Developing the economic competence in Aland:

Recommendations and key learning points for policymakers

By Anna Lundgren and Jukka Teräs



Developing the economic competence in Aland:

Recommendations and key learning points for policymakers

By Anna Lundgren, Nordregio and Jukka Teräs, NORCE

Dr. Anna Lundgren has a background in Political Science and holds a PhD in Planning and Decision Analysis with specialization in Urban and Regional Studies from KTH Royal Institute of Technology (2017). Anna Lundgren works as a Senior Research Fellow at Nordregio, an international research center for regional development and planning, established by the Nordic Council of Ministers. She is the project manager for several research projects related to regional development, policy development and territorial governance related to e.g. the green transition, skills and competence, mobility and cross-border transport infrastructure planning and collaboration. Anna Lundgren has more than 20 years of experience working in regional development where she among other things was the Secretary General for Mälardalsrådet, an association of more than 50 municipalities and five regional councils in the greater Stockholm region.



Dr. Jukka Teräs is a Senior Researcher at NORCE Norwegian Research Centre in Tromsø. He is specialised in regional development, innovation, smart specialisation, and sustainability. He has more than 25 years of experience in innovation promotion and regional development from both public and private sectors in Finland, in the Nordic and Arctic regions, the Nordics, and in the Baltic Sea region. Jukka has been involved in research and consultancy assignments ranging from EU-related interregional cooperation programmes to region-specific and company-specific issues. He has disseminated research results in scientific journals and other national and international publications. He has participated in a number of assignments related to regional development and innovation, also in Åland. Jukka holds a Doctor of Technology from the University of Oulu Industrial Engineering and Management, and an MBA from the Helsinki School of Economics.



Abstract

The autonomous region of Åland is situated between Finland and Sweden. Throughout history the economy has been closely related to shipping and lately also to tourism. The economy and labour market in the region were heavily affected during the Covid-19 pandemic and the subsequent travel restrictions. In this article, we explore the economic competence in Åland through the lens of a framework by Carlsson and Eliasson (1991) which contains four capabilities: strategic or selective capability, organisational capability, technical or functional capability and learning capability. The analysis is based on the implementation of the EU Structural Funds Programme in Åland (2014-2020). We find several examples of how the programme and financed projects have contributed to raising the economic competence in Åland along the four capabilities, as well as examples of how micro-level economic competence is linked to macro-level economic development of the region. However, current megatrends such as demographic change, globalisation, digitalisation and climate change are only reflected in the programme and projects to a limited degree. These should be further emphasized in future programs and in building economic competence in Åland due to their long-term importance as well as a stronger focus on sustainability and inclusivity. Furthermore, to release the systemic benefits, the linking between the micro-level and macro-level could be further emphasized.

Key words: economic competence, regional development, megatrends

Disclaimer: The opinions expressed in this report represent those of the author and do not represent the opinion of the Centrum Balticum Foundation, and thus, the Centrum Balticum Foundation does not bear any responsibility for the opinions expressed in the report.

Table of contents

1.	Introduction	4
2.	A background to Åland and its economy	5
3.	The implementation of EU Structural Funds Programme (2024-2020) in Åland	6
4.	Analysis of economic competence in Åland	8
5.	Concluding remarks	11
6.	Recommendations and key learning points for policymakers	12
	References	14

1. Introduction

The Åland islands are situated in the middle of the Baltic Sea. Åland is a demilitarized and autonomous region of the Republic of Finland and celebrated 100 years of self-governance in 2022. Åland has a population of slightly more than 30,000 inhabitants (30 359 in 2022) of which the majority live in the main island and Mariehamn. Åland which is Swedish speaking has close links to both Sweden and Finland. Throughout history, shipping has been important for the Åland islands, and sectors related to trade, transport and tourism are currently important industry sectors. With a strong dependence on these sectors, Åland was severely hit by the Covid 19-pandemic and the subsequent travel restrictions that put the economy and labour market in Åland under strain.

The aim of this article is to explore what economic competence means in the Åland context and discuss how it can be developed to increase economic growth and resilience in the future.

The understanding and the importance of economic competence as the means to connect different forms of capital (land, machinery, energy, financial and labour capital) to induce economies of scale and economies of scope goes back to classical economy with Adam Smith and J.S Mills in the 18th and 19th centuries. While Alfred Marshall in the 1890s distinguished between four main agents of production; land, labour, capital and organisation, Alfred Chandler in the 1990s talks about knowledge, skill, experience and teamwork, i.e., the organised human capabilities essential to exploit the potential of technological processes. He also links microeconomic capabilities to macroeconomic performance in international comparative studies, attributing superior competence of American industry to their organisational capabilities (Smith, 1776; Mills, 1848; Marshall, 1890 and Chandler, 1990 cited in Carlsson and Eliasson, 1991).

In this article, we depart from Carlsson and Eliasson (1991) who claim that economic competence is the ability to identify, expand and exploit an opportunity set by which technological possibilities are converted into economic activity. They identify four types of capabilities which together make up economic competence:

- 1. selective or strategic capability
- 2. organizational capability
- 3. technical or functional capability
- 4. learning capability

The selective or strategic capability refers to the ability to formulate and monitor the overall business strategy, including the selection of markets, products and technologies. It also includes key elements such as the development of appropriate organizational structure, effective internal processes, the recruitment of top management and key staff, as well as the ability to develop a supporting entrepreneurial business culture that generates and takes advantage of new business opportunities.

The organizational capability relates to integrating and coordinating activities to achieve synergy effects. This is performed through the development of an appropriate organizational structure that minimizes the costs of coordinating different functional activities such as production, R&D and marketing, including the development of effective middle management and competent teams. In the organizational ability lies also the ability to create synergies thereby releasing economies of scale and scope. Carlsson and Eliasson point out that organizational capability is often related to tacit knowledge and experimental learning.

The technical or functional capability includes competencies in all areas and relates to function (e.g., production, R&D, marketing, financing, administration), to the production process, and to market development. A high productivity or efficiency illustrates a high functional ability. However, while functional capability is necessary, it is not sufficient for high economic performance since also other capabilities of economic competence are needed.

The final capability presented by the Carlsson and Eliasson (1991) framework is **the learning capability**. This refers to the ability to learn from both successes and failures, to be adaptive and to take appropriate measures. The learning capability includes both internal processes for innovation, diffusion of knowledge and feedback, and external processes. When tacit knowledge is involved, this also often involves

reallocation of people, hiring and entry/exit of firms. External learning capability does however not only deal with accessing information, but also with interaction and knowledge creation with suppliers, customers and competitors nationally and internationally.

In their framework of economic competence, Carlsson and Eliasson also distinguish between the micro-level economic competence of the firm, i.e., business competence, and macro-level economic competence pertaining to the economy as a whole which is based on the aggregated capabilities of all economic units including the system's effect deriving from effective coordination between the units.

It is important to note that Carlson and Eliasson's definition of economic competence is framed into a narrative of economic development as closely linked to technological development and innovation. Other research on what drives economic development departs from other perspectives such as the role of institutions (e.g. North, 1990, Williamson, 2000), spatial perspectives and urban economics (e.g. Isard, 1949, Glaeser, 2012). A Scopus search in October 2023 revealed that economic competence is linked to studies of the entrepreneurial state (Mazzucati, 2011), the role of government in market and state failures in the implementation of innovation policy (Wennberg et al. 2022), the development of economic competence among students (Kaiser et al. 2020; Sigfried et al. 2021) and among businesses (Mayr et al. 2020), and the dynamics between the different elements that constitute economic competence (Mathews, 2003).

In this article, we revisit the Carlsson and Eliasson framework of four capabilities of economic competence (1991) and discuss economic competence in Åland. The empirical material for the analysis is based on the implementation of the EU Structural Fund Programme "Entrepreneurship and Competence" 2014-2020 where the authors have participated as external evaluators (Teräs, 2017; Teräs, Lundgren and Salenius 2019; Löfving, Lundgren, Teräs and Turunen, 2023). The programme consisted of two parts with different focus, "Entrepreneurship and Innovation" funded by ERDF and "Inclusivity and Competence" funded by ESF. The programme was implemented during the period 2016-2022 and complemented with funding from REACT for supporting regions during the COVID-19 pandemic period. In total close to 11 million Euro was allocated to regional development projects within the project period.

The structure of the paper is as follows: After this introduction follows a section with a background description of the Åland and its economy. In the third section, we delve into the implementation of the EU Structural Fund Programme in Åland.

The fourth section starts with presenting an overview of strengths, weaknesses, opportunities and threats relating to the Åland economy elaborated by the authors, before analysing economic competence in Åland though the Carlson and Eliasson lens of four capabilities of economic competence: selective and strategic, organisational, technical and functional, and learning capability. In our re-visit of Carlsson and Eliasson (1991), we also discuss the current megatrends in relation to the elements of economic competence in Åland. In the fifth section we present some concluding remarks and in the sixth and final section we present recommendations for improving economic competence in Åland and discuss limitations with the framework used and our research.

2. A background to Åland and its economy

Åland is an autonomous Swedish-speaking region of Finland situated in the archipelago between Sweden and Finland. In 2022, Åland had 30,359 residents of which Mariehamn is the largest town and capital with 11,757 inhabitants. While the rural district of Åland had 16,557 inhabitants, 2,045 inhabitants lived in the archipelago which consists of more than 6000 islands (ÅSUB, 2023b). The region comprises of 16 municipalities and the total area in Åland is 13,324 km2 of which 1,554 km2 is land and 11,770 km2 is water (ÅSUB, 2023b).

Map 1: Map of Åland



Illustration: Eeva Turunen

In 2020, Åland's gross domestic product's value in current market prices amounted to about 1,15 billion euros, constituting 38,500 euro/capita (30 400 PPS €). The number of companies in Åland in 2022 was 2,872. The largest companies in 2021 by the number of employees included Viking Line, Ålandsbanken, Trailer-Link and Åland Post. Other significant companies can be mentioned such as Chips Group, Wiklöf Holding and PAF (ÅSUB, 2023a & 2023b).

Historically, international shipping has been the most important source of economic prosperity in the Åland islands. In 2019, shipping accounted for 16 per cent of Åland's GDP, but in 2020 the share dropped to 6 per cent because of the COVID-19 pandemic. Almost 5 per cent of all employed people in Åland worked in shipping in 2020 (7 per cent in 2019). (ÅSUB, 2023a). In 2022 1,4 million travellers visited the island of Åland. This meant over 447,000 guest nights in Åland's hotels, guest homes, campsites and holiday villages. Notably, the guest nights in smaller facilities and private cottages are not registered in this account. (ÅSUB, 2023a)

In 2022, the relative unemployment rate was 4.5 per cent, following the peak year of 2020 with 9.5 per cent relative unemployment due to the pandemic (ÅSUB, 2023b). The educational institutions in Åland offer education in e.g., health care, business education, tourism, and sea and shipping-related education, but also education in other topics such as music, open university, and design can be found. In 2022, Åland had almost 1,100 students at the upper secondary level and almost 500 students at the Åland University of Applied Sciences. More than 200 Ålanders were studying at the upper secondary level outside of Åland, as well as about 1,150 pursuing higher learning abroad. Of those studying outside Åland, 57 per cent studied in Sweden, 39 per cent in Finland, and the remaining 4 per cent are divided over about fifteen other countries. (ÅSUB, 2023a).

3. The implementation of EU Structural Funds Programme (2024-2020)

The Åland Structural Fund Programme "Entrepreneurship and Competence" focused on two priority intervention areas, "Entrepreneurship and Innovation" (ERDF), and "Inclusivity and Competence" (ESF). The Programme's objective was to develop knowledge and improve skills in working life, increase employment, enhance productivity and innovation capacity, renew and diversify Åland's business community, and contribute to a well-educated, equal and active inclusive society (Landskapsregeringen, 2014.) Nordregio was responsible for evaluating the Åland Structural Funds Programme, and published evaluations on three occasions in 2017, 2019 and 2023 (Teräs, 2017; Teräs, Lundgren and Salenius, 2019; Löfving, Lundgren, Teräs and Turunen, 2023).

Within the framework of the Structural Funds Programme, a total of 47 projects were implemented within the ERDF-part (including 29 liquidity support measures) and 25 projects within the ESF until September 2022. The total budget of the Åland Structural Funds Programme amounted to close to 11 million Euro.

Projects implemented under priority intervention area "Entrepreneurship and Innovation" (ERDF):

Åland Sailing Robots (Högskolan på Åland) An autonomous mobile platform that uses wind and solar energy, to support the development of sailing robots.

Business Lab &Business Lab React Åland (Högskolan på Åland) Promotes new entrepreneurship and facilitates commercialising new ideas, especially for young new entrepreneurs.

Finansieringsinstrument: Offentligt riskkapital (Ålands Utveckling Ab) Equity capital or loans to small and medium-sized growth companies based in Åland.

Utveckla framtidens företag – från idé till export (Ålands Näringsliv AB) Advisory concept for entrepreneurs and established companies with new, growth-oriented ideas

Energismart Åland (Ålands Teknologi- och energicentrum). Develop advisory services for energy and information channels, and develop Åland as a test area for smart energy systems.

Utveckla framtidens företag – REACT (Ålands Näringsliv) Support, inspire and develop Åland's companies and and entrepreneurs in the post Covid-19 conditions.

Projects implemented under priority intervention area "Inclusion and skills" (ESF):

Emmaus Returcafé (Emmaus Åland r.f.) Integrating the long-term unemployed into the labour market. **En samordnad sysselsättningsenhet** (Ung resurs r.f.) A co-ordinated employment unit works to make the labour market more accessible for young NEETs and for other long-term unemployed persons through flexible, intensive, and individual support in everyday life.

Flex-In, en flexibel väg till inklusion (Medborgarinstitutet/ Mariehamns stad) Building a course system, for example, the study materials for teaching Swedish to immigrants.

Returhuset – förstudie (Ålands Miljöservice kf) Recirculation: receiving facility, workshop, shop **Mise Textilprojekt** (Ålands Miljöservice kf) Feasibility study: Recirculation for textile, building on Returhuset

Emmaus växtkraft (Emmaus Åland rf) Workshops to increase social participation and employability. **Emmaus växtkraft 2.0** (Emmaus Åland r.f.) Emmaus Växtkraft 2.0 builds on previous projects with the same name but with an increased focus on those affected by the Covis-19 pandemic.

Vi välkomnar fler (Ålands Näringsliv r.f.) Creating conditions for foreign-born people to stay in Åland by utilizing their skills and developing more opportunities for entrepreneurship.

Hållbar utveckling (Ålands Centralandelslag, ÅCA) A quality management project for sustainable organisational mindset

Välkommen in (Ålands Näringsliv) Increasing the competence and the quality of service of business owners and employees.

HÅY – Helhetsundervisning vid Ålands gymnasium (Ålands yrkesgymnasium) New training initiative with digital tools, entrepreneurial thinking and participation in working life.

Kustens mat (Ålands yrkesgymnasium) Offers participants a new course module within artisan food.

VÅG – Vuxenutbildning i Ålands gymnasium (Ålands yrkesgymnasium) Developing sustainable structures for lifelong learning.

Skärgårdsakademin (Företagsam skärgård r.f.) Training entrepreneurs (and municipal employees) primarily in ICT sector.

Kompetensutveckling Inpex 2017–2020 (Inpex Ab) Building competence in sustainable thinking and quality management systems.

Kompetenshöjande och miljöbesparing (Energi och Miljötekniska Föreningen i Landskapet (EMIL)) Raising the skills of employees in various member companies (with the keywords of Safety and environmental safety)

Optinova Academy (Optinova Ab) Training the staff during the pandemic. The aim is to have a more well-trained staff that can meet future challenges.

Åland Gear Up (Högskolan på Åland) Support for the tourism industry, which needs to adapt to the post-pandemic conditions by increasing its competitiveness and maintaining profitability.

En flexibel skola i skärgårdsmiljö (Utbildnings- och kulturavdelningen/Ålands landskapsregering) Creating a system that can ensure qualitatively equal education for all in a local environment and enabling small schools to offer relevant and attractive teaching positions in the different schools.

Vägledning (Utbildnings- och kulturavdelningen/Ålands landskapsregering) Creates a system that ensures equal guidance

Sommarpraktikant 2021 (Ålands Näringsliv r.f.) The project will ensure that 220 young people born between 2002 and 2005 have a summer job during the summer for at least four weeks.

Nya utbildningar inom hållbar energi och teknik (Utbildnings och kulturavdelningen, Utbildningsbyrån) Creating the conditions to provide technical expertise in renewable energy and technology needed to manage the operation, maintenance and service work of, e.g., wind turbines, solar panels and electric cars.

Sommarpraktikant 2022 (Ålands Näringsliv r.f.) As a result of the project, 160 young people born in 2004, 2005 or 2006 will have job during the summer for at least four weeks

Source: Åland Structural Funds Programme 2014-2020

According to the evaluations of Åland Structural Fund Programme by Nordregio, the Programme has played a significant role in supporting regional development on Åland, especially during the pandemic when financial support was provided to people and businesses to help kickstart the recovery of society. According to the provincial government, the programme has reached about 10% of Åland's population through activities and liquidity support. The programme has also contributed to achieving the goals of the Europe 2020 strategy for smart, sustainable, and inclusive growth. By granting projects, the programme has contributed to the development of economic growth, smart solutions and the development of skills in Åland (Löfving, Lundgren, Teräs and Turunen, 2023).

4. Analysis of economic competence in Åland

The aim of this section is to explore economic competence in Åland by examining the implementation of the EU Structural Funds Programme through the lens of the Carlsson and Eliasson framework of economic competence (1991). As a start, the following SWOT analysis has been prepared by the authors with the aim of introducing some key strengths, weaknesses, opportunities, and threats of the Åland and its economy that can be related to capabilities identified in the applied framework: selective or strategic capability, organisational, technical or functional capability, and learning capability.

Table 2: SWOT of Åland economy from the viewpoint of economic competence

Strengths	Weaknesses
-low unemployment*	-isolated "island " economy
- family business culture	-accessibility
-the tradition of entrepreneurship (especially ship-	-low population- issues of critical mass
ping) paves the way for new businesses	-limited number of growth-oriented companies
- trust among the key actors of the innovation system	-low diversification of industries
-relation to Sweden	
Opportunities	Threats
-upgrading the regional innovation ecosystem	-constant lack of qualified labour force
-agility in upgrading skills & competencies	-young talent moving out
-green transition businesses in Åland	-continued isolation
	-limited attraction regarding Invest-in activities

^{*}With the exception of the Covid 19-period when the unemployment was very high. Source: Article authors

With the aim of exploring the economic competence in Åland, the authors have analysed the implementation of the Structural Funds Programme in Åland (2014-2020), following the Carlsson and Eliasson (1991) framework of economic competence. By linking the micro-level to the macro-level, the analysis also focuses on to what extent the Structural Fund Programme and it projects are reflect and sustain the development of the four types of economic competencies identified by Carlsson and Eliasson.

Table 3 illustrates that projects funded within the Åland EU Structural Fund Programme 2014-2020, has contributed to strengthening the economic competence in Åland along all four capability dimensions of the framework. The table furthermore illustrates that the ERDF and ESF, along with React funding during the pandemic, are complementary. While the ERDF funding has a stronger focus on business development activities, the ESF targets skills development and sustainable development of the labour force.

Table 3: Examples of projects financed by Åland Structural Funds Programme contributing to economic competence along the four capability dimensions

Selective or strategic capability	Organisational capability	Technical or functional capability	Learning capability
Utveckla framtidens	Riskkapital (ERDF)	Energismart Åland	Business Lab (ERDF +
företag (ERDF + React)		(ERDF)	React)
	Energismart Åland		
Business Lab (ERDF +	(ERDF)	Optinova (ERDF)	Emmaus returcafé +
React)	Sommarpraktikant		växtkraft (ESF + React)
	2021+ 2022 (ESF)	Hållbar utveckling ÅCA	
Vi välkomnar fler +		(ESF)	Kompetensutveckling
Välkommen in (ESF)			Inpex (ESF)

Source: Åland Structural Funds Programme 2014-2020

The main objectives of the Åland Structural Fund programme "Entrepreneurship and Competence" (2014-2020) were well in line with the **selective or strategic capability** as the programme aimed to develop knowledge and improve skills in working life, enhance productivity and innovation capacity, renew and diversify Åland's business community. Projects such as e.g. Utveckla framtidens företag (ERDF + React), Business Lab (ERDF and React) and Vi välkomnar fler and Välkommen in (ESF) serve as examples of projects aiming to strengthen the selective or strategic capability of Åland.

Regarding **organisational capability** to integrate and organise activities to achieve synergy effects, the objectives of the Åland Structural Fund Programme 2014-2020 were in line, enhancing productivity and innovation capacity, and renewing and diversifying Åland's business community, and contributing to a well-educated, equal and active inclusive society. Projects such as e.g. Riskkapital (ERDF), Energismart Åland (ERDF) and Sommarpraktikant (ESF) serve as examples of projects aiming to strengthen the organisational capability of Åland.

Also to enhance the **technical or functional capability**, the objectives of the Åland Structural Funds Programme seem well suited, i.e. to develop knowledge and improve skills in working life, enhancing productivity and innovation capacity, and renewing and diversifying Åland's business community. Projects such as e.g. Energismart Åland, Optinova Academy and Hållbar utveckling ÅCA illustrate examples of projects aiming to strengthen the technical and functional capability of the businesses and business networks in Åland.

Regarding **learning capabilities**, i.e. to learn from successes and failures, as well as identify and correcting mistakes, and reading and interpreting market signals to take appropriate actions, was also found to be in line with the objectives of the Åland Structural Fund programme with the aims of improving skills, enhancing productivity and innovation capacity and to renew and diversify the business community in Aland. Among the projects supporting the learning capability, we find e.g. Business Lab (ERDF + React), Emmaus returcafé + växtkraft (ESF + React) and Kompetensutveckling Inpex (ESF).

As can be noted, several projects contribute to multiple capability dimensions of economic competence. However, the objective and emphasis of the individual projects is usually within one or two dimensions of economic competence.

It is important to note that economic competence is not limited to single firm development but can relate to any organisation at any level within the economy. This means that macro-level development of the Åland economic competence constitutes the aggregate of the capabilities of all economic actors within the economy, plus the additional capability derived from their effective coordination (systems effect). In the Åland Structural Fund Programme 2014-2020 projects such as e.g. En flexibel skola i skärgårdsmiljö and Vägledning could serve as examples of projects initiated by government actors aiming to strengthen long-term macro-level effect capabilities of Åland, in these cases by supporting primary education in rural areas and gender equality.

Impact of current megatrends on economic competence in Åland

The EU Structural Fund Programme in Åland (2014-2020) was implemented in 2016-2022. Global megatrends such as demographic change, technological change, climate change and globalisation have a strong impact on economic development. While the impact of some of the megatrends such as demographic change, although fundamental, can be recognised only after a longer time period, sudden economic and social shocks such as the Covid-19 pandemic have accelerated the effects of some of the megatrends in the regions. The recent change in the geopolitical situation has implications not only for global trade but also to regions such as e.g. Åland. The megatrends influence economic development and are expected to challenge the prospects for sustainable and inclusive economic growth and are likely to shape both the economy and the labour market in the Nordic countries (Alsos and Dølvik, 2021; ILO 2022). Globalisation, which includes diffusion of new technologies, increase of capital and financial flows, as well as movement of labour force, has contributed to economic growth and new jobs, but also to rising income inequalities and resulted in economic vulnerability to external shocks (ILO, 2008).

Like other Nordic countries and regions, Åland is impacted by the megatrends, such as the demographic challenges related to an ageing population, and Åland is also part of the global economy with shipping and tourism as main sources for the economy. The latest waves of technological change enabled through automation and digitalisation (4th technological revolution), as well as climate change and the green transition, have created both opportunities and challenges, also in Åland. We have identified several examples of how companies tag onto the current megatrends by using their selective and strategic capabilities to find ways of exploiting new business opportunities and thereby promoting and strengthening economic competence in Åland. Two of these examples, Ålandsbanken and OX2, are presented in Table 4.

Table 4: Two current examples of projects increasing economic competence in Åland

Ålandsbanken - a combination of modern bank, regional flavour and increasing sustainability

Sustainability and green bank card: Ålandsbanken has made a long-term commitment to protect the Baltic Sea. In addition to the Baltic Sea Project, Ålandsbanken has developed the Baltic Sea Card, the world's first payment card that measures the carbon footprint of purchases and is made of environmentally friendly materials. Thanks to the innovation, Ålandsbanken has been invited to the UN Conference on the Environment to show a concrete example of implementing the Paris Agreement.

The Baltic Sea Project is an important part of Ålandsbanken's sustainability strategy and sustainability thinking permeates the organization. Ålandsbanken has for example the first eco labelled (Nordic Swan) Finnish income fund, Ålandsbanken's Green Bond ESG.

OX2 - establishing wind power in Åland

OX2 is a company providing large-scale renewable energy solutions, focussing on onshore and offshore wind power. It is one of Europe's leading developers of onshore wind power established with offices across Europe and Australia. The company was founded in 2004 and is listed on the Nasdaq Stockholm Main Market stock exchange. The largest markets are in Finland and Sweden (30% in each country) and in Åland (16%).

While onshore wind power represents 35% of the technology portfolio, offshore wind power represents 43%. Other technologies are solar power 19% and energy storage 3%. OX2 manages the entire value chain, from the acquisition of project rights and greenfield to development, permit application processes, procurement, construction and technical and commercial management.

Currently, the company has two offshore wind projects under development in Åland, Noatun Åland Nord with 340 turbines and estimated 19.5 TWh and Noatun Åland Syd with approx. 310 turbines and an estimated production of 18 TWh.

Source: www.alandsbanken.com and www.OX2.com

As we have seen, the Åland Structural Funds programme "Entrepreneurship and competence" and the subsequently funded projects have contributed to building economic competence in Åland along with the dimensions for economic competence identified by Carlsson and Eliasson.

While the Carlsson and Eliasson framework was elaborated 30 years ago, one may ask if it manages to capture the current megatrends of today. Although the megatrends are not referred to explicitly as the main rationales in the programme, it is evident that the megatrends and sustainable development have had an influence on the programme and even more in the projects. Several of the projects are targeting the changing dynamics in the labour market due to the ageing population and migration aiming at reducing unemployment, filling skills gaps and increasing inclusion in the Åland society. Several projects target skills development including digital skills as well as increased skills and building network capacity to foster export and tourism. The knowledge of the impacts of climate change has increased since the programme started in 2016. However, we also find that several projects aim at reducing environmental harm and increasing knowledge about sustainable development.

Our revisit of Carlsson and Eliasson's framework of economic competence brings us to the conclusion that the framework is still valid. The framework provides a relevant and easily applicable tool for the analysis of economic competence, and it also facilitates the linking between macro-level economic development and micro-level business development.

We also found that while the Eliasson and Carlsson framework does not bring in the notion of trends or megatrends into the analysis explicitly, our analysis of the Åland Structural Funds Programme shows that these can be captured in the current framework. However, in applying the framework it would be beneficial to include the megatrends explicitly rather than implicitly since they form a long-term influence on economic development and should be taken into account in a more explicit way. Including the most important megatrends in the analysis of economic competence and its dimensions, would increase the likelihood that the analysis of economic competence also has a solid long-term perspective.

5. Concluding remarks

The general term competence is a complex term, it is difficult to define and related to the context in which competence is used. In this article, economic competence is defined as the ability to identify, expand, and exploit a set of opportunities (Carlsson and Eliasson, 1991).

In our analysis, we revisited the analytical framework of economic competence by Carlsson and Eliasson) to understand how economic competence is developed in Åland through the implementation of the EU Structural Funds Programme.

The first conclusion is that the concept of economic competence is still highly relevant and significant for the development of firms, regions and states. All four key dimensions of economic competence, i.e. the selective or strategic capability, the organizational capability, the technical or functional capability and the learning capability, were developed through the implementation of the EU Structural Funds programme and the projects. It is important to recognize that the role of economic capability at the macro level in Åland is not only based on the aggregated performance of individual firms, economic actors and projects, but need to take into consideration the systems effect (coordination). We found that several of the projects funded by the Åland Structural Funds Programme (e.g. Utveckla framtidens företag) aim at developing new knowledge and networks targeting both individual businesses and projects, and contributing to the positive systems effect in Åland.

The Åland Structural Fund Programme has contributed to building the economic competence in Åland in many positive ways. However, there are also exceptions where the projects failed to meet the targets, and where the lack of economic competence may have been part of the explanation for the failure. As an example, the setup of a regional risk capital fund that was one of the prioritised ERDF projects, was closed down earlier than planned due to e.g. insufficient number of projects meeting the set criteria and lack of interest.

Although the Carlsson and Eliasson framework proves to be relevant for analysing economic competence in a regional context, such as Åland, we also find that it to a large extent focuses on what is key to the micro-level business perspective and only to a limited degree captures what is relevant to the macro-level, such as the system's effect and integrating the megatrends into the analysis. The megatrends such as demographic change, digitalisation, climate change and globalisation currently set the scene for much of economic growth and development. Recognizing those challenges is key to the development of not only innovative and smart regions, but also sustainable and inclusive societies. Yet another element that is not expressively captured by the Carlsson and Eliasson framework of economic competence, is the ability to deal with the multi-level governance contexts (i.e. firm level, regional level, national level, EU/ international level). To be able to orientate in this context is important not only for individual firms and economic actors, but also for macro-level actors aiming at achieving systems effect through coordination both horizontally and vertically. This comes close to the notions in the literature of territorial governance and place-based leadership, where the territory is at the centre when developing policy and improving regional development (Moodie, Wøien Meijer, Salenius and Kull, 2023).

6. Recommendations and key learning points for policymakers

Finally, we would like to provide some recommendations and insights based on the analysis of the implementation of the EU Structural Funds Programme (2014-2020) in Åland through the lens of economic competence and the framework elaborated by Carlsson and Eliasson

Our study reveals that the analytical framework of economic competence elaborated by Carlsson and Eliasson in 1991 is still of relevance, but would deserve a stronger emphasis on current megatrends, especially sustainability. As the mega-trends have substantial long-term effects and sustainability has become a mainstream element in all economic activities in recent decades, this should be further reflected in the concept of economic competence. We recommend **that the concept of economic competence is broadened to include also the megatrends**, and in Åland in particular sustainability should be included.

The four types of capabilities of economic competence take to some extent into account the issues of engaging in collaboration to reach inclusivity and systems effects. We encourage **continuous attention to inclusivity and engagement of many different stakeholder groups, to unlock the full potential of economic competence** in Åland. This would mean expanding the networks beyond "the usual suspects" (e.g. key companies, educational and research institutes).

We also recommend an increase of competence to take advantage of the horizontal and vertical multi-level governance context and engage with actors and networks regionally, nationally and internationally to find solutions for developing economic competence that is both place-based and based on territorial governance.

The Åland Structural Funds Programme include several projects that contribute to selective or strategic competence. Åland has shown the ability to make innovative choices regarding markets, products, and technologies. Moreover, Åland has engaged individuals and organisations in entrepreneurial activity. However, we recommend that Åland **pays attention to the ability to attract talent and a competent labour force**. In an ever-increasing competition of talent, this is particularly important for small and remote economies.

Åland has a number of innovative and growth-oriented companies with a track record of advanced organisational competence, for example, Ålandsbanken, PAF and Chips. The Åland Structural Funds Programme include several projects and initiatives that enable the transfer of knowledge and contribute to organisational competence. During the Covid 19 pandemic, the Åland Government with assistance from the European Commission proved a strong agility to redirect funding towards urgent needs related to the SME sector and the labour market. Based on our analysis, we recommend measures to **transfer good practices of organisational competence from large and experienced economic actors to the SME sector**. It is however worth noting that organisational ability includes also tacit knowledge which is difficult to transfer with formal training programs and networking activities and that the personal experience of successful entrepreneurs plays a significant role.

The track record of the most successful companies in Åland shows advanced technical or functional capability regarding R&D, engineering, production, marketing, service and finance. The Åland Structural Fund Programme include several projects that contribute to technical or functional competence. A key challenge, and a generic problem, is to increase the technical and functional capability of SMEs and start-up companies. We recommend Åland to pay extra attention to participating in international networks (Finland, Sweden, Baltic Sea Region & EU) to further strengthen technical or functional competence in Åland.

Through the success of the shipping industry, Åland has proven to have the ability to create new competence internally through innovations. The Åland Structural Funds Programme include several projects that contribute to advancing the learning capability. Due to the limited population in Åland, it is challenging to create critical mass in several fields of economy. For this reason, we recommend an outward-oriented attitude towards international contacts and networks as crucial for increasing learning capability in Åland.

In order not only to aggregate the economic competence of single firms and economic actors in Åland, but also make full use of the additional capability from effective coordination (systems effect), Åland is well positioned thanks to the role of the Government of Åland who is actively monitoring the regional development. The Åland Structural Funds Programme (2014-2020) has been coordinated by the Åland Government which has a key role in releasing the system's effects. As expressed by Carlsson and Eliasson (1991), macro-level coordination consists of rules, guidance and incentives that contribute to the development of economic competence. We recommend that Åland pays specific attention to **providing relevant incentives that motivate companies to further innovate and invest in Åland**.

References

- Alsos, K., & Dølvik, J.E. (2021). The future of work in the Nordic countries opportunities and challenges for the Nordic working life models. Nordic Council of Ministers. https://norden.diva-portal.org/smash/get/diva2:1552808/FULLTEXT02.pdf
- Carlsson, B. and Eliasson, G. (1991) "The Nature and Importance of Economic Competence", IUI Working Paper, No. 294, The Research Institute of Industrial Economics (IUI), Stockholm, https://www.econstor.eu/bitstream/10419/95090/1/wp294.pdf
- Glaeser, E. (2012) Triumph of the city. Pan Books
- ILO. (2008). "ILO Declaration on Social Justice for a Fair Globalization". Geneva. Retrieved from https://wcms.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/genericdocument/wcms.099766.pdf
- ILO. (2022). World employment and social outlook: trends 2022 (922035697X). Retrieved from https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms834081.pdf
- Isard, W- (1949). "The General Theory of Location and Space-Economy", The Quarterly Journal of Economics, Volume 63, Issue 4, November 1949, Pages 476–506, https://doi.org/10.2307/1882135
- Kaiser, T., Oberrauch, L., and Seeber, G. (2020). "Measuring economic competence of secondary school students in Germany", Journal of Economic Education, vol 51, issue 3-4, p. 227-242. DOI: 10.1080/00220485.2020.1804504
- Landskapsregeringen Åland (2014.) Ålands strukturfondsprogram 2014-2020. https://www.regeringen.ax/sites/default/files/attachments/page/programme_2014fi05m2op001_6_1_sv.pdf
- Löfving, L., Lundgren, A., Teräs, J. and Turunen, E. (2023). Ålands strukturfondsprogram 2014-2020. Utvärderarnas slutrapport per 31.12.2022. Nordregio report: 2023:1. https://www.regeringen.ax/sites/default/files/attachments/page/%C3%85land%20strukturfondsprogram%202014-2020.%20Slututv%C3%A4rderingsrapport%202022
 0.pdf
- Mathews, J.A. (2003). "Competitive dynamics and economic learning: An extended resource-based view", Industrial and Corporate Change 12 (1), pp. 115-145. https://doi.org/10.1093/icc/12.1.115
- Mayr, S., Mitter, C., Kücher, A., and Duller, C. (2020). "Entrepreneur characteristics and differences in reasons for business failure: evidence from bankrupt Austrian SMEs", Journal of small business and Entrepreneurship. Pp 1-20. DOI: 10.1080/08276331.2020.1786647
- Mazzucati, M. (2011). "The entrepreneurial state". Soundings, Number 49. Winter 2011, pp. 131-142 (12). Lawrence and Wishart. DOI: https://doi.org/10.3898/136266211798411183
- Moodie, J.R, Wøien Meijer, M., Salenius, V. and Kull, M. (2023) "Territorial governance and Smart Specialisation: empowering the sub-national level in EU regional policy", Territory, Politics, Governance, 11:7, 1392-1412, DOI: 10.1080/21622671.2021.1905542
- North, D. (1990) Institutions, Institutional Change and Economic Performance. 27th printing 2017. Clays St Ives: Cambridge University Press
- Sigfried, C. and Wuttke, E. (2021) "Development of economic competence of students at general grammar schools through a non-formal opportunity to learn through experts", Citizenship, Social and Economic Education, 20(2), pp.122-142. https://doi.org/10.1177/20471734211036462
- Teräs, J. (2017) Ålands strukturfondsprogram 2014-2020. Utvärderarnas första delrapport per 31.12.2016. Stockholm: Nordregio https://www.regeringen.ax/sites/default/files/attachments/page/str fond version final nordregio med annex 2 0.pdf
- Teräs, J., Lundgren, A. and Salenius, V. (2019) Ålands strukturfondsprogram 2014-2020. Utvärderarnas andra delrapport per 31.12.2018. Nordregio report 2019:7. https://www.regeringen.ax/sites/default/files/attachments/page/utvardering_alands_strukturfondsprogram_version_higher_resolution_may_31_2019_.pdf

- Wennberg, K., Sandström, C. (2022) "Introduction" in Wennberg, K., Sandström, C. (eds). Questioning the Entrepreneurial State. International Studies in Entrepreneurship, vol 53. Springer, Cham. https://doi.org/10.1007/978-3-030-94273-1_1
- Williamson, O.E. (2000) "The new institutional economics: Taking Stock, Looking Ahead", Journal of Economic Literature, VOL XXXVIII:595-613.DOI: 10.1257/jel.38.3.595
- ÅSUB (2023a) Åland FAQ [Online]. Available at: https://www.asub.ax/en/aland-faq (Accessed: 31 October 2023)
- ÅSUB (2023b) *Åland in Figures 2023*. [Online]. Available at: https://www.asub.ax/sites/default/files/media/document/%C3%85land%20in%20figures%202023 0.pdf (Accessed: 31 October 2023)

Earlier publications in the BSR Policy Briefing series by Centrum Balticum Foundation

BSR Policy Briefing 5/2023:	"The green transformation of the European maritime sector: Six tricks to support sustainable cruise shipbuilding" by Elisa Aro and Eini Haaja
BSR Policy Briefing 4/2023:	"Iron curtain on Belarus' western border: Does the crisis in Minsk's relations with its Baltic neighbors threaten Belarusian independence?" by Kamil Kłysiński
BSR Policy Briefing 3/2023:	"The economic interaction between the USA and the littoral states of the Baltic Sea" by Alari Purju
BSR Policy Briefing 2/2023:	"The Resource Balanced Economy to meet the twin challenges of phasing out fossil fuel energy and self-sufficient supply of raw materials" by Simon P. Michaux
BSR Policy Briefing 1/2023:	"Baltic Sea region security of supply after Russia's invasion on Ukraine: The past is just a prologue" by Anna Mikulska and Luke Min
BSR Policy Briefing 11/2022	: "Sanctions against Russia, their effectiveness and impacts on Finland" by Hanna Mäkinen
BSR Policy Briefing 10/2022:	"The Baltic Sea islands and their impact on the regional security" by Zdzislaw Sliwa, Hans Helseth and Viljar Veebel
BSR Policy Briefing 9/2022:	"Willingness to fight for Ukraine: Lessons to the Baltic States" by Jānis Bērziņš and Victoria Vdovychenko
BSR Policy Briefing 8/2022:	"Chinese investment in the Baltic Sea region: Main characteristics and policy challenges" by Kálmán Kalotay and Ágnes Szunomár
BSR Policy Briefing 7/2022:	"NATO and security in the Baltic Sea region" by Klaus Wittmann
BSR Policy Briefing 6/2022:	"The Ostrovets Nuclear Power Plant: Energy independence on paper – isolation in practice" by Justinas Juozaitis
BSR Policy Briefing 5/2022:	"Aspects of blue economy in the Baltic Sea region" by Riitta Pöntynen
BSR Policy Briefing 4/2022:	"Leveraging bioeconomy development for climate change mitigation and adaptation in the Baltic Sea Region" by Alisher Mirzabaev
BSR Policy Briefing 3/2022:	"Russia's renewable energy sector: Policy recommendations" by Liliana Proskuryakova
BSR Policy Briefing 2/2022:	"The circular economy in St. Petersburg" by Yury Nurulin, Olga Kalchenko and Inga Skvortsova
BSR Policy Briefing 1/2022:	"Energy dimension of green growth in Kaliningrad" by Artur Usanov
BSR Policy Briefing 11/2021:	: "Mortality in Russia during the pandemic in 2020 and in the first half of 2021" by Marina Lifshits
BSR Policy Briefing 10/2021:	: "Building security in the Baltic Sea region: Military perspective and NATO approach" by Andrzej Fałkowski
BSR Policy Briefing 9/2021:	"The "Swedish model" in the COVID-19 pandemic" by Torbjörn Becker, Jesper Roine, and Svante Strömberg
BSR Policy Briefing 8/2021:	"Lithuania's response to the COVID-19: Two stages, mixed results" by Linas Kojala
BSR Policy Briefing 7/2021:	"The Kaliningrad Region and COVID-19" by Vitaly Petrovich Zhdanov
BSR Policy Briefing 6/2021:	"Polish struggle against COVID-19" by Bartosz Arłukowicz
BSR Policy Briefing 5/2021:	"COVID-19 and Finland: Not good news for fiscal sustainability" by Jouko Vilmunen
BSR Policy Briefing 4/2021:	"Latvia and COVID-19: Preliminary impressions" by Dzintars Mozgis and Normunds Vaivads
BSR Policy Briefing 3/2021:	"The German economy and the Corona shock – An acceleration of structural changes?" by Michael Grömling
BSR Policy Briefing 2/2021:	"Contemporary trends and future scenarios for the Greater St. Petersburg region" by Nikita Lisitsyn

BSR Policy Briefing 1/2021:	"The COVID-19 in Estonia: Governance of the Health Care System, spread of the disease, regulations and impact on economy" by Alari Purju
BSR Policy Briefing 6/2020:	"Leadership in Turbulent Times: Germany and the Future of Europe" by Kimmo Elo
BSR Policy Briefing 5/2020:	"Denmark and COVID-19" by Marin A. Marinov
BSR Policy Briefing 4/2020:	"Lithuania and Belarus: Will Lithuania become Belarus' "Iceland"?" by Ruslanas Iržikevičius
BSR Policy Briefing 3/2020:	"The corona pandemic and its impact on the economic development of the Baltic Sea region in 2020" by Kari Liuhto
BSR Policy Briefing 2/2020:	"Increasing Eco-efficiency via Digitalisation in Maritime Industry in The Baltic Sea Region: Policy Support through Carrots or Sticks?" by Milla Harju
BSR Policy Briefing 1/2020:	"The forest industry around the Baltic Sea region: Future challenges and opportunities" edited by Kari Liuhto
BSR Policy Briefing 9/2019:	"The Baltic states and security in the Baltic Sea region: Dark clouds in blue sky" by Kristi Raik
BSR Policy Briefing 8/2019:	"Creation of regional gas market in the Baltic States and Finland: Challenges and opportunities" by Tadas Jakstas
BSR Policy Briefing 7/2019:	"US FDI in the Baltic Sea region: The state of American investment and selected challenges" by Kalman Kalotay
BSR Policy Briefing 6/2019:	"Germany and the Baltic Sea region: political and security interests" by Tobias Etzold
BSR Policy Briefing 5/2019:	"Government support for the Russian shipbuilding industry: Policy priorities and budgetary allocations" by Elena Efimova and Sergei Sutyrin
BSR Policy Briefing 4/2019:	"Finnish tonnage as the implementer for security of seaborne supply in maritime transport" by Bo Österlund
BSR Policy Briefing 3/2019:	"The Estonian-Finnish economic cooperation" by Alari Purju
BSR Policy Briefing 2/2019:	"Bioeconomy Policies in the BSR" by Torfi Jóhannesson
BSR Policy Briefing 1/2019:	"Cooperation between Saint-Petersburg and Finland" by Stanislav Tkachenko
BSR Policy Briefing 10/2018:	"The sanctions against Russia. Are there winners and losers around the Baltic Sea?" by Susanne Oxenstierna
BSR Policy Briefing 9/2018:	"Future of Public Sector Governance and Digitalization" by Meelis Kitsing
BSR Policy Briefing 8/2018:	"American Policy Towards the Baltic States" by Stephen Blank
BSR Policy Briefing 7/2018:	"Russian direct and indirect investment in the Baltic Sea region" by Alexey Kuznetsov
BSR Policy Briefing 6/2018:	"Foreign economic relations of the Kaliningrad region" by Vitaliy Zhdanov, Vladimir Kuzin and Mikhail Pliukhin
BSR Policy Briefing 5/2018:	"Why is Russia seeking to ignite a civil war in the European Union and how to stop it?" by Ruslanas Iržikevičius
BSR Policy Briefing 4/2018:	"On the paradoxes of foreign expansion: the experience of Polish firms" by Piotr Trąpczyński and Krystian Barłożewski
BSR Policy Briefing 3/2018:	"The bioeconomy in the Baltic Sea region" by Anna Berlina
BSR Policy Briefing 2/2018:	"Russia vis-à-vis Ukraine: On Some Economic Costs" by Sergey Kulik
BSR Policy Briefing 1/2018:	"Chinese Direct Investment in the Baltic Sea Region" by Jean-Marc F. Blanchard
BSR Policy Briefing 5/2017:	"The economic impact of China on the Baltic Sea region" by Jean-Paul Larçon
BSR Policy Briefing 4/2017:	"National innovation and smart specialisation governance in the Baltic Sea region" edited by Zane Šime
BSR Policy Briefing 3/2017:	"The economic state of the Baltic Sea region" edited by Kari Liuhto
BSR Policy Briefing 2/2017:	"Russia's foreign relations and the Baltic Sea region" by Sergey Kulik
BSR Policy Briefing 1/2017:	"Russia and the security in the Baltic Sea region" by Justyna Gotkowska & Piotr Szymański
BSR Policy Briefing 2/2016:	"The EU-Russia relations and their reflections in the Baltic Sea region" Stanislav L. Tkachenko

BSR Policy Briefing 1/2016:	"The maritime cluster in the Baltic Sea region and beyond" edited by Kari Liuhto
BSR Policy Briefing 1/2015:	"Natural gas revolution and the Baltic Sea region" edited by Kari Liuhto
BSR Policy Briefing 4/2014:	"A Russian Sudden Stop or Just a Slippery Oil Slope to Stagnation?" by Torbjörn Becker
BSR Policy Briefing 3/2014:	"Poland and Russia in the Baltic Sea Region: doomed for the confrontation?" by Adam Balcer
BSR Policy Briefing 2/2014:	"Energy security in Kaliningrad and geopolitics" by Artur Usanov and Alexander Kharin
BSR Policy Briefing 1/2014:	"The Baltic Sea region 2014: Ten policy-oriented articles from scholars of the university of Turku edited by Kari Liuhto
BSR Policy Briefing 4/2013:	"The Kaliningrad nuclear power plant project and its regional ramifications" by Leszek Jesien and Łukasz Tolak
BSR Policy Briefing 3/2013:	"Renewable Energy Sources in Finland and Russia - a review" by Irina Kirpichnikova and Pekka Sulamaa
BSR Policy Briefing 2/2013:	"Russia's accesion to the WTO: possible impact on competitiveness of domestic companies" by Sergey Sutyrin and Olga Trofimenko
BSR Policy Briefing 1/2013:	"Mare Nostrum from Mare Clausum via Mare Sovieticum to Mare Liberum - The process of



www.centrumbalticum.org/en