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In memory of Professor Nikolaos Konsolas

Professor Emeritus Nikos Konsolas served as Professor of Regional Science at the Department of Economic & Regional Development at Panteion University of Social and Political Sciences. Over the course of his academic career, he acted as Head of the Department and Director of the Postgraduate Program in Regional Development, which he helped to establish, and as long-term Director of the Institute of Regional Development at Panteion University, where he was in charge of many important development studies and projects, including the EU programs Regional Innovation Strategies (RIS, RIS+, RISE).

In addition to his academic duties, Professor Konsolas held prominent positions in the public and private sectors. He was a member of the Board of Directors of ETVA Bank, President of the Industrial Areas Company VIPETVA, and President of Pharmetrica, the research company of the National Pharmaceutical Agency of Greece. He also managed a wide range of research projects on behalf of banks, public enterprises, and private companies.

Professor Konsolas also developed extensive collaborations with several Greek government ministries, among them the Ministries of National Economy, Development, Industry, and Education, as well as with the Regions of South Aegean, North Aegean, Peloponnese, Central Greece, Thessaly, and Western Greece. His work extended to several Prefectures and Municipalities in Greece, including many island municipalities such as Rhodes, Kalymnos, Leros, Naxos, Aegina, Chios, and Corfu.

Moreover, he served as President of the Greek Section of the European Regional Science Association and as a Board Member of the European Regional Science Association. Overall, Professor Nikos Konsolas made profound and lasting contributions to the research fields of Regional and Urban Development, Industrial Policy, and Industrial Location. Through his extensive knowledge, experience, and dedication, he paved the way for hundreds of researchers and played a crucial role in establishing the discipline of Regional Science in Greece.

Nikos Konsolas was not only an outstanding scholar and a distinguished university professor, but also a remarkable individual, principled, kind and generous, who shared his admirable qualities with all of us who were fortunate to know him.

May we all in the research and academic community in Greece

Keep his memory and legacy alive!

The Editorial Team

Connecting the dots: Museum networking as a tool for local development. The case of the museums in the Southern Aegean islands

Abstract:

This paper examines the role of museum networks in contributing to local development, with a particular focus on the Southern Aegean islands. Following a brief overview of the concept of museum networks, a presentation of local museums' main characteristics is provided. These typically small and specialized institutions often face considerable challenges in their operations, including financial constraints, limited staff, and minimal use of digital tools. However, they play an important role in preserving community heritage and identity. Forming museum networks offers a way to address some of their problems through resource sharing, knowledge exchange, and collaborative initiatives. This kind of networking also benefits local communities by strengthening public engagement, offering educational opportunities, and boosting cultural tourism.

The second part of the study concentrates on non-public museums in the Southern Aegean islands. Notable is the thematic diversity of their collections, closely tied to the identity and history of these islands. Based on the evidence presented concerning museum networking in small towns, the study argues that if these museums establish networks on particular islands, they could achieve similar benefits in heritage preservation and enhancement, tourism growth, and sustainable development. To create such networks, some key strategies are outlined, including a governance framework, funding sources, technology adoption, and tourism partnerships.

Key-words: Southern Aegean islands; local museums; museum networks; community engagement

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1. Introduction

Local museums are often some of the most important cultural landmarks in small towns, dedicated to preserving and showcasing the history, culture, and heritage of their respective regions. Traditionally, they were seen as a source of pride, guardians of local heritage and identity, and followed standard curatorial approaches. However, from the mid-20th century onward, the museum world began to change, shaped by broader shifts in society, the economy, and technology. As part of this transformation, hundreds of new local museums opened around the world, many focusing on science, technology, or natural history. This boom in new museums and major upgrades to existing ones shows a growing awareness of the role museums can play in tourism and community development. Small local museums not only grew in number, but thanks to new funding opportunities and advances in technology, many were able to improve their operations and modernize the way they present their exhibitions.

In today's fast-moving, multicultural world, museums need to keep evolving to stay relevant. More than ever, they are looking to involve their communities, tackle complex social and political topics, and play an active role in shaping the cultural landscape. At the same time, digital tools have made it easier for museums to stay in touch, share ideas, and learn from one another. This has made the value of working together, through a collaborative and coordinated structure, such as a museum network, clearer than ever.

This paper aims to explore the potential of local museum networks, assessing their capabilities and advantages to identify opportunities for museums in the Southern Aegean islands to establish such networks. It examines the benefits of working together, the challenges they may encounter, and the basic strategic steps for their successful implementation.

2. The concept of museum networks

Museum networks emerged in the late 20th century, particularly during the 1970s and 1980s, on the initiative of international cultural organizations and major museums. As museums evolved and began to play more prominent roles in their communities, the idea of working together, rather than in isolation, started to make more sense. Collaboration offered a way to achieve higher visibility and prestige, make better use of resources, and improve quality standards (Bagdali, 2003).

Various definitions have been proposed for museum networks or partnerships. One of the most comprehensive is provided by Baroncelli and Boari (2001:136): Museum networks refer to "organizations founded on repeat relationships between single museums, geared to the common management of tangible resources earmarked for heritage, cultural development, or administrative purposes. Some specialized services (relating, for example, to technical assistance, internal or external communications, education, work with the public, etc.) are delivered (or coordinated) by a single managerial structure serving all the museums in a network. However, each individual museum remains fully in charge of its other activities, especially the scientific planning of exhibitions, and museographic activities".

Tulliach (2017:19) summarizes the basic points of a partnership between museums and/or cultural organizations: - establishing different levels of integration between the institutions, - cooperating on a joint cause, - producing mutual benefit and mutual commitment of resources, and - transferring creative skills. According to Bagdadli (2003), when becoming part of a museum network, three main aspects are considered: economic efficiency, sharing common values and similarities, and availability of complementary resources.

Numerous studies (e.g., Bagdadli, 2001; Maffei, 2012; Scrofani and Ruggiero, 2013; Tulliach, 2017) have demonstrated the substantial benefits that museum networks can provide not just for the museums, but also to their local communities. As Loach (2017) aptly states, "The future of museums will be based mainly on different types of collaboration with other

museums or institutions, with the main purpose being to develop resilient museums with strong organizational foundations.”

The recognition of networking value led many museums to connect with a wide range of similar cultural organizations to establish viable local, regional, national, and international networks. Most of these networks have been operating successfully, adapting to the changing demands of the museum sector and society.

3. Local Museum Networks

3.1. Characteristics of Local Museums

Local museums vary significantly in both scale and specialization compared to their larger counterparts in big cities. Usually small in size, they center their collections on themes derived from local or regional history, art, ethnography, and archaeology. They frequently operate within limited exhibition spaces, often with inadequate facilities, make minimal use of digital technology, and have a shortage of staff and resources. As a result, they find some difficulty in being competitive and attractive to visitors and tourists (Cerquetti and Mantella, 2015).

Yet despite these limitations, local museums hold a particularly important position in their communities as custodians of local history and culture, two major elements of any community's identity. Residents, proud of these institutions, often donate heirlooms to the collections and offer financial assistance or volunteer work (Cecalupo, 2017).

Small museums have also demonstrated their ability to drive economic growth. As part of the town's attractions, they can enhance tourism and create job opportunities. However, their financial impact depends on their size and available resources. Studies have shown that several small local museums, still unknown outside the local context, do not easily become tourist destinations, as they have not yet reached their full potential (Cecalupo, 2017; OECD/ICOM, 2019).

3.2. Advantages and challenges of museum networking

To deal with everyday challenges, many local museums have started forming networks, some officially, others more informally. By teaming up and sharing resources and expertise, museums can handle common problems more easily. This kind of collaboration might include co-hosting exhibitions, joint staff training, organizing events, or designing marketing campaigns. Working together also helps smaller, lesser-known museums get more attention. By tapping into the creativity and experience of bigger or better-funded partners, they can enhance their attractiveness and reach new audiences (Yarrow et al., 2008; Tulliach, 2017; Cecalupo, 2017).

There are financial advantages too. Networking can help museums cut down on operational costs, open up new funding opportunities, and more. It also brings wider benefits to the community, especially through increased tourism (Baroncelli & Boari, 2001). An interesting study on museum networks conducted by Maffei (2012) provides a series of explanatory examples of economies of scale, scope, and variety that can be generated through sharing resources, activities, and spaces between museums.

Although networking offers many advantages to a cultural organization, some difficulties should be overcome. Several studies have been conducted to assess the performance of museum networks. Borin (2015) identified several problems, including diverse administrative and bureaucratic domains and sectors, technical and administrative issues, a lack of managerial tools (such as financial management tools), and a shortage of human resources and professional profiles. A survey carried out in 2011 in a large museum network in the Marche Region of Italy showed that museum networks have an important role in promoting local cultural heritage and raising awareness concerning local museums but have not gone beyond the simple goal of marketing communication through events, guided tours,

brochures, and guides and are still too weak to be able to succeed in innovating the services their museums offer (Cerquetti and Mantella, 2015; Cerquetti, 2019). Further difficulties arise from inadequate planning, such as incompatibility in the members' administrative frameworks and operational practices, a partner failing to fulfill commitments, unequal participation, or one institution dominating the collaboration (Yarrow et al., 2008; Tulliach, 2017). Additionally, adhering to shared standards and regulations may be difficult for smaller institutions with limited resources.

3.3. Benefits for local communities

The positive outcomes that efficient museum networks can achieve for the communities are mainly related to three sectors: community engagement, education, and tourism development.

3.3.1. Community engagement

As already mentioned in the introduction, museums today give priority to social inclusion and the community's active participation. The ICOM Code of Ethics states that "the promotion of local heritage and the subsequent interaction with the inhabitants are two of the main duties of museums, related to their educational role. Museums need to be at the service of their community" (ICOM 2004: Art. 4). In line with this, museums apply various strategies, such as organizing collaborative public events and educational outreach programs, and encouraging volunteer participation. Co-creating projects provides a platform for community engagement and dialogue, motivating people to express themselves freely and gain confidence in their ideas (Simon, 2010; Iacob, 2021).

With social cohesion as an important goal, networks encourage accessibility and participation in various activities for persons with disabilities and marginalized groups, such as immigrants (Dodd and Sandell, 2001; Papadimitriou et al., 2017). This participatory approach strengthens community bonds and creates a mutually enriching relationship between museums and the public. (Iacob, 2021).

3.3.2. Education and learning

These days, education is seen as one of the core missions of museums, an integral part of their identity (Hooper-Greenhill, 2007). Museums are encouraged to rethink how they approach learning, redesign their educational programs, and determine how to better measure their impact. Larger and mid-sized institutions usually have the capacity to do this. But for smaller museums, it is often tough to keep up, as they lack the necessary staff or resources. Becoming part of a network can give even the smallest museums a chance to get involved in joint projects and offer engaging learning opportunities they would not be able to manage alone.

Museum networks often partner with schools, universities, and other organizations to create a wide range of educational activities, workshops, guided tours, hands-on experiences, interactive displays, and more. These kinds of programs support formal education, promote lifelong learning, and help people connect more deeply with local history and culture. In doing so, museums become lively spaces for learning, creativity, and connection (OECD/ICOM, 2019). Technology plays a big part in this shift, too. Tools like virtual and augmented reality or mobile apps can make exhibits more engaging, especially for younger visitors. They allow museums to offer immersive, interactive experiences that spark curiosity, encourage creativity, and bring history to life in new and exciting ways.

3.3.3. Cultural tourism

Museum networks can play a key role in helping a town attract cultural tourists. By working together with local authorities and cultural organizations, they can offer a full calendar of events, like joint exhibitions, themed festivals, and other popular activities. More importantly,

they can help develop fresh and creative cultural tourism experiences aimed at visitors who travel specifically to explore the unique character of a place.

These networks are well-positioned to meet that demand, since many of a destination's standout cultural features are found in its local museums. One great way to help tourists connect with these museums is through a "museum route", a planned path that takes visitors through a series of museums, each highlighting specific exhibits or themes. This kind of experience makes it easier and more engaging for visitors to explore local culture. In turn, this can put small towns on the map as appealing new destinations, giving a boost to the local economy (Moulin & Boniface, 2001; Konsola, 2011).

4. Museums in the Islands of the Southern Aegean

The South Aegean region of Greece, which consists of the Cyclades and the Dodecanese island groups in the central and southeastern Aegean Sea, is rich in history and culture, as evidenced by its diverse museums celebrating each island's unique heritage. Public-owned Archaeological and Byzantine Museums are, undoubtedly, the most numerous and of the greatest importance. They are not covered in this study, though, as it focuses on private museums. The latter, which are owned by individuals, organizations, or private entities, differ greatly in the systems of ownership, resources, and governance, as well as in their stated mission.

Almost all the islands, except for a few very small ones, have at least one museum, and many have several. Of interest to this study are the islands with three or more private museums, regardless of their type and size, making them potential candidates for future collaboration through formal or informal networks.

4.1. Typology of collections

One of the defining characteristics of non-archaeological museums in the Aegean islands is the thematic diversity of their collections, each closely connected to the identity and history of the respective island. The most common types are:

- *Folklore Museums* include exhibits of folk art, such as pottery, textiles, costumes, metalwork, furniture, etc., typical of life on the islands during the 18th and 19th centuries.

- *Historical Museums* show objects related to specific historical events that occurred during various periods, such as those of the Ottoman rule, the Venetian and the Italian occupations, as well as World War II.

- *Maritime Museums*. Given the islands' seafaring history through the ages, these museums often display miniature models of ships, naval instruments, maps, artifacts of maritime trade, and documents related to naval history.

- *Modern Art Museums*. A limited number of islands have museums or galleries devoted to collecting and displaying works of art (mostly paintings and sculptures) of artists of the two previous centuries, as well as living artists, Greek or foreign.

- *Ecclesiastical Museums* feature collections of icons, gospels, old manuscripts, clergy vestments, vessels, and other religious objects relevant to the Orthodox Church's divine liturgy.

- *Natural History Museums* highlight the islands' biodiversity with displays of local flora, fauna, minerals, and fossils. Notably, Nisyros hosts a unique Volcanological Museum.

- *Specialized Museums*: Other museums focus on specific themes, such as industrial history, the life of a notable person, or the history and applications of commodities like wine, olive oil, marble, or pottery.

4.2. Main features

The museums of the Southern Aegean islands vary widely in terms of size, building quality, facilities, ownership status, funding sources, staffing, and operational structures, reflecting the

unique conditions of each institution. In the following paragraphs, some of the key characteristics are presented. These data stem to some extent from research conducted in 2006 on 51 local museums across the country, rather than exclusively within the Aegean islands (Dermitzaki et al., 2009; Doxanaki et al., 2012). Since this research is based on data collected two decades ago, the author found it helpful to include certain additional insights from recent visits to several museums in the region and visits to the relevant websites.

4.2.1. Ownership and Organizational Structure

Museums in the Southern Aegean islands operate under diverse ownership models. Many are municipal institutions, while others are privately owned, often established by individuals, foundations, or local associations. Ecclesiastical museums are church-owned.

In terms of organizational structure, larger museums are typically governed by a board of directors, whereas most are managed by curatorial staff. Interestingly, a significant number of museums operate with just one person or a small team of 2–5 paid staff members handling multiple responsibilities (Doxanaki et al., 2012). As a result, these institutions often make use of the support of volunteers.

4.2.2. Museum buildings and facilities

The condition of the buildings and the quality of facilities and services in local museums vary greatly. Modern, purpose-built museum buildings are few. Many more are old, some dating back to the 19th century. They were not originally built as museums but as homes, administrative buildings, schools, or industrial spaces. The adaptive reuse of these buildings has proved innovative and successful in many cases; for instance, bunkers constructed during WW2 were turned into War Museums in Leros and Milos. There are also cases where a restored old factory serves as a museum that exhibits its original industrial function. A good example is the Hermoupolis Textile Museum in Syros.

Regarding visitor facilities, most local museums offer only basic amenities. Museum shops and cafes are found in larger museums that provide lecture halls and spaces for educational activities. Modern interpretive tools, such as wall display panels, videos, multimedia displays, and audio guides, remain limited, with most museums relying on traditional methods like brochures and guidebooks (Dermitzaki et al., 2009; Doxanaki et al., 2012).

4.2.3. Funding and Financial Challenges

Non-archaeological museums rely on various funding sources, including support from local and regional governments, private donations, sponsorships, grants, and collaborative partnerships. A few are fortunate enough to have long-standing endowments. Some museums generate modest income from admission fees, gift shop sales, and cafés. However, most offer free entry or charge only a nominal fee (Doxanaki et al., 2012).

For many smaller museums, the financial constraints affect their ability to improve facilities, update exhibitions, and implement effective marketing strategies. Very often, funding shortages prevent them from integrating new technologies, and in several cases, even a website is lacking!

That said, several larger museums in the South Aegean region operate efficiently, meeting essential standards in exhibition spaces, collection presentation, technological integration, specialized staffing, and visitor facilities. Notable examples include the Art Museums in Andros and Rhodes, the Museum of Marble Crafts in Tinos, the Industrial Museum in Syros, the Milos Mining Museum, and the Aegean Maritime Museum in Mykonos, among others.

5. **Creating Museum Networks in the Islands of the Southern Aegean**

The evidence discussed earlier shows that museum networks can bring real benefits, not only to the museums themselves, but also to the wider community. This approach could work just as well in the Southern Aegean, whether it is in the capital of a larger island or spread across a smaller one, which often functions much like a small town in this context.

It's worth noting that around 16 islands in the Dodecanese and Cyclades each have at least three private museums, enough to form an island-specific network. These local networks would be different from broader regional ones that connect museums across multiple islands. A good example of a successful regional network, in another island group in Greece, is the Ionian Islands Museum Network, launched in 2020. It now includes 16 museums across five islands and has already shown promising results (<https://dimin.museum.ionio.gr>)

Setting up a museum network involves several important steps. Here's a brief look at some of the key ones:

5.1. ***Establishing a Central Coordinating Body***

Forming a Steering Committee to launch the project of establishing the network is the first step in the process. The Committee will consist of representatives from the museums who lead the initiative and other stakeholders, including local government, educational institutions, and community organizations.

The committee is the group that helps the museum network operate cohesively and efficiently. They define objectives and make sure the network has a clear direction, decide on major priorities, and distribute responsibilities equitably, so that all museums, big or small, feel included and supported. They monitor the progress of ongoing initiatives and also advocate for the network when dealing with funders, government, or the public (Jacob, 2021; Basso et al., 2017; Tulliach, 2017; Baroncelli and Boari, 2001).

5.2. ***Determining the Network's Scope***

Deciding which museums should join the network means evaluating each one based on set criteria, like their type, collections, facilities, staff, and management. But this is not always easy, since museums on the same island can have very different levels of resources. Some may not be ready to engage fully in such an initiative, especially as networking is still a relatively new concept for many professionals in the field.

Larger museums can bring major benefits, like expertise, technology, and visibility (Leandri and Scalera, 2023), but they can also dominate the network and leave smaller institutions feeling sidelined (Jacob, 2021). Research by Doctors and Carter (2021) found that partnerships work best when organizations are of similar size and successful partnerships rely on shared goals, flexible funding, and roles that are clearly defined. To keep things fair, it is important to set detailed guidelines about what is expected from each member.

5.3. ***Developing Programs and Activities***

The network's main activities should reflect its goals and make the most of what each museum can contribute. Working together on activities like joint exhibitions, workshops, conferences, shared educational programs, and cultural festivals helps build strong partnerships and allows museums to benefit from shared resources. By collaborating, they can offer a wider and more diverse range of services than they could on their own. However, increasing the number of activities can lead to higher costs and put extra pressure on smaller museums, especially those with limited staff (Baroncelli & Boari, 2001).

5.4. ***Searching for Funding Opportunities***

One of the biggest challenges for any museum network is to ensure viability by securing long-term funding. Local government usually provides the core support, but networks can also

apply for EU or other grants, which often require teaming up with other cultural or educational partners. Private sponsorship is another option, though it can raise ethical concerns, especially when profit-driven goals clash with a museum's core values (Chaitas, 2024). The best way to tackle this is through carefully planned partnerships that balance financial independence with a commitment to sustainable, ethical practices (Chynoweth et al., 2021). When working with potential sponsors or business partners, museums need to be proactive in protecting their values, credibility, and public trust.

5.5. Leveraging Technology

Having a strong online presence is important for promoting the network. A clear, easy-to-navigate website that connects visitors to each museum and shares up-to-date, useful information, alongside consistent activity on social media, can help people understand what the network offers as a whole. Over time, the network can build a recognizable identity and become an attractive cultural destination (Proctor, 2010). Offering virtual tours of the museums might also motivate more people to visit in person, while making the experience more accessible to those who cannot travel.

5.6. Developing Sustainable Tourism Initiatives

Tourism in the South Aegean is mostly known for its focus on "sun and sea." But lately, some of the islands have been trying to broaden their appeal by putting more emphasis on their cultural assets. Museums can play a big part in this, especially when they join forces as part of a network. By working together with local businesses, tour operators, municipal agencies, and community groups, these networks can help develop tourism plans that offer visitors more variety and depth.

One such plan, relatively new in Greece, is the creation of museum routes. As mentioned earlier, these are planned itineraries, like themed paths, that guide visitors through a city's museums in an organized manner (Konsola, 2011). A practical way to encourage participation could be offering a museum pass giving access to all museums in the network, plus discounts at local shops and businesses, to stimulate the local economy (Leandri & Scalera, 2023). Building a clear and engaging brand around the route, which captures its unique identity, could also contribute to its success.

6. Concluding remarks

Creating museum networks across the Southern Aegean islands may seem like a major challenge, but it is certainly one worth pursuing. For smaller islands, particularly those away from busy tourist routes, these networks can provide a great opportunity to protect and showcase their unique cultural heritage while also attracting visitors interested in authentic cultural experiences. By implementing shared programs, curating thematic itineraries, incorporating interactive elements into exhibits, and engaging residents, these networks can strengthen community bonds and local pride, creating a dynamic cultural environment that not only helps safeguard and highlight the region's long history and distinct identity but also brings the benefits of cultural tourism.

Backing these kinds of collaborations should be a top priority for local governments and cultural organizations because the benefits go far beyond tourism. When museums work cooperatively, that spirit of partnership can spread to other areas of community life. For example, local festivals on neighboring islands might band together, either formally or informally, to share ideas and resources. Even voluntary associations can adopt similar approaches to tackle local challenges. In short, when museums, nonprofits, and other community players join forces, it can be one of the most effective ways to drive sustainable, long-term growth for a town.

This paper set out to explore how local museums in the Southern Aegean might benefit from creating or joining a museum network. The goal was not to lay out specific plans for individual islands, but rather to open up the relevant discussion and highlight the potential. Developing concrete proposals would require a closer look at how each museum is structured and operates. Therefore, this study should be seen as a starting point, a first step towards a deeper analysis of the wider topic of museum networks in the region.

7. References

- Bagdadli, S. (2001). *Le reti di musei. L'organizzazione a rete per I beni culturali in Italia e all' estero*, Milano: Egea.
- Bagdadli, S. (2003). "Museum and theatre networks in Italy: determinants and typology", *SDA Bocconi Research Division Working Paper*, pp. 03-86.
- Baroncelli, A. & Boari, C. (2001). "Network structures in museums' management", in Froehlicher, T., Kuhn, A. and Schmidt, G. (eds), *Competences Relationnelles et Metamorphose des Organisations*, pp. 133-162.
- Borin, E. (2015). "Fostering the creation of cross-sectorial networks: key drivers for culture-related collaborations in Italy's Po Delta Region", *ENCATC, Journal of Cultural Management and Policy*, 5, pp. 27-42.
- Cecalupo, C. (2017). "Partnerships Between Small Museums as a New Management Culture: The Italian Case", *Museological Review*, 21, pp. 34-43.
- Cerquetti, M. & M., Montella (2015). "Museum Networks and Sustainable Tourism Management. The Case Study of Marche Region's Museums (Italy)", *Enlightening Tourism. A Pathmaking Journal*, 5, 1, pp.100- 125.
- Cerquetti, M. (2019), "Vingt ans après. Do museum networks really work? A focus on the inland areas of the Marche Region's 'seismic crater (Italy)", *Il Capitale Culturale*, 19, pp. 27-51.
- Chaitas, C., Chipangura, N., & Meparishvili, N. (2024). "Expanding museums' horizons through partnerships and collaboration", *Museum International*, 76, 3-4, pp. vi-xi.
- Chynoweth, A., Poulot, D., & Zorich, D. (2021). *Museums and the Challenge of Change: Old Institutions in a New World*. London: Routledge.
- Dermitzaki, A., Doxanaki, T. & Linardakis, M. (2009). "Cultural tourism and local museums: factors affecting their interrelationship", *The Museum*, 6, pp.20-29. (in Greek).
- Doctors, E. R. & Carter, K. E. (2021). "Small Museums and Community Partnerships: Equity, Education, and Interpretation", *Journal of Museum Education*, 46, 3, pp.285-295.
- Dodd, J. & Sandell, R. (2001). *Including Museums: perspectives on museums, galleries and social inclusion*, University of Leicester. Research Centre for Museums and Galleries.
- Doxanaki, A., Dermitzaki, A., Zounis, P., Tsilaga, E., & Panagiari, P. (2012). "Local museums and sustainable regional development in Greece: assessment and perspectives", in Amonda, R., Lira, S. & Pinheiro, C. (eds.), *Heritage 2012*, Porto, Portugal.
- Hooper-Greenhill, E. (2007). *Museums and Education: Purpose, Pedagogy, Performance*. Routledge: London.
- Iacob, R. (2021). *Local Networks: (a guide to) Reimagining the Work of Cultural Organisations*, Brussels: ENCC.
- ICOM, (2004), *Code of Ethics for Museums*, Paris.
- Konsola, D. (2011). "Museum networks in the contemporary city", *Proceedings of the 9th Conference of the Greek Section of the European Regional Science Association* (Athens, May 6-7, 2011). (in Greek).
- Leandri, E. & Scalera, F. (2023). "Museum Networks: A Tool for Cultural Heritage Management and Sustainable Development of the Years Coming", *International Journal of Business Management and Economic Research*, 14(5), pp. 2245- 2252.

- Loach, N. (2017). "Future of museums: collaboration and well-being", *Museum iD*, online magazine.
- Maffei, T. (2012). "The museum network", in Cataldo, L. (ed.), *Museums and heritage on the net, From museum systems to the Evolved Cultural District*, Milan: Ulrico Hoepli Editore SpA.
- Moulin, C. & [Boniface](#), P. (2001). "Routeing Heritage for Tourism: making heritage and cultural tourism networks for socio-economic development", *International Journal of Heritage Studies*, 7(3), pp. 237-248.
- OECD/ICOM (2019), *Culture and local development: maximising the impact: A guide for local governments, communities and museums*, OECD Local Economic and Employment Development (LEED) Papers, No.7, Paris: OECD Publishing.
- Papadimitriou, N., Plati, M., Markou, E. & Catapoti, D. (2017). "Identifying Accessibility Barriers in Heritage Museums: Conceptual Challenges in a Period of Change", *Museum International*, 68, 271-272, pp. 33-47.
- Proctor, N. (2010). "Digital: Museum as Platform, Curator as Champion, in the Age of Social Media", *Curator: The Museum Journal*, 53,1, pp. 35-43.
- Scrofani, L., and Ruggiero, L. (2013). "Museum networks in the Mediterranean area: Real and virtual opportunities", *Journal of Cultural Heritage*, 14, 3, pp. S75-S79.
- Simon, N. (2010). *The Participatory Museum*. Santa Cruz, California: Museum 2.0.
- Tulliach, A. (2017). "Best practice in museum partnerships: Bologna and its museum networking", *Museological Review*, 21, pp. 8-22.
- Yarrow, A., Clubb, B., & Draper, J. (2008). *Public Libraries, Archives, and Museums: Trends in Collaboration and Cooperation*. IFLA Professional Reports: 108, The Hague.

Networks as a Learning Organization: The Case of SME's in the Mediterranean Countries

Abstract:

The author argues that the next network organisation frontier is operating as a "learning organisation". These are complex organisational ecosystems that integrate problem solving, internal knowledge, innovation and experimentation, and external information. NETCIM is the model example, and the experiences of its members are used throughout the article to show how the learning organisation works.

Keywords: Network, Learning Organization, SME, Mediterranean

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1. An Introduction to NETCIM

In October 2004, European Union initiated a project to promote CIME (Computer Integrated Manufacturing and Engineering) in SME's (Small-Medium Enterprises) environment. The strategic objective of the project is to contribute to the improvement of the SME's competitiveness, mainly in less developed regions of Europe. The differentiating aspect of the project, which is known with the acronym NETCIM EP 9901 (Co-operative Network for CIME Technologies in Europe), is that investigates the role of a Network of co-operating expert companies as dissemination and technology transfer vehicle, by means of demonstration actions, training and service to SMEs. An excerpt from the original technical annex can be found in the quotation box below.

"The first objective of the project will be to define a set of recommendations and guidelines, based on the evaluation of co-operative actions, to design the infrastructure and methodology for the Network functionality, to share experiences and information, and to establish an information flow in CIME among the centres inside the Network, and from the Network to manufacturing firms. The contribution to the improvement of the SME's competitiveness could be underlined as a strategic objective for the network for the future. The efficiency of the network in helping manufacturing firms will show the added value of an initiative such as NETCIM"

NETCIM has developed so far a set of work products and deliverables that embody the proposed network organisation framework. NETCIM involves integration of information technologies and new organisational strategies. It also involves—as its name disclose—major attention to CIME technologies, viewed from the systems engineering and management perspective; that is in terms of resource allocations and expectations (cost elements of effort and schedule, the quality and functionality of processes and products, and risk management) to assure the implementation of trustworthy and responsive systems in industry (especially in SMEs).

This experiment-at-large captures the exchange of experiences, discussions and exploitation of results, and foremost the exploration of opportunities for Productive partnerships between European industrialists and CIME experts / researchers, between information technology specialists and manufacturers. The project provides a test-bed for the current interplay of technological innovation, technology transfer and organisational and social issues.

2. *The involved network nodes*

The NETCIM network is constituted by nodes characterised by a number of common features (these features position each node in the framework of technology transfer described in following sections, as Technology Advocates, Receptors, Suppliers and Consumers):

- Most of them behave like a bridge between technology suppliers and user enterprises, thus promoting the adoption of innovative computer-based solutions. Some carry out this mission as no profit bodies that realise the innovation policy of their owner institutions (CCP, Democenter, IAI, Tekniker, Universities), others are consortia of manufacturers (Fatronik), others make business of R&D and technology transferring (ITCC).
- The nodes are representative of diverse economical contexts and technological development levels, and bring a variety of problems and competencies corresponding to their direct experiences on the field.

The reason for this choice is avoiding an excessive emphasis on a single technological sector or a single industrial region, so as to gain the widest possible experience during the NETCIM project execution.

Moreover, it was decided to concentrate the NETCIM activity on South Europe countries (Greece, Italy, Portugal, Spain) since they are representative of different levels of technological development while sharing many difficulties and delays in adopting advanced technologies. In addition, all these countries are characterised by an economy based on a prevalence of small-medium sized manufacturing enterprises. We hypothesise that this condition is particularly suitable for amplifying the impact of initiatives carried out through a network.

3. The Workplan

The project includes four work-packages: preliminary study (study and evaluation of SMEs needs in various fields related to CIME technologies, definition of pilot cases, nodes specialisation, activities and services); pilot case co-operative actions; evaluation of pilot cases and recommendations for network organisation and design; design and experimental implementation of a network. In the next chart we present an overview of the project's time frame and major tasks.

4. A Conceptual Framework for CIME technology transfer

4.1 Background

The work is using as a basis the Roger's Transition Theory [Rogers 1983]. The transition theory gave us the following model described by the figure 1. The model guide us to adopt the best-fitted strategy for us case. We can distinguish the Transition Mechanisms that will lead us to Dissemination, Implementation means. Transition Model

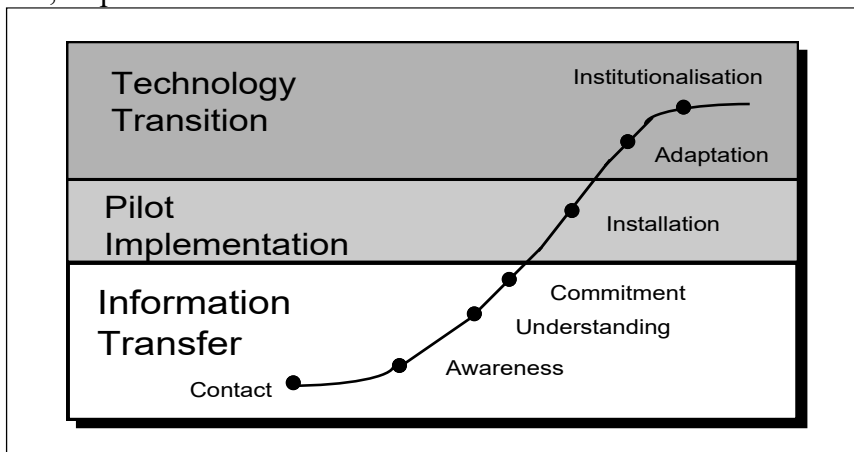


Figure 1 Technology Transition

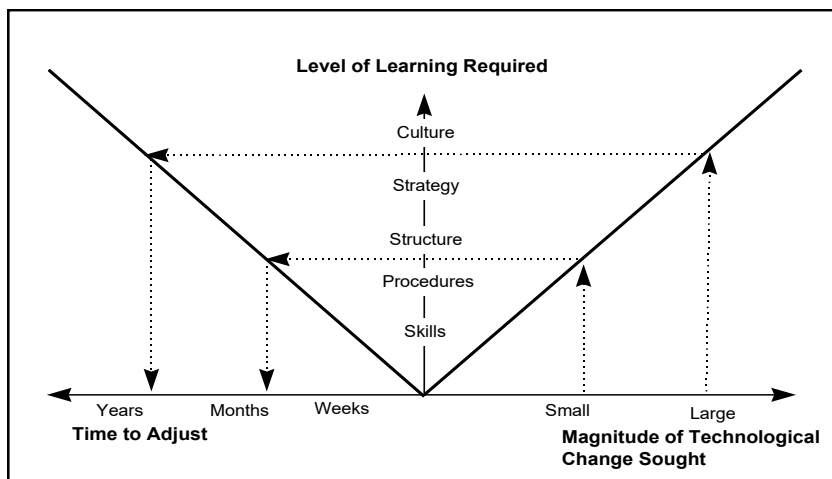


Figure 2 Dimensions of Change

4.2 The Framework

Adoption and implementation addresses the case of installing technology in an organisation. This view focuses on organisational matters: the users, brokers, actors, etc.

The following figures summarise the major phases.

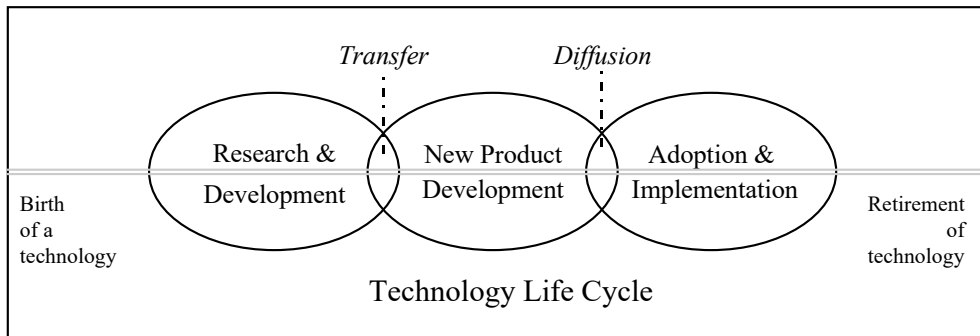


Figure 3 A Conceptual Framework for Technology Transition

4.3 Transactions

A broker of some kind facilitates most transactions, between technology producers and technology consumers. The transactions can be one-to-one (technology adoption), or one-to-many (technology diffusion).

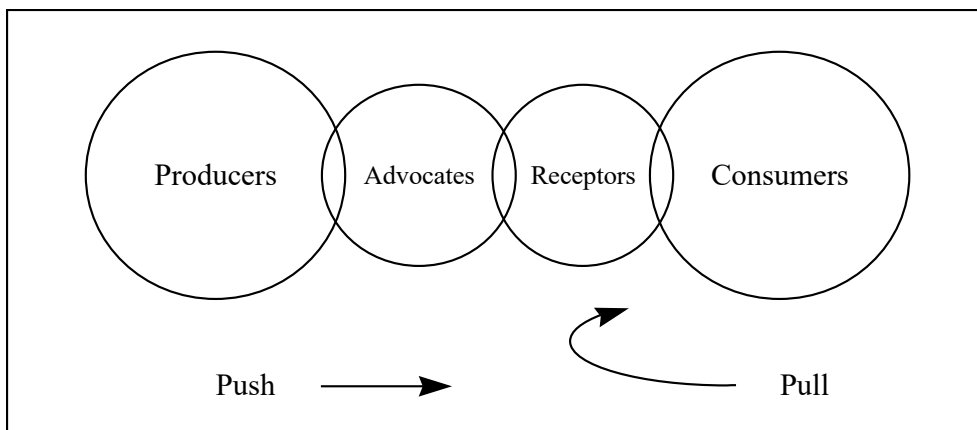


Figure 4 Transactions between Framework Actors

Adoption and implementation addresses the case of installing technology in an organisation. This view focuses on organisational matters: the users.

5. Applying the framework to NETCIM

The goal of NETCIM, or of a similar network, is to help customers (users) make lasting improvements in their ability to acquire, develop and maintain CIME technologies, and in their ability to educate people to perform these activities effectively.

Currently, the network population has a limited number of employees while the population of firms (SMEs) addressed includes hundreds of thousands.

Thus, satisfying this goal depends upon applying a thorough understanding of technology transition to derive and employ strategies that will realise the mission.

A number of key strategies can provide the network with this leverage: information dissemination and outreach activities, partnerships and infrastructure development.

6. An Introduction to Networks and Organisations

The idea of networking is not new. It can be traced back to 1950s (in diverse fields as sociology, anthropology, psychology etc.) and as early as the 1930s (in the field of

organisational behaviour). Four are the major reasons for the interest in the concept of networks:

- (1). The first is the emergence over the last two decades of what Best (1990) has labelled "the New Competition". This is the competitive rise of small entrepreneurial firms, of regional districts (see Prato in Modena), of new industries (biotechnology), and Asian economies such as those of Korea and Taiwan. The considered characteristic of the New Competition is a network, of lateral and horizontal inter-linkages within and among firms.
- (2). A second reason has to do with recent developments in information technologies. A new set of enabling technologies (not so new actually, but popularised) make possible non-aggregated, distributed, and flexible communications between firms.
- (3). Sociological drivers and factors (e.g., change in Central and Eastern Europe)
- (4). The maturing of network analysis as a discipline over the same period is the third reason for the increased trend toward viewing business partnerships as networks. The development was spearheaded in the 1970 by Harrison White, leading to the production of several theoretical and methodological tools that could be applied to various substantive areas.

Five are the basic premises of network theory, from the organisational point of view:

- (1). All organisations are in important respects social networks and need to be addressed and analysed as such.
- (2). An organisation's environment is properly seen as a network of other organisations.
- (3). The actions (attitudes and behaviours) of actors in organisations can be best explained in terms of their position in networks of relationships.
- (4). Networks constrain actions, and in turn are shaped by them.
- (5). The comparative analysis of organisations must take into account their network characteristics.

NETCIM approaches the network concept from both the theoretical and the empirical standpoint. Foremost we are interested in the relevance of the network perspective for practice.

7. An Introduction to Learning Organisations

7.1 Questions

What explains the strategic conduct of firms, in particular their choice to enter into strategic alliances (like NETCIM)? Are these alliances viable long-term organisational arrangements?

Does the mode of "network" organisation characteristic of the New Competition represent the new model of the organisation for service?

Which is the role of ties that create trust (such as shared ethnic, geographic, ideological, or professional background)?

The theme of interests "Pulling Together". Pulling together denotes co-ordinated action of many individuals in achieving a common goal. It also describes the coming together of many different perspectives, concerns, and abilities to find a common ground and a way of achieving co-operation. Pulling together is fundamentally dynamic in nature, and is often a matter of explicit negotiation and communication. Major changes need to be instituted to help the network nodes pull together.

8. Networks of Co-operating Experts

8.1 Dissemination and technology transfer vehicle: Description

In this chapter we will investigate the role of a network of co-operating expert companies as dissemination and technology transfer vehicle. This is based on demonstration actions, training and service to SME's . The work follows the evolution of a project, the NETCIM, initiated by the EU, to promote CIME (computer Integrated Manufacturing and Engineering) in SME's environment.

The project involves integration of information technologies and new organisational strategies. It also focuses onto the CIME technologies, examined from the systems engineering and management perspective. It is important to implement reliable and trustworthy systems in SME's, under the constraints of the resource available and the expectations at the enterprise. These can be summarised in the cost elements, the quality and functionality of processes and products and risk assessment.

Nodes constitute the NETCIM network. Every node is characterised by a number of common attributes. These attributes assign each node into the framework of technology transfer, namely the Technology Advocates, Receptors, Suppliers and Consumers.

Most of the nodes act as a bridge between technology suppliers and enterprises – users. Therefore the adoption of innovative computer-based systems is being carried out through the network. Some nodes act as no-profit bodies (Institutes – Universities, Research Centers), others as consortia of manufacturers or exploiting Research and Development through technology transfer.

The economic context differs from node to node as well as the technological development level. This brings forward a variety of problems and competencies, corresponding to their previous experiences on the field.

These remarks impose an emphasis not on a single technological sector or a unique industrial region but on a wide range of technology oriented industries. Moreover, the concentrated activity of the NETCIM project on Southern Europe gives us the widest possible experience, since these countries (GREECE, Italy, Spain, Portugal) represent different levels of technological development. In addition the economy of these countries is characterized by the prevalence of small – medium sized manufacturing enterprises.

The project includes four-work packages preliminary study, pilot case of co-operative actions evaluation of pilot cases and recommendations for network organisation and design and finally the experimental implementation of a network. The work packages assist the NETCIM network to help the customers making lasting improvements in their ability to acquire, develop and maintain CIME technologies and educate the users in order to perform these activities effectively.

The NETCIM project is taking an empirical approach to the problem without neglecting the theoretical approach to the network design and implementation. This kind of approach has received considerable attention recently (Desmet 1994) especially in the problems of empirical validation methods and tools. The application of both approaches, in the same way as it is realized in order to research work (Nohria 1992) lead us towards:

- The making up the Theory of Network Action
- The investigation of different types of network ties and their applications
- The analysis of the causes and dynamics of networks
- The experimentation of new methodological advances and the representation of a problem – centered research relevant to practitioners.

The problems that arise in the empirical validation of methods and tools have received considerable attention in recent research papers (Desmet 1994). The pilot cases, which later were transformed to scenarios of collaboration, have been selected as the principal method for use in the NETCIM project. This is due to the insufficient resources available for the scenarios to conduct controlled experiments which would satisfy the overall evaluation objectives. On the other hand, surveys are not an appropriate technique, as the idea of networking has not yet been launched to industry at large.

During the project's implementation opportunities will be sought to construct experiments which isolate and test aspects of the network operation. However the main emphasis in the evaluation will be on indicative scenarios of collaboration conducted across a broad range of CIME technological areas and differing factors.

Although objective measures will be used where feasible, the resource constraints of the project and the size, complexity and duration of the process involved in the introduction of CIME technology evaluation and assessment of the scenarios will often take the form of human judgments.

The data collected in the evaluation of scenarios of collaboration should be focused and significant. To this end hypotheses are being defined and each case study is being used to gather data to support (or refute) one or more of them. Four scenarios of collaboration have been planned for the NETCIM project. Different industrial sectors represented among and across the scenarios by the end-user organizations. The plan indicates that a good coverage of a general value-chain should be achieved

9.Evaluation of the Bottom-Up Experience in NETCIM Project: Scenarios of Collaboration

9.1 Evaluating Scenarios of Collaboration

Simultaneously with the theoretical approach to network design and implementation, NETCIM project is taking an empirical standpoint to the problem—through the conduct of scenarios of collaboration. By applying both approaches in a fashion found also in other research work (Nohria 1992):

- (I). We try to build the Theory of Network Action
- (II). We try to investigate the different Types of Network Ties and Their Implications
- (III). We start to analyse the Aetiology and Dynamics of Networks
- (IV). We experiment new methodological advances
- (V). We present a Problem-Centred Research Relevant to Practitioners

9.2 Selecting a method for empirical study

There has been considerable attention recently (Desmet 1994) to the problems in empirical validation of methods and tools. Validation of network organisation poses a further difficulty, precisely because we cannot typically specify a priori how things should be done.

There are three main types of empirical study: experiments, case studies and surveys.

- An experiment is the most rigorous form of empirical investigation, sometimes providing conclusive evidence that a hypothesis is true by controlling variables to isolate causes and effects. Experiments are suitable for simple processes in laboratory conditions.

- A case study typically provides anecdotal evidence for or against a hypothesis and subjective experience in the use of some method or technology by trying it out in typical situations. Case studies are suitable when use of the method or tool is expensive and takes place in a complex environment over which the investigator has little control. Most investigations in industry take this form, applying measurements to real projects. Where a number of case studies are to be conducted, it is often possible to select and/or design them in such a way as to yield useful cross-case study comparisons and analysis. Such suites of case studies are sometimes called "pseudo-experiments".

- A survey seeks to identify typical industrial practice, experience and opinions, and is suitable only when the object of investigation is already widely in use.

Of course there are insufficient resources available for the scenarios to conduct controlled experiments which would satisfy the overall evaluation objectives, given such a large number of factors which may have confounding effect on the results of the experiments. Surveys on the other hand are not an appropriate technique as the idea of networking has not yet been launched to industry at large.

Thus pilot cases which latter were transformed to scenarios of collaboration have been selected as the principal method for use in the NETCIM project, although where the opportunity exists, in the future, other approaches will also be used. In particular, opportunities will be sought to construct experiments which isolate and test aspects of the

network operation. However, the main emphasis in the evaluation will be on indicative scenarios of collaboration conducted across a broad range of CIME technological areas and affecting factors. Therefore, the scenarios of collaboration will tend to provide anecdotal evidence rather than conclusive proof.

Although objective measures will be used where feasible, the resource constraints of the project and the size, complexity and duration of the processes involved in the introduction of CIME technologies, evaluation and assessment of the scenarios will often take the form of human judgements.

The data collected in the evaluation of scenarios of collaboration should be focused and significant. To this end, hypotheses are being defined and each case study is being used to gather data to support (or refute) one or more of them.

Four scenarios of collaboration have been planned for the NETCIM project. Different industrial sectors are represented among and across the scenarios by the end-user organisations. The plan indicates that a good coverage of a general value-chain should be achieved.

9.3 Network Modelling & Architecture

NETCIM approaches the final goal of building a network from a business engineering point of view, that is, the network should have an *architecture*. Making a model (i.e., designing) of the network implies visualising structures and associations within it. For the project, the word architecture is used in two situations.

- Firstly, when are referring to the most important static structures of the network. Typical elements in these structures are the functions of the network--for example the nodes and their capabilities. Other elements are processes and deliverables at various levels, as well as various kinds of resources, both human and mechanical. One element is linked to other elements to form, collectively, a structure. The main characteristic of the network architecture is the two level of connections. The first connects the NETCIM nodes, the second level includes the links between SMEs and the network. Three other structures of particular interest have been identified up to now: actions matrix, capabilities matrix and output network operations. Details can be found in D31.1.
- Secondly, we use the term architecture, when capturing the dynamics of the network's architecture, that is, how the network operates in different situations. The decisions to be made and the measures to be taken in the course of different events are of particular interest and necessary in order to understand the network's tasks.

During the modelling task, we try to describe both a part of the network we are investigating and its environment. The first step is to understand the environment. One clean way to do it is by using *actors*. Actors are used to represent the environment that interacts with a part of the network, which is made up of all the relevant processes. An actor represents an abstraction of someone or something that uses the network processes. In a model, an actor could be either an external business agent (e.g., an end-user industry), or a network member.

So far, we have identified four types of actors: *users*, *consultants*, *innovators*, *technology providers*. For a detailed descriptions of their role in relation to the NETCIM network, the reader can consult D2 (in D2 actor are named agents)

A fundamental modelling construct is the *use case*. A use case is a sequence of transactions in a system (i.e., the network) whose task is to yield a result of measurable value to an individual actor of the system. We have anticipated so far eight use cases that we call *net actions*. For a detailed description the reader can consult deliverable D2.

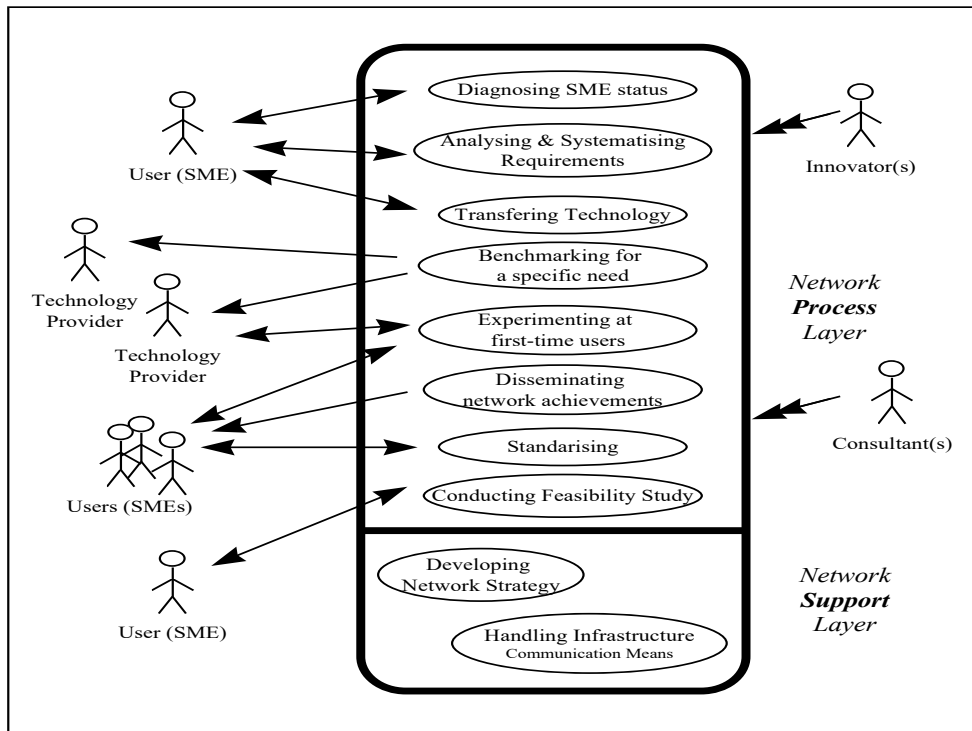


Figure 5 NETCIM Model

A basic element of a use case is the *transactions*. A transaction is an atomic set of activities that are performed either fully or not at all. It is invoked by a stimulus from an actor to the system or by a point in time being reached in the system. A transaction consists of a set of actions, decisions and transmission of stimuli to the invoking actor or to some other actor(s).

9.4 System

A system is a network of interdependent components that work together to try to accomplish the aim of the system. The system must have an aim. Without an aim, there is no system. The aim of the system must be clear to everyone in the system--emphasis on purpose. A system must be managed. It will not manage itself. Left to themselves components become selfish, competitive, independent profit centres. The secret is co-operation between components toward the aim of the organisation. (aim is for everybody to gain on the long term)

Optimisation is a process of orchestrating the efforts of all component toward achievement of the stated aim.

Knowledge is built on theory. Without a theory, experience has no meaning. Without theory, one has no questions to ask. Without a theory, we have nothing to revise, nothing to learn.

9.5 The Ten Commandments

Networking is a very important way of work to share experiences and information, and to establish a technology flow among the network nodes and from the network to industrial companies. Network procedures and activities have to be clarified by defining the *modus operandi* for the involved centres including objectives, expected results, rules for participating in the network and the role of each involved node. The network has to focus on a specific problem and not consider general, vague issues that cannot be defined precisely. In addition, network initiatives are particularly important for the user industries in the forefront of development to co-ordinate their requirements and to send a clear message to supplier and RTD initiatives.

NETCIM is a network of technologically skilled nodes. Users are the audience of each node. The node has the ability of interpreting local user needs. Every NETCIM initiative is justified only if it is finalised to users. So, users must be involved in every experiment. First objective of the NETCIM project is to define a set of guidelines and recommendations deriving from co-operative initiatives. Network initiatives are also important to accelerate the take-up of industry in general on multi-site application using advanced networking services. The results of such initiatives depend especially on intense interaction, and hence effectiveness, in multi-site working practice.

NETCIM, as network of skilled nodes with industrial end-user audience, identify 10 basic objectives:

- (I). Requirements on themes of interest
- (II). Diagnosis of SME status
- (III). Technology transfer
- (IV). Benchmarking for specific need
- (V). Experiments at first-time users
- (VI). Dissemination on cultural basis
- (VII). Feasibility study for individual user
- (VIII). Training and education
- (IX). Standardisation
- (X). Communication (means and contents)

The objectives above are described in the following:

- (I). *Diagnosis of SME status*: Provide the user a baseline generated by measuring their current technological status. Baselines are also an important mean for comparing other company status and for measuring future improvement. Different diagnosis experts can evaluate enterprise status from different viewpoints. Diagnosis is performed through advanced technologies available at the different nodes. The results of the process will allow a better understanding of how the adoption of new CIME technologies improve the overall organisation and performance of SMEs. Besides, users can be compared to each other across the network. In addition, cost-benefits analyses should be executed on the results of the diagnosis process, in order to support management activities.
- (II). *Requirements on themes of interest*: Requirements elicitation methodology and techniques are necessary to support change management and evolving systems. Reusability and customisation of requirements methodology for specific applications can be obtained by improving their flexibility and efficiency. This is particularly required to identify and harmonise generic requirements for use of advanced technologies manufacturing and engineering across broad sectors of industry. Moreover, requirements are necessary to establish a consensus across a range of users and a dialogue with appropriate technology providers. In addition, users have a clear understanding of their strategic needs and how to meet them. Naturally, requirements specification has to include agreements on standard to be used.
- (III). *Technology transfer*: Manufacturing enterprise, SME, technology provider, intermediary could benefit from direct participation in the validation and exploitation of RTD results or through the transfer and dissemination of emerging technologies. In particular, the technology transfer objective is to promote the diffusion of technologies, to provide solutions to the needs perceived by industry and to overcome the obstacles to the circulation of technologies. This can be achieved through the network, by linking many users in order to support the transfer of a given technology or of many technological solutions. Demos and other means to make new technology accepted and appreciated will be used by the network.
- (IV). *Benchmarking for specific need*: Benchmarking actions are aimed at identifying how a well-defined need should be covered by a particular solution among those actually available

on the market. The overall framework is based on a precise understanding of a particular industrial need and in the evaluation of the solutions, offered by the network, that should meet the identified need. Network available solutions should be produced by nodes themselves or be commercial products on which nodes are especially trained. Among the identified solutions cost-benefits analyses are performed in order to identify the best one, also taking into account the general characteristics of the involved users. Quantitative measures of how the introduction of a new technology should affect the overall enterprise organisation, will be basis for selecting the best solution among those available.

- (V). *Experiments at first-time users*: Important for stimulating the adoption of best practice initiatives for multi-site applications in order to raise the awareness among first-time users and to assist them to adapt and experiment with their working practice accordingly. This allows to establish a small-number of experiments regarding several users whose aim is to contribute to the understanding of future practice bringing competitive advantage. Demonstration and experiments actions are generally based on vertical consortia bringing user together with the necessary applications developers and technology suppliers. Generally, in order to meet the above concepts, *pilots* are defined to demonstrate the transformation of any manufacturing or business organisation through the application and use of advanced information technologies to meet clear, quantifiable business goals. Pilot case or best practice histories with detailed and quantified analyses of costs and benefits would be available as references for performance evaluation and for wide dissemination activities. From the networking point of view, the testing outside the network of the network functionality will provide timely and valuable feedback and influence further development.

- (VI). *Dissemination on cultural basis*: Dissemination actions are required to spread information about effectiveness process improvement. The principal objective is to provide end-users (across Europe), a common sets of interest both knowledge of what improvements can be achieved and contact information on where to find help in achieving the improvements for themselves. The demonstration results with detailed and quantified analyses of costs and benefits would be available as references for wide dissemination actions. Also technology awareness and promotion actions, including showcase demonstrator applications and briefings (seminars, conference, information packs, press releases) are necessary for dissemination purposes. A network of support centres to gather and disseminate widely the state of the art, products, services and systems is especially important in dissemination activities.

- (VII). *Feasibility study for individual user*: The study performer is a node that can take benefits from previous similar experiences. Besides, other nodes can help as consultants on specific questions. Feasibility studies are also necessary to evaluate the likely benefits and to define: (a) an implementation plan for individual users, and (b) directed RTD on behalf of group of SMEs having similar requirements. Thus, each feasibility study has to be performed after having established a clear statement of the objectives to be achieved and target audience identification.

- (VIII). *Training and education*: To establish a basis of understanding of the centres participating in the network on a particular technology area and the way it can be deployed, training and education activities have to be undertaken. Of particular importance is the need to address the universal problem of raising the profile of process improvements with senior management in order to show measurable benefits. The aim is to raise the awareness of management so as to ensure an appropriate environment for process improvement and the successful adherence to a quality approach. In addition, training, education and skills for all groups of people involved in the network has to be carried out in the context of live (or experimental) application, that is, on the job rather than in the abstract. Trainers common profiles have to be established by the whole network. In addition, realisation of education material and demos, exchange of teachers and promotion of mobility (for homogenisation purpose), are initiatives that the net has to undertake.

- (IX). *Standardisation*: Standards are especially important to realise a stable network infrastructure. The reason lies on the common background that is necessary to create every time, different entities (even heterogeneous), decide to work together as a network. Otherwise, the possibility of interaction does not exist since their approach to the solution of particular problems should be incompatible. Networking initiatives should also lead to the definition of pre-standard resulting from the common understanding of each participating node on particular problems. Hence, experiences and suggestion coming out from other related European projects should be taken into account in order to define new pre-standard format that will not prevent the enlargement of the NETCIM network.
- (X). *Communication (means and contents)*: New technologies support reliable and high quality services. They are growing up very fast and, especially in recent years, have changed the communication field in a very significant fashion. Networking is especially important in terms of co-operative and collaborative initiatives involving nodes (also heterogeneous) sited in different part of the world. However, these objectives cannot be pursued without the availability of communication tools able to support great exchange of data. In particular, recent developments of the communications technologies, have improved the level and the reliability of the interaction (also on great distance) and created the foundation for networking. Besides, database definition and creation will result from the experience of each node and reporting the results (expressed on a quantitative basis) obtained for each net-action undertaken by the NETCIM consortium.

10. Individual Node Behaviour & Network Management Context

During the evaluation task of the NETCIM project we are continuously examining the management processes of the network and identified that four common characteristics of the nodes shape their behavioural context (see boxes in Figure 6). This context matches other successful paradigms found in large organisations, such as Westinghouse, 3M, Andersen Consulting, and other companies more adept to continual renewal (Bartlett 1995).

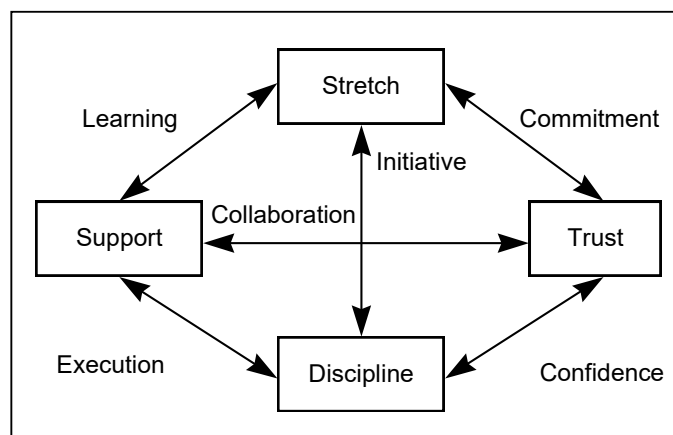


Figure 6 Individual Node Behaviour & Network Management Context

The power of the network's managerial context derives from the internal tensions among the four foundation characteristics. Individual nodes learn to operate in an environment that is, on one hand, highly disciplined and demanding, yet, on the other, trusting (and secure). The expectations are stretching and ambitious, yet within a supportive setting. In the resolution of these complementary yet often contradictory forces, the network develops the energy and direction to drive its dynamic operation processes. The individual behaviours of each network member resulting from these tensions (the gap between vision and current reality is the source of energy; this gap is called **creative tension**) are depicted in Figure 6, above the links that exist between the four common characteristics.

Firstly, we present the new managerial context

- (I). Discipline
- (II). Support
- (III). Trust
- (IV). Stretch

Now in turn, we present the six behaviours, which we believe are imperatives for the successful operation of networks such as NETCIM.

- (I). Initiative
- (II). Collaboration
- (III). Learning
- (IV). Confidence
- (V). Commitment
- (VI). Execution (bias for action and ability to implement)

There is a need to reinforce this new set of learned behaviours and to consolidate the new organisational paradigm of NETCIM. Obviously, as we have already noted, the change of the network will probably be ongoing. Thus, another purpose is to create a continuing capacity for further change and to maximise the learning achieved so that subsequent changes will be handled more effectively.

Essentially, NETCIM nodes have successfully to pull, in unison and in the same direction, a number of "change levers" which are available to them, in order to create change in SMEs. We follow a traditional model that has become known as Leavitt's diamond (see Figure 7 Leavitt's diamond). This suggests that one can intervene in the organisation to create change in four distinct areas. These are people, technology, tasks and organisation.

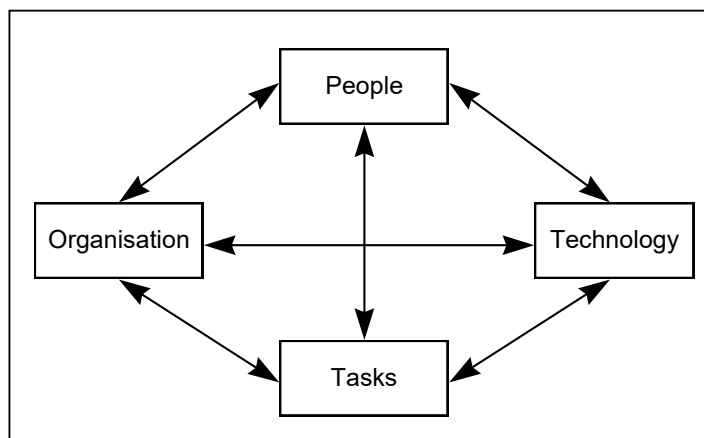


Figure 7 Leavitt's diamond

11. Future work - Evaluation of Scenarios of Collaboration and Network Operation

As a next step in our work we are going to evaluate the different scenarios of collaboration and of network operation. We have established a number of general criteria for this evaluation process. These are the following:

- (I). General Expectation
- (II). Node - User Relations
- (III). Node - Node Collaboration
- (IV). Main Aspects
- (V). Support means

12. Learning Organization

It is very important for the Small Medium Enterprises to look the adoption of new technologies and concepts in a clear way under a well defined framework. The Value Chain model has been applied by many organisations when they tried to implement new development strategies. As we have seen in NETCIM paradigm a number of needs and net actions are covering certain parts of the value chain, such as Inbound, Outbound or Operation and Production.

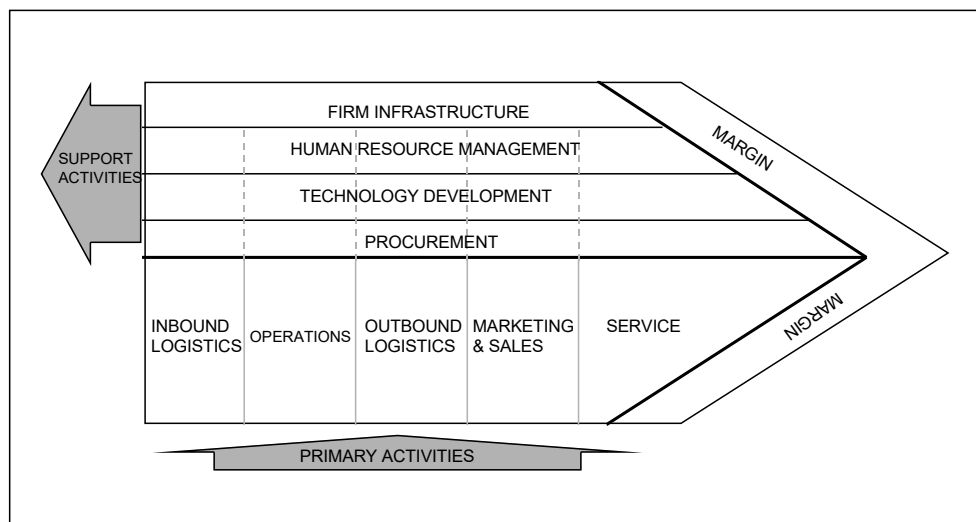


Figure 8 Value Chain

13. Implications for Research and Management

We conclude our work by summarising the following:

- Networks are giving companies access to skills in different countries.
- To attract new members, a network must show potential for joint benefits
- The network design must exhibit both inner quality characteristics, which bring together the participant members, urge them to live and co-operate within it, and outward that appeal to the environment (users and technology providers) to use the network. The inner quality aspect is captured in the managerial context already described.

Finally certain aspects of the network are: its size, composition, patterns of growth (processes), governance structure, internal competition and they are identified in each network operation acting as technology transfer and diffusion vehicle.

14. Bibliography

- Baker, E. Wayne. *The Network Organisation in Theory and Practice. Networks and Organisations: structure, form, and action.* Edited by Nitin Nohria and Robert G. Eccles. HBS Press, 1992
- Bartlett A. Cristopher. *Rebuilding Behavioural Context: Turn Process Reengineering into People Rejuvenation.* Sloan Management Review. Fall 1995
- Christofer Alexander. *The Timeless Way of Building.* Oxford University Press. New York 1979.
- Deming W. Edwards. *The New Economics, for industry, government, education.* MIT Centre for Advanced Engineering Study. November 1993. Cambridge. MA D2139.
- Desmet. *Guidelines for Evaluation Method Selection.* DES/WP2.2/7, Deliverable 2, Version 2.0, NCC Services Ltd, June 1994.
- Fowler Pricilla, Linda Levine. *A Conceptual Framework for Software Technology Transition.* Technical Report. CMU/SEI-93-TR-31. ESC-TR-93-317. December 1993.

- Goldhar, J.D. and Lei, D. (1994) "Organising and managing the CIM/FMS firm for maximum competitive advantage," *Int. J. Technology Management*, Special Issue on Technological Resources to Increasing Competition, Vol. 9, Nos 5/6/7, pp. 709-732.
- Jacobson Ivar. *The Object Advantage, Business Process Reengineering with Object Technology*. ACM Press 1995.
- Kirkbridge Paul. *Managing Change. In Strategic Thinking and the Management of Change*. Edited by Stacey Ralph. Kogan Press 1993.
- Leonard-Barton, Dorothy. *The Factory as a Learning Laboratory*, Sloan Management Review. Fall 1996.
- MacLennan, Fiona, Gary Ostrolenk. *The SPICE Trials: Validating the Framework*. 30 April 1995.
- NETCIM. *CO-OPERATIVE NETWORK FOR CIME TECHNOLOGIES IN EUROPE*. EP 9901. OCTOBER 1994.
- Nevis, C. Edwin, Anthony J. DiBella, Janet M. Gould. *Understanding Organisations as Learning Systems*. Sloan Management Review, Winter 1995.
- Porter E. Michael. *The Competitive Advantage of Nations*. Macmillan 1990.
- Porter E. Michael. *Competitive Advantage*. The Free Press 1985.
- Senge, M. Peter. *The Leader's New Work: Building Learning Organisations*. Sloan Management Review. Fall 1990.

European Union Facing New Challenges

Abstract:

The onset of the 21st century, although it appeared hopeful for the European Union (thanks to the single currency and the implementation of the European Reform Treaty (Lisbon)), its progression met with significant turbulence and jeopardy. The second decade of the new century in particular was full of developments and crises that involve the EU but also the planet in its entirety.

There were crises originating outside the European Union but producing intense repercussions within the Union, namely the important *debt crisis* and the equally significant *public health crisis*. Both those emergencies occurred at a time when the EU was not prepared to address them; but was able to manage by adopting specific institutional adjustments.

The crisis that manifests on a global scale and has not been remedied yet is the *environmental crisis*. It became necessary to adapt to it by decarbonising and replacing fossil fuels with energy sources featuring low or zero environmental footprint.

Other important adjustments became necessary because of geostrategic developments of international scale; because of major technological developments and changes emanating from international commerce; and China's emergence as strong international player.

Keywords: Geostrategic realignments, Letta report, Draghi report

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1. Geostrategic changes

The creation and development of the EU took place in the favorable international context that had occurred after the end of the Second World War. The security afforded by NATO and by the American military might allowed the EU member States to channel funds – which would otherwise be allocated to their defense – toward other more development-oriented purposes. The stable geopolitical situation in combination with growing international trade created a favorable environment for developments within the EU, for the elaboration of common policies and the creation of a – yet nascent but actual – level of integration.

Much has changed during the current century, with the appearance of new crises arising from global geostrategic differentiations from past situations, which tend to produce new divisions and rivalries. The overall course of European integration is influenced by changes that tend to prevail at the collective level. Nicole Gnesotto, vice president of the Jacques Delors Institute has pointed out that there are three probable scenarios² for the future of the global order:

- (1). Restoration of western power. That would involve the pursuit to revive western influence, which no longer enjoys the appeal nor the acceptance of past times;
- (2). Confrontation between democracy and authoritarianism, a simplified scenario that does not take into account the existing inter-dependencies, and
- (3). 'Diversified disorder' featuring the coexistence of different systems in the world, a scenario that seems likely to predominate.

Regardless of the future development of given conditions, today the world is moving on a course without stable rules and without the presence of a power that would be both capable and reliable to compel the implementation of common decisions. It is a well known fact that the United Nations Organization has the capability to make collective decisions, but not the ability to enforce them.

Certain geopolitical circumstances -such as the likelihood of the USA reverting once again to isolationism, and the actual Russian invasion in the Ukraine, which brought war near the heart of Europe, could produce important consequences. The Russian invasion deprived Europe and especially Germany of the ability to supply its industry with cheap fossil fuel originating in the rich Russian underground. The same war produced one more effect, the restriction of Ukrainian exports of foodstuff. Combined with the climate change, which has already affected farmland that used to be fertile – such as the Thessaly plain in Greece – it is probable and expected that it would lead either to food shortages or to higher prices.

Another equally important change pertains to *international trade developments*, where European companies have been facing strong international competition, while at the same time they have lost access to cheap energy. The growth of the Chinese industry of electrical automobiles is already an area of trade contest between the EU and China.³

One more important differentiation from past conditions concerns *European Population Trends*. Although the population decline during the covid-19 pandemic seems to have recovered after the pandemic was over, the figures could be attributed primarily to immigration rather than to normal demographic change.⁴

The consequences are major: The problem of insufficient labor force that would be necessary to restore and to increase the competitiveness of the European economy; and the problem of immigration, which requires the assimilation of persons coming from different

²'Planisphère. Are we able to predict the future of the coming world?' ('Pouvons-nous choisir l'avenir du monde qui vient?') Par Emilie BOURGOIN, Nicole GNESOTTO, Pierre VERLUISE, 25 October 2024. Diploweb.com La revue géopolitique

³ 'Additional tariffs for Chinese electric vehicles is a fateful message to the European automotive industry'

⁴ "Inflation is rising again in the EU but not in Greece", with graphs, 11 July 2024

<https://www.newmoney.gr/roh/palmos-oikonomias/europi/eurostat-o-plithismos-tis-ee-afxanete-xana-ochi-omos-ke-stin-ellada-grafimata/>

countries and different cultures. Other important consequences arise from the need to adapt to new technologies, and from the choice to decarbonize because of the climate crisis.

2. Implications in the European Union and the European response

An overview of the conditions that altered the foundations of the European trajectory and development would appear highly precarious and pessimistic. The word ‘pessimistic’ might not be appropriate if such an overview concerned a singular state endowed with non-negotiable volition to resist forthcoming disasters. To quote Max Weber, “The state has a monopoly on legalized violence”. Recent Nobel laureate Daron Acemoglu has also invoked this classical quote to explain his view ⁵ that the degree of centralization held by the state allows the state to intervene and regulate social and economic concerns.

However, that is not the case with the European Union, which consists of 27 different sovereign states, which are able either to fully obstruct or to delay any decision. Here we are entitled to wonder whether the real obstacle that the European economy faces in order to be able to respond to those challenges is its incomplete political integration, and by inference its insufficient institutional system. According to Bruno Dupré, French diplomat assigned to the European Union diplomatic service, “The problem is that the European DNA was founded on the premise that all political ambition ought to be renounced.” ⁶ That statement is certainly true considering that ever since the original formation of the EEC, the prevailing view has been that sovereignty belongs only to member states.

Although the institutional structure of the EU was ineluctable, and its present conclusion can be considered fully democratic, ⁷ that structure is not noteworthy for its flexibility nor for the speed of its decision-making processes. Many changes in the international milieu highlight the contrast between the global dimensions of current human activities on one hand, and on the other hand the limited national dimension that is the hallmark of democratic institutions and rules. That is not unusual considering that the standards that apply to the creation of new institutions are based on antecedent institutions; when a society has been organized in a specific way, its particular institutional structures tend to remain. ⁸

The institutional structure of the European Union, as mentioned before, was ineluctable because the member States were reluctant to relegate parts of their national sovereignty to the new transnational arrangement. The EU system was sufficient for the times when the international milieu was secure and displayed significant developmental potential. However, having enumerated the new challenges, we can pose certain questions that concern the future. Does the European Union have the will, the capability and the instruments to cope with those international challenges?

Regardless of the eventual answers to those questions, something is certain: No individual state would be able to face the global challenges by itself. It follows that there is no alternative way except for the quest to maintain and to bolster the European Union. This obvious answer does not necessarily assure that the forces that supported and attained economic integration will still be sufficient to ward off the silent decay that is pursued by populist forces, by internal divisions, and by external opponents and competitors.

The EU is thereby faced with an existential crisis charged with economic, technological and social considerations. The level of technological development is constantly changing, a trend that does not favour the EU. Here we can witness a significant productivity gap between the EU and the USA, which we interpret as the result of faster growth of the

⁵ Daron Acemoglu, James J Robinson, ‘Why Nations Fail’, kindle edition, loc 1336

⁶ Is Europe still able to avoid suspension ? (L’Europe est-elle encore en mesure d’éviter le décrochage?) Par [Bruno DUPRE](#), le 13 octobre 2024 . Diploweb.com La revue geopolitique

⁷ Olga Gioti Papadaki, ‘European Political Integration and Solidarity Policies’, p.258, Kritiki Publications 2024

⁸ Daron Acemoglu, James J Robinson, ‘Why Nations Fail’, kindle edition, loc 798

technology sector in the USA. The productivity gap of the European economy *is not supported by a demographic rise of younger population*, as natural population variation is either stagnant or negative in all EU member States. The overall population variation (including immigration) is positive in some of the EU member States (Germany, Ireland, Luxembourg and Sweden) where economic opportunities, asylum policies or the mobility between the EU member States have been attracting people.

It follows the overall strategy of the EU during the upcoming period ought to focus on strengthening its competitiveness, along with successful assimilation of incoming immigrant flows; on ensuring success of the transition in digital technology, and at the same time on defossilisation.

The latter two goals could operate against each other, and therefore the EU concern is to create synergies among them. Here we could mention in passing that if the Russian invasion in Ukraine had not occurred, it would be quite possible to witness delays in the defossilisation of the European economy – which was pushed along by this war, considering that the low-priced Russian natural gas is no longer among our choices. The EU pursuit toward growth ought to be well balanced and should include all population groups, in order to accomplish the best possible results and to forestall social tensions.

Investing in any social policy is contingent on the success of the respective social policy and therefore on higher productivity – especially in the innovative sectors that currently produce high value – which ought to precede and to be successful. Defending European values should remain active within the EU itself and at the same time continue to proclaim those values to the rest of the world.

The European social policy is financed by the *Cohesion Policy*, which evolved from the EU Regional Policy. Although the latter used to finance initially the less developed regions, already since the recent two programming periods it has been financing the vigorous and developing regions – a fact that suggests a change of course aiming initially for effectiveness and at the same time persistence in pursuing equality. That means that the Cohesion Policy is consonant with the development policy as a whole. Here there must be adequate provisions that there will be no regressions neither in the social profile nor in attenuating regional inequalities.

The split of authorities prevailing in the EU does not favor the remedying of the problems observed. There is, however, a favorable precedent: Crises help the European Union to overcome the immobility imposed by the reluctance of some member States, and by a fastidious persistence to maintain the existing status quo (e.g. the public health emergency enabled the decision for common borrowing, an action that was not provided in the Treaties). Based on that, we look forward to the emergence of an autonomous European agency that would be able to determine its own strategies which would include, besides the economy and building up competitiveness, also defence and the international presence of the EU.

3. The Letta Report

In view of the fact that the single market remains at the core of European integration, and also that respective needs have multiplied, the European Commission together with the European Council appointed Enrico Letta, former prime minister of Italy, to compile a report on the prospects of the single market. The Letta report ⁹ proposes strategic improvements aiming to revitalize the market and enable it to respond to the requirements of an expanded and more complex global situation. We can add a *fifth EU Freedom*, ‘to foster research, innovation and education in the single market’, ¹⁰ centered exactly on research, innovation, knowledge and education – in order to fortify the potential for innovation in the Single Market under the new

⁹ www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf

¹⁰ See footnote 8, p. 18

global conditions. That fifth Freedom includes the emphasis on innovative methods to mobilize public and private capital so that the investment gap is limited and our common goals can be fulfilled. The proposed goals can be supported by advancing the cross-border interoperability of trans-European public services.

In the relevant Regulation¹¹, the definition of cross-border interoperability is “The ability of European entities and public sector agencies of the member States to interact among themselves across their borders, exchanging data, information and knowledge via digital processes, in accordance with the legal, epistemological and technical requirements of such cross-border interoperability”. The development of cross-border interoperability in the network and information systems employed to provide and manage public services in the EU, shall be able to offer to the EU public administrations the capacity to cooperate, thereby making the said administrations functional at the trans-national level.

4. The Draghi Report

In summary, the EU acknowledges important developmental shortfalls regarding the digital revolution, parallel to the proliferation of digital productivity in the USA. At the same time the EU recognizes that there is significant potential by means of revitalizing the Single Market as indicated in the Letta report.

Those observations compelled the European Commission to appoint Mario Draghi, former governor of the European Central Bank, to prepare a report on “The Future of European Competitiveness”. That report was submitted to the European Commission on 9 September 2024 and is expected to stand as the basis for a new European Agreement on Competitiveness. The report identifies three major action directions:

- Europe must again focus its collective endeavors to *bridge the innovation gap* vis a vis the USA and China, especially in advanced technologies.
- The second direction concerns the alignment of defossilisation and competitiveness policies. Europe must cut back the cost of energy, accelerate the development of clean energy, and support industry in its transition to sustainable practices. The demand for relief from carbon emissions could lead to the development of units able to be leaders in the technologies they offer. At the same time, support should be extended to energy-intensive industries, to energy producers, and to industries that enable reduction of greenhouse gas emissions.
- The third direction for action is to *increase materials security* and to *decrease related dependencies*. Such security is a precondition for sustainable development. The EU ought to secure crucial raw materials, to fortify its digital and defense industries, and to reduce dependencies from countries outside the EU. At this point the report presents a precise evaluation of the poor condition of the EU defence industry, which is fraught with major fragmentation that prevents the creation of economies of scale. Reducing the dependence on countries outside the EU is contingent on the development of a purely European economic foreign policy that would support the economic relations of the EU with countries that are endowed with natural resources. The report also proposes additional investments to support national productive capacity, and to promote cooperation among the EU member States.

Further on, the same report identifies three principal structural instruments to pursue its goals: It proposes a new *Industrial Policy* and also *Competition and Trade Policies*. The Industrial Policy would be contingent on the integration of the Single Market – a subject that we have reiterated since several decades – considering the Single Market remains the backbone of European integration, and operates as the principal agent promoting the development of prosperity and solidarity.

¹¹ REGULATION (EU) 2024/903 OF THE EUROPEAN COUNCIL and the COUNCIL of 13 March 2024 laying down measures for a high level of public sector interoperability across the Union (Interoperable Europe Act)

Overall, the policies proposed in the Draghi report *ought to be aligned as parts of an overall strategy*. The EU has already decided (since 2019) to create the so called Strategic Agenda 2024-2029,¹² to be decided jointly in the context of the European elections and to post the guidelines for the next five years. The Agenda defines the fundamental priorities and directions for action aiming to address the basic challenges facing Europe. The Strategic Agenda¹³ is structured around three pillars: a Free and Democratic Europe, a Strong and Secure Europe, and a Prosperous and Competitive Europe. It is obvious that this Agenda concurs with the proposals of the Draghi report, which proposes further measures for achieving those goals while not limiting itself to those alone. Thus that same report calls for *reforms in the EU governance*, to facilitate decision making, to reduce the regulatory burden, and to improve the coordination of policies among the EU member States.

However, the most important issue is the *financing of the principal action sectors*, which would require huge investments. In order to proceed with digital conversion and defossilisation, and also increase the defensive capability of the EU, the total percentage of such investments ought to increase by about 5 percent of the EU Gross Product every year. The most recent time that such increases occurred was in the 1960s and 1970s,¹⁴ and therefore the magnitude of the funding required according to the report is enormous. An investment drive of such great size would require mobilization of private capital, although the private sector would not be sufficient without corresponding support from the public sector. Any fiscal restrictions could be moderated by higher productivity. Although the needs seem excessive, the EU has enough capabilities, which have allowed the EU to achieve economic integration with minor inequalities. Nowadays, competitiveness depends more on enhancing the level of knowledge in the workforce and less on limiting labor cost.

An expected critique to the proposal for high public financing would be that if the necessary funds were collected by raising taxes or by borrowing at the EU level- that could aggravate fiscal pressures on countries that are already struggling with high debt.

The text describes a road map that includes a series of actions and necessary initiatives aiming to make the EU overall more productive. The foreword to the report¹⁵ states that “If Europe is unable to become more productive, we will have to make a choice. We will not be able to immediately become a leader in new technologies, a beacon of responsibility for climate, and an independent player in the international scene. We will not succeed in financing our social model. Then we ought to curb some, if not all our ambitions.” Conversely, economic support and the consequent transformation could lead to social prosperity for everyone, even more so if it is accompanied by a strong social contract.

The report describes in detail the necessary measures for competitiveness in individual sectors such as energy, clean technologies, automotive industry, medicine, and advanced technologies. An important challenge is that of the European defense industry, where the private sector has no direct incentive to shoulder the burden of finance.

The report describes in equal detail the institutional adjustments necessary, and invokes¹⁶ the need to accelerate EU action by *extending the use of qualified majority voting* in decision making, and also possibly by applying the special transitional clause¹⁷ *utilizing the institution of enhanced cooperation*, or even recourse to trans-governmental cooperation as last resort. Another equally important adjustment is the *simplification of existing rules*, and

¹² <https://www.consilium.europa.eu/el/policies/strategic-agenda-2024-2029/#what>

¹³ https://european-union.europa.eu/priorities-and-actions/eu-priorities/european-union-priorities-2024-2029_el
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¹⁴ The Future of European Competitiveness — Part A, Chapter 1, p.16

¹⁵ Foreword p.3

¹⁶ Most of the related proposals are from pages 66 and 57 of the report The Future of European Competitiveness

¹⁷ <https://eur-lex.europa.eu/EL/legal-content/glossary/passerelle-clauses.html>

the creation of a framework to coordinate competitiveness, in order to focus on strategic priorities at the overall EU level.

The Draghi report proposes a very clear and ambitious strategy toward the reformation of EU competitiveness in a complex geopolitical milieu. The plans and the proposed strategies are ambitious and they require ample coordination, political will and enormous investments.

The report offers a thorough examination concerning the challenges confronting the European Union, with clear sense of their urgency and a strong pro-European stance. In that sense this report is reminiscent of a phrase¹⁸ by Jacques Delors, which led to the Single European Act in 1986-87: “Quand je les ai fait toucher du doigt que les années 1980-84 étaient particulièrement pénibles pour l'économie européenne ...je leur ai dit aussi: si nous avions un vrai Marché unique, ce serait un très grand stimulant pour nos économies”. The adoption of the Single Act prepared the 1992 enactment of the Single market.

The concurrence of the Draghi report with the earlier proposal by Jacques Delors (which was based on the proposals of the Cecchini report)¹⁹ is not coincidental. Both men were devoted Europeanists with genuine European vision. We hope that Mario Draghi will be able to contribute once again²⁰ to the rescue of the EU.

Obviously, conditions in the 1980s are not comparable to 2024, when Europeans must deal with the crossfire of *technological competition* where the main competitors, the USA and China, have a clear advantage; *higher energy cost* due to relinquishing low-cost fossil fuels from Russia (and at the same time burdened with expenses toward military equipment support for Ukraine); together with reaching *zero carbon footprint* by the year 2050, and as a result the endeavor to defossilise industry – during a time period when global strategic conditions are differentiated.

It is essential that this report become accepted by the new European Commission as the new road map for the forthcoming decade, and also by the governments of the member States. The overall dangers facing the EU today go much further than the economic stagnation of the 1980s, which we mentioned before as an example.

The proposals set forth in the report carry the risk that they could be overshadowed by objections concerning common financing and the Eurobonds (European Stability Bonds), which have been facing opposition from countries such as Germany whose Federal Constitutional Court accepted the Bonds issued for the pandemic with the provision that they would be issued that time only.

It is not possible to make any predictions about what is going to happen in the European Union – although it is very clear what ought to happen. A ray of hope could come from the Budapest Declaration, the document endorsed by the 27 member States after the informal session of the European Council that took place in Budapest on 7 and 8 November of 2024. In that session, the European leaders discussed the need to create a new accord concerning competitiveness. The reports presented above provide the basis to forge those ambitious European Union projects. Inter alia they proclaim the need to avoid the well-trodden path and to utilize all possible means and all policies at both the trans-national and the national level.

¹⁸ Jacques Delors '40 ans des traits de Rome', Brussels 1999, p.207

¹⁹ P. Cecchini 'The challenge of 1992. Europe without borders', A report on the research programme 'The costs of non-Europe' funded by the EU Commission.

²⁰ The first time was on 26 July 2012, the famous phrase “whatever it takes” concerning the rescue of the new currency during the economic crisis at a time when Mario Draghi was president of the European Central Bank.

5. References

- Acemoglu Daron James J. Robinson 'Why Nations fail' Kindle edition Emilie BOURGOIN, Nicole GNESOTTO, Pierre VERLUISE, *Pouvons-nous choisir l'avenir du monde qui vient ? Planisphère* le 25 octobre 2024. Diploweb.com La revue géopolitique.
- Apostolopoulos Christos 'Additional tariffs on Chinese Electric cars are the fatal message to the European automotive industry Four Wheels 8/10/24, (in Greek) <https://www.4troxoi.gr/epikairotita/kosmos/oi-prostheto-dasmoi-sta-kinezika-ev-einai-to-moiraio-minyma-pros-tin-eyropaiki-aytokinitoviomichania/>
- Cecchini P. 'The Challenge of 1992. Europe without Borders' Report on the research project 'The Cost of Non-Europe' funded by the Commission of the European Communities, (in Greek).
- Delors Jacques '40 ans des traits de Rome' Bruxelles 1999
- Dupre Bruno L'Europe est-elle encore en mesure d'éviter le décrochage ? le 13 octobre 2024 . Diploweb.com La revue geopolitique
- European Commission 'The Future of European competitiveness
- European Council Strategic agenda 2024-2029
- European Council enrico-letta much-more-than-a-market-report www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf
- European Council Press release 8 November 2024, Budapest Declaration on the New European Deal for Competitiveness, (in Greek).
- Papadaki Olga Gioti 'European Political Integration and Solidarity Policies' p.258 Kritiki 2024 edition, (in Greek)
- Regulation (EU) 2024/903 of the European Parliament and of the Council of 13 March 2024 on measures for a high level of interoperability in the public sector across the Union (Interoperable Europe Regulation), (in Greek)
- New Money The EU population is growing again, but not in Greece 11/7/24 <https://www.newmoney.gr/roh/palmos-oikonomias/europi/eurostat-o-plithismos-tis-ee-afxanete-xana-ochi-omos-ke-stin-ellada-grafimata/>, (in Greek)

The radical approach to crime and the science of criminology

"Society prepares the crime and the criminal commits it"
Victor Hugo

Abstract:

This paper examines the social phenomenon of crime, which is increasingly on the rise. Our focus will be on identifying the underlying causes that drive individuals to commit crimes, diverging from the mainstream approach of criminologists who often prioritize the consequences of crime over its origins.

Keywords: Crime, criminology, science of criminology

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1. Introduction

This paper examines the social phenomenon of crime, which is increasingly on the rise. Our focus will be on identifying the underlying causes that drive individuals to commit crimes, diverging from the mainstream approach of criminologists who often prioritize the consequences of crime over its origins. This perspective reflects the idea that it is easier to "study the formed body than the individual cell." In criminology, the "cell" of crime is rooted in capitalist society, which fosters both crime and criminals. A society centered around the relentless pursuit of profit inherently cultivates conditions for criminality⁵.

2. Marx on Crime and Criminality

Karl Marx's analysis of crime provides profound insights into its role within capitalist society. His work, often characterized by its intellectual brilliance, was aptly described by Friedrich Engels in Marx's obituary: "On the afternoon of March 14, 1883, at a quarter to three, the greatest thinker of all time ceased to think."⁶

In his work *Theories of Surplus Value*, Marx explores the concept of crime as a productive force within capitalism. He argues that crime, similar to other forms of production, is deeply embedded in capitalist structures. Marx provocatively claims, "A philosopher produces ideas, a poet produces poems, a priest produces sermons, and a criminal produces crimes." This assertion challenges conventional understandings of crime by revealing its role in the broader social and economic system. Marx's analysis demonstrates that crime not only generates criminal acts but also drives the creation of various societal institutions, including criminal law, the legal system, police forces, and even academia.⁷

Marx further elaborates that crime fuels the development of a range of professions, from locksmiths to police officers, while simultaneously generating new needs and technological innovations, such as tools for torture or methods of criminal detection. Crime, in this context, is portrayed as an integral element of the capitalist economy, fostering the evolution of productive forces and reinforcing the systemic nature of capitalism. According to Marx, without crime, capitalist societies would face stagnation, as the competition and dynamism that crime stimulates would disappear. In this sense, crime functions as a catalyst for social, technological, and economic development, despite its seemingly paradoxical role. Citing Bernard de Mandeville, Marx observes:

*"What we call evil in this world, both moral and natural, is the great principle that makes us social creatures, the solid foundation of all occupations and professions without exception. Without evil, society would collapse."*⁸

Moreover, Marx's argument challenges contemporary approaches to criminal justice, which often focus on punitive measures rather than addressing the root causes of crime, such as economic inequality, poverty, and social marginalization. Marx's historical materialist perspective asserts that crime is not merely a social anomaly but a symptom of deeper structural flaws in society. Therefore, the persistence of crime cannot be resolved through mere punishment but requires systemic transformation.

Through this analysis, Marx challenges traditional views of crime as a purely destructive force, illustrating its paradoxical role in sustaining capitalist structures.⁹

⁵ Marx, K. (Capital: A Critique of Political Economy, Volume 1, Preface to the First Edition, p. 12). Trans. Ben Fowkes. Modern Times Editions, Athens.

⁶ Marx, K. & Kautsky, K. (1965). Abridged Capital: Simplified Version, pp. 5-6. Iniochos Editions, Athens.

⁷ Marx, K. (1981). Capital: Theories of Surplus Value (Fourth Volume of Capital), Vol. 1, pp. 432-434. Trans. Panagiotis Mavromatis. Modern Times Editions, Athens.

⁸ Karali, E. (2021). "Crime and Normality," Efimerida Prin, 23 May 2021 (Greek).

⁹ Karali, E. (2021). "Op. cit." Efimerida Prin, 23 May 2021 (Greek).

3. The Crimes of Capitalism

Capitalism's history is riddled with systemic crimes that far surpass individual acts of violence. Colonialism, slavery, and imperial wars have resulted in unimaginable suffering. For example:

- Between 1857 and 1867, British colonial forces exterminated nearly 10 million Indians.¹⁰
- Belgian exploitation of the Congo (1885–1908) caused the deaths of 10–15 million people.¹¹
- The transatlantic slave trade claimed at least 17 million lives, fueling the rise of capitalism in the U.S. and beyond.^{12 13}

The 20th century's world wars, driven by capitalist rivalries, resulted in over 110 million deaths.¹⁴ Post-World War II, conflicts such as the Korean and Vietnam wars, often waged in the name of capitalist interests, claimed millions more lives. These examples underscore the systemic violence inherent in capitalist expansion.^{15 16}

4. The Capitalist Crime of Drugs

Over the past two decades, drug-related deaths in the United States, the epicenter of capitalism, have exceeded 1 million. This alarming trend highlights a “virtual battlefield” where people succumb to substance abuse rather than traditional conflicts. In 2021 alone, over 100,000 individuals died from drug overdoses—a 15% increase from 2020—according to the National Center for Health Statistics. Of these, more than 80,000 fatalities involved opioids, with fentanyl being a leading cause, as reported by the *Washington Post*.

Since the early 21st century, the U.S. has faced an escalating overdose epidemic driven by prescription painkillers, heroin, fentanyl, and methamphetamines. The CDC reported that between February 2022 and February 2023, 109,940 people died from drug overdoses—an average of 305 deaths per day. Many victims are young, with states like California, Florida, and Texas recording the highest death tolls, particularly in wealthier regions like California (over 11,000 deaths in a year).¹⁷

This epidemic underscores a deeper societal issue: in capitalist societies, even when economic needs are met, individuals often seek fulfillment in escapism, such as drug use, rather than in daily life. This reflects the values of a profit-driven system, devoid of universal ideals and humanistic aspirations, where the pursuit of happiness is overshadowed by the pursuit of profit.

5. A Radical Approach to Crime: Rousseau, Hugo, Marx, and Dostoevsky

The United States, despite making up less than 5% of the global population, incarcerates 25% of the world's prisoners. Why do the most severe crimes occur in the heart of capitalism? Every day, 120 Americans die from gun violence, with approximately 40,000 deaths annually. The U.S. is the only country where civilian firearms outnumber its population, with over 400 million firearms for 335 million citizens.

President Dwight Eisenhower, in 1961, warned about the growing influence of the “military-industrial complex.” Recent reports show that in Greece, death contracts range from

¹⁰ The Guardian. (2007). 24 August; 18 July.

¹¹ Renton, D., Seddon, D., & Zeilig, L. (2007). *The Congo: Plunder and Resistance*, pp. 30-31. Zed Books, London.

¹² World Future Fund. "Death Toll from Slavery: Historical Perspectives." Retrieved from: www.worldfuturefund.org

¹³ Huffington Post. (2014). 24 February; The Nation. 1 May 2015; Forbes. 3 May 2017.

¹⁴ “Estimates of exact numbers vary. Data from the Great Soviet Encyclopedia, Vol. 26, pp. 411 and 430.”

¹⁵ Human Development Report. (1991 & 2005). pp. 82, 153-155.

¹⁶ Gikas, A. (2017). "The Crimes of Capitalism," *Rizospastis*, 3 September 2017 (Greek).

¹⁷ Neta, S. (2023). "Over 300 deaths per day in the USA from drug overdoses," *Iatronet* (Greek).

€40,000 to €100,000, reflecting the commodification of human life. A famous social experiment asks: if 30 people are confined together, how long before they abandon their humanity? The result may not lie in inherent depravity, but in the crime of confinement itself.

Victor Hugo's statement, "Where a school opens, a prison closes," emphasizes the importance of education in reducing crime. Societies should focus on humanistic values rather than perpetuating crime and degradation. States and governments, through inadequate education, healthcare, and social services, contribute to social inequality. As the adage goes, "Poverty is slavery." Poverty, insecurity, and the "every man for himself" mentality breed violence. The commodification of human relationships fosters a loss of solidarity.¹⁸

Violence, including murder and sexual abuse, is rooted in exploitative social structures that prioritize individualism, competition, and profit. These dynamics erode human dignity, leading to dehumanization and hostility, even among those with shared concerns. Radical feminist movements oppose the legitimization of prostitution as "bodily autonomy," exposing the exploitation of women's bodies. Progressive theories that justify such practices undermine human dignity.

The culture of violence, rooted in state repression and economic inequality, amplifies oppressive gendered and generational dynamics. To address criminality, we must look beyond individual acts to the systemic causes, which lie in the structure of capitalism. Western societies, including the U.S., are complicit in the exploitation of vulnerable populations, as seen in global sex tourism.

The solution to criminality cannot be found within capitalism, as Marx argued: money is born with bloodstains, and capital is inherently exploitative.¹⁹ The mode of production shapes social consciousness, making criminals products of their environment.²⁰

Society must confront the idea that "society prepares the crime; the criminal commits it." Criminology must study the systemic causes of crime, acknowledging that profit-driven societies inevitably foster criminality.^{21 22}

In *Crime and Punishment*, Dostoevsky shows that Raskolnikov's crime is a protest against social injustice, reflecting the failure of society to address inequalities—a theme that resonates in both 19th-century Russia and today's world. Rousseau's insight that the enclosure of land initiated social inequality highlights the roots of societal crime: "The first man who enclosed a piece of land and said, 'This is mine,' was the true founder of civil society."²³

6. Conclusion

To meaningfully reduce crime, we must analyze its root causes within the broader societal context. Crime is not an isolated phenomenon; it is a product of the values and structures of a capitalist society that prioritizes profit over human welfare.

To create a new consciousness, we must transition to different societies that prioritize universal ideals rather than the profit-driven motives of current capitalist systems. Superficial analysis of social phenomena is insufficient; we must look beneath the surface.

¹⁸ Bakunin, M. "The Politics of the International," in *For an Anarchist Socialism*, Free Press Editions, p. 43 (Greek).

¹⁹ Marx, K. (1978). *Capital: A Critique of Political Economy*, Volume 1, p. 785. Modern Times Editions, Athens.

²⁰ Marx, K. *Capital: A Critique of Political Economy*, Volume 1, p. 785.

²¹ Marx, K. "Preface" in *A Critique of Political Economy*, Economic and Philosophical Library Editions, p. 7.

²² Marx, K. (1978). *Capital: A Critique of Political Economy*, Volume 1, p. 785. Modern Times Editions, Athens.

²³ Rousseau, J. J. (2006). *Discourse on the Origin and Foundations of Inequality Among Men*, Modern Times Editions, Athens, p. 113 (Greek).

As Marx famously asserted, "*Philosophers have only interpreted the world in various ways; the point is to change it.*"²⁴ Without systemic change, crime will remain a persistent feature of exploitative societies. The ultimate goal must be to build societies grounded in universal human ideals, where exploitation, poverty, and crime are relics of the past.

With this understanding, we can contribute to a scientific analysis of crime in Greek society and beyond, paving the way for meaningful and lasting solutions.

7. References

- Alexiadis, St. (2004). *Criminology* (4th ed.). Sakkoulas, Athens-Thessaloniki (Greek).
- Bakunin, Mikhail. "The Politics of the International" in *For an Anti-Authoritarian Socialism* Free Press Editions, Athens (Greek).
- Farsedakis, Iakovos. (1990). *Criminological Thinking from Antiquity to the Present Day* Nomiki Bibliothiki, Athens (Greek).
- Farsedakis, Iakovos. (2005). *Elements of Criminology* Bibliothiki, Athens (Greek).
- Gikas, Anastasis. (2017). "The Crimes of Capitalism" *Rizospastis*, 3 September 2017 (Greek).
- Karali, Emilia. (2021). "Crime and Normality" *PRIN Newspaper*, 23 May 2021 (Greek).
- Kourakis, Nestor. (2023). *Social Justice and Counter-Criminal Policy* Sakkoulas, Athens (Greek).
- Kostopoulos T, Voukelatou A, Laskaratos K, Tsaknaki V, «Museums of the future and sustainability», *The Hellenic Open Business Administration Journal* (under publication)
- Kostopoulos T, Voukelatou A, Laskaratos K, Tsaknaki V, «Museums, Society and Health», *The UNIVERSITY WITHOUT BORDERS Journal of ECONOMICS & BUSINESS*, (under publication).
- Kostopoulos, Tryphon. (2024). *State and Self-Government* Papazisis, Athens (Greek).
- Kostopoulos, Tryphon. (2014). *Local Democracy and European Integration* Papazisis, Athens (Greek).
- Kostopoulos, Tryphon. (2010). *Local Society and European Integration* Papazisis, Athens (Greek).
- Kostopoulos, Tryphon. (2000). *European Economic Integration and the National State: Regions and Regional Policy of the European Union* Adelphi Kyriakidis, Thessaloniki (Greek).
- Kostopoulos, Tryphon. (1996). *European Union and Local Self-Government: The Institution of Local Self-Government in Greece* Papazisis, Athens (Greek).
- Lampropoulou, Efstathia. (1994). *Social Control of Crime* Papazisis, Athens (Greek).
- Laskaratos K, Voukelatou A, Tsaknaki V, T.Kostopoulos, «Culture and political ideologies: The example of Greek Museums», *The UNIVERSITY WITHOUT BORDERS Journal of ECONOMICS & BUSINESS*, Volume 6 - 2023, No 1 & 2
- Manoledakis, Ioannis. (2011). *Law and Ideology* Sakkoulas, Athens (Greek).
- Manoledakis, Ioannis. (2005). *Criminal Law* (7th ed.). Sakkoulas, Athens (Greek).
- Marx, Karl. (1978). *Capital*, Vol. 1 Synchronic Era, Athens (Greek).
- Marx, Karl & Kautsky, Karl. (1965). *Epitome, Capital, Popularized* (Synopsis: The Capital, Popular Edition). Iniochos, Athens (Greek).
- Marx, Karl. (1981). *Capital: Theories of Surplus Value (Fourth Volume of Capital)*. Synchronic Era, Athens (Greek).
- Marx, Karl. "Prologue" in *Critique of Political Economy* Economic and Philosophical Library (Greek).
- Marx, Karl. *Theses on Feuerbach*.
- Mooney, J. (2020). *The Theoretical Foundations of Criminology: Place, Time and Context*. Routledge.

²⁴ Marx, K. Theses on Feuerbach, 11th Thesis.

- Neta, Sophia. (2023). "Over 300 Drug Overdose Deaths Per Day in the US" *MedNet* (Greek).
- Rousseau, Jean-Jacques. (2006). *Treatise on the Descent and Foundations of Inequality Among Men* Synchronic Era, Athens (Greek).
- Spinelli, Kalliopi. (2014). *Criminology: Modern and Older Directions* Nomiki Bibliothiki, Athens (Greek).
- Zarafonitou, Christina. (2023). *Empirical Criminology* (3rd ed.). Nomiki Bibliothiki, Athens (Greek).
- Zarafonitou, Christina. (2011). "Fear of Crime: A Comparative Approach in the European Context" Special Issue of *Criminology*, October 2011 (Greek).
- Zarafonitou, Christina. (2011). "From Retributive to Restorative Justice: Punitiveness or Conflict Mitigation?" In *Criminology Facing Contemporary Challenges* Sakkoulas, Athens (Greek).
- Zarafonitou, Christina. (2008). *Punitiveness: Modern Trends, Dimensions, and Criminological Concerns* Nomiki Bibliothiki, Athens (Greek).
- Zarafonitou, Christina. (2003). *Prevention of Crime at Local Level: Modern Trends in Criminological Research*). Nomiki Bibliothiki, Athens (Greek).

Cultural Policy, Cultural Management and Socio-Economic Impact: A study for Greece

Abstract:

Cultural heritage is one of the main sources that may contribute significantly to the development process and, furthermore to local development. This article attempts to analyze the issue of cultural heritage and local development, focusing on a case study of Greece. The paper using a 'mixed approach' that based in a literature survey and in an analysis of secondary dataset. Furthermore, the paper also attempts to analyze the impact of cultural heritage, cultural policy and sustainable development in Greece.

Keywords: Cultural, Cultural heritage, Sustainable development, Local development, Socio-Economic Impact, Greece.

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1. Introduction

The term culture refers to the culture of a society and a region-country and has multiple meanings, and expresses such material goods as, for example, cultural heritage, buildings and monuments of historical importance, fine arts, decorative objects, clothing, etc., as well as intangible goods and activities, such as, for example, manners and customs, ideas and values, human achievements, etc. (Lowenthal, 1985).

In particular, the term of "cultural heritage" is of particular importance and describes both the man-made (material and intangible) and natural heritage of a country. National cultural heritage organizations are set up to determine how and where to leave what older generations left behind. Public or private museums and cultural organizations take on the task of preserving cultural property, incur significant costs for their preservation and organize events to inform the public about their importance.

According to UNESCO (2015), cultural heritage is closely related to the 'creative industries' that affecting the socio-economic variables, such as, national product-GDP, national income, employment, and moreover the quality of life etc. The protection and preservation of the cultural heritage of a place has an impact on a set of parameters. This is also the sector that receives the most benefit, as a set of components lead to an improvement in the climate and allow the inflow of funds to a destination. Culture, both ancient and modern, is a tourist attraction and the two - culture and tourism - have been considered to be closely linked, (Demangeot, Broderick & Craig, 2015).

This article attempts to analyze the role of cultural organizations, the cultural heritage and the impact on sustainable development.

2. Cultural Organisations and Cultural Management

The concept of "cultural resource management" refers to cultural management-administration with the main goals of productivity, feasibility and economic profit brought together. Through the management of culture, the mechanisms that will strengthen it will be established, affecting directly socio-economic growth.

Cultural organizations are the essentials units of cultural policy and cultural process. Cultural organizations operate according to the main principles of public interest, affecting essentially the processes of production, employability and development.

Furthermore, cultural organizations are mainly associated with the promotion of cultural heritage, in association with education, new digital technologies and cultural creative industries, posing an important impact on development. Cultural organizations play a crucial role involving also an heterogeneous, large-scale audience, with varying requirements.

A particularly important factor for the structure and success of the cultural organizations' goals is related with the internal and external organisational environment and resources, corresponding to the determining factors of political economic, social and technological forces, affecting the organization. These environments involve the available resources of the cultural organization and includes the productive resources and factors, such as, the tangible and intangible resources related to cultural heritage, or the production of cultural products and activities, the economic and human resources, and also the available infrastructure and the technological resources.

Regarding the cultural activities and the cultural organizations, we can consider the sectors of culture and creativity sectors, such as, prints, constructions, crafts, publications, audiovisual, communications, advertising, retail of cultural goods, architecture, arts, libraries and museums. Table 1 illustrates the codes and statistical classification from cultural activities and creativity sectors.

Table 1: Statistical Classification of Culture and Creativity Sectors

Code Numbers	Culture and Creativity Sectors
Prints, Constructions and Crafts	
1812	Other printing activities
1813	Pre-printing and pre-recording services
1814	Bookbinding and related activities
1820	Reproduction of pre-recorded media
3212	Manufacture of jewelry and related articles
3213	Manufacture of imitation jewelry and related articles
3220	Manufacture of musical instruments
3240	Manufacture of toys of all kinds
Retail Trade of Cultural Goods	
4761	Retail sale of books in specialized stores
4763	Retail sale of music and video recordings in specialized stores
7722	Rental of video cassettes and discs
Publications	
5811	Book publishing
5813	Newspaper publishing
5814	Magazine publishing of all kinds
5819	Other publishing activities
Software Publishing and Computer Programming	
5821	Computer game publishing
5829	Other software publishing
6201	Electronic systems programming activities
Audiovisual	
5911	Motion picture, video and television program production activities
5912	Activities incidental to motion picture, video and television program production
5913	Motion picture, video and television program distribution activities
5914	Film screening activities
5920	Sound recordings and music publishing
7420	Photographic activities
Television, Radio and Communication	
6020	Television programming and broadcasting
6201	Electronic systems programming activities
6312	Web portals
6391	News agency activities
Architecture	
7111	Architects' activities
Advertising	

7311	Advertising agencies
Specialized Design	
7410	Specialized design activities
Arts and Entertainment	
90	Creative activities, arts and entertainment
Libraries and Museums	
91	Activities of libraries, archives, museums and other cultural activities

Source: Own elaboration, Database ELSTAT

Figure 1 illustrates the main and related domains of strategic planning and cultural management for cultural organisations. Strategic management for a cultural organisation consists one of the main pillars for the success of internal economics and the efficiency process of cultural organisations.

Figure 1: Strategic Planning of Cultural Management, Scale Economies and Competitiveness



Source: Own Elaboration

Figure 2: Cultural Management and Planning Activities

Source: Own Elaboration

The issues of administration-management and organization of the internal and external environments of the cultural organization set the conditions for achieving the goals of sustainability, productivity, profitability, competitiveness and effectiveness of the cultural organization. Figure 2 illustrates the management process for cultural resources, human capital, infrastructures and financial aspects.

The management of cultural elements is a part of a broader socio-economic planning framework and now contains elements of business administration, which will be reported in the course of work. Cultural management takes place in developed countries with funds that they themselves offer to cultural sites, through their state budgets or the participating individuals, to support the needs and help in their operation, while continuing to enable visitors. But in countries that do not have the financial capacity to manage cultural sites, international organizations provide funding through various programs to support and include monuments in the list of world cultural heritage. (The World Bank, 2010).

3. Cultural Heritage and Sustainable Development

At the 1972 General Conference in Paris, as has been the case to date, almost every country in the world was invited to sign the recognition of its natural and cultural heritage, as well as the promise of long-term measures to ensure its preservation. of the monuments of the civilizations that passed but also of those that come. (UNESCO, 2014).

Cultural economy deals with the following basic issues:

- Those products and services whose primary economic value derives from their cultural value.
- Need economic interventions and innovations (markets, production, entrepreneurship)
- Need Public and Private Sectors
- Need protection, development and transmission of all aspects of cultural life: heritage and contemporary

There is a huge literature indicating that there is also an apparently impact of cultural policy and culture in economic and social sectors and moreover in sustainable development. Cultural heritage has a direct impact in:

- Economic growth
- Quality of life and social development and

- Sustainable development.

The term sustainable development is a concept that has become more and more common in recent years in the vocabulary of scholars and in essence marks a shift of man towards more friendly methods of resource management. (UNESCO, Robinson & Picard, 2006).

Agenda 21 of the United Cities & Local Governments (UCLG) highlights the importance of culture as the cornerstone of sustainable urban development. (Duxbury, Hosagrahar & Pascual, 2016). Cultural management, moreover, could not have the desired results, if not combined with an environment that offers opportunities for activities that do not leave a strong environmental footprint (impact of human activity), as this demonstrates the interest of the local community in conservation of natural resources. (Sengupta, 2001).

Figure 3 illustrates the main points and the impact of cultural policy and cultural management in socio-economic growth and sustainable development.

Figure 3: Cultural Policy, Cultural Management and Socio-Economic Growth



Source: Own Elaboration

Regarding the cultural policy, the main points of policy initiatives concern:

- Sustainable and competitive creative and cultural economy needs effective policy-making
- Government interventions help shape the structure around which the creative and cultural economy develops
- Local of Cultural infrastructure and cultural facilities
- Technology, internet and other telecommunications quality and access
- Tax regimes
- Education policies from school to tertiary
- Local and regional government involvement
- Rights and status of artists
- Financial and administrative support
- Creative and cultural economy is both a global and local phenomenon

Cultural heritage, like the environment, represents for economy and society precious public capital with strong development potential that needs to be preserved for future use.

Capital is a factor of production, along with land and labour. In a wider sense, a “capital asset” is any good that can be used in the economic process, thus generating income and employment.

Cultural heritage items or sites are considered as capital assets, since they can enter the production process attracting visitors, encouraging entrepreneurship, contributing to the branding of a place, increasing social well-being by generating income and employment at local, regional or national level. Figure 4 illustrates the process of between the cultural management, internal and external environment and those of competitiveness, productivity and socio-economic effects.

Figure 4: The Socio-Economic Effects of Cultural Management



Source: Own Elaboration

Sustainable development is a major asset for the cultural management of modern cities or developing tourist areas. According to UNESCO (2012; 2015) reports, culture can be either the guide to the implementation of sustainable development methods in a place or the cause that will activate them, (UNESCO, 2012, 2015). The vision is now formulated with the parameters (UNESCO, 2015):

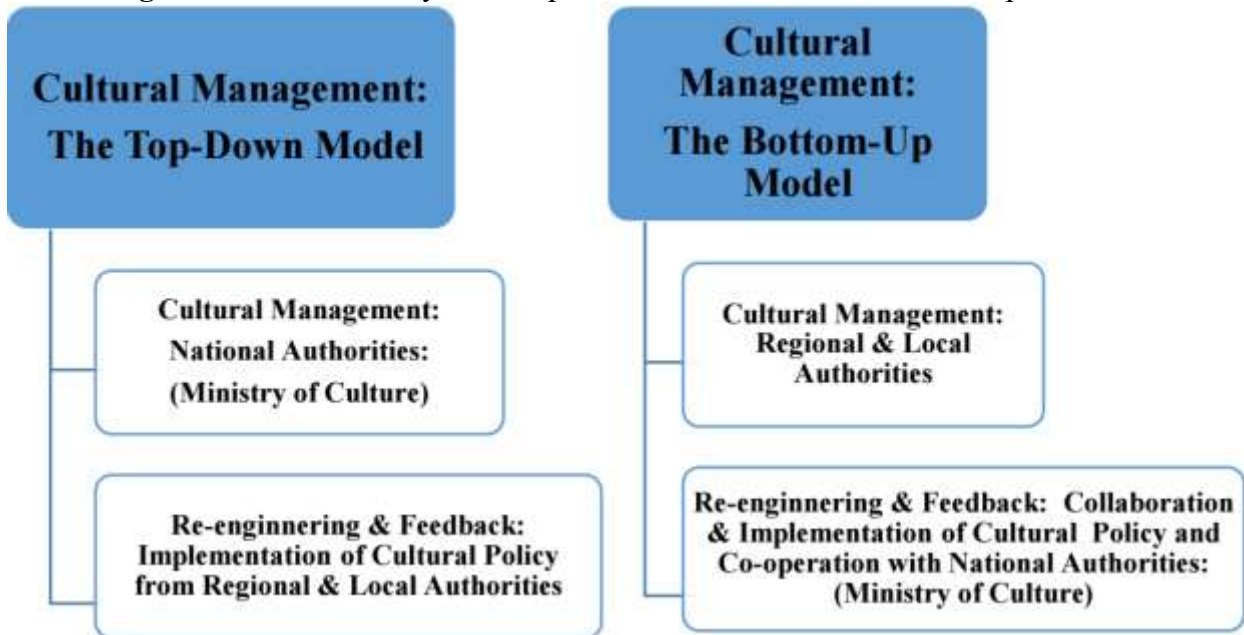
- Creating conditions for a positive impact on available resources and reducing social inequalities.
- Recognizing that the development of an area (in the context of cultural management) includes respect for human rights and fundamental freedoms, social development and the existence of democratic systems of government.
- Pay due attention to the peculiarities of the cultural elements and the local culture

In European Communities (1957) and EU institutional level there was no-clear directives-references and/or legislation for the protection and the promotion of cultural heritage at national or EU level. In 2007, the European agenda for Culture or so-called the ‘Green-Bible’, pay emphasis in human resources of cultural and creative sectors and as a pillar for socio-economic growth and sustainable development.

Currently, in EU there is a cultural institutional framework for the protection and promotion of cultural heritage and cultural industries. There is an extensive financial program

for the support of EU' cultural heritage. Figure 5 illustrates the process and the main pillars between the two alternative models of cultural policy: firstly in the Top – Down Model and secondly the Bottom-Up Model.

Figure 5: Cultural Policy: The Top – Down Model and the Bottom-Up Model



Source: Own Elaboration

The European' cultural policy aiming to:

- Promote cultural heritage as a pivotal component of cultural diversity and inter-cultural dialogue.
- Highlight the best means to ensure conservation, safeguarding of cultural heritage and enjoyment by a wider and more diverse audience.
- Promote cultural heritage's contribution to the economy.
- Promote cultural heritage as an important element of the relations between the EU and third countries.

Furthermore, the goals at the national level are:

- National Coordinators will manage the Year in Member States
- Multipliers: Creative Europe desks, Commission and European Parliament representations, cultural heritage stakeholders, the cultural sector, etc.

Throughout the country, there are hundreds of museums, archaeological sites, and monuments that detail the rise of art, architecture, crafts, design, ideas and thought. Figure 5 illustrates the main Unesco world' heritage monuments, whereas, in Greece there are eighteen cultural monuments of Unesco heritage.

Figure 6 illustrates a SWOT analysis, (strength -- weaknesses form the internal environment and opportunities and threats from the external environment), for cultural activities and cultural heritage in Greece.

Figure 6: SWOT Analysis

Strengths
<ul style="list-style-type: none"> • The unique and authentic cultural heritage (ancient, Roman, Byzantine, modern). • The Mediterranean climate, which allows visitors to arrive for more than 8 months per year. • The large number of cultural events that take place throughout Greece, giving visitors the opportunity to get to know it more closely. • Improving infrastructure in recent decades • The large number of protected areas and cultural heritage contributes to the creation of conditions for sustainable development.
Weaknesses
<ul style="list-style-type: none"> • The negative economic climate of the economic crisis, which implies a reduction of funds to the culture sector. • The dozens of unexploited or moderately preserved monuments. • The bureaucracy • The lack of an organized plan to increase and promote more sustainable development methods.
Opportunities
<ul style="list-style-type: none"> • The entry into the country of large business investment interests of the tourism sector and the construction of large and well-organized accommodation. • The financial crisis, however, also created opportunities, as several companies found suitable ground to grow or settle in Greece (increase of jobs). • The growing trend for cultural tourism and ecology that attracts tourists more alternative ways of recreation and therefore more environmentally friendly.
Threats
<ul style="list-style-type: none"> • The Mismanagement and • High taxation and bureaucracy are key obstacles to the development of cultural activities. • The financial crisis

Source: Own Elaboration

4. Conclusions

Cultural heritage is important for sustainable development and for human well-being for the present and for future generations, at national, regional, and local level.

Cultural heritage, like the environment, consists of public capital assets that provide to society a stream of services, that are non-marketed but which can be quantified and valued. For selecting heritage projects and public policy measures we need to understand how the concepts and methods for valuing cultural heritage goods and services are defined and used. Need to understand the economic characteristics of goods and services provided by cultural heritage assets, thus to know how to estimate benefits and costs of projects in the sector of cultural heritage. Cultural heritage provides goods and services to society that are non-marketed, hence they have no price, but have value.

The combination of cultural management in an area and the application of sustainable development methods means that the local community and entrepreneurship can benefit from the promotion of cultural goods, but without harming themselves or the environment in which they are located. The EU cultural policy aiming to:

- To encourage the sharing and appreciation of Europe's cultural heritage as a shared resource.
- To raise awareness of common history and values.
- To reinforce a sense of belonging to a common European space.

The cultural policy and the orientation in Greece aiming to:

- Balance conservation with an acceptable degree of change. Stakeholders should weigh the different values and trade-offs between conservation and development, identifying the acceptable level of change and the extent of adaptive reuse.
- Promote a blend of regulation and incentives. Measures to conserve historic city cores and heritage assets are not limited to rules and regulation that restrict activities. Incentives are also essential for achieving “integrated conservation.”
- Ensure a dialogue between public and private sectors. Heritage is a public good and the economic justification for public sector investment is well established. But, it is unreasonable to expect the public sector to be the sole investor, and the solution is to have a combination of public and private investment, with a balance between the two, varying depending on the project scheme and context.

5. References

- Allison, M. & Kaye, J. (2005). *Strategic Planning for non-profit organizations* (2nd edn.). New York: John Wiley & Sons.
- Campbell, J. & Viceira, L.M. (2002). *Strategic asset allocation: Portfolio choice for long-term investors*. Oxford: University Press.
- Corsane, G. (2005). Issues in heritage, museums and galleries: A brief introduction (In: G. Corsane, *Heritage, museums and galleries: An introductory reader*). London: Routledge, p. 1-13.
- Demangeot, C., Broderick, A.J. & Craig, C.S. (2015). “Multicultural marketplaces”. *International Marketing Review*, Vol. 32 (No 2), p. 118.
- Dijkers, M. (2013). “Introducing GRADE: A systematic approach to rating evidence in systematic reviews and to guideline development”. *KT Update*, Vol. 1 (No 5), p. 1-3.
- Duxbury, N., Hosagrahar, J. & Pascual, J. (2016). *Why must culture be at the heart of sustainable urban development?* Buenos Aires: UCLG Publishing.
- ELSTAT: www.statistcs.gr
- European Agenda for Culture (2014). *The role of Public Arts & Cultural Institutions in the promotion of cultural diversity and intercultural dialogue (Work Plan for Culture 2011-2014)*. Brussels: EU Publishing.
- Eurostat: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Culture_statistics_-_cultural_enterprises&action=statexp-seat&lang=el
- Gkantzias G. and Korres G. (2011) ‘Cultural Economy and Sponsorships: Financial Management and Development of Cultural Units’, (in Greek), Hellenic Open University, Greece.
- Hesmondhalgh, D. & Pratt, A.C. (2005). “Cultural Industries & Cultural Policy”. *International Journal of Cultural Policy*, Vol. 11 (No 1), p. 1-13.
- Korres G. (2002) ‘Economies of Culture’, Hellenic Open University, (in Greek), Greece.
- Keitumetse, S.O. (2014). “Cultural resources as sustainability enablers: Towards a Community-Based Cultural Heritage Resources Management (COBACHREM) Model”. *Sustainability*, Vol. 6, p. 70-85.
- Lowenthal, D. (1985). *The past is a Foreign Country*. New York: Cambridge University Press.
- Robinson, M. & Picard, D. (2006). *Tourism, Culture & Sustainable Development*. Paris: UNESCO Publishing.
- Sengupta, R. (2001). *Ecology & Economics: An approach to sustainable development*. Oxford: Oxford University Press.
- Swarbrooke, J. (1999). *Sustainable tourism management*. London: CAB International Publishing.

- Throsby, D. (2008). Culture in sustainable development: Insights for the future implementation of (Art. 13 CE/08/Throsby/Art.13). Paris: UNESCO.
- UNESCO (1982). Mexico City Declaration on Cultural Policies (World Conference on Cultural Policies). Mexico City: United Nations Publishing.
- UNESCO (2005). Basic Texts of the 1972 World Heritage Convention (2005 edn.). Paris: United Nations Publishing.
- UNESCO (2012). Culture: A driver and an enabler of sustainable development. Paris: United Nations Publishing.
- UNESCO (2014). Medium-Term Strategy for 2014-2021 (37 C/4) (General Conference). Paris: United Nations Publishing.
- UNESCO (2015). UNESCO's work on culture and sustainable development evaluation of a policy theme. Paris: United Nations Publishing.
- UNESCO (2017). International Funds Supporting Culture.
- Van der Borg, J. & Russo, A.P. (2005). The impacts of culture on the economic development of cities. Rotterdam: European Institute for Comparative Urban Research.

The Role of Tourism in the Economic Growth of Cyprus and the Challenges of Sustainable Business Practices

Abstract:

The paper presents the tourism trends in the tourism industry in Cyprus, including tourist arrivals, income from tourism, tourist expenditures and discusses the economic importance of tourism. Considering tourism sustainability in Cyprus, the paper through a literature review presents and discusses the challenges of the implementation of sustainable business practices in the accommodation industry.

Keywords: Tourism Trends, Challenges in Tourism sustainability, Cyprus.

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1. Introduction

1.1 Tourism trends in Cyprus

The tourism sector in Cyprus is considered as the backbone of the island's economy, providing an important lifeline to the economy during the relatively recent economic and financial downturn. In 2019, the tourism industry has registered highest record year with arrivals reaching 3.976.777. Expansion of the high season beyond the June to September period is one of the main targets of the Government for tourism, as part of the 2030 strategic vision. Demand growth over the last few years seems to be driving capital inflows to new hotel and infrastructure developments, as well as renovation of existing hospitality assets. The Strategic Plan for Tourism Development 2003-2020 was prepared by the Cyprus Tourism Organisation (CTO) with the intention of providing a roadmap for the future development of the Cyprus tourism sector. The optimum target of the Strategic Plan is the maximisation of income earned from tourism. This can be achieved, inter alia, through increases in tourist expenditure in Cyprus and in the number of arrivals (CTO 2018). Since receipts from tourism and tourist arrivals are among the crucial determinants of a country's success in tourism, an overview of the evolution of these variables for Cyprus is provided below. Figure 1 shows tourist's arrivals in Cyprus for the period 2018 and 2019. Figure 2 shows tourist arrivals (in thousands) in Cyprus for the period 2000-2019. Arrivals exhibit a rather cyclical pattern with the lowest and highest point occurring in 2000 and 2019 respectively. After 2000, arrivals were declining possibly due to the September 11 terrorist attacks and the war in Iraq. Signs of recovery of arrivals appear in 2004 and in 2005. Increase of tourist arrival in 2019 rather than in 2018 is remarkable for tourism industry prosper in near future. Tourist arrival is inclining relatively higher from the year 2015 till 2019 which indeed creates many opportunities for the accommodation industry to enhance their business. Figure 3 shows tourist arrivals from the country of residence. The tourists from United Kingdom seem to have increased during the year 2019.

Figure 1: Tourist arrivals from 2018 and 2019
(Source: Cyprus statistics, CTO; Cyprus Tourism Organization)

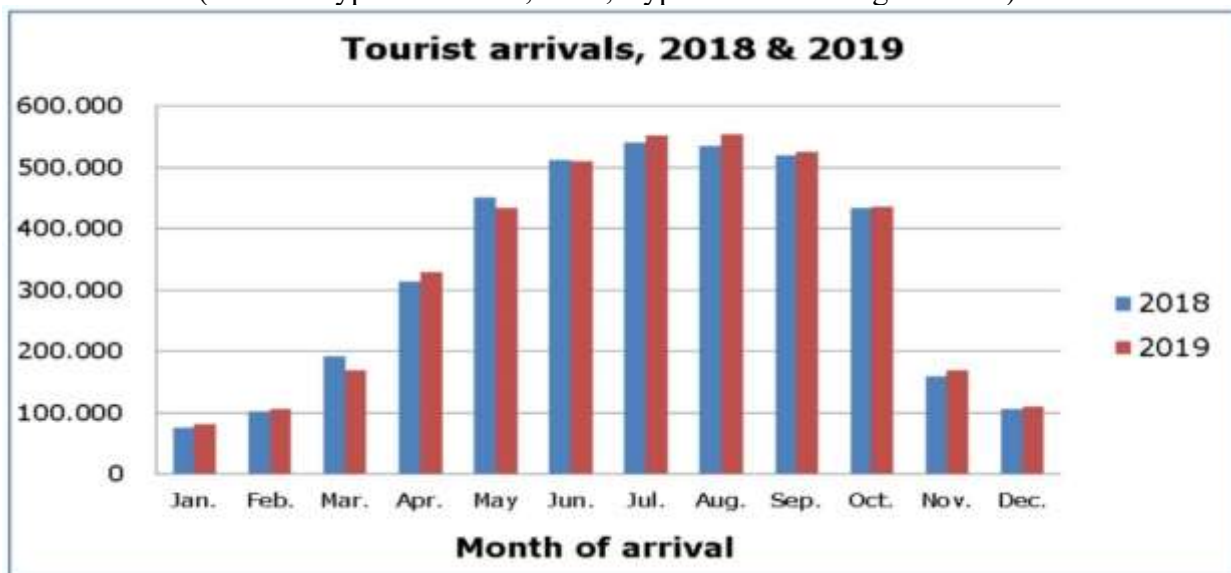


Figure 1 shows that the arrivals of tourists increased to 110.330 in December 2019 compared to 106.563 in December 2018, recording an increase of 3.5%. December 2019 had the highest volume of tourist arrivals ever recorded in Cyprus during the specific month. For the period of January – December 2019 arrivals of tourists was 3.976.777 compared to

3.938.625 in the corresponding period due 2018, recording an increase of 1.0% and out numbering the total arrivals ever recorded in Cyprus during a year.

Figure 2: Tourist Arrivals from 2000 to 2019
(Source: Cyprus statistics, CTO; Cyprus Tourism Organization)

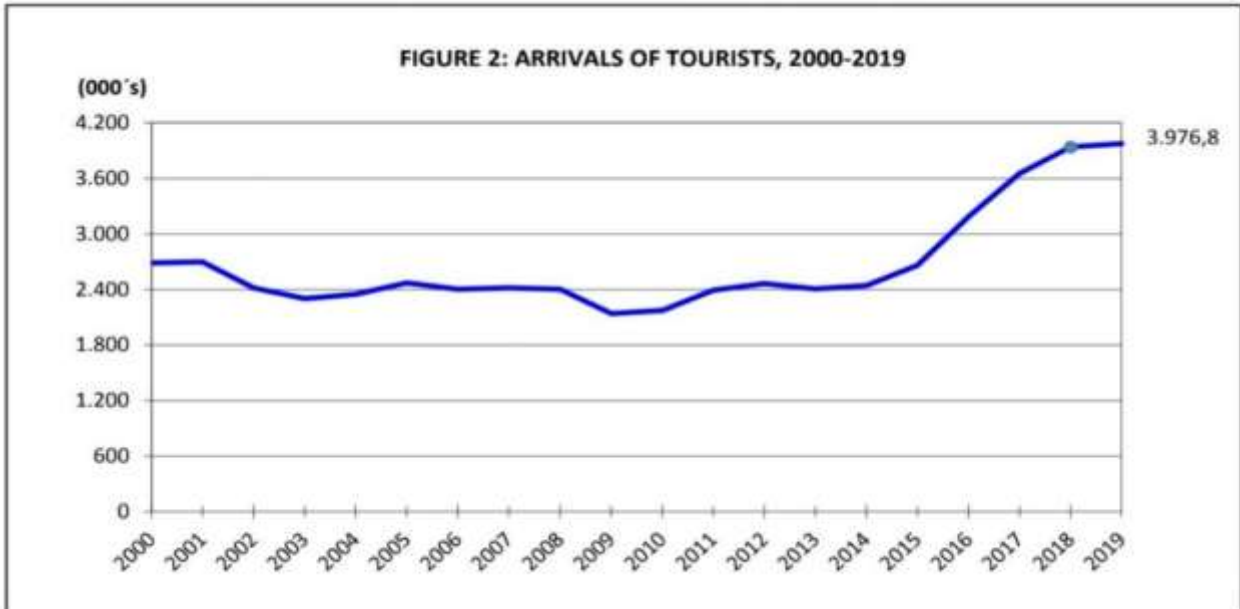


Figure 2 shows that Europe has been the traditional tourist market for Cyprus. Tourists from European countries amount to 86.3% of the total tourist arrivals in 2019.

Figure 3: Arrivals of Tourist by country of usual residence, 2000- 2019
(Source: Cyprus statistics, CTO; Cyprus Tourism Organization)

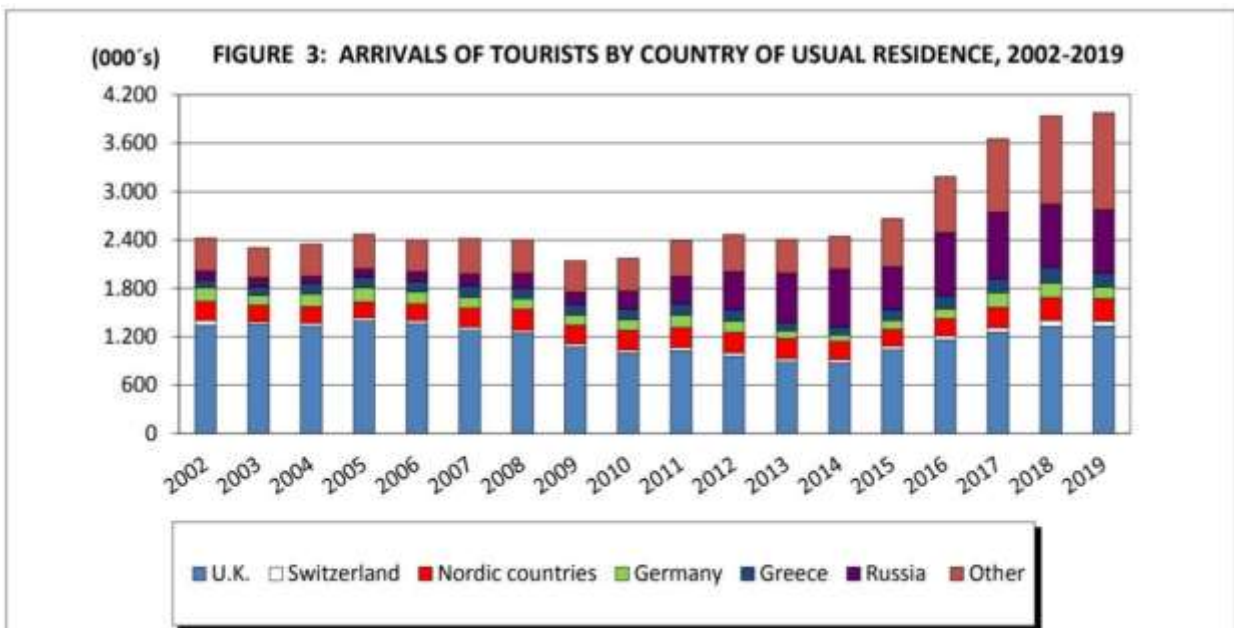


Figure 3 shows that during 2019, the United Kingdom was the most important source of tourism for Cyprus with a share of 33.5% of the total tourist traffic, followed by Russia with 19.7%, Israel with 7.4%, Greece with 4.3%, Germany with 3.8%, Sweden with 3.6%, Ukraine with 2.4%, Poland with 2.0% and Switzerland with 1.7%. Tourists arrivals from the

United Kingdom increased by 2% in December 2019 compared to December 2018. While an increase of 51.0% was recorded for tourists from Israel. A decrease of 33.4% in tourist arrivals from Greece and 1.7% from Russia were recorded. Percentage changes from one year to the next for the main countries of usual residence of tourist are presented in Table 1.

Country of Usual Residence	December				January – December			
	Tourist Arrivals			% Change 2019/18	Tourist Arrivals			% Change 2019/18
	2017	2018	2019		2017	2018	2019	
TOTAL	98.924	106.563	110.330	3,5	3.652.073	3.938.625	3.976.777	1,0
Austria	439	988	802	-18,8	40.473	45.888	44.538	-2,9
Belgium	651	616	1.451	135,6	27.089	28.231	26.077	-7,6
France	886	1.843	1.032	-44,0	35.931	36.500	31.114	-14,8
Germany	5.100	6.096	4.501	-26,2	188.826	189.200	151.500	-19,9
Denmark	180	133	252	89,5	34.990	43.063	40.568	-5,8
Switzerland (incl. Lichten.)	969	1.914	1.282	-33,0	57.540	74.216	67.534	-9,0
Greece	13.931	15.807	10.524	-33,4	169.712	186.370	171.512	-8,0
United Kingdom	28.218	32.065	33.401	4,2	1.253.839	1.327.805	1.330.635	0,2
Israel	10.048	9.324	14.077	51,0	261.966	232.561	293.746	26,3
Lebanon	1.920	1.935	2.663	37,6	58.273	62.255	58.796	-5,6
Norway	567	751	191	-74,6	54.342	55.273	60.782	10,0
Netherlands	498	912	885	-3,0	37.585	42.217	43.198	2,3
Ukraine	2.004	1.839	5.136	179,3	48.190	69.619	95.031	36,5
Poland	1.069	1.811	2.455	35,6	56.665	89.508	80.243	-10,4
Russia	12.307	9.990	9.818	-1,7	824.494	783.631	781.856	-0,2
Sweden	827	940	1.025	9,0	136.725	153.769	144.605	-6,0
Finland	49	136	121	-11,0	20.962	26.507	24.661	-7,0
Other	19.261	19.463	20.714	6,4	344.471	492.012	530.381	7,8

Table 1 shows tourist arrivals in Cyprus according to country of usual residence for 2017, 2018 and 2019 along with the corresponding % changes from 2017. The tourists from the United Kingdom increased by 4.2% in December 2019 compared to December 2018 while an increase of 51.0% was recorded for tourists from Israel. A decrease of 33.4% in tourist arrivals from Greece and 1.7% from Russia were recorded.

Figure 4: Arrivals and Expenditure per Person by Country of Usual Residence (Cyprus Statistical, CTO Cyprus Tourism Organization)



Figure 4 shows the total revenue from tourism estimated at €2.683,0 millions in 2019, compared to €2.710.6 millions in 2018, recording a decrease of 1.0%. The average expenditure per person was €674.65 recording a decrease of 2.0% from 2018. The highest average expenditure per person in 2019 was recorded in the month of August with €779.31 and the lowest in the month of January with €483.26.

Figure 5: Per Day Expenditure of Tourists by Month in the Years 2017, 2018 and 2019 (Cyprus Statistical, CTO Cyprus Tourism Organization)

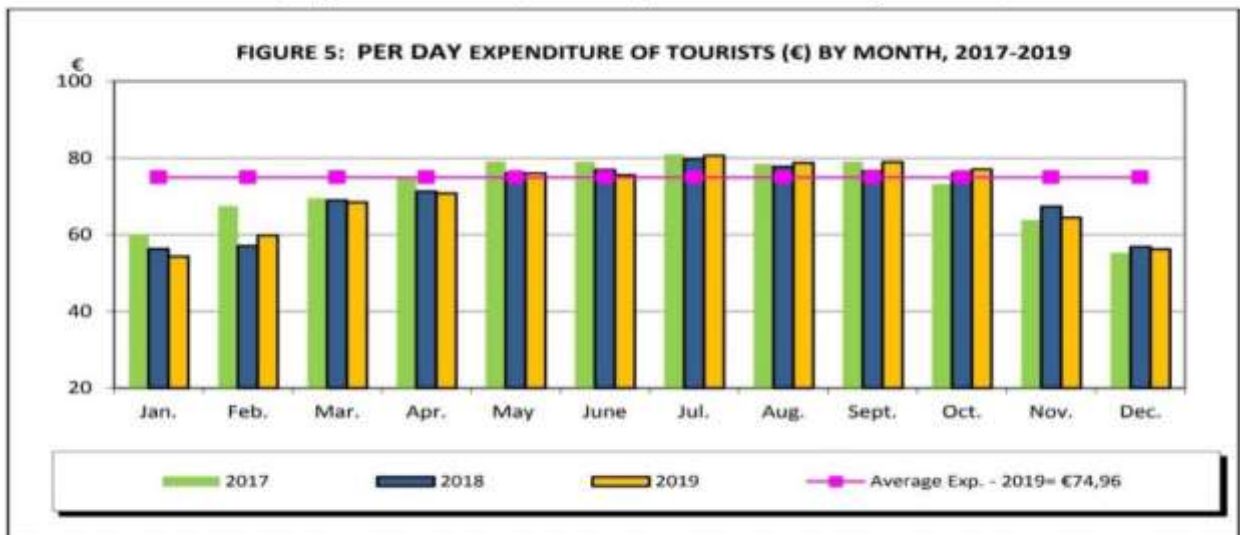


Figure 5 shows the daily tourist expenditures during the year 2019 and have reached €74.96, recording an increase of 0.2% as compared to 2018. The highest expenditure per day was recorded in the month of July with €80.61 and the lowest in January with €54.30.

Figure 6: Per Day Expenditure of Tourists by Country of Usual Residence
(Cyprus Statistical, CTO Cyprus Tourism Organization)

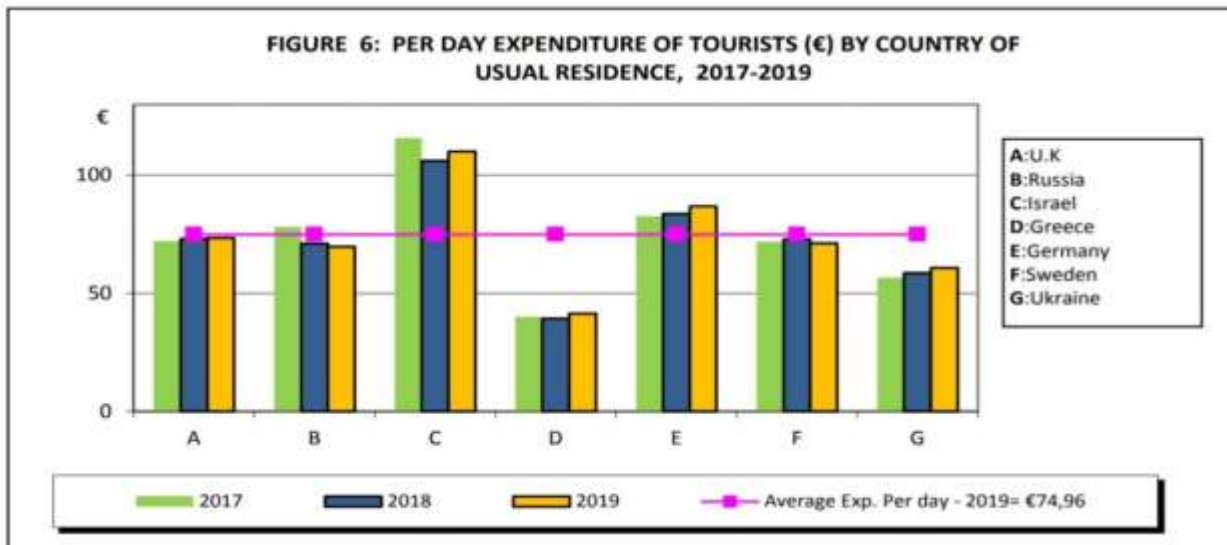


Figure 6 shows the U.K. tourists (the largest tourist market with 33.5% of the total tourists). Tourist expenditure in 2019, averaged €73.40 per day, which is by 2.1% below the overall average, while tourists from Russia (the second largest market with 19.7% of the total tourists) spent on average €69.79 which is by 6.9% below the overall average. The tourists from Israel (the third major market with 7.4%) spent on average €110.13 per day or above 46.9%. In 2019, tourists staying in Pafos, a location with the highest proportion of tourists (34.5% of the total) recorded an average expenditure per person of €685.15 which is by 1.6% above the overall average, while tourists staying in Ayia Napa (with the second highest proportion of tourists – 18.4% of the total) spent on average €681.02 or by 0.9% above the overall average. Tourists staying in Limassol (with 12.4%) spent €632.05 or by 6.3% below the overall average and tourists in Larnaka (with 11,9%) spent €498.91 or by 26.0% below the overall average.

Figure 7: Tourist Arrivals and Tourism Revenue
(Cyprus Statistical, CTO Cyprus Tourism Organization)

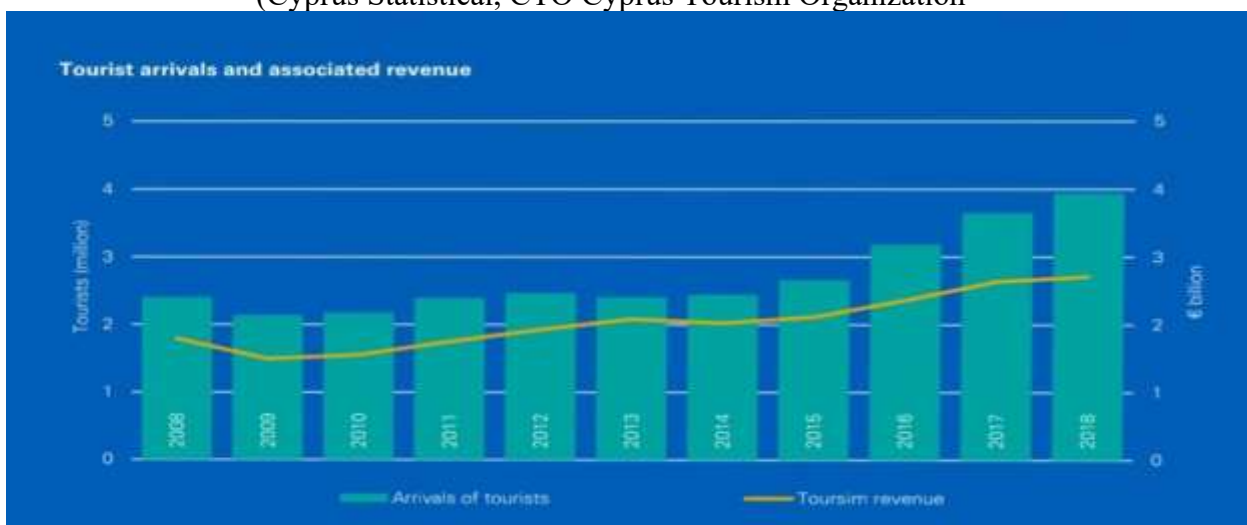


Figure 7 shows a 7.8% year on year increase in tourist arrivals. 2018 is the most successful year recorded for the Cyprus tourism industry, with the number of tourist arrivals reaching 3.9 million. Since 2014, tourist arrivals have risen for five consecutive years, reaching peak levels in 2018. In revenue terms, tourism accounted for the equivalent of 13.1%

of nominal GDP in 2018, rising to €2.7 billion, compared to the prior year. Considering the overall growth of the tourism sector, it is evident that despite the economic and financial crisis on the island, the tourism sector provided an important lifeline to the economy, which contracted by approximately 20% in 2012 – 2014. One can appreciate the significance of the tourism sector when further assessing its influence on other main markets such as retail, construction and transport.

1.2 Economic importance of tourism in Cyprus

Tourism is one of Cyprus' top economic performers for decades and the last five years had been record breaking in both the number of arrivals and revenue. In 2019 the country welcomed almost 4 million visitors with total revenue estimated at 2.7 billion (EUR) providing the long-standing appeal of Cyprus as a top European holiday destination. In 2019, contribution of travel and tourism to GDP (% of GDP) for Cyprus was 22.7 %. Before contribution of travel and tourism to GDP (% of GDP) of Cyprus started to increase to reach a level of 22.7 % in 2019, it went through a trough reaching a low of 14.3 % in 2010. The arrivals of tourists reached 110.330 in December 2019 compared to 106.563 in December 2018, recording an increase of 3.5%. December 2019 had the highest volume of tourist arrivals ever recorded in Cyprus during the specific month. For the period of January – December 2019 arrivals of tourists totalled 3.976.777 compared to 3.938.625 in the corresponding period of 2018, recording an increase of 1.0% and outnumbering the total arrivals ever recorded in Cyprus during a year. This year the revenue is estimated at 2.7 billion Euros. The contribution of the tourism sector to national income has improved. From tourism as a percentage of GDP was 22.7% in 2019 compared to 14.3% in 2010.

The growth in the tourism sector has boon for industry and policy circles. Most industry seems to agree that Cyprus is one of the competitors as a tourist destination.

Along with the pros comes the cons, decline in pollution control, increased competition, rising costs and a deteriorating infrastructure are the reasons most often cited for Cyprus's loss of competitiveness. Several countries such as Croatia, Turkey and Egypt have emerged as popular tourist destinations in the last few years. This has increased competition among countries trying to attract tourists and has put downward pressure on prices. Newly established tourist destinations are at a lower level of development and operate with significantly lower costs than Cyprus does.

It is therefore very difficult to compete against them in terms of price. The alternative strategy is to differentiate Cyprus's tourist product and compete by offering higher quality. Doing so would require substantial investments in order to upgrade an ageing infrastructure that can no longer provide a high quality tourist experience.

The country's focused on diversifying its traditional beach holiday image can show the world that it has a lot more to offer than just the sun and sea. By extending its season with the aim to welcome tourists all the year round, Cyprus would benefit by promoting its mild and green winter with snow capped and peaks and its other lesser known attractions such as forest and mountain regions, its wine country and agro-tourism, as well as its many historical and religious sites. Following global trend, a key part strategy in developing and refining niche segments like health and wellness tourism, sports, nautical and cultural tourism, all represent diversified thematic areas that also foster investment opportunities in the tourism and hospitality sector.

1.3 Sustainability

The definition of sustainable tourism compares nicely to definitions of sustainability that include the triple bottom line approach to social, economic, and environmental spheres (Sustainable Measures, 2010), and can also be seen in terms of capital (The World Bank, 2004). Social sustainability means maintaining social capital, including investments and

services that create the basic framework for society (Sustainable Measures, 2010; The World Bank, 2004). Economic sustainability means economic capital should be maintained. It involves maintenance of capital, or keeping capital intact (economic and manufactured capital is substitutable). The traditional economic criteria of allocation and efficiency must now be joined by a third, that of scale (Daly, 1992).

Environmental sustainability means protecting natural capital and seeks to improve human welfare by protecting natural capital. Environmental sustainability needs sustainable consumption by a stable population (Goodland, 2001; The World Bank, 2004). Sustainability is a crucial constituent for growth of the modern world economies. Therefore, sustainable tourism is not resistant to the demand of the world community for a better future in the destinations that are highly dependent on tourism. However, sustainable tourism can't be achieved automatically; rather it depends on a particular approach based on scientific research which will impart rational methods to the managers and operators of tourism system in general and accommodation sector in particular (Benn et al., 2014).

The major challenge that destinations are facing is operating methods in accommodation sector in order to be qualified as a green approach toward green outcome (Naidoo, Moola, & Place, 2013). And those outcomes are elaborated within the dimensions that the survey has focused on. In another word, how do managers of the hotels protect and utilize their resources which are highly limited (Naidoo et al., 2013). The fact of the matter is, exhaustion of natural resources, global warming, pollution of the oceans, urbanization, and rapidly growing population with increasing consumption are the major challenges that tourism industry must come to terms with. Accompanying all the affairs, tourism has been the reason behind depletion of the resources by the excessive consumption of ancillary sectors such as transport, accommodation, energy, land etc. Within such framework, managers are playing a determining role in how to proceed with processes and approaches to upgrade their establishments to be qualified as 'eco-hotel' so to speak (Erdogan & Baris, 2007). With the growing environmental awareness among the present tourists, accommodation sector cannot remain dormant. Nevertheless, the main agent who can disseminate eco-behaviour into the accommodation sector lies with the managers who are at the helm of these establishments. As stated by Erdogan and Baris (2007):

'A clean environment is a basic component of quality service and is thus important for the development of travel, tourism, and hotel industries. Sustainable prosperity of travel, tourism, and hotel businesses also calls for the inclusion of environmental protection components in every phase of their business venture, from the preparation and application of site plans and business programs and policies to daily routine practices'.

Accommodation sector has become a major component of guiding the industry towards sustainability as various schemes developed to evaluate and reward the hotels around the world for their involvement in such ventures (Kim, 2013). For instance, International Tourism Partnership has come up with 'green hotelier' scheme where 'Green Hotelier is the leading source of information on the sustainable and responsible agenda within the hotel industry (Kim, 2013). As the key communication tool of the International Tourism Partnership, which works with global hotel chains to drive the responsible agenda, Green Hotelier has a serious commitment to delivering accessible, expert and honest content' (<http://www.greenhotelier.org/>). And/or, the EU Eco-label for Tourist Accommodations, renders the following assets to the accommodation sector if they limit energy consumption, water consumption, reducing waste production, favouring the use of renewable resources and of substances which are less hazardous to the environment, and promoting environmental education and communication (Kim, 2013) However, the majority of previous studies as well as the measures taken by businesses focus primarily on the environmental dimensions of sustainability and therefore fail to acknowledge the holistic principle of sustainable development (Swarbrooke, 1999; Sharpley, 2000). The socio-cultural, environmental and

economic realms are interdependent and the aim of a sustainably managed business should be the optimization of all three (Hitchcock and Willard, 2009; Elkington, 2004). The accommodation business manager is an interesting field of research. A more detailed picture of the attitudes and actions of business managers in Cyprus will be created in this study. It includes all dimensions of sustainability and investigates differences between attitudes stated and actions implemented as well as differences in actions and attitudes related to the businesses' characteristics.

1.4 Objective of the paper

The objective of this paper is through a literature review to explore the perceived benefits and challenges of the implementation of sustainable business practices in the accommodation industry.

2. LITERATURE REVIEW

2.1 Sustainability in the tourism industry

Sustainable tourism is perhaps the most prominent feature of contemporary tourism discourse. However, despite its prominence for several decades, achieving sustainability remains as elusive as ever. The tourism industry is one of the largest single industries worldwide which has been criticised for its unsustainable practices such as the exploitation of the environment and local population; little commitment to particular destinations; control through large transnational corporations; unsustainable planning of physical elements, little action for awareness raising and implementation of sustainable initiatives only for good publicity and reducing costs (Swarbrooke, 1999; Mowforth and Munt, 2009).

Tourism, as an industry, is characterized by diversity and constitutes a number of sub-sectors that include transport, accommodation, food service, retail, attractions, events and facilitation. The industry has also been accused about its strong motive of short-term profit maximization instead of long-term sustainability (Swarbrooke, 1999; Mowforth and Munt, 2009). Bansal (2002: 124) argues that 'organizational goals are tied to economic performance, not environmental performance or social equity' and that 'this orientation is understandable given that a firm's time horizon is considerably shorter than society's'. Nevertheless, there are many examples of good environmental practice allied with profitability (Mowforth and Munt, 2009).

2.2. Industry self-regulation

It is the process whereby members of an industry, trade or sector of the economy monitor their own adherence to legal, ethical, or safety standards, rather than have an outside, independent agency such as a third party entity or governmental regulator monitor and enforce those standards. To achieve greater sustainability in the tourism industry the primary instruments of actions include the enforcement of laws and regulations as well as voluntary standards and initiatives (Bohdanowicz, Simanic and Martinac, 2005). However, the highly fragmented and cross-sartorial nature of the tourism industry often presents challenges for government regulations and their enforcement. In particular, the regulation for sustainability is difficult due to the complexity of the concept (Mowforth and Munt, 2009). Consequently, most countries rely on responsibility for sustainability through self-regulation (Bramwell and Alletorp, 2001). The most common techniques to respond to the growing importance of sustainability are Corporate Social Responsibility [CSR]; Environmental auditing; Eco-labelling and certification; and codes of conduct. Supporters of industry self-regulation argue that it might enhance creativity to solve problems and challenge businesses to exceed minimum standards (Hjalager, 1996; Field, 1994). Self-regulation is promoted as more effective in preventing unsustainable activities as it is in the companies' self-interest to be

socially responsible. Moral businesses will introduce sustainable business practices that are believed to be right for society and the environment (Bramwell and Alletorp, 2001). However, unfolding moral motives of companies from their self-interest in the benefits generated from sustainable business practices is very difficult (Cannon, 1994). Indeed, the implementation of voluntary initiatives has been criticised for being solely designed to prevent statutory control and regulations. Industry initiatives tend to not make a significant difference as the issue of sustainable development is not considered from a broad perspective, often solely considering environmental issues and involving only little investment (Swarbrooke, 1999). The bodies currently leading the tourism industry, such as United Nation World Tourism Organization [UNWTO] or World Travel and Tourism Council [WTTC], do not promote sustainable development through a holistic approach but promote the tourism industry through growth, profit maximisation and capital accumulation (Mowforth and Munt, 2009).

2.3 Sustainable Business Practices

2.3.1 Definition of sustainable business practices

Based on the Brundtland definition Landrum and Edwards (2009) define a sustainable business as 'one that operates in the interest of all current and future stakeholders in a manner that ensures the long-term health and survival of the business and its associated economic, social, and environmental systems'. Businesses solely focusing on reducing their environmental impact are referred to as 'green businesses' whereas a sustainable business would focus on all three dimensions of sustainability, which have often been referred to as 'triple bottom line'. The realms are intimately intertwined and their interdependencies need to be understood (Hitchcock and Willard, 2009; Elkington, 2004). The limitation to the environmental dimension has been criticized by several authors about the attempt of the tourism industry, in particular the accommodation industry, to become 'sustainable' (Swarbrooke, 1999; Font and Harris, 2004; Roberts and Tribe, 2008). However, taking environmental initiatives can be the first step towards sustainability according to the four-step model for sustainable development in tourism enterprises by Kernel (2005). The first steps are mainly concerned with developing environmentally cleaner processes and environmental management practices. The consequent and final steps challenge organisations to go further and include social and ethical aspects as well as integration in the community (Kernel, 2005). Similarly, Dunphy, Griffiths and Benn's (2007) sustainability phase model defines distinct steps organisations can take to attain sustainability. The final phase is called 'The sustaining corporation' where the ideology of sustainability is internalized with a fundamental commitment to facilitate ecological viability of the planet and contribute to equitable social practices and human fulfilment. According to Dunphy et al. (2016) this stage has not been reached by any organization for the time being. Many businesses appear to be in the initial phase and need to continue their efforts to combine the ecologic, environmental and socio-cultural dimension of sustainability.

2.3.2 Attitudes towards sustainability

Research of business manager's attitude is essential as 'the most serious barriers to change in business are attitudinal' (Dewhurst and Thomas, 2003). Ajzen and Fishbein's (1980) theory of reasoned action concludes that a strong relationship between belief, attitudes, and behavioural intentions exists, which then leads to certain behaviour. Beliefs and attitudes are influenced and formed through macro-environmental pressures, personal relationships, individual values and motives (Ajzen and Fishbein, 1980). Hobson and Essex (2001) point out that the general attitude towards environment and the implementation of sustainable business practices is most important. However, several authors highlight that agreement with broad statements representing the idea of sustainability is easy (Horobin and Long, 1996; Dewhurst and

Thomas, 2003; Deng, Ryan and Moutinho, 1992). But more specific statements and actions taken are more difficult to agree with and a certain gap between attitudinal statements and actual initiatives becomes apparent (Dewhurst and Thomas, 2003). Studies about businesses' attitudes towards responsibility for sustainable development reveal contradicting results. A survey of senior managers in the Danish tourism industry suggests that comparatively larger proportion of businesses consider the prime responsibility with the industry or with the industry working in partnership with the government (Bramwell and Alletorp, 2001). However, a study conducted with out-going tourism companies in the UK reported that the majority considered that responsibility lies with national and host governments alone and not with the industry (Forsyth, 1995). The comparability of these studies might be limited due to the contrasting business strategies, different time frame and location.

2.3.2.1 Determining factors of attitudes

Many researchers intend to better understand the motivations and perceptions of tourism business managers and investigate determining factors of their attitudes towards sustainability, of which the size of business appears to be frequently researched (Deng et al., 1992; Kirk, 1998; Dewhurst and Thomas, 2003; Horobin and Long, 1996). The majority of tourism businesses are small- or medium sized, but in global terms large transnational companies dominate and control the development of the industry (Middleton and Hawkins, 1998; Swarbrooke, 1999). Large businesses might be more likely to develop sustainable policies in order to respond to market pressures and out of commercial self-interest (Middleton and Hawkins, 1998). In their study of Canadian hoteliers attitudes towards environmental issues Deng et al. (1992) tested various hypotheses including whether or not the size or other structural components were determining factors of attitude. They assumed that hotels belonging to a group might be less concerned about environmental regulations and restraints.

However, their results showed no significant difference between group owned and family owned hotels. Concerning the size of business there was a non-significant tendency that small hotels were the least sympathetic to environmental issues as they were facing the most difficult trading conditions (Deng et al., 1992). An attitude-study particularly looking at managers of chain hotels in Europe was conducted by Bohdanowicz and Martinac in 2003. Their results show very positive attitudes towards environmental protection and acknowledgement of the importance of the environment for further development of the tourism industry. They highlight the significant impact of the hotel industry and the potential of large hotels and hotel chains for promoting and supporting corporate sustainability. An interesting finding of their study was that 'the level of environmental awareness among the hoteliers was commensurate to the efforts made by the chain management towards developing and enforcing environmental policies and programs' (Bohdanowicz and Martinac, 2003: 4).

On the contrary small hotels are mainly managed by the owners whose attitudes towards sustainability are not influenced by hotel chain policies but mainly by their personal values and beliefs, perception of environmental imperatives, motivations and goals and the understanding and awareness of the type of action required (Dewhurst and Thomas, 2003). Another determining factor of attitude towards sustainability and environmental responsibility could be the destination and its stage in the tourist area life cycle. Ioannides's (2001) longitudinal model of attitudes showed that hoteliers only took a 'treadmill' approach to sustainability as they began to worry about business survival. Their strategic planning timeline remained short through all destination development phases and their social priority was always low.

Environmental priority and support for regulations only emerged when the destination began to demonstrate structural difficulties (Ioannides, 2001). Bohdanowicz, Zanki-Alujevic and Martinac (2004) compared attitudes among Swedish, Polish and Croatian Hoteliers. Their

results show that Swedish hoteliers were more aware and had comprehensive knowledge and well-established programs and initiatives relevant to environmental protection. Polish hoteliers had little knowledge about environmental issues thus were only beginning to recognize the importance of initiatives other than immediate economic benefits.

Although in Croatia hoteliers seemed to have a high level of knowledge about and concern for environmental issues, the least pro-ecological initiatives were implemented. Bohdanowicz et al. (2004) conclude that the differences come on the one hand from the national level of environmental education and on the other hand from the development state of the tourism industry including the political and economic situation. Consequently, they agree with Bramwell and Alletorp (2001) who explain differences in attitudes by the unequal levels of environmental concern in various countries. The majority of attitude studies are concerned with environmental issues and do not consider other dimensions of sustainability which need to be considered in order to receive a more comprehensive understanding of businesses perceptions and attitudes towards sustainable business practices.

2.4 Sustainable business practices in the accommodation sector

This particular study is unable to describe the discussion about the negative impacts of accommodation businesses in-depth and will not provide a detailed review of all sustainable business practices as it would go beyond the realms of this study. It is noted that there is no universal solution for accommodation businesses due to the fragmented structure of the industry. Consequently, every business will need to decide on a strategy to move towards sustainability that suits the needs of its present and future stakeholders and will ensure a sustainable use of resources. The decisions will need to be taken in a collaborative approach with all stakeholders. The following sustainable business practices of accommodation businesses will therefore represent general trends and ideas instead of practical recommendations and frameworks. The accommodation sector interfaces with the concept of sustainable tourism on various levels.

- (1) The development, location and design of accommodation units.
- (2) The operational management practices.
- (3) The human resource management practices.
- (4) The food and drink offered in catering establishments.

The hospitality industry has been largely focused on environmental issues concerned with operational matters rather than all dimensions of sustainability (Swarbrooke, 1999). Roberts and Tribe (2008) have developed a set of sustainability indicators for tourism enterprises using the following four dimensions: environmental, socio-cultural, economic and institutional. Although these indicators were designed for small businesses they will be the basis for this literature review because they provide a holistic overview of the issues relevant for tourism businesses. To better conform to the definition of sustainable business practices the institutional sustainability indicators were integrated into the indicators of the economic dimension.

2.4.1 Economic Dimension of sustainable business practices

Economic sustainability refers to a business's ability to make profit in order to survive and benefit the economic systems at the local and national level, (Roberts and Tribe, 2008: 584). Sustainable businesses consider their economic impact on the community, such as job creation, local wages, and their contribution to local economic growth. Also suppliers and an engagement across the supply chain to ensure similar values and practices are issues of economic sustainability. At the same time businesses need to maintain corporate profitability and internal financial stability (Landrum and Edwards, 2009). For accommodation businesses local purchasing practices are means to maximize the economic benefits of tourism for the local economy and reduce the need for transport and energy consumption (Swarbrooke,

1999). Shaw and Williams (2002) take Lundgren's model of entrepreneurial development and hotel linkages as an example for supply and demand linkages for food by hotels. Strong linkages spread the economic benefit of tourism throughout the economy and could lead to improved development.

Table 2: Difficulties of Human Resource Management Concerning Sustainability

Human Resource Issue	Problem in Tourism and Hospitality Industry
Equal Opportunities	Traditionally discriminating in terms of sex, race and disability
Pay and Working Conditions	Low hourly rates, unpaid overtime work, reliance on gratuities, long working hours, uncertain working hours, no adequate breaks
Seasonality and Casual labour	Local adults with family responsibilities cannot take seasonal jobs, positions filled by either local young people or in-migrant workers
Management Styles	Unplanned recruiting, authoritarian management culture, inflexible imposition on corporate culture, key staff imported, etc.
Training and Personal Development	Training first area to be cut in difficult economic times, training only related to current job, lack of personal development opportunities
Job Satisfaction	Little job satisfaction, monotonous tasks, de-skilling
Staff-Tourist Relations	Inequality often leads to negative staff-tourist relations
High Turnover	High turnover is seen as inevitable and desirable

Source: Swarbrooke 1999, Baum 2006

Human resource management presents some challenges in relation to the concept of sustainability for the accommodation industry. The characteristics of employment in the hospitality and tourism industry are often unjust and need to be changed in order to develop more sustainable forms of tourism (Swarbrooke, 1999). Table 2 summarizes the difficulties in the traditional form of human resource management concerned with sustainability.

Sustainable business practices concerned with human resource management 'require that both employers and employees take a long-term view of their relationship in the mutual interest of both parties, of their customers and ultimately, of the company profitability' (Baum, 2006: 300). The tourism and accommodation industry is a service industry whose quality depends on committed, well-trained, well-rewarded and empowered front-line staff (Baum, 2006).

2.4.2 Socio-cultural Dimension of sustainable business practices

The definition of socio-cultural sustainability is difficult as it includes definitions of society, culture and community. In short, socio-cultural sustainability is concerned with the social interaction, relations, behavioural patterns and values between people (Roberts and Tribe, 2008; Mason, 2003). A respectful interaction between hosts and guests, involvement of the local people and recognition of the contribution of traditions and culture to the tourist experience are key issues for sustainable businesses (Roberts and Tribe, 2008). Negative socio-cultural impacts are mainly concerned with tourism in developing countries where overcrowding, 'demonstration' effect, 'Actualization' etc. are phenomena possibly leading to a certain irritation of the host population and socio-cultural problems (Mason, 2003). Nevertheless, also in developed countries the tourism and accommodation industry might have impacts on the socio-cultural conduct of people.

The question of authenticity in tourist experiences arises when cultural traditions get modified and altered for tourist consumption. Commoditization can lead to pseudo-events that are planned to be convenient for tourists which might lead to a falsification of the traditional meaning of the event (Mason, 2003). Consequently, cultural promotion through tourist education and initiatives to promote and enhance appreciation for cultural and historic heritage are indicators and actions outlined by Roberts and Tribe (2008). Related to the authenticity in cultural events is the authenticity in food and drink provided. The modern catering side of the accommodation industry has been criticized for offering 'international' menus with many imported ingredients or imitations of traditional local dishes. Sustainable business practices would be encouraging tourists to visit local food producers, providing local products and supporting organic and environmentally friendly agriculture and food processing industries (Swarbrooke, 1999). Involvement of the local population and a business's involvement in the local community are also part of socio-cultural sustainable business practices. Supporting the community through sponsorship of activities or groups, membership in NGO and resident access to accommodation premises are possible targets (Roberts and Tribe, 2010).

2.4.3 Environmental Dimension of sustainable business practices

The environmental dimension of sustainability is the most widely documented one. In the hospitality industry a wide range of information exists about environmental issues such as energy saving, recycling, water savings, etc. A study in the London hotel sector showed that almost all respondents indicated to be taking action on environmental matters (Knowles et al., 1999). Many other researchers point out that the accommodation industry is aware of its negative impacts on the environment. In particular resource depletion such as energy, water and non-renewable resource usage are areas of environmental action (Middleton and Hawkins, 1998; Hobson and Essex, 2001). Other initiatives towards more environmental friendly operations management adopted by accommodation business could be: recycling systems; use of unbleached and UN dyed fabrics, use of recycled supplies, etc. (Swarbrooke, 1999; Hobson and Essex, 2001). However, researchers observe a gap between environmental 'good' intentions and action. Most hotel managers merely concentrate on actions that advance the company's objective. Cost-reductions through environmental actions have been criticized for being the only motivator for action (Knowles, et al., 1999; Swarbrooke, 1999; Hobson and Essex, 2001). Also the development of new accommodation establishments can be problematic with regard to the environmental dimension of sustainability. The use of fresh water resources for swimming pools and the energy consumption for air conditioning and heating have been criticised (Swarbrooke, 1999). However, some researchers argue that environmentally friendly design, also referred to as 'green building', is an up-coming issue in the accommodation industry that will facilitate sustainable business practices (Landrum and Edwards, 2009; Deng and Burnett, 2000; Butler, 2008). Raising awareness of environmental issues among guests and staff represents another important issue of sustainable business practices which can be linked to the educational criteria for sustainability in tourism. However, the effectiveness of general information pamphlets presented to guests about water and energy usage during their stay at a hotel or guesthouse can be questioned (Mowforth and Munt, 2009; Sloan et al., 2009).

2.5 Strategic implementation of sustainable business practices

Successful implementation of sustainable business practices can only be reached when the holistic principle of sustainability is understood and integrated into the strategic planning of the business. If sustainability initiatives are seen as add-ons or as another performance variable the full benefits of sustainable business practices will not be reached (Larson et al., 2000). Strategic sustainability represents a commitment demonstrated by top management

that moves beyond compliance and efficiency to avoid risks and minimize costs (Dunphy et al., 2007). The integration of sustainability into strategic planning will also require businesses to develop a more long-term focus and thus help them to examine threats and opportunities, see relationships in the external environment and make sense of current trends (Hitchcock and Willard, 2009). It is essential that sustainability is perceived as a company-wide goal that incorporates every aspect of business and its relationships. This requires a system thinking that everything is related in some way and each part and each person in the business can contribute towards more sustainability (Landrum and Edwards, 2009) Therefore a bottom-up approach as well as a top-down approaches are required involving goals, tactics and budgets which should be reviewed and updated regularly. Also the process and performance needs to be regularly monitored and audited (Blackburn, 2007).

2.5.1 Benefits of the implementation of sustainable business practices

The moral obligation or pure desire to contribute to society might be the reason for adopting sustainable business practices for some businesses (Tzschentke et al., 2004); but for many the business case for sustainability and the benefits related to sustainable business practices tie the commercial interest of business to the goals of society (Miller and Twining-Ward, 2005).

2.5.1.1 Cost reduction

The most cited benefit of sustainable business practices is the reduction of costs (Landrum and Edwards, 2009; Bohdanowicz et al., 2004; Hobson and Essex, 2001; Hitchcock and Willard, 2009; Swarbrooke, 1999).

Tzschentke et al. (2004) declare it as the prime motive behind introducing environmental initiatives. Particularly, the rising costs for water, energy and waste disposal led many businesses to look for alternatives. Operational measures are for example recycling systems, using recycled materials, installing water-saving devices, using low energy light bulbs, energy-conservation measures such as insulation or solar-powered water heating systems. These initiatives focus exclusively on the environmental dimension of sustainable business practices (Swarbrooke, 1999). There is a lack of literature and research about cost saving possibilities related to the socio-cultural and economic dimension of sustainability.

2.5.1.2 Public relations

Sustainable business practices can also bring benefits to a company in terms of positive public relations and improved hotel image with shareholders and local community. These benefits can differentiate the business from its competitors and can be the source of competitive advantages and new market opportunities (Hitchcock and Willard, 2009; Landrum and Edwards, 2009; Swarbrooke, 1999). Kirk's (1998) findings revealed that public relation benefits had the most positive attitude ratings, followed by 'Improved relation with the local community' and 'Marketing'. The analysis shows interesting associations with the hotel characteristics. Large hotels, hotels with a classification between 3 and 5 stars and chain hotels were more likely to see positive public relation benefits (Kirk, 1998) than small, 2 star classified and independent hotels.

2.5.1.3 Employee satisfaction

Through sustainable human resource management employees are more likely to feel adequately rewarded, valued, and proud of their work and have a more positive self-image (Swarbrooke, 1999; Baum, 2006). Service quality but also health and productivity are likely to improve through more sustainable developments and business practices (Swarbrooke, 1999; Butler, 2008). The move towards sustainability requires a positive change in corporate culture. In this context, culture can be described as the hidden driving force of people's behaviour both inside and outside organisations. Cultural beliefs, thinking and behaviour need

to be consistent with the concept and values of sustainable business practices to make efforts successful (Doppelt, 2003; Schein, 2009). Sustainable human resource management and a sustainable corporate culture can help the company to attract and retain the best employees which at present is a serious problem in the tourism and hospitality industry (Hitchcock and Willard, 2009; Swarbrooke, 1999).

2.5.1.4 Consumer demand

Consumer demand is the most controversial benefit of sustainable business practices. Environmental and social concerns increasingly influence customer behaviour but so far it is debatable if this 'green' consumerism has reached the tourism industry (Dodds and Joppe, 2005; Hjalager, 2000; Miller and Twining-Ward, 2005). Once more the difficulties in defining sustainable tourism and sustainable business practices force consumers to base their choice on individual judgement and limited knowledge. Sustainable tourism products are often not readily available and clearly specified. Consequently, greater information and disclosure about the impacts of the products is necessary (Hjalager, 2000; Miller and Twining-Ward, 2005). Many researchers argue that the increased awareness for general societal issues will ultimately lead to a rise in demand for sustainable travel and tourism products (Dodds and Joppe, 2005; Bohdanowicz and Martinac, 2003; Sloan et al., 2009). However, although people might be aware of the negative impacts of tourism they are not willing to pay more for environmentally friendly products (Watkins, 1994; Dodds and Joppe, 2003). Business owners are unconvinced that consumers will be attracted by a business's environmental performance and more research is required to determine the actual consumer demand for sustainable business practices in the accommodation industry (Dewhurst and Thomas, 2003; Sloan et al., 2009).

2.5.2 Barriers to the implementation of sustainable business practices

Businesses can be limited in their implementation of sustainable business practices by external factors that are beyond their control such as government policy or the attitudes of stakeholders and their lack of interest. But also internal obstacles within the company might exist. The main barriers with the implementation of sustainable business practices outlined are the involved costs, the complexity of the concept and the lack of information and support (Swarbrooke, 1999; Berry and Ladkin, 1997; Hobson and Essex, 2001; Kirk, 1998; Bohdanowicz and Martinac, 2003).

2.5.2.1 Costs

One mayor concern of all businesses is the cost involved in implementing sustainable business practices. Many fear that the change towards more sustainable business practices is prohibitively expensive (Bohdanowicz and Martinac, 2003; Butler, 2008). Butler (2008) admits that first generation energy-saving or alternative technologies were expensive and relatively inefficient. Today technologies have evolved and buildings designed according to LEED standards (Leadership in Energy and Environmental Design) are cost neutral and less expensive to operate than conventional approaches (Butler, 2008). Although this refers to the building of new establishments initiatives in established buildings can also provide eco-efficiency and thus cost-saving benefits. However, once initial steps have been taken environmental problems may arise that require new investments which may not provide a financial return (Tilley, 2000).

2.5.2.2 Complexity of concept

Another problem is expressed concerning the definition of sustainability and sustainable business practices. The imprecision in definition makes the concept difficult to understand

and hard to translate into meaningful action and measures (Berry and Ladkin, 1997; Horobin and Long, 1996). This 'lack of an accepted model of what sustainable tourism actually means in reality' and the 'lack of in-house expertise on relevant issues' have been highlighted by Swarbrooke (1999) as a limitation on the tourism industry action in sustainable tourism.

2.5.2.3 Information and support

In order to overcome the difficulties businesses face concerning the complexity of sustainability, information and support from the public sector is required. However, Sloan et al. (2003) criticize that the communication of environmental concerns by governments is ineffective. Several other authors raise a similar concern. Berry and Ladkin's (1997) findings revealed that the roles of the people responsible for development and management of infrastructure and regulation were not understood and a more active role of the public sector as a co-ordinator was demanded. The information provided by the UK government, such as good practice handbooks or manuals, was largely unknown to participants of various studies (Horobin and Long, 1996; Berry and Ladkin, 1997; Dewhurst and Thomas, 2003). This shows the importance of involvement of all stakeholders in participatory approaches to sustainable tourism development.

3. Conclusion

The literature review showed that sustainability is an increasingly important issue in the tourism industry. Although the concept is difficult to define and the striving for industry self-regulation has been criticised, the tourism and accommodation industry increasingly intends to implement sustainable business practices. The motives and also the attitudes of managers are likely to be influenced by factors such as size, ownership or location of the business. The literature review summarized some indicators for sustainability in accommodation businesses and also outlined the benefits and barriers associated with a successful implementation of sustainable business practices. This study has explored the challenges and the importance of sustainable business practices in the accommodation industry.

3.1 Recommendations for future research

This research only represents a first attempt to investigate the challenges of sustainable business practices in Cyprus and further research is required to gain more in-depth insights. The study gave predefined statements about the sustainable business practices implemented and further studies might analyse the intensity and the effectiveness of the actions taken. Also the attitudes of the employees and their opinion towards benefits and barriers in the implementation of the practices might be a valuable field of research.

4. References

- Ajzen, I. and Fishbein, M. (1980). Understanding attitudes and predicting behaviour, Englewood Cliffs: Prentice Hall.
- Anderson et al. (2007). Statistics for Business and Economics, London: Thomson.
- Bansal, P. (2002). The Corporate Challenges of Sustainable Development. *The Academy of Management Executive*, 16(2), pp. 122-131.
- Baum, T. (2006). Human resource management for tourism, hospitality and leisure: an international perspective, London: Thomson.
- Berg, B.L. (2009). Qualitative Research Methods for Social Sciences, 7th edition, Boston: Pearson
- Berry, S. and Ladkin, A. (1997). Sustainable tourism: a regional perspective. *Tourism Management*, 18(7), pp. 433-440.
- Blackburn, W.R. (2007). The sustainability handbook – The complete management guide to achieving social, economic and environmental sustainability, London: Earth scan.
- Black, T.R. (1993). Evaluating Social Science Research: An Introduction, London: Sage.

- Bohdanowicz, P. and Martinac, I. (2003). Attitudes towards sustainability in chain hotels – Results of a European survey, Conference Proceedings, CIB 2003 International Conference on smart and sustainable built environment, Brisbane.
- Bohdanowicz, P.; Zanki-Alujevic, V. and Martinac, I. (2004). Attitudes towards Environmental Responsibility among Swedish, Polish and Croatia Hoteliers, Conference Proceedings, BEST Tourism Think Tank IV, Esbjerg, Denmark
- Bohdanowicz, P.; Simanic, B. and Martinac, I. (2005). Sustainable Hotels – Environmental Reporting According to Green Globe 21, Green Globes Canada /GEM UK, IHEI Benchmark hotel and Hilton Environmental Reporting’, Conference Proceedings, The 2005 World Sustainable Building Conference, Tokyo.
- Bramwell, B. et al. (1996) (ed.). Sustainable Tourism Management: Principles and Practice. Tilburg: TUP.
- Bramwell, B. and Allotrope, L. (2001). Attitudes in the Danish Tourism Industry to the Roles of Business and Government in Sustainable Tourism. *International Journal of Tourism Research*, Vol. 3, pp. 91-103.
- Brunt, P. (1997). Market Research in Travel and Tourism, Oxford: Butterworth-Heinemann.
- Bryan, A. (2004). Social Research Methods, 2nd edition, Oxford: Oxford University Press.
- Bryan, A. (2006). Integrating quantitative and qualitative research: how is it done? *Qualitative Research*, vol. 6, no. 1, pp. 97-113.
- Buckley, R. (2002). Tourism Eco labels, *Annals of Tourism Research*, vol. 29, no. 1, pp. 183-208.
- Buckley, R.C. (2001). Major issues in Tourism Eco labelling’ in Font, X. and Buckley, R.C. (ed.) Tourism Eco labelling – Certification and Promotion of Sustainable Management, Wallingford: Cabi.
- Butler, R. (1998). Sustainable tourism – looking backwards in order to progress in Hall, M. and Lew, A. (ed.) Sustainable Tourism: A geographical perspective, Harlow: Addison Wesley Longman.
- Butler, R. (1999). Sustainable tourism: A state-of-the-art review, *Tourism Geographies*, vol. 1, no.1, pp. 7-25.
- Butler, J. (2008). The Compelling "Hard Case" for "Green" Hotel Development, *Cornell Hospitality Quarterly*, vol. 49, no. 3, pp. 234-244.
- Cannon, T. (1994). Corporate responsibility: a textbook on business ethics, governance, environment: roles and responsibilities, London: Pitman.
- Carroll, A.B. (1999). Corporate Social Responsibility - Evolution of a Definitional Construct, *Business Society*, vol. 38, no. 3, pp. 268-295.
- Creswell, J.W. (2003). Research design: Qualitative, Quantitative and Mixed Methods Approaches, 2nd edition, London: Sage.
- Clarke, J. (1997). A Framework of Approaches to Sustainable Tourism, *Journal of Sustainable Tourism*, vol. 5, no. 3, pp. 224-233.
- Doppler, B. (2003). Leading Change toward Sustainability: A Change-Management Guide for Business, Government and Civil Society, Sheffield: Greenleaf Publishing.
- Dunphy, D., Griffiths, A. and Benn, S. (2007). *Organizational change for corporate sustainability – A guide for leaders and change agents of the future*, 2nd edition, London: Routledge.
- Edwards, A.L. (1957). Techniques of Attitude Scale Construction, New York: Appleton Century Crofts.
- Ellington, J. (2004). Enter the Triple Bottom Line in Henrique’s, A. and Richardson, J. (ed.) The Triple Bottom Line: Does it all add up? London: Earth scan.
- Farrell, B. and Twining-Ward, L. (2005). Seven Steps towards Sustainability: Tourism in the Context of New Knowledge, *Journal of Sustainable Tourism*, vol. 13, no. 2, pp. 109-122.

- Fennel, D.A. (2006). *Tourism Ethics*, Clevedon: Channel View.
- Field, B.C. (1994). *Environmental Economics – An Introduction*, New York: McGraw-Hill.
- Fink, A. (2003). *The Survey Kit: How to sample in surveys*, 2nd edition, London: Sage.
- Font, X. (2002). Environmental certification in tourism and hospitality: progress, process and prospects, *Tourism Management*, vol. 23, pp. 197-205.
- Font, X. and Harris, C. (2004). Rethinking standards from green to sustainable, *Annals of Tourism Research*, vol. 31, no. 4, pp. 986-1007.
- Forsyth, T. (1995). Business attitudes to sustainable tourism: Self-regulation in the UK outgoing tourism industry, *Journal of Sustainable Tourism*, vol. 3, no. 4, pp. 210-231.
- Goodall, B. (1995). Environmental Auditing: a tool for assessing the environmental performance of tourism firms, *The Geographical Journal*, vol. 161, no. 1, pp. 29-37.
- Hall, C.M. (1994). *Tourism and Politics: Policy, Power and Place*, Chichester: John Wiley and Sons.
- Hitchcock, D. and Willard, M. (2009). *The business guide to sustainability – Practical strategies and tools for organizations*, 2nd edition, London: Earth scan.
- Haulage, A.M. (1996). Tourism and the environment: the innovation connection, *Journal of Sustainable Tourism*, vol. 4, no. 4, pp. 201-218
- Haulage, A.M. (2000). Consumerism and Sustainable Tourism, *Journal of Travel and Tourism Marketing*, vol. 8, no. 3, pp. 1-20.
- Hobson, K. and Essex, S. (2001). Sustainable Tourism: A View from Accommodation Businesses, the *Service Industries Journal*, vol. 21, no. 4, October, pp. 133-146.
- Holcomb, J.L.; Upchurch, R.S. and Okumus, F. (2007). Corporate social responsibility: What are top hotel companies reporting, *International Journal of Contemporary Hospitality Management*, vol. 19, no. 6, pp. 461-475.
- Horner, S. and Swarbrooke, J. (2004). *International cases in tourism management*, Oxford: Elsevier Butterworth-Heinemann.
- Horobin, H. and Long, J. (1996). Sustainable tourism: the role of the small firm, *International Journal of Contemporary Hospitality Management*, vol. 8, no. 5, pp. 15-19.
- Hunter, C. (1997). Sustainable Tourism as an adaptive paradigm, *Annals of Tourism Research*, vol. 24, no. 4, pp. 850-867.
- INS keep, E. (1998). *Guide for local authorities on developing sustainable tourism*, World Tourism Organization.
- Ioannides, D. (2001). Sustainable development and the shifting attitudes of tourism stakeholders: toward a dynamic framework, in McCool, S.F. and Mosley, R.N. (ed.) *Tourism, Recreation and Sustainability: Linking Culture and Environment*, Wallingford: Cabi.
- Jamieson, S. (2004). Likert scales: how to (ab) use them, *Medical Education*, vol. 38, pp. 1212-1218.
- Johnson, B. and Turner, L.A. (2003). 'Data collection strategies in mixed methods research', in Thakkar, A. and Teddlie, C. (ed.) *Handbook of mixed methods in social and behavioural research*, London: Sage.
- Kernel, P. (2005). Creating and implementing a model for sustainable development in tourism enterprises, *Journal of Cleaner Production*, vol. 13, pp. 151-164.
- Kirk, D. (1998). Attitudes to environmental management held by a group of hotel managers in Edinburgh, *Hospitality Management*, vol. 17, pp. 33-47.
- Klein, N. (2001). *No Logo*, London: Flamingo.
- Knowles, T.; Macmillan, S.; Palmer, J.; Grabowski, P. and Hashimoto, A. (1999). The Development of Environmental Initiatives in Tourism: Responses from the London Hotel Sector, *International Journal of Tourism Research*, vol. 1, pp. 255-265.
- Landrum, N.E. and Edwards, S. (2009). *Sustainable Business: An Executive's Primer*, New York: Business Expert Press.

- Larson, A.L.; Olmsted-Teisberg, E. and Johnson, R.R. (2000). Sustainable Business: Opportunity and Value Creation, *Interfaces - Sustainable business*, vol. 30, no.3, pp. 1-12.
- Lemon, N. (1973). *Attitudes and Their Measurement*, London: Batsford.
- Liu, Z. (2003). Sustainable Tourism Development: A Critique, *Journal of Sustainable Tourism*, vol. 11, no. 6, pp. 459-475.
- Manning, T. (1999). Indicators of tourism sustainability, *Tourism Management*, vol. 20, pp. 179-181.
- Mason, P. (2003). *Tourism Impacts, Planning and Management*, Oxford: Butterworth-Heinemann.
- Middleton, V.T.C. and Hawkins, R. (1998). *Sustainable Tourism: A Marketing Perspective*, Oxford: Butterworth-Heinemann.
- Miller, G.A. and Twining-Ward, L. (2005). *Monitoring for a sustainable tourism transition: the challenge of developing and using indicators*, Wallingford: Cabi.
- Morse, J.M. and Richards, L. (2007). *Readme first for a user's guide to qualitative methods*, 2nd edition, London: Sage.
- Mow forth, M. and Munt, I. (2009). *Tourism and Sustainability: New Tourism in the Third World*, 3rd edition, London: Routledge.
- Oppenheim, A.N. (1998). *Questionnaire Design, Interviewing and Attitude Measurement: New Edition*, London: Continuum.
- Pomp, W. (1997). *Touristic management*, Heidelberg: Springer.
- Roberts, S. and Tribe, J. (2008). Sustainability Indicators for Small Tourism Enterprises – An Exploratory Perspective, *Journal of Sustainable Tourism*, vol. 16, no. 5, pp. 575-594.
- Ruane, J.M. (2005). *Essentials of Research Methods: A Guide to Social Science Research*, Oxford: Blackwell Publishing.
- Sarantakos, S. (2005). *Social Research*, 3rd edition, Hampshire: Palgrave Macmillan.
- Scamp, S. (1977). *Attitudes and Opinions*, London: Prentice Hall.
- Schein, E.H. (2009). *The Corporate Culture Survival Guide*, San Francisco: Jossey-Bass.
- Schuman, H. and Presser, S. (1996). *Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording and Context*, London: Sage.
- Sloan, P.; Legrand, W. and Chen, J.S. (2003) *Assessing Hoteliers' Awareness and Perception of Environmental Initiatives*, Conference Proceedings, Euchre Congress, Bad Honnef, Germany.
- Sharply, R. (2000). Tourism and Sustainable Development: Exploring the Theoretical Divide, *Journal of Sustainable Tourism*, vol. 8, no. 1, and pp. 1-19.
- Shaw, G. and Williams, A.M. (2002). *Critical Issues in Tourism: A Geographical Perspective*, 2nd edition, Oxford: Blackwell.
- Swarbrooke, J. (1999). *Sustainable Tourism Management*, Wallingford: CABI.
- Tilley, F. (2000). Small firm environmental ethics: how deep do they go? *Business Ethics: a European Review*, 9:31-41.
- Tzschentke, N.; Kirk, D. and Lynch, P.A. (2004). Reasons for going green in serviced accommodation establishments, *International Journal of Contemporary Hospitality Management*, vol. 16, no. 2, pp. 116-124.
- Veal, A.J. (2006) *Research Methods for Leisure and Tourism*, 3rd edition, Harlow: Pearson Education.
- Wall, G. (1997). Is Ecotourism sustainable? *Environmental Management*, vol. 21, no. 4, pp. 483-491.
- Watkins, E. (1994). Do guests want green hotels? *Lodging Hospitality*, vol. 50, no. 4, pp. 70-72.
- WCED (1987). *Our common future*, Oxford.

The Key Role of GIS in Spatial Planning: A Contemporary Approach

Abstract:

Since their introduction, the Geographic Information Systems have found their most widespread applications in urban planning and management and environment management. Initially used for territorial forecasting, planning and management by specialists, the GIS have also become usefool tools for public consultation. They offer to the local authorities new opportunities to communicate about the projects that are being implemented, and at the same time they offer to the citizens the opportunity to learn about these issues, as they allow a certain pedagogy of the territorial approach. The most determinant development in the use of the GIS in the years to come seems precisely to be that of their role as essential tools in the service of participatory democracy, in the issues of spatial management and planning.

Keywords: Geoinformatics, GIS, spatial analysis, Urban Planning, Environmental Planning

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1. Introduction: Definition and basic concepts of the GIS

Three decades after their introduction in the planning support system, the Geographic Information Systems (GIS) are now essential for territorial actors. In view of increasingly complex planning and programming issues, they provide decision makers with the necessary cartographic tools for territorial management, decision-making and communication. With the advent of digital technology and the rise of geoinformatics (the application of information technology to geography), the GIS make it possible to address a variety of issues, such as housing, land ownership, employment, services to the population, environment, use conflicts, tourism development, or even the planning of physical and digital networks.

According to one of the most classic and popular definitions (Wellar, 1993), “a GIS consists of computer software, hardware, and peripherals that transform geographically referenced spatial data into information on the locations, spatial interactions, and geographic relationships of the fixed and dynamic entities that occupy space in the natural and built environments”. However, the GIS are neither software nor computer systems. We could define a GIS as the set of structures, methods, tools and data, constituted to report issues located in a specific area and assist decisions to make on this space. In reality, the GIS extend beyond material, software and data, to integrate the people who manipulate them, and the principles and methods implemented in the system are an integral part of it (Thériault, 2008). According to Laurini (1993), the functions of the Geographic Information System are the collect, storage, extraction, investigation, analysis and presentation of located data.

A GIS comprises four major components, in interconnection: a technological component, an informational component, an organizational component and a methodological component, which allows the coherence of the tools, men and information, to respond to the given objectives.

The GIS is also a spatialized database, designed, structured and updated according to its specific objectives. The collect of these data, their organization, their updating is an integral part of the mission of the system. The organizational component is the most important component of the three, the one that determines the other two and, in long-term costs, it is often the most costly. There is practically no GIS independent of a space and of specific objectives of knowledge, analysis and action on that space. Like all information systems, a GIS is most often a sustainable system, which supports the general activity of an organization and a structure, and whose life-cycle is associated with it. This means that a GIS must consider itself as a project. It unfolds in the time and its components vary dynamically according to the successive objectives that have been fixed.

2. Mapping and analysis

In any territory there is a great variety of geographic data (orthophotos, topographic databases, etc.) or thematic data that can be represented in a GIS. The first step in creating a Geographic Information System for a given area is to record this data. Organizations that are responsible for the different sectors of an area may either decide to create a GIS taking account of all the problems, or create a lighter structure that is limited to a specific, clearly defined thematic field.

The size of a Geographic Information Systems depends essentially on the goals one wants to achieve by its use. It will then take the form of a tool on its own, with a dedicated team within the organism, or with an online interface of information and consultation. The size of an area does not necessarily affect the importance of the GIS. Issues to be processed are the most important element. Thus, the team dedicated to the GIS of a large city, will be responsible for managing geographic databases on a great number of different issues, such as roads, urban equipment, networks, green spaces, building permits, municipal addresses, garbage collection, etc.

Once established, the GIS must:

- help solve the problems of urban data management through analysis and diagnostic assistance,
- create a dynamic that allows for dialogue and exchange of data between users,
- serve as a continuous support, which also provides a holistic approach for users, decision-makers and citizens.

The implementation of a GIS often leads initially to an organizational and operational system that allows:

- Consultation of cadastral maps, ground orthophotos at different dates, and topographical data repository for the determination of spatial data in its three dimensions.
- Thematic data consultations, especially as regards land, such as mapping of General Urban Plans, mapping for Public Utilities, Land Plots, School Districts, for traffic lights, sewerage, nature reserves, classified buildings and monuments etc.
- Consultation of analytical, thematic maps produced before publication and presented (for example) in the form of an atlas of the area, taking into account different types of data (demography, housing, population density, economic characteristics, etc.). This capitalization of thematic and geographic data corresponds to a step known as “territorial knowledge”. Then comes the stages of analysis and study. Ground analysis consists of producing a method tailored to a specific problem (de Montis, 2006). This phase results in the production of a new layer of information, a new map or new tables. An example of this is the monitoring and identification of urban sprawl around cities, or the measurement of the density of infrastructures and services in different districts or areas.

In terms of scale, many different scales can be used to accurately analyze an area:

- Large or very large scales (1/10,000 to 1/200) allow access to very detailed data for urban projects, with information on plots, buildings, roads and urban equipment. These scales are also suitable for issuing or revising building permits.
- Medium scales, on the contrary, (1/100,000 to 1/20,000) allow for the representation of more general and more comprehensive information.

3. The use of GIS in urban management

While the GIS offer multiple possibilities for analysis or simulation, they have found the first and most widespread applications, as we have seen, in urban management issues, which are becoming an even more important field of their use today. In Urban Planning, the GIS is used as a spatial database, as an analysis tool and as a modelling tool, often together with other information systems, like DataBase Management Systems (DBMS), Computer Aided Design (CAD) and Decision Support Systems (DSS). The GIS is today the most basic tool for urban planners, as it allows them to use a variety of geoprocessing functions for spatial urban analysis, such as map overlay, buffering, connectivity measurement, etc. Apart the spatial analysis and spatial modelling, other uses in urban planning include database management and visualisation.

Spatial analysis with the use of GIS, is used today in all the stages of the urban planning process: Identification of objectives, resource inventory, analysis of present situations, modelling, projection and planning options, plan evaluation and monitoring. It can cover very different functions, such as spatial statistical analysis, identification of planning action areas, land suitability analysis, impact assessment etc. In the context of monitoring and recording property ownership in a municipal area, for example, Geographic Information Systems can be used to locate freehold land in order to create land reserves. They can also be used for land management that is still available in specific areas. They also allow, in the prior phase, to identify areas that are likely to host projects for residential complexes, social housing, or various infrastructures.

The scale of the area covered can range from a metropolitan area to a city district, or even to a building block or a street. At a larger spatial level, such as large municipalities or functional urban areas, GISs can be used to manage a variety of data: urban roads (for maintenance management), green spaces and tree trunks, public transport lines, urban and community networks (water, sewage, street lighting) as well as the management of building permits.

With the important increase of the GIS software, the variety of its functions and its user friendliness, over the last decades, the only constraints on the use of GIS in urban planning are those of the availability of data, organisational change and staff cost.

4. The GIS in the environmental management

In the environmental management, the GIS have a great variety of application areas, which can be grouped in two main categories: the Natural Resources Management and the Environmental Planning and Management. The Natural Resources Management includes, vegetation, forest inventory and modeling, access planning, fire risk analysis, change detection of ecosystem dynamics, etc, while the Environmental Planning and Management includes environmental impact assessment, environmental risk management, environmental monitoring, etc.

The GIS have been proved to be a particularly efficient tool in the environmental management, natural resources and landscapes, however, the environmental management is in most cases indirect (Mermet, 1992). This means that the environmental manager is only one actor among others and he must always take into account the actions of other actors in its own strategy, and influence the management of the environment and of the natural resources by them. In addition, most actors do not directly manage natural environments, forests, streams etc, but manage qualities of these spaces, of these streams, a flow or faunal richness, for example, in according to the uses they favor.

There are two different situations in the environmental GIS (Joliveau, 1996):

- a) First, the case where it is a question of giving an environmental dimension to a sectorial information system (sanitation, water, electricity, air, roads, forest, etc.). In this case, the systems integrate the subjects of sectoral management (discharges, roads, networks ...), describe how they work and measure their impact on the natural environment only for one or two simple parameters, without describing these natural environments, their functioning and their evolution.
- b) Second, the case where we are interested to a territorial environmental information system (local communities, natural parks, reserves, etc.). In this case, the problem is to integrate on a territory all the factors to be taken into account for an environmental decision. It is therefore necessary to go beyond the sectoral logic and to have a description of the environments and its functioning independent of sectoral management objectives.

5. Conclusion: The future of the GIS as a tool for consultation and decision-making

Geographic information technologies in general (GIS, digital cartography, web-mapping, etc.) are naturally positioned as tools in the service of participatory democracy: Memory, communication tool, decision assisting - but also incentives for dialogue and exchange between elected officials and citizens.

By enabling the rapid use of the resources necessary to understand the parameters, the stakes and the choices made in the territorial public management, the geographic information technologies are powerful assets for citizens to participate actively and in an informed way. However, they also raise important issues related in particular to the context of their use, but also to the spatial representations they produce and convey (Obermeyer, 2013).

In the most developed countries, the implementation of public consultations is now a democratic necessity - and sometimes, it is also required by the legal framework. During these

discussions, everyone should be able to get acquainted and understand the projects. This knowledge can relate to both the description of the project and the presentation of its implications and the simulation capabilities offered by the GIS and Geomatics. The combined use of GIS and multi-criteria decision methods (MCDM) can offer a more effective tool in these procedures.

The Geographic Information Systems can thus play an important role in shaping the ground in debates between decision-makers and citizens. Having more features than the classic map, they allow you to visualize the current situation, and at the same time a future projection, including the main development lines and large spatial intervention projects, with the eventual alternative scenarios. As a decision-making tool, they can even allow a certain pedagogy of the territorial approach. The user friendly character of the new GIS generation, combined with the practices of citizens' E-participation in urban governance, appear to be the most promising and determinant development in the use of this extremely useful tool for the democratization of spatial and environmental planning, in the years to come.

6. References

- Bordin, P., (2002), *SIG : concepts, outils et données*, Hermès, Paris
- Chrisman, N.R., (2006), *Charting the unknown: How computer mapping at Harvard became GIS*, ESRI press, Redlands
- De Montis, A., (2006), "The Rise of Cyber Planning". In: Wheeler, S.M., and Beatley, T., *The Sustainable Urban Development Reader*, Routledge, London
- Dragicevic, S., (2004), "The potential of Web-based GIS", *Journal of Geographic Systems*, vol. 6, pp. 79-81
- Gocmen, Z.A. and Ventura S.J., (2010), "Barriers to GIS use in planning", *Journal of the American Planning Association*, 76(2), pp. 172-183
- Joliveau, T., (1996), "Gérer l'environnement avec des S.I.G. Mais qu'est-ce qu'un S.I.G.?" In: *Revue de géographie de Lyon*, vol. 71, n°2, 1996.
- Laurini, R., Milleret-Rafford F., (1993), *Les bases de données en géomatique*, Hermès, Paris,
- Mermet, L., (1992), *Stratégies pour la gestion de l'environnement*, L'Harmattan, Paris
- Mineau, D., (2003), "L'apport des SIG en Urbanisme", *La Géographie - Acta Geographica*, vol. 2003, no 4, pp. 443-553
- Nedovic-Budc, Z., (2000), "Geographic information Science implications for Urban and Regional Planning", *URISA Journal*, vol. 10, No 2, Spring 2000
- Obermeyer, N., (2013), "Tracking public participation in Urban Governance: Democracy and Data Privacy". In: Carlos Nunes, S., *Citizen E-participation in Urban Governance: Crowdsourcing and Collaborative Creativity*, IGI Global
- Therault, M., Des Rosiers F., (dir.), (2008), *Information géographique et dynamiques urbaines*, Hermès, Paris
- Vernez-Moudon, A. and Hubner, M., (2004), *Monitoring Land Supply with Geographic Information Systems*, John Wiley and Sons, New York
- Vonk, G., Geertman, S., Schot, P., (2005), "Bottlenecks blocking widespread usage of planning support systems", *Environment and Planning A*, 37(5) pp. 909-924
- Wellar, B., (1993), "GIS Fundamentals", *Profiting from a Geographic Information System*, Ed. G.H. Castle, Fort Collins

The Role of the Ecomuseum in Landscape Education and the Utilization of Local Knowledge

Abstract:

This paper explores the pivotal role of ecomuseums in fostering sustainable development and enhancing local identity within the context of contemporary society. By integrating cultural heritage, education, and community engagement, ecomuseums serve as dynamic platforms that connect people with their environment. Through a holistic approach that encompasses experiential learning, landscape education, and the utilization of digital technologies, ecomuseums empower local communities, preserve cultural traditions, and promote environmental stewardship. The study investigates how ecomuseums can effectively leverage local knowledge and integrate landscape education into their programming, fostering a deeper understanding of the dynamic relationship between humans and their environment. By engaging participants in sensory experiences and promoting community ownership of local heritage, ecomuseums cultivate a deeper appreciation for the landscape as a living entity shaped by cultural, social, and ecological dimensions. Furthermore, the integration of digital tools and e-learning platforms enhances accessibility, broadens participation, and empowers communities to actively engage in the preservation and management of their cultural heritage. Ultimately, this research highlights the critical role of ecomuseums in fostering sustainable development, strengthening local identities, and cultivating a deeper understanding of the interconnectedness between people, place, and culture within a rapidly changing world.

Key words: ecomuseums, landscape education, local knowledge, experiential workshops, cultural heritage, sustainable local development

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1. Introduction

Traditional museums often focus on the display of objects within their walls, while ecomuseums are community-driven institutions that emphasize the dynamic relationship between people, place, and culture within a specific territorial context. These "museums without walls" prioritize community involvement in the preservation and promotion of local heritage, cultural identity, and natural resources. Recent research highlights the growing importance of ecomuseums in fostering sustainable development and safeguarding cultural heritage. They serve as vital hubs for community participation, cultural preservation, and regional revitalization (Hsu et al., 2018). By emphasizing sustainable tourism and active community involvement, ecomuseums contribute significantly to the sociocultural advancement of local areas (Badia and Donato, 2023).

Recognized for their adaptability, ecomuseums empower local communities to preserve and manage their cultural heritage, maintain traditions, reinforce their identity, and educate the public on various cultural, economic, social, and environmental issues. Furthermore, they offer a means for communities to derive multiple benefits from tourism (Hsu et al., 2018). Studies indicate that ecomuseums can effectively implement strategies for sustainable local development, particularly in rural areas, by fostering communication and collaboration between researchers and local communities (Perella et al., 2010).

Some ecomuseums prioritize the creation of experiential opportunities for tourists and visitors, contributing to the diversification of local economies and generating employment through tourism. These initiatives aim to revitalize communities and counteract decline (Dal Santo et al., 2017; Doğan, 2015; Pappalardo, 2020). Other ecomuseums play a crucial role in community education, development, and preservation, fostering social and psychological empowerment while addressing critical cultural and social development needs (Dogan and Timothy, 2020; Wuisang, et al, 2018).

This article investigates the role of the ecomuseum as an educational tool for heritage conservation and social development, with a particular emphasis on landscape education. It examines how ecomuseums can leverage local knowledge, cultural heritage, and experiential learning to foster sustainable development, preserve cultural identity, and promote community engagement. By integrating landscape education through experiential workshops, and by applying educational programs grounded in local knowledge, the ecomuseum can serve as an innovative educational resource that promotes place-based knowledge, fosters experiential learning, cultivates empathy, and actively engages participants in a dynamic and interactive environment

2. Management of Local Knowledge

Ecomuseums are living institutions that prioritize local knowledge, integrating it into activities aimed at preserving collective memory. By collecting, organizing, and utilizing this knowledge, they contribute significantly to regional sustainable development, fostering cultural identity, social cohesion, and a meaningful connection between the past and the future. As dynamic institutions, ecomuseums play a crucial role in safeguarding local identity and driving sustainable development. They focus on specific regions, highlighting the unique character of places and their communities (Davis, 2011). By collecting and curating local knowledge, emphasizing local identity, and preserving collective memory and cultural continuity, ecomuseums leverage the past to shape a sustainable future (Norman, 1993). Furthermore, by showcasing local knowledge, preserving collective memory, and fostering cultural identity and sustainable development, ecomuseums can effectively counter the homogenizing effects of globalization. They provide valuable social spaces for community interaction, collaborative understanding, and the preservation of collective memory (Bellaigue, 1999). Ecomuseums act as drivers of regional development by integrating diverse aspects of local life, enhancing local resources, and organizing activities that reinforce

cultural identity (Pedrosa, 2013). Through these initiatives, ecomuseums assist communities in navigating the challenges of modernization while safeguarding their unique heritage.

According to UNESCO (2018), indigenous knowledge encompasses the insights, skills, and worldviews developed by societies with longstanding interactions with their natural environments. In contrast, local knowledge refers to the understandings and abilities developed by individuals and communities within specific geographic contexts. Both forms of knowledge possess inherent value, yet their recognition and appreciation within Western scientific frameworks have only recently gained significant traction (Ford et al., 2016). These valuable knowledge systems play a vital role in the ecomuseum's efforts to preserve cultural heritage and promote sustainable development. Ecomuseums serve as platforms for recognizing and revitalizing these often endangered knowledge systems, enabling communities to share and safeguard their traditional ways of knowing. By integrating indigenous and local knowledge into their exhibits and activities, ecomuseums effectively combat the homogenizing effects of globalization and foster a deeper connection between visitors and the cultural and environmental history of the region (Mustonen, 2014). Consequently, ecomuseums emerge as essential spaces for the preservation and promotion of these invaluable knowledge systems, ensuring their transmission to future generations

Key actions to effectively utilize local (and indigenous) knowledge in ecomuseums include:

- **Developing comprehensive knowledge repositories:** This involves creating and maintaining digital libraries, audiovisual archives, and online platforms that preserve and archive local history and cultural heritage, showcasing the area's rich cultural traditions.
- **Mapping and evaluating existing knowledge:** This crucial step involves assessing the relevance of local knowledge to current needs and challenges, while also ensuring its effective intergenerational transmission. This process facilitates a deeper understanding of the evolution of local knowledge over time and identifies opportunities to enhance its dissemination through innovative tools and practices.
- **Strengthening communication channels:** Fostering collaborative efforts through the exchange of ideas, the organization of joint actions, and participation in creative initiatives. These collaborative endeavors facilitate the continuous evolution of knowledge, enabling its adaptation to new circumstances and integration into innovative practices that effectively address community needs.
- **Integrating local knowledge into practical applications:** Utilizing local knowledge in ways that align with the community's priorities and the needs of the local economy. This approach bridges the gap between cultural heritage and daily life, transforming cultural wealth into a valuable development tool while simultaneously promoting sustainability and reinforcing the region's unique identity, ultimately benefiting both residents and visitors.

Local knowledge, encompassing practical skills and knowledge shaped by cultural contexts, is crucial for sustainable development and community empowerment. This collective intangible resource, with its significant developmental potential, should not be merely viewed as information to be extracted or as an alternative to Western science (Antweiler, 1998). Transferring local knowledge through education strengthens community ownership of collective memory, fostering a shared foundation for adapting to changing conditions. Integrating local and traditional knowledge into educational frameworks enhances cultural identity, respects diversity, and provides context-rich learning experiences (Guerra Monterroza and Consuegra Solano, 2024). Despite challenges such as navigating diverse frameworks and resource limitations, the incorporation of local knowledge can positively impact students' identity and academic outcomes (Druker-Ibáñez and Cáceres-Jensen, 2022). A holistic approach that blends oral traditions with written documentation ensures both the preservation and adaptive transmission of this valuable knowledge. Lifelong learning effectively balances modern knowledge with indigenous practices, supporting sustainable

community development (Ratana-Ubol, 2016). Beyond simply information, local knowledge is a collective asset that, through education, can be transformed into actionable cultural, social, and economic value. Experiential and pedagogical approaches further embed this knowledge into daily life, reinforcing collective identity and driving sustainable progress.

3. Educational Programs

Recent studies underscore the critical role of cultural heritage integration in educational programs, emphasizing its significance in fostering awareness, preserving traditions, and reinforcing cultural identity. These initiatives actively engage participants through discussions, hands-on activities, and the innovative application of technology (Ezz El-Din, 2019; Sulima, 2022). Regional programs exploring local heritage contribute significantly to the safeguarding of cultural landscapes and intangible heritage, while simultaneously encouraging active community engagement. Moreover, creative entrepreneurship, when rooted in cultural heritage, thrives on experiential learning, robust community networks, and supportive systems that foster the development of innovative ventures grounded in local traditions (Summatavet and Raudsaar, 2015).

Contemporary approaches to cultural heritage education prioritize interactive and experiential methods, emphasizing three key dimensions: communication with cultural actors and the public, research and training programs, and the establishment of strong partnerships with local communities (Achille and Fiorillo, 2022). Ecomuseums play a pivotal role in fostering community engagement by supporting local initiatives and cultivating a sense of collective ownership (Choi, 2017). In navigating the complexities of modern multicultural societies, ecomuseums employ innovative strategies for collection, representation, education, and participation, effectively integrating natural and cultural heritage with local communities (Montanari, 2015; Davