regulate the relations and interactions between individuals and groups" (Edquist and Johnson 1997). Institutions differ as they can be formal or informal, basic or supportive, and binding or recommended (*Ibid*., 50).

Institutions set up the patterns how information is exchanged, how conflicts and cooperation are managed, and how resources are channelled (Edquist and Johnson 1997, 52-54). These roles show how much institutions can influence learning. As Archibugi *et al*. (1999, 530) argue, learning binds the whole system and is the key to the development of the system. It can be said that learning is the most crucial part of fulfilling the main function of the system which is the development and diffusion of innovations (Edquist and Chaminade 2006, 112). Mody (1993) emphasises that learning and exchanging information is the main reason behind alliances or other mechanisms of cooperation between companies but for the successful diffusion of knowledge, right policies that support workforce training or industry-wide cooperation must be in place.

However, national perspective is too aggregative in explaining such developments as it is oriented to describe broad national characteristics while sectoral approach

concentrates on sector-specific characteristics within the broader environment (Malerba 2003, 334; Malerba and Nelson 2011, 1649). A number of articles have been published focusing on the role that regions and supranational institutions have on fostering innovation, networking, industrial development and finance (Cooke 1996; Niosi and Bellon 1994; Pavitt and Patell 1999).

The coherence of the innovation system comes from the fact that all actors on all levels support or influence each other as they fulfil their task. Through this, the actors also interact with each other through communication, exchange, cooperation, competition and command (Malerba 2005, 66). This, in turn, fosters different types of relationships and networks between them.

As many SOE-s are active in natural-resource-based sectors which can provide opportunities for backward and forward linkages, the question is which steps should be taken so that the economy could benefit from it the most. Although natural resources can generate income, in the long run, the country has to cope with diminishing returns and has to think about ways to balance it with activities like manufacturing that generates increasing returns (Reinert 2013). There are a number of examples how governments have used SOE-s to increase country's manufacturing capabilities.

For example, SOE-s can be used to acquire strategic assets like knowledge and technology that are needed to upgrade the local manufacturing through international expansion route (Child and Rodrigues, 2005). Internationalisation is unavoidable if local knowledge pool is not enough for such developments. It again shows that purely national perspective is not enough in analysing innovation systems.

As Brazil was in debt crisis, increasing its deep-water oil production, which was also a technical challenge, was seen as a way to earn extra income (Dantas and Bell 2006, 831). However, the collapse of oil prices in 1986 meant that investments in deep-water drilling technologies globally stopped and Petrobras had to develop new technologies with the help of foreign partners (Dantas and Bell 2009). Internationalisation clearly helped Petrobras to acquire new knowledge to upgrade and expand its manufacturing. It also helped to change the company from a passive learner and technology acquirer to a strategic player in international knowledge networks that actively develops new

technologies and solutions through joint ventures (Dantas and Bell 2006; Dantas and Bell 2009). Norway also used internationalisation to acquire competencies but the method used was different. After the discovery of oil under the Northern Sea, Norway invited international oil companies to help develop the oil fields with a condition that the companies develop on-shore activities and use local suppliers which created knowledge spillovers between the international oil industry and Norwegian suppliers (Sæther *et al*. 2011, 378). Through the internationalisation, Norway and Brazil were both successful in using global oil sector's knowledge base, technologies, inputs, actors, networks, and institutions for the development (Malerba 2005, 66-67).

Also, Norwegian state-owned oil producer Statoil had to prefer local suppliers to support the development of local onshore activities and engineering capabilities even if more competent foreign suppliers existed or using local suppliers slowed down the development of oil fields (Cumbers 2000, 245; Grønning *et al*. 2008, 295-296; Sæther et al. 2011, 378). The same was in Brazil where local content policies were established that Petrobras had to follow (Paz 2014, 507). However, this policy was more actively implemented after Petrobras had already developed some level of competencies (Dantas and Bell 2011). In turn, local suppliers in both countries got a possibility to 'piggy-back' on SOE-s by using latter's demand and networks to internationalise (Wright *et al*. 2007, 1020-1021).

It was the institutional context that enabled both countries to develop their oil industries. For Norway, implementing such policy measures was nothing new. The previous experience with the development of local hydroelectricity and aluminium production had already established the necessary routines. The most important of those already established institutions was the Concession Laws that regulated the ownership of natural resources and was later used for negotiating the terms of oil production with foreign oil companies which also included the requirement of using local suppliers (Wicken 2009, 50; Engen 2009, 180-181). In addition, there was a political will to implement such policies as they were backed and established by the Labour Party (Wicken 2009, 89; Sæther *et al*. 2011, 376). In Brazil, it was the government who directed the company from the internationalisation towards the domestic market and implemented local-content measures (Paz 2014, 507).

Another useful tool for building manufacturing capabilities is the purchase of goods and services by the public agencies and also SOE-s through public procurement procedure. In addition to simply buying goods and services, public procurements can be used to promote innovation. Historically, the governments have used public procurements for developing specific, usually military-related, technologies and for industrial upgrading (Lember *et al*. 2013a, 2). The shift from industrial policy towards a system of innovation approach and therefore innovation policy has also influenced public procurement practices. Instead of focusing on the creation of technological and production capabilities, the innovation policy rationale is much more horizontal as the goal is to have a wider innovation impact compared to sectoral approach (Lember *et al*. 2013b, 13-14). This lead from technology procurements to R&D procurements that target early phases of products and technologies and which do not fall under trade agreements (*Ibid*., 25).

However, during the 1990s the overall rationale shifted from technology and R&D public procurement of innovation (PPI) towards 'no policy' policy with emphasis on short-term efficiency and noninterventionism in economic policy, supported by international trade regimes like World Trade Organisation's agreement on public procurement, or the European Union single market (Lember *et al*. 2013c, 296-297). WTO and EU procurement regulations also contributed to risk-aversive culture with a low use of innovation-oriented public procurements (*Ibid*., 299). It is a clear example of how cross-border institutions can have a significant impact on the behaviour of local institutions.

Although it is understandable that public organisations try to avoid failures and losing public money as they are constantly under public scrutiny, it is also clear that avoiding risks does not support the creation of value. If the Norwegian government had avoided taking risks and had not preferred local suppliers then Norway would not have so many companies in the upstream part of the oil industry's value chain. The Norwegian government understood the importance of on-shore activities which has also helped Norway to avoid Dutch disease (Røed Larsen 2004). One possible way of doing that is to implement PPI policies in a way that motivates low-tech companies in the country to upgrade their skills (Lember *et al*. 2013c, 304). In recent years some countries have

again taken more interest towards PPI and introduced generic policies like innovation-friendly regulations, acknowledging innovation as an important side-goal of public procurements, establishing communication platforms with industries for pre-selection stages *etc* (*Ibid*., 294-295). However, if countries lack previous experience with active PPI policies then it will be hard to effectively implement them. A lot of effort is needed to establish the necessary routines for such policies, e.g new communication platforms must be created or the existing ones re-oriented. Also, the general attitude towards risk and efficiency must be changed among the politicians who pass the laws in the parliament and officials who implement them.

3. The value chain of SOE-s in the chemical industry

3.1 Chemical industry SOE-s in the local value chain

The firm's activity can determine the type of relationship it is engaged in. Based on their sources of technology used, nature of the technology produced and what is their principal activity, Pavitt (1984) categorises firms under one of four different categories: supplier-dominated, science-based, scale-intensive or specialised equipment suppliers. Miozzo and Walsh (2006) also add that a number of knowledge-intensive business service providers have emerged. The relationship that supplier-dominated firm has with other firms is probably not that close as an advanced upstream supplier. Supplier dominated firms have a weak R&D and engineering capability, and therefore they make a minor contribution to their process or product technology (Pavitt 1984, 356). This means that a relationship between two firms with sophisticated activities is probably closer than a relationship where one firm deals with simple economic activities.

As the sectors mature, so may the firms also change over time from one type to another. Miozzo and Walsh (2006) argue that many science-based firms in the chemical industry have changed into production-intensive firms. This is in line with Utterback's (1996) model of innovation dynamics where the product, production process, organization, market and competition change in time from an uncertain fluid phase where emphasis is on product innovation and gaining the market into a specific phase where market is divided between oligopolies and emphasis is on process innovation.

The chemical industry, including shale oil production, is a sub-category of process industry which is characterised by production in processes, both divergent and convergent, where the value is added by mixing, separating, forming and/or chemical reactions by either batch of continues mode and where products can be both intermediates or finished products (Kannegiesser 2008, 63). Shale oil production, like any other chemical industry, has a complex demand structure where every product is a

'finished product' which can also be used as an intermediate in the next production process (*Ibid*., 64-66). Shale oil production is also a production-intensive activity where the companies are constantly looking for ways how to mine and process oil shale more efficiently, and how to use side waste and by-products that are produced during the excavation and processing activities (Eesti Põlevkivitööstuse aastaraamat 2015; Pavitt 1984, 358).

The way how different companies in the system interact with each other also shapes how the system, as a whole, functions – what is the level of cooperation between the companies and how they are positioned to one another. This is described by value chain approach which focuses on how and why companies position to each other. The principles can be used on a national, sectoral and global level.

Value chains were first mentioned by Porter (1985, 33-36) who explained that value chain "*disaggregates a firm into its strategically relevant activities in order to understand the behaviour of costs and the existing and potential sources of differentiation*" and these activities are performed to design, produce, market, deliver, and support its production. The concept has been used in different approaches, each with different emphasis. Commodity chain approach puts emphasis on networks of labour and production processes which link together households, companies, and states, and are built around one product or commodity (Gereffi *et al*. 1994, 2; Hopkins and Wallerstein 1986, 159). Each company receives inputs and sends outputs and this transition locates them within a commodity chain which tends to be directed from the periphery towards the core where the highest profits are made (Hopkins and Wallerstein 1994, 17-18). In the 2000s the discussion moved towards global value chain concept as it was most inclusive and captured the full range of possible chain activities and end products (Gereffi *et al*. 2001, 3).

Gereffi (1994) distinguishes producer-driven and buyer-driven value chains. In producer-driven chains backward and forward linkages are controlled by large integrated transnational companies in the capital- and technology-intensive industries where international subcontracting of components and strategic alliances between competitors is common (Gereffi 1994, 97; see Sturgeon *et al*. 2009 and Sturgeon and Van Biesebroeck 2011 for automotive industry analysis).

Buyer-driven chains that are set as decentralised production networks are controlled by large retailers, brand owners, and trading companies (Gereffi 1994, 97). This pattern is most usual in labour-intense, consumer-goods industries where goods are produced by independent factories under original equipment manufacturer arrangements and specifications are provided by the buyers and branded companies who themselves do not usually own factories for manufacturing (Gereffi 1994, 97-99; Humphrey and Schmitz 2002, 1021). One of the main reasons why this kind of production is moved to the low-wage Third World countries is to meet the rising competition (Crestanello and Tattara 2006). This pressure is also felt by the producers in developing countries. If these companies want to maintain or increase their incomes, they have to increase the skill content in their activities and/or move into niche markets with high entry barriers (Humphrey and Schmitz 2002, 1018). This upgrading is not easy and depends on the governance structure of the value chain.

Production-intensive shale oil production falls also under the category of producer-driven value chains. As the activity is concentrated on processing oil shale into shale oil which is a natural resource industry, it can provide numerous backward and forward linkages. Oil shale producers face technological challenges to achieve more efficiency in oil shale mining and later processing which could create potential opportunities for local equipment suppliers and software developers who can offer their solutions or even develop them together with shale oil producers. Also, local construction companies could benefit as shale oil production facilities mean large construction contracts. On the downstream side oil shale, shale oil and their by-products can be used in the production of construction materials, chemical products and gasoline (Eesti Põlevkivitööstuse aastaraamat 2015)

The value chain governance structure itself depends on the complexity of transactions; codifiability of information; and capability of suppliers (Gereffi *et al*. 2005, 84). There are five types of value chain governance: markets where transactions are not complex, products are easy to produce with little input from the buyer; modular value chains where complex information is easily codified making the transaction simple; relational value chains where information cannot be codified, supplier's capabilities are high, and tacit knowledge must be exchanged between buyer and supplier through close

interaction; captive value chains where ability to codify information and product specifications are both high but supplier's capabilities are low; and hierarchy where product specifications cannot be codified, products are complex, and there are no capable suppliers, which means that lead firms have to develop and produce the product themselves (*Ibid*. 86-87). Table 1 will sum up the key determinants of value chains.

Table 1: Key determinants of global value chain governance (Gereffi *et al*. 2005, 87)

Governance type	**Complexity of transaction**	**Ability to codify transactions**	**Capabilities in the supply base**	**Degree of explicit coordination and power asymmetry**
Market	Low	High	High	
Modular	High	High	High	
Relational	High	Low	High	
Captive	High	High	Low	
Hierarchy	High	Low	Low	

Humphrey *et al*. (1998; cited in Kaplinsky and Morris 2003, 73-74) bring out a number of factors that can help to evaluate the relationship between companies in the value chain. Habaradas and Tolentino (2010) have used these factors to determine the complexity of transactions (Table 2) and the ability to codify the transactions (Table 3) which help to find out the governance structure between the companies.

The operation of value chains depends on the availability of skilled labour, necessary infrastructure, and finance; state policies regarding market regulations, e.g the use of tariffs, quotas or other restrictions (Gereffi 1995, 104; Gereffi and Fernandez-Stark 2011, 11). This ties the value chain with the system of innovation where it operates.

In the context of SOE-s, government's public procurement policies influence the value chains that have developed around SOE-s. If the government pursues innovation-oriented public procurement policies then it can be expected that there is also more information and knowledge exchange in the value chain and cooperation between SOE-

s and local companies is closer. This could help the local companies to upgrade their skills and become internationally more competitive. It means that through the PPI-s SOE-s can support the internationalisation of local companies and help them eliminate barriers preventing it. In the case of 'no policy' policy, the exchange of information and knowledge can be expected to be much lower, cooperation to be superficial and the governance structure more market-based. This also means that SOE-s' contribution to its local value chain's upgrading is small.

Table 2: Complexity of transaction (Humphrey *et al*. 1998 cited in Kaplinsky and Morris 2003; Habaradas and Tolentino 2010)

Governance type	**Degree of dependence**	**Length of trading relationship**	**Ordering procedure**
Market	Suppliers have many customers and buyers utilise multiple sources	Short-term trading	Open bidding for buyers, with prices being negotiated and agreed upon before orders are commissioned
Modular	Suppliers only have few customers, while buyers resort to single- or dual- or select-sourcing	Long-term trading	Bidding for contract may not take place. Likely winner is known in advance. Prices are settled after contract is awarded.
Relational			
Captive			
Hierarchy			

Table 3: Ability to codify transactions (Humphrey *et al*. 1998 cited in Kaplinsky and Morris 2003; Habaradas and Tolentino 2010)

Governance type	**Price determination**	**Credit extended**	**Contractual relationship**	**Inspection**
Modular	Adversarial, with hiding of information	Punitive or no credit extended	Suppliers only start production on receipt of written order	Inspection on delivery
Relational	Non-adversarial with "open books" policy	Easy access to letters of credit, longer period, and easier terms	Suppliers are more flexible about instructions and start production without written order	Little or no inspection on delivery of most parts
Captive	Adversarial, with hiding of information	Punitive or no credit extended	Suppliers only start production on receipt of written order	Inspection on delivery
Hierarchy	Non-adversarial with "open books" policy	Easy access to letters of credit, longer period, and easier terms	Suppliers are more flexible about instructions and start production without written order	Little or no inspection on delivery of most parts

3.2 Barriers of upgrading and internationalisation

Upgrading is one of the most important questions in the value chain approach as it enables the companies to manage with the rising international competition (Humphrey and Schmitz 2002, 1018). Many value chains, including the chemical industry, are global in nature (Kannegiesser 2008; Kathuria *et al*. 2008). This puts pressure not only on the leading companies but also to their suppliers. If the suppliers do not manage to upgrade their skills then they will lose their position.

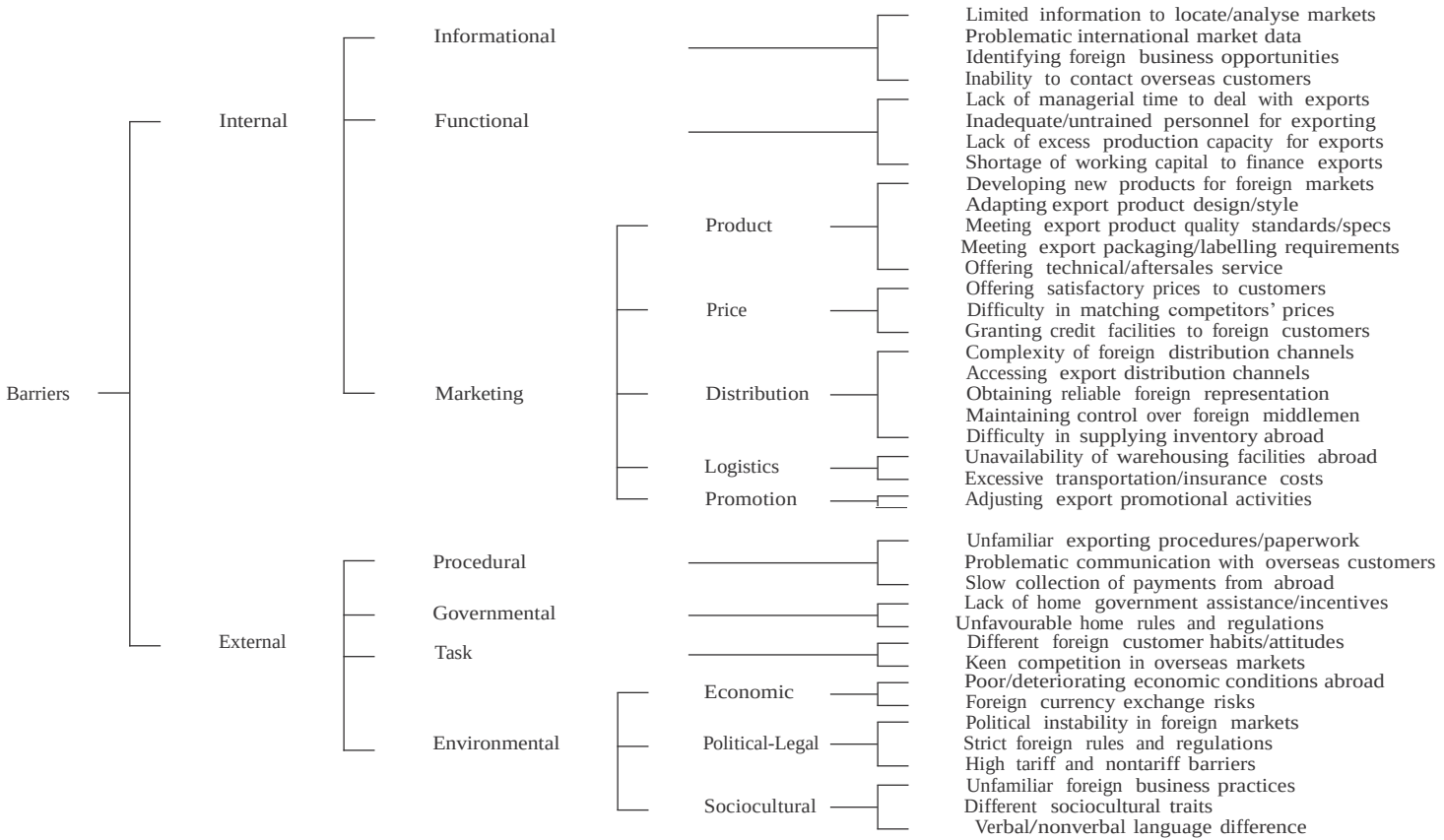
Although upgrading is one of the central topics in the value chain literature, it does not explain in detail what challenges companies in the value chain actually face that hinder the upgrading. In addition to upgrading the skills, companies also have to put more effort into finding new markets. This is especially the case with companies operating in small countries as their market puts extra constraints to upgrading. However, there are many barriers that the companies have to overcome. The literature of internationalisation has covered very well the different barriers that companies face.

First of all, firms must be aware of their unique competencies and assets they can offer on the global market and excess capacity of resources that are needed for international activities (Wiedersheim-Paul *et al*. 1978, 52). However, unique assets must first be developed which in knowledge and technology intense fields can be challenging. Even if firms are aware of their unique assets and international possibilities, they might not be able to exploit them due to resource constraints.

One of the most common of barriers is a lack of, and obtaining of market knowledge due to differences of language and culture which makes it more difficult to make decisions regarding foreign operations (Johanson and Vahlne 1977). Industrial relationships are heavily trust-based, making the establishment of these relations and thus entering industrial networks more challenging as other actors must be motivated to enter into such relationships (Johanson and Vahlne 1990). Such industrial networks consist of customers, customers' customers, competitors, suppliers and distributors, which makes these networks similar to value chains (*Ibid*., 19). Companies also have to adapt to one another technically, administratively, logistically or adapt to each other with regard to knowledge (Johanson and Mattsson 1987).

A very good summary of barriers has been provided by Leonidou (2004) who classifies barriers as internal barriers like functional, informational and marketing barriers, and external barriers which include procedural, governmental, task and environmental barriers (*Ibid*.). Table 4 brings out the detailed list of barriers.

Table 4: Classification of Export Barriers (Leonidou 2004, 283)



OECD (2008, 36) has used Leonidou's framework in the context of small and medium-sized firms and has concluded that most of the barriers are internal. The same has been concluded by Pinho and Martins (2010) who analysed Portuguese companies. External barriers like the degree of competition in the sector, tariff and administrative barriers, and language differences are also important. Based on Leonidou's classification of barriers, it can be said that most of the barriers that exporters experience are related to distribution, while non-exporters are experiencing barriers related to information, function, and environment (*Ibid*.). Based on this, Table 5 summarises the most important barriers.

4. The framework for analysing SOE-s' role in eliminating the barriers of upgrading and internationalisation of its local value chain's suppliers

The exact impact that SOE-s have in on upgrading the skills of local suppliers depends on many different aspects that are all interlinked to one another. First, every SOE operates in a wider context, a system of innovation, which consists of all important economic, social, political, organisational and institutional actors and factors like universities, industry, public agencies, research organisations, regulations and habits (Lundvall 1985; Edquist 1997; Edquist and Johnson 1997). These actors and factors are both national and transnational, influencing each other through everyday operations (Cooke 1996; Niosi and Bellon 1994; Pavitt and Patell 1999). As SOE-s are part of this system, all these actors and factors have an impact on SOE-s everyday operations. At the same time, SOE-s themselves influence those same actors.

SOE-s themselves are very much influenced by government policies which mirror the government's expectations towards its company. For example, many SOE-s are an important source of income for the governments. At the same time, it has an impact on SOE-s' operations and investments.

Government implements a certain set of policies that regulate SOE-s' everyday operations and set them tasks they have to fulfil. Based on government's policies and expectations a certain set of habits and routines will develop to meet the expectations. If the government's expectations for a SOE are to only fulfil the main functions of a business like earn profits and offer its services then no other functions should be expected from the SOE to fulfil. All the routines and habits that SOE develops are created to only meet expectations. If the government wants to use SOE-s for other purposes like for the development of local manufacturing to make the sector internationally more competitive then it requires a new set of routines and habits to be

developed. The government's willingness to implement any policy also depends on the influence of international trade regimes which create a set of rules that countries have to follow (Lember *et al*. 2013c, 297). For example, WTO GPA discourages using PPI as technology policy and the EU is even more restrictive (Lember *et al*. 2013b, 25; Lember *et al*. 2013c, 299)

Public procurements are one of the main tools how governments can influence the development of local manufacturing and encourage them to be more innovative (Lember *et al*. 2013b, 14-15). As SOE-s are also required to use public procurements then they can be very useful for such purposes. This is especially the case with SOE-s active in natural-resource-based industries that can create numerous backward and forward linkages (Chang 2007, 30). First, SOE-s have to develop and/or procure technology and equipment for the extraction and processing of resources. Processed resources are later used for the production of final products or used as final products, like in the chemical industry.

If SOE-s have to follow PPI policies then habits, routines and the general mindset have to support this. For example, the procurement conditions must support the participation of local companies. If it is known that local companies are not that capable then risks should be taken as something inevitable. This means that the officials responsible for procurements must have necessary skills and knowledge to conduct innovation-oriented procurements (Lember and Kalvet 2013, 136). Because of the PPI policies, it can be expected that close relationships with local companies must be developed which needs separate attention. If the government implements 'no policy' policy then it can be expected that SOE-s will emphasise short-term efficiency and try to avoid risks (Lember *et al*. 2013c). Supporting the development of local manufacturing is not seen as a priority as it means taking risks and in the short term may not seem to be efficient. This means that it is unlikely that SOE-s will develop new solutions together with local companies or sets higher standards in a way that improves local companies' operations (Table 5).

In addition to helping the local suppliers to upgrade their skills which make them internationally more competitive, SOE-s can also help them internationalise through other ways. The topic of overcoming internationalisation barriers is usually covered in

the context of large multinational companies supporting its smaller suppliers. The same can be applied to internationally well-established SOE-s. These SOE-s can include suppliers into their operations outside their home country (Acs *et al*. 1997; Bell 1995; Bell *et al*. 2001; Wright *et al*. 2007). The cooperation that is established between the supplier and the SOE can also open up the possibility to enter the SOE's business network that otherwise would be unreachable (Acs *et al*. 1997). Through these networks, a supplier may get the contacts of new possible clients. If a SOE has some knowledge regarding business opportunities abroad that could benefit its local suppliers then it can share this. SOE-s can even directly recommend its local suppliers to its international partners. However, for this to happen, SOE-s have to develop close relations with its local suppliers as it is with PPI policies.

Wright *et al*. (2007, 1021) explain that when a smaller company, or in this case supplier, joins larger companies' networks and forms alliances with them, it increases their social capital. The fact that the company is a supplier for a larger client can be seen as a trustworthy reference to the latter's partners. Such cooperation can also help to build suppliers' technical and production capacity through the development of new products or high standards set by the SOE. For example, this can be done through PPI policies. If the government pursues PPI as an R&D policy then radical innovations and new product prototypes could be developed in cooperation between SOE-s and local companies (Lember *et al*. 2013b, 25). Generic PPI policy can be used for setting new standards that the tenderers have to meet. However, SOE-s have little influence on environmental, governmental, procedural or distributional barriers as they are not directly connected to them. Table 5 also brings out the ways how SOE-s can help local companies to upgrade and internationalise.

Based on this, there is a link how the system of innovation influences the interaction between SOE-s and local companies. The way how a SOE announces its procurements has a big impact on the companies located in its local value chain. More precisely, it influences the governance structure between the SOE and its local suppliers that depends on the complexity of information and knowledge transferred between the companies, the codifiability of information and the capabilities of suppliers (Gereffi *et al*. 2005, 84-85). If the procurements are only based on price and are not innovation-

oriented then a market-based the governance structure in the value chain can be expected with low cooperation between the companies as the complexity of transferred information and knowledge is low. In this case, the SOE has little or no positive influence on building the capabilities of local suppliers which could help them to become internationally more competitive. Low cooperation also means that SOE-s probably will not help the suppliers to eliminate internationalisation barriers in any other way. If the complexity of transferred information and knowledge is high then a positive influence can be expected on suppliers' capabilities, increasing their international competitiveness which helps them to overcome internationalisation barriers.

Table 5: Barriers of internationalisation and how SOE-s can help to eliminate those barriers. Based on Leonidou 2004; Acs *et al*. 1997; Bell 1995; Bell *et al*. 2001; Wright *et al*. 2007 and the Author

Barrier classification	**Sub-classification**	**Barrier**	**How SOE could help**
Internal	Informational	Limited Information to Locate/Analyse Foreign Markets.	Information about the foreign markets that can be analysed, provided by the SOE.
		Problematic International Market Data.	
		Identifying Foreign Business Opportunities.	Foreign business opportunities hinted by the SOE.
		Inability to Contact Overseas Customers	Introducing/recommending the local provider to SOE's international partners.
	Functional	Lack of Excess Production Capacity for Exports.	Increasing local demand (temporarily) which enables to build capacity for exports.
	Marketing	Developing New Products for Foreign Markets.	New products developed for the SOE that also have a potential for exports or new products developed in cooperation with the SOE.
		Meeting Export-Product Quality Standards/Specifications.	Higher quality standards set by the SOE.
		Lack of References	Using SOE as a reference client.
External	Environmental	Unfamiliar Foreign Business Practices.	Information about the foreign business practices can be provided by the SOE if it is or has been active on the market that the local producer wants to enter.
	Procedural	Unfamiliar exporting procedures/paperwork	Advice from the SOE regarding the exporting procedures/paperwork

5. Building the case – Eesti Energia

5.1 Overview about the company

The current analysis puts at its centre Eesti Energia, an Estonian SOE which is the largest electricity producer in Estonia that uses oil shale as the main energy source. In 2016 Eesti Energia produced 9071 GWh of electricity, of which 380.3 GWh was from renewable sources (Eesti Energia 2017, 32). The second main business area for Eesti Energia is shale oil production. The national strategy for oil shale sees shale oil production as a way to use oil shale more efficiently through the development and use of best possible technologies (Keskkonnaministeerium 2015, 53). Eesti Energia with its subsidiaries is one of the biggest R&D spenders in the country and is categorised as a large enterprise in global R&D cloud (Mürk and Kalvet 2015).

Eesti Energia is also one of the largest companies in Estonia in terms of turnover and number of employees. By the end of 2016, Eesti Energia had 5840 employees and turnover was 742.1€ million (Eesti Energia 2017). This means that the company has a significant role in Estonian economy. In 2009 Eesti Energia decided to build a new shale oil production plant based on technology developed together with Outotec Technology. The oil plant started up for the first time in 2012 and became fully operational in 2015.[2] The total cost of the plant was 270€ million which in Estonian context is a very large investment.

Aforementioned means that Eesti Energia, like Petrobras or Statoil, has a potential to create backward and forward linkages and include other local companies into its projects and everyday operations. This cooperation could benefit the local partners as it would give a possibility for them to improve their products and services, participate in technology development and get new business contacts which all could help them to penetrate new markets and improve their position in global value chains.

[2] Homepage of Enefit - https://www.enefit.com/en/history

Estonian exporters are well integrated into the global value chains as approximately 2/3 of their turnover comes from export sales (Berthou *et al*. 2015, 23). According to the World Bank statistics[3], the export of goods and services was 79.3% of Estonian GDP in 2015 which is one of the highest ratios in the world. However, Estonian export is very much concentrated on Scandinavia and Russia (Čede *et al*. 2016, 11-12).

In recent years Estonia has experienced slow economic growth. The annual growth numbers during the last four years have been between 1.5% and 2.7%.[4] In 2015 24.94% of the workforce was occupied in manufacturing making it the largest sector in Estonia.[5] In the meantime, the main drivers of growth have been the IT-sector and internal consumption while manufacturing has shown slow growth (Statistikaamet 2017). The labour productivity in 2015 per person employed on the basis of value added was 24 600€ in manufacturing and 37 400€ in information and communication. In fact, productivity in Estonian manufacturing lags behind Western countries and is 55% of the EU average (Palo 2017). However, the added value per capita in the manufacturing of coke and refined petroleum products was 41 100€.[6] As the consumption cannot drive growth because of the small local market and most of the workforce is occupied in manufacturing, upgrading the sector is crucial for future growth. Higher productivity in the shale oil production could open up opportunities for local manufacturing companies as the sector needs efficient production facilities to keep up the productivity.

5.2 Eesti Energia and its procurement practices

One of the major determinants of the governance structure between Eesti Energia and other local companies is the fact that Eesti Energia is a SOE whose sole shareholder is the state. As the state is the majority shareholder and Eesti Energia is a utility company, the company has to follow the procedures and principles that are set in the Estonian Public Procurement Act.[7] The general principles include the economical use of financial resources, transparency, avoidance of disturbing the competition through the use of

[3] The World Bank statistics – Available http://data.worldbank.org/indicator/NE.EXP.GNFS.ZS
[4] According to statistics of Eesti Pank
[5] Statistics Estonia
[6] Statistics Estonia
[7] Public Procurement Act (RT I 2007, 15, 76) § 10 Section 3

public funds *etc*.[8] Eesti Energia and its subsidiaries have to follow public procurement procedure if the purchasing of goods and services is related to:

- production of electricity;
- distribution and production of heat energy and gas;
- research of mining fields of oil shale, peat or other solid fuels and extraction of aforementioned natural resources.[9]

On other occasions, Eesti Energia follows simplified procurement procedure or contracts services with the simplified procedure, both regulated with Public Procurement Act[10] and procurement procedure of Eesti Energia. This means that all the contracts signed between Eesti Energia and its suppliers follow a procurement procedure.

According to the interviewees from Eesti Energia, the most important determinant of procurement decisions is the price. However, for more complicated projects like the construction of a new oil production plant they also look for partners who have enough experience and technological and engineering capacity to deliver the necessary equipment. The search for potential partners together with consultations with them are done before they publically announce the procurement. The idea is that the companies that Eesti Energia has established a contact with will later compete for the procurement with a price. (Int4)

When asked how many of the contractors, who participate in Eesti Energia's shale oil production value chain, are local, the interviewees from Eesti Energia responded that most of the main contractors are foreign companies. For the large projects, Eesti Energia uses 'engineering, procurement, construction' contracts (EPC contracts). It means that finished projects are given over on turnkey principle. Interviewees said that local companies lack experience, technical competence, and financial capital for such projects as the local market is too small to develop competencies in the capital-intensive energy sector. In the meantime, foreign companies do such projects on a daily basis and

[8] Public Procurement Act (RT I 2007, 15, 76) § 3
[9] Eesti Energia AS-i ja kontserni ettevõtjate hankekord
[10] Public Procurement Act (RT I 2007, 15, 76) § 18^2 and § 19

that is why Eesti Energia is actively seeking international partners for such projects. (Int4)

In addition to a small local market, the development of competencies is hindered by the fact that Eesti Energia does not want to be a testing ground for local companies in leading such projects as they want to be sure that the contractor is capable of finishing the project. One of the interviewees added that they do not have the right to take such a risk. The interviewees said that even Eesti Energia lacks experience and competencies to lead and coordinate such projects. (Int4)

However, during projects like the construction of a new oil production plant local companies are involved and usually used as subcontractors by foreign companies. Local companies are also used for the everyday running and maintenance of the oil plants where they provide spare parts or do metal works. Using the local companies as subcontractors and for the maintenance of the oil production plant is more efficient and cheaper than using foreign companies. One of the interviewees said that Estonian companies lag too far behind the Western companies, it is impossible to catch up because of the capital intensity of the sector and therefore the only choice is to take the role of a subcontractor and specialise on some very specific parts. How many local companies and from what field of activity were actually involved during the project, Eesti Energia does not know. The reason behind this is the use of EPC contracts that are signed with main contractors who are therefore responsible for finding the subcontractors instead of Eesti Energia. (Int4)

It is interesting to note that sometimes Eesti Energia has difficulties in finding potential international partners as their projects are small on a global scale. As one of the interviewees said:

"*First we search for potential companies who could qualify. We look at their competencies, references and how they have shown themselves in that field. For the project of extracting gasoline from oil shale gas, a total of nine companies qualified. Almost all of them are much bigger than Eesti Energia. [--] Our project of 50€ million was looked as something small and pointless. Some of the companies do not even look at projects that are under 200€ million or 1€ billion."* (Int4)

According to interviewees from Eesti Energia, the company also has not purposely helped to develop local companies' competencies in any other way. However, Eesti Energia tries to avoid the situation where they order all the metal works from their subsidiary. The aim is to keep up the competition between different local companies and to have alternative options. When asked has Eesti Energia recommended its local suppliers to its international partners, the interviewees did not know for sure. However, they believed that local companies have probably established partnership relations with foreign main contractors during the construction process of the oil production plant. (Int4)

Eesti Energia also offers its contractors a possibility to participate in its factoring programme. When interviewees from Eesti Energia were asked how many companies take part of their factoring programme, the answer was between 300-400 companies which also includes resellers and service providers. They also believed that the factoring programme empowers smaller companies that cannot afford 90-day payment deadline and therefore usually lack finance and negotiation power. (Int4)

During the construction of Enefit 280 oil production plant, Eesti Energia also used its subsidiary Enefit Solutions[11] quite extensively for equipment construction and metal works. The subsidiary is also involved in the everyday maintenance of the oil plant (Int4). The interviewees brought out three main reasons why Eesti Energia often uses its subsidiary instead of procurements.

The first reason for using a subsidiary instead of private contractors is the price. As the subsidiary does not add a profit margin to a price, it helps to keep the overall costs down. The second reason for using a subsidiary is the fact that it helps to keep competencies inside the company. The interviewees brought out that the competencies gathered during the construction of the equipment for Enefit 280 oil production plant have later been useful for the maintenance of the plant. This shows that for Eesti Energia it is also important to keep hierarchical governance structures in the value chain which enables the exchange of tacit knowledge between different value chain activities for effective management of the plant. (Int4)

[11] Previously known as Eesti Energia Tehnoloogiatööstus AS

The third reason brought out by the interviewees from Eesti Energia is a social one. The subsidiary is located in Ida-Virumaa county that has the highest unemployment rate[12] in Estonia and where the majority of the population consists of local Russian minority. Because of this, the subsidiary is a very important employer in Ida-Virumaa. The interviewees added that it is Eesti Energia's corporate responsibility to create social stability in the region. It also prevents the loss of local highly skilled labour. As one of the interviewees said, once a welder or production specialist leaves their field, it takes minimum 6 months when they lose their competence. (Int4)

Eesti Energia's owner's expectations document has increased company's cooperation with local partners on some level. Interviewees brought out that Eesti Energia is in active partnership with the Oil Shale Competence Centre of the Tallinn University of Technology, located in Kohtla-Järve. In cooperation with the Tallinn University of Technology, the company has also launched a program named INSENEGIA with the aim of attracting young talents into the sector. In addition, Eesti Energia is sponsoring Museum of Oil Shale in Kohtla-Järve. (Int4)

However, the document has not given an extra incentive for Eesti Energia to seek more cooperation with local companies. As one of the interviewees said, the Estonian Public Procurement Act and European directives prevent the company to prefer local companies. It is also not Eesti Energia's goal to support local companies in any way as the company's aim is to earn profit to its owner, guarantee the supply of electricity for the country and add value to oil shale. If a local company is chosen as a winner of the procurement then the reason is that it is cheaper and more efficient for Eesti Energia. (Int4)

5.3 The governance structure between Eesti Energia and its local suppliers

As was previously mentioned, Eesti Energia finds all its suppliers through procurements. This means that the price is agreed upon before orders are commissioned. It was also confirmed by the representatives of all the companies who said that the most important factor for Eesti Energia is the price and the winner of the procurement is the company that offers the lowest.

[12] According to Statistics Estonia in 2016 the unemployment rate in Ida-Virumaa county was 13.5% while the national rate was 6.8%.

The length of the contracts has varied. As the representative from Company A said, some contracts are short-term and can last only a few months while others can be several years long (Int1). What is common between short- and long-term contracts is that both are construction-object-based (Int1). The aspect of object-based contracts was also brought out by other two companies (Int2; Int3). The length itself depends on complexity and volume.

The interviewees from all three companies agreed that Eesti Energia is an important client but they do not depend only on Eesti Energia's contracts as all have also other clients. However, the interviewees from Company A and Company B brought out that the contracts related to the construction of Enefit 280 oil production plant made up to 2/3 which lowered right after the oil production plant was completed (Int1; Int2). For Company C the contracts with Eesti Energia during Enefit 280 construction made up around 7% of the annual turnover (Int3). In general, the degree of dependence is low as all the companies have other clients and Eesti Energia also tries to avoid hindering the market competition. However, there is a lot of volatility as the contracts with Eesti Energia can make most of the annual turnover.

According to Gereffi *et al*. (2005) typology and indicators used by Humphrey *et al*. (1998; cited in Kaplinsky and Morris, 2003), it can be said that the complexity of transaction was mostly market-based. It is most clear with ordering procedure where all the companies participate in open biddings as Eesti Energia buys all the necessary services and equipment through procurements. The length of contracts varies between few months and several years. The reason why some contracts were longer was because of the volume and complexity of the work. However, all the contracts were construction object based which additionally made the governance very much market-based as the cooperation ended right after the construction was completed. All the questioned companies also have other clients, although they agreed that Eesti Energia is an important client for them. It can be said that the main reason behind this is the fact that Eesti Energia gets everything through procurements. Also, none of the questioned companies had framework agreements with Eesti Energia. Although Eesti Energia has been only one client out of many, the procurement contracts have made out a large proportion of the turnover.

When looked at what the companies actually provided for Eesti Energia, then with Company A the complexity of transactions was high like in the modular chains. Company A produced and assembled the whole steel structure of the oil production plant's main building with a volume of 5000 tonnes of steel and was the main contractor for that part of the plant. For the production of steel structure elements, a lot of technical information was exchanged. The project of the whole building and initial technical information about the steel elements was provided by Eesti Energia's partner Outotec. The producer had to finish the design of the elements, provide the technical documents of finished elements for Eesti Energia and Outotec, produce and assemble them. (Int1)

Company B provided the systems, both hardware, and software, for measuring the amount of semicoke gas and for measuring the amount of oil coming from and going to the storage. For that Eesti Energia provided information regarding the properties of the substances measured, the piping system and where measurement equipment must be located. However, the exchange of information was minimal as it was not complex and Company B did not have to modify the provided solutions substantially. (Int2)

The complexity of information transaction was also high for Company C as it designed electrical installations for some of the plant buildings. There were many things that had to be taken into account while designing the electrical installations: dust, the danger of explosion in some areas, fire safety *etc*. In addition, the company evaluated designs made by other companies and offered consultancy services to Outotec. However, the company did not gain new knowledge which could benefit them. (Int3)

It can be said that the complexity of transaction during the project was low with Company B and high with Company A and Company C. The reason is that Company B provided standardised services that did not need too much input from Eesti Energia and only minimal adjustments were made. However, Company A had to design the structures and was also the main contractor for that part of the construction and Company C designed the electrical installations that also needed a substantial exchange of information between the company and Eesti Energia. However, for the latter, there was no learning moment.

The ability to codify transactions between Eesti Energia and the questioned companies was high. The price determination in all three cases was adversarial, with the hiding of information. The reason behind this was that Eesti Energia itself did not ask detailed price calculations and therefore the companies themselves did not provide them. From a business perspective, it is logical as companies try to avoid providing their cost structure for competition reason.

When asked about credit extended, Company A was not aware that Eesti Energia has a factoring programme and Company C answered that Eesti Energia has not offered them the possibility (Int1; Int3). The interviewee from Company B said that it has used Eesti Energia's factoring programme in the past but not during the construction of Enefit 280 (Int2). The interviewee also added that in general Eesti Energia's payback terms are rigid but there is no doubt that Eesti Energia will pay on time (Int2).

When looked at the contractual relationship, all three companies started their work after the contract was signed and technical specifications were provided by Eesti Energia or its partner Outotec. This is due to the fact that oil production plant is both a technological and a construction project. Eesti Energia and Outotec designed the plant which means that the suppliers had to supply their part according to the main project and for that, they needed technical specifications from Eesti Energia and Outotec. The inspection was thorough as all the provided solutions and works had to match the project and necessary standards, e.g the equipment that was used for the automatisation solutions had to have necessary licenses and calibration certificates. (Int1; Int2; Int3)

Capabilities in the supply base can be considered to be high in the context of what they provided. Local companies have enough capabilities to participate as subcontractors and providers of smaller sub-systems and low- and mid-tech solutions. However, for more complex solutions Eesti Energia seeks potential partners from abroad as the company knows that local companies are not able to provide them.

It can be said that the governance between Eesti Energia and the companies consisted factors usual for modular and market-based governance type. The most important reason behind this is the fact that Eesti Energia finds its suppliers through procurements and uses price as the main indicator.

5.4 Barriers of internationalisation and Eesti Energia's influence

All three companies are active on the international market but the level of internationalisation is different. Company A is most international of the three and is very active in the Nordic countries. The interviewee added that the export income makes up to 70-80% of annual turnover. The company is owned by a holding company whose another subsidiary is a construction company that has subsidiaries in Sweden, Finland and Latvia to whom the company also provides steel structures. In addition, the company uses local agents in the Nordic countries who know the local market. (Int1)

Although Company C is active on the international market, the export income is currently around 5% of annual turnover. The representative from the company answered that they are not actively seeking for international markets, adding that in their field the Western clients are price sensitive and expect at least two times the cheaper price from an Eastern European company compared to a local company which makes it hard to be profitable. (Int3)

During the time of the interview, Company B had only one active foreign contract. However, the company is actively seeking for international partners that could include the company to its projects. The main reason for internationalisation is local and volatile small market. (Int2)

All three companies have experienced barriers for internationalisation. Table 6 sums up the main barriers. In addition, the table brings out how Eesti Energia has influenced those barriers.

Table 6: Eesti Energia's influence on barriers of internationalisation, based on interviews

Barrier classification	Sub-classification	Barrier	How SOE could help	Companies	Eesti Energia
Internal	Informational	Limited Information to Locate/Analyze Foreign Markets.	Information about the foreign markets that can be analysed, provided by the SOE.	1) Company B wishes to be more active internationally as the local market is small. Most likely this can happen through the partnership with large MNC-s that are well known providers of automatisation equipment. However, it is hard to find such partners and the company has not put much effort to it.	1) Eesti Energia has not provided information about potential markets.
		Problematic International Market Data.			
		Identifying Foreign Business Opportunities.	Foreign business opportunities hinted by the SOE.	1) According to Company A in some markets it is hard to find clients as the business there is based on close personal contacts.	Eesti Energia has not provided information about potential partners.
				- After the completion of Enefit 280 Eesti Energia's subsidiary Enefit Solutions has been a competitor for Company A on foreign markets. Interviewee's opinion from Company A was that a situation where they have to compete with a large SOE is unfair.	
		Inability to Contact Overseas Customers	Introducing/recommending the local provider to SOE's international partners.	1) For Company B entering foreign markets can mostly happen through the partnership with large MNC-s that are well known providers of automatisation equipment. However, it is hard to find such partners. 2) Company A brought out the importance of trust in their field. This in turn can make it harder to establish contacts with foreign partners.	1) Eesti Energia has not recommended any of the three companies to its international partners. 2) During the Enefit 280 construction, Company A developed good relations with Eesti Energia's partner Outotec as the latter was the main coordinator of the constructions. Because of the established contact, Company A is now participating in other Outotec's projects abroad.
	Functional	Lack of Excess Production Capacity for Exports.	Increasing local demand (temporarly) which enables to build capacity for exports.	1) For Company B small local market does not support the growth that is needed for successful internationalisation. .	1) For Company B Eesti Energia is a very important client that has included the company in numerous projects, including Enefit 280. However, Eesti Energia's procurements are also tied to large investments which creates a lot of volatility in such a small market. Extra volatility created beacuse of Eesti Energia's procurement practices where a project is divided between design procurement and equipment supply procurement.
	Marketing	Developing New Products for Foreign Markets.	New products developed for the SOE that also have a potential for exports or new products developed in cooperation with the SOE.	1) Company A is an experienced producer of steel structures for machinery and especially for construction. However, every project is different and can be challenging. 2) For Company B small local market does not support specialisation which is needed for successful internationalisation	1) Steel structure elements produced by Company A for Enefit 280 were a bit more complex than usual. Company gained new knowledge for producing a certain type of steel structure elements that can be useful for new projects here and abroad. 2) Eesti Energia's procurement practices have not supported Company B. For some projects, Eesti Energia has announced two separate procurements: first for the project design and second for the supply of equipment. In some cases, Company B has made the project design and later has lost the supply procurement because of the lower price offered by competitors. Dividing projects in such a way does not support accumulation of knowledge. Also the volatility of the market does not support specialisation.
		Meeting Export-Product Quality Standards/Specifications.	High quality standards set by the SOE.	-	-
		Lack of References	Using SOE as a reference client.	1) Company A brought out that in their field good references are important for getting large projects. 2) Company B brought out the importance of references. 3) Company C brought out the importance of references.	1) Eesti Energia has been an important reference for Company A. The fact that the Company A produced the whole steel structure for the main building with a volume of 5000 tons, showed that the company is able to participate in large manufacturing plants' construction projects. 2) Eesti Energia is a very important reference for Company B as it is also a very small company. Having such a reference can really help in finding foreign partners. 3) For Company C Eesti Energia's reference is an important one. However, the company has also other important references like the North Estonian Medical Centre, WGI Global Inc. and Tartu University Hospital.
External	Environmental	Unfamiliar Foreign Business Practices.	Information about the foreign business practices can be provided by the SOE if it is or has been active on the market that the local producer wants to enter.	1) Company C brought out that if clients and construction objects are located abroad, the business trips are unavoidable as clients have demanded physical presence for the meetings. This however raises the costs and therefore the focus is more on the local market. 2) Company A brought out the role of language barriers as in some markets it is hard to make business without knowing the local language, especially when partners are small businesses.	-
	Procedural	Unfamiliar exporting procedures/ paperwork	Advice from the SOE regarding the exporting procedures/paperwork	-	-

Based on Table 6 it can be said that Eesti Energia has had limited positive influence on local companies' internationalisation. All three companies mentioned that Eesti Energia is internationally a good reference. This has especially been the case with Company A whose representative mentioned that the reference shows the company's capability in participating in the construction of large manufacturing plants (Int1). For other two companies, Eesti Energia's reference is good in general but they did not bring out any direct benefits as Company A (Int2; Int3).

Only Company A mentioned that because of the construction of Enefit 280, new business relations were developed with Eesti Energia's foreign partners. Company A developed good relations with Finnish company Outotec during the project and because of it, Outotec has included the company in its projects in Mexico, Russia, Botswana, and Sweden. However, the good relations developed on the construction site and it was not Eesti Energia that recommended the company. For Company A, Eesti Energia's subsidiary Enefit Solutions is actually a competitor in foreign markets. (Int1)

Company B and Company C did not get new international business partners through the project and Eesti Energia has not recommended them to its international partners. For Company C internationalisation is also not a priority. As seen from Table 6, Company C has brought out only one barrier which is closely linked with a peculiarity in their field as it is often necessary to be physically on the construction object which creates travel expenses. Improvements could be done here as Eesti Energia has established good relations with different foreign partners. (Int2; Int3)

Company B emphasised that the local market is small and volatile which in turn prevents the growth of their capacity for exports. The construction of Enefit 280 benefited the company but with the completion of the oil production plant, the workload diminished. This was also related to the completion of other Eesti Energia's projects like Auvere Powerplant where Company B also participated. A small and volatile local market also does not support specialisation which also hinders internationalisation. (Int2)

Although Eesti Energia should be interested in highly specialised local companies, through its procurement practices, the company actually makes the building of

competencies even more challenging. The interviewee from Company B pointed out, although not in the context of the Enefit 280 construction, that during some projects Eesti Energia announces two separate procurements: the first for project design and the second for equipment (Int2). There have been instances where Company B has won the first procurement and created the project design but lost the second one as the competitor's offer was cheaper (Int2). Such a method makes the governance between the companies even more market-based as it shortens the contract and divides the project into smaller, less complex tasks. The interviewee from Company B also mentioned that sometimes Eesti Energia sets the conditions for tenderers so high that it is impossible for local companies to participate (Int2).

For the companies dividing the project creates extra volatility because of the shorter contracts. Although it enables Eesti Energia to make some adjustments in the project if necessary, it takes away the chance for companies to accumulate knowledge about the linkages between design and installation. The latter stage is also important from the design perspective as a company can learn about the flaws in their design during that stage and adjust them accordingly for the next time.

For Company A designing, producing and assembling the steel structure of the main building enabled to get knowledge and experience for handling with more complex steel structures. The interviewee from Company A said that this experience definitely helps the company to get new contracts abroad. (Int1)

Although Eesti Energia has influenced the internationalisation on the companies, the positive influence has been limited. Of the three companies, Company A has benefited the most from the construction of Enefit 280 shale oil production plant as it has clearly helped company's internationalisation. The only clear benefit Company B got by supplying its solutions for the plant was the reference. The interviewee from Company B pointed out that through its other projects, Eesti Energia has actually hindered the development of competencies and internationalisation of the company. For Company C, Eesti Energia is also a valuable reference but the company did not get any other benefits that could help its internationalisation. In fact, for Company C internationalisation is not a priority.

6. Discussion

Eesti Energia's limited positive influence on questioned companies' internationalisation is related with the system of innovation where the SOE operates. Since regaining its independence, Estonia has emphasised market liberalisation and dismantling any trade barriers (Lember and Kalvet 2013, 128). The prevalent policy mode in Estonia has been 'no policy' policy and the country has not introduced any effective PPI policy measures yet (Lember *et al*. 2013c). Because of this, a risk-aversive culture with an emphasis on short-term efficiency has developed (*Ibid*.).

This, in turn, has influenced the government's expectations towards Eesti Energia. As one of the interviewees from Eesti Energia said, the most important tasks for the company are earning profit to its owner, guarantee the supply of electricity for the country and add value to oil shale. The same is also stated in the owner's expectations document that also emphasises the use of regional workforce and the need to diminish negative impact on the environment. Dividends from Eesti Energia are an important income for the state. This was especially the case during the economic downturn in 2009 when Estonian economy shrank -14.2% and the payment of dividends was 86.9€ million, and in 2010 when the economy started to recover with 1.7% growth and the payment of dividends was a record high 109.2€ million (Eesti Energia 2010, 63; Eesti Energia 2011, 61).[13] Because of this, the company is highly committed to efficiency.

The commitment to efficiency and non-existent PPI policy also affects the way how procurements are conducted. For Eesti Energia, the most important factor is the price. This is especially the case with smaller procurements. For some projects, there are also separate procurements for design and for the supply of equipment which helps Eesti Energia to make adjustments to the project if necessary. For larger projects, the company relies on international partners as it is more efficient and the local companies

[13] Economic growth numbers are based on statistics provided by Eesti Pank

lack competencies. Also, Eesti Energia produced many parts of the equipment itself with its subsidiary as it helped to keep necessary knowledge for maintenance in-house and it was cheaper.

The commitment to high efficiency also affects local companies' ability to build capacity. As Lember *et al*. (2013b, 16-17) argue, the conventional understanding of procurements, that emphasises transparency, efficiency, and noninterventionism, is quite different from basic ideas of innovation-oriented procurements. Because the most important factor is the price, the governance between the companies is very much market-based. However, market-based governance does not support capacity building as there is little exchange of knowledge and information between the companies (Gereffi *et al*. 2005, 86-87). This was the case with Company B for whom the project did not help to build new capacities because there was not much exchange of information between the companies. Company A is a good example how the exchange of more complex information can benefit the company.

However, because the emphasis is on efficiency, transparency, and noninterventionism that do not support the implementation of PPI policies, a risk-aversive culture has developed (Lember *et al*. 2013c, 305). Eesti Energia does not want to be a testing ground for local companies as they want to be sure that the company is able to finish the project. Therefore, for large projects like the production unit for Enefit 280 that produces petroleum from oil shale gas, potential partners are searched from abroad. This is totally opposite to how Statoil and Petrobras have contributed to the development of local industries (Paz 2014, 507; Sæther *et al*. 2011, 378).

It makes sense as such projects are too capital-intense for Estonian companies because of the small local market. The interviewees from Eesti Energia said that in the field of energetics and oil production the only choice for local companies is to be subcontractors and to specialise on some very specific niche. At the same time, Eesti Energia's procurement practices do not support specialisation and capacity building. It is not only because of the use of price as the main criteria but also because separate procurements are announced for the design and for the supply of the solution. The use of such a procurement practice takes away the chance for local companies to accumulate knowledge regarding the linkages between the design and the installation which could

help improve the former. This, in turn, would help local companies to become internationally more competitive.

Market-based governance between the companies also means that there are no close relations between Eesti Energia and its local suppliers and therefore it does not help the local companies to internationalise in any other way. All the companies admitted that Eesti Energia has not recommended them to any of its international partners and has not hinted business opportunities abroad. It is also not expected from them to fulfil such a task by the government. What also hinders the development of relations between Eesti Energia and local companies is the fact that the SOE does not put attention to which companies are actually part of its value chain. Because of the EPC contracts, Eesti Energia does not have a detailed overview which companies and from which field of activity are part of the SOE's value chain as it is the main contractor that has to find the subcontractors.

From Eesti Energia's perspective, the company acts rationally as one of its main goals is to be profitable and pay dividends to the owner. If the state only expects dividends, the supply of electricity and added value to oil shale then Eesti Energia will continue its everyday operations, including procurement practices, as before. It is the government that has to change its innovation and procurement policies so that local companies could benefit more from Eesti Energia's operations.

Last three Estonian governments have actually understood that the local industry needs more attention. In the beginning of 2015, the Ministry of Economic Affairs and Communications created the task group for developing a green paper for Estonian industrial policies (Eesti Elektritööstuse Liit 2015). The paper will be presented to the government for approval in September 2017.[14]

Approving a green paper is just the first step. More important is which steps the government will take to actually support the industry. Lacking previous experience in implementing real PPI policies can be a serious issue in changing the ruling understanding about risk, efficiency and interventionism in public agencies and SOE-s.

[14] Ettevõtluse kasvustrateegia rakendusplaan 2017-2020 - https://www.mkm.ee/sites/default/files/ettevotluse_kasvustrateegia_rakendusplaan_2017_2020.xlsx

It is also clear that there is a wider, international trade regime that regulates the procurements and must be followed by Eesti Energia. However, policy changes regarding public procurements should be implemented so that the local suppliers could upgrade their skills. Such changes are not always at odds with international regulations. For example, the practice of announcing separate procurements for project design and supply of equipment when there are local companies capable of providing both should be stopped. This would create more stability in the market and help companies to upgrade their skills.

Also, terms and conditions not necessary for the delivery of services and equipment but which prevent the participation of local companies with enough competencies should be set aside. The latter proposal means that a thorough analysis regarding the actual capabilities of local companies should be made. As most of the local suppliers are low-tech companies, implementing such policies could help upgrading their skills (Lember *et al*. 2013c, 304). The example of Company A shows that the local companies could clearly benefit from such projects.

Implementing aforementioned policies could change the governance structure between the companies as the complexity of transaction would rise with increased modularity (Gereffi *et al*. 2005, 86-87). Strong market-based factors would still remain as procurements are the only way for finding suppliers.

Promoting networking among such companies is also necessary as it could enable them to participate on Eesti Energia's procurements as joint tenderers. There already exist roof organisations such as Eesti Masinatööstuse Liit, Eesti Elektritööstuse Liit and Eesti Keemiatööstuse Liit that can be used for such purposes. Eesti Energia is already involved in all those organisations which should make the establishment of even closer cooperation easier. Eesti Energia should also put more attention to its main contractors' subcontractors to get more data and a better understanding of its influence in the economy. As Eesti Energia has sought partners and technology from abroad and is internationally well connected, those networks could also be useful for local companies in finding new partners (Wright *et al*. 2007, 1020-1021). This means that such networking could remove barriers that local companies experience related to contacting potential foreign clients and finding foreign markets and business opportunities. In

addition, if in the future Eesti Energia will have projects abroad or starts to develop the current ones with a quicker pace, then Eesti Energia could use the established local networks to include the local suppliers to the project.

It is interesting that although Estonia is a good example of a country implementing 'no policy' policy, it also sees Eesti Energia fulfilling some historic roles of SOE-s that are at odds with the implemented policy mode. As is written in the owner's expectations document, the state expects the company to use regional workforce. It means that the company is expected to create jobs in Ida-Virumaa county.

This was also mentioned by interviewees from Eesti Energia who said that in addition to keep necessary competencies in-house which is in line with Pavitt's description of production-intensive companies (1984, 358), one of the reasons why the company orders a big proportion of steel structures and equipment from its subsidiary Enefit Solutions is to provide jobs and social stability in Ida-Virumaa county where the majority of the population is the local Russian minority. This somewhat relates to the practice used in China where SOE-s employ people to prevent the social unrest (Bai *et al*. 2000). Although Eesti Energia wishes to create social stability in Ida-Virumaa county, they also do this to keep much needed skilled workforce in the company. Eesti Energia sees a direct benefit from this because when welders and production specialists do not have work, they will leave the sector and lose their skills. The fact that the government has given to its SOE a task that contradicts with the general understanding of efficiency and market liberalisation, and the company fulfils it, shows that more interventionist policies like innovation-oriented policies could be implemented.

On the theoretical perspective, this thesis shows that the value chains where the leading company is owned by the state are affected by factors that do not affect value chains lead by private companies. Public procurements were identified as one of the most important of such factors. There is a link how procurements are conducted and what is the governance type between SOE-s and local suppliers. This link needs further analysis with a larger sample to make more solid conclusions. The topic is also very important as in many countries SOE-s play a major role in the economy. For example, oil countries where oil is the main export article and where oil fields are operated by SOE-s could use them to upgrade the local manufacturing through the use of PPI. In time, this could

diversify their exports. The proposed framework could also be used to analyse private companies active in utility sector as they are also often bound to use public procurements.[15]

In addition, not all the factors brought out by Humphrey *et al*. (1998; cited in Kaplinsky and Morris 2003, 73-74) and Habaradas and Tolentino (2010) are suitable to evaluate the value chain if the leading company has to use public procurements. First, all the procurements are open biddings, characteristic to market-based governance. However, many procurements are related to complex technologies that only a few companies are capable of delivering. Therefore, during the evaluation, it must be looked if preceding discussions prior to the annunciation of the procurement were held with potential tenderers. Also, if the ability to codify transactions is evaluated, it must be taken to account that during all procurements the work starts only after the written order which is usual for modular and captive value chains.

[15] Public Procurement Act (RT I 2007, 15, 76) § 10 Section 3

7. Conclusions

A hypothesis was posed at the beginning of the thesis: "Eesti Energia has a limited influence on local companies' capacity building because of the market-based governance structure between Eesti Energia and its local value chain's suppliers related to the government policies and therefore its positive influence on local companies' internationalisation is limited." A framework was created to explain SOE's role in the internationalisation on local companies. For that, a system of innovation approach was used to explain how policies implemented by the governments have directed SOE-s' operations. Public procurement policy was selected as a more specific tool through which the state can direct SOE-s' operations. The framework further explains how the way procurements are conducted influences the governance structure between a SOE and its local value chains' suppliers. The governance structure itself determines SOE's exact influence on its local suppliers' upgrading of skills and internationalisation. Using such a broad framework helps to understand the exact influence that a SOE has on local companies and why a SOE influences local companies in a certain way.

The analysis was based on interviews with representatives from three different Eesti Energia's suppliers that participated in the construction of Enefit 280 shale oil production plant. The focus of the interviews was to determine the governance structure between them and the SOE. The second objective was to find out the main barriers of internationalisation and how Eesti Energia has influenced those barriers. In addition, one interview was performed with two representatives from Eesti Energia with a focus to determine how they find their partners. The findings were then analysed with the help of the framework.

Based on the interviews with the representatives from Eesti Energia and from local companies, and the framework used it can be said that Eesti Energia has a limited role in the internationalisation of local companies because of the system of innovation where the company operates. The fact that Estonia has pursued market liberalisation has

influenced the procurement policy and government's expectations to Eesti Energia. Because of this, the company is efficiency-oriented which influences the way how the company conducts the procurements. As the most important factor is the price, the governance structure is market-based with low exchange of knowledge and information, and little cooperation between the companies. This hinders the upgrading of skills in local companies and their internationalisation. Also, the fact that Eesti Energia developed the technology together with Outotec and produced many parts of the equipment itself, explains Eesti Energia's limited role.

The topic needs a more in-depth analysis. As was found out, because of the use of EPC contracts, Eesti Energia lacks the information which companies are used as subcontractors by the main contractors. Including those companies into the analysis could help to understand the real impact that Eesti Energia's shale oil production has on local companies. An analysis with a larger sample of companies could also help to make more solid conclusions regarding the link between pulic procurements and the value chain of SOE-s.

8. Riigiettevõtete roll kohalike ettevõtete rahvusvahelistumisel Eesti Energia põlevkiviõli tootmise näitel

Käesoleva töö eesmärk on uurida riigiettevõtete rolli kohalike ettevõtete rahvusvahelistumisel Eesti Energia põlevkiviõli tootmise näitel. Mitmed riigid on riigiettevõtteid kasutanud kohaliku tööstuse arendamisel. Eriti häid võimalusi pakuvad selleks riigiettevõtted, mis tegutsevad maavaradega seotud valdkondades, mis loob võimalusi nii ettevõtetele, mis pakuvad tootmiseks vajalikke lahendusi, kui ka ettevõtetele, mis tegelevad maavarade edasise töötlemisega. Eesti kontekstis on teema oluline, kuna töötlevas tööstuses on hõivatud kõige suurem osa töötajaskonnast.

Riigiettevõtte rolli analüüsimiseks kasutati raamistikku, mis põhineb innovatsioonisüsteemi, väärtusahelate ja ettevõtete rahvusvahelistumise teooriatel. Innovatsioonisüsteemi teooria aitab mõista, miks riigiettevõtted käituvad mingil viisil, mis suuresti tuleneb sellest, mis poliitikaid riik nende suhtes rakendab ja mis on riigi ootused riigiettevõtete suhtes. Üheks peamiseks mõjutajaks on riigis rakendatav hankepoliitika, mida peavad ka riigiettevõtted järgima. See, kuidas riigiettevõte korraldab hankeid, mõjutab omakorda seda, millised täpselt on suhted riigiettevõtte ja tema kohalikus väärtusahelas tegutsevate ettevõtete vahel. See, milliseks kujuneb suhe, mõjutab omakorda riigiettevõtte täpset mõju kohalike ettevõtete arengule ja nende rahvusvahelistumisele.

Magistritöö raames viidi läbi intervjuud kolmes ettevõttes, mis osalesid Enefit 280 õlitehase ehituses. Samuti toimus üks intervjuu Eesti Energia esindajatega. Tuginedes intervjuudel ja kasutatud raamistikul võib öelda, et Eesti Energia mõju kohalike ettevõtete arengule ja nende rahvusvahelistumisele on madal, mille põhjuseks on laiem innovatsioonisüsteem, milles Eesti Energia tegutsenud on. Taasiseseisvusest alates on riik lähtunud liberaalsest majanduspoliitikast, mis omakorda on mõjutanud seda, milline on olnud riigi hankepoliitika ja ootused Eesti Energia suhtes. Lähtuvalt rakendatavast poliitikast ja ootustest on Eesti Energia vägagi efektiivsusele suunatud, mis omakorda

mõjutab seda, kuidas ettevõte oma hankeid korraldab. Kuna hangete kõige olulisem tingimus on hind, on ka Eesti Energia ja kohalike ettevõtete omavaheline suhe vägagi turupõhine, mille raames toimub vähe informatsiooni vahetust ja koostööd. See omakorda ei võimalda kohalikel ettevõtetel oma võimekust oluliselt tõsta ja piirab nende rahvusvahelistumist.

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Appendix 1 - List of interviewees

1) Interviewee from Company A (Int1) – Sales and Marketing Manager; 24.04.2017

2) Interviewee from Company B (Int2) – Member of Management Board, Technology Director; 17.04.2017

3) Interviewee from Company C (Int3) – CEO; Answered the questions via email

4) Interviewees from Eesti Energia (Int4) – Partner Relations Development Manager, Procurement Director; 21.04.2017

Appendix 2 – Interview guide, local companies

1. Complexity of transaction

1.1 How important is Eesti Energia as a client (proportion in turnover)? Do you have other clients?

1.2 How long are the contracts?

1.3 Was the ordering procedure based on open bidding (procurement) where prices were negotiated and agreed upon before orders are commissioned or there was no bidding and prices were settled after the contract was awarded?

2. Ability to codify information

2.1 How was the price determined? Was it adversarial with the hiding of information or non-adversarial with 'open book' policy?

2.2 How flexible was the payment plan? Did Eesti Energia offer to participate in its factoring programme?

2.3 When did the work begin, before or after written order?

2.4 How thorough was the inspection?

3. Barriers of internationalisation

3.1 How important it is for your company to operate in foreign markets?

3.2 What are the main barriers of internationalisation?

3.3 Has the cooperation with Eesti Energia in the context of Enefit 280 helped you to enter foreign markets?

Appendix 3 – Interview topic guide, Eesti Energia

1. What role Eesti Energia as a state-owned enterprise sees itself to fulfil?

2. How many of the procurements are related to shale oil production?

3. What are the main criteria for your potential partners?

4. How much you cooperate with local companies in the context of shale oil production? How many of them participate in the value chain of shale oil production? From which industries are they from?

5. If there are not so many local partners then why? What advantages the foreign partners possess?

6. Have you helped the local companies to build their competencies on purpose?

7. What are the reasons behind the fact that Eesti Energia produced most of the equipment and steel constructions itself with its subsidiary?

8. Since the owner's expectations document was adapted by the state, has Eesti Energia put more focus on finding local partners?

9. Have you recommended local suppliers to your international partners or involved them in your international projects? If yes, are you knowledgeable is there any collaboration that has developed out between local companies and your international partners because of this?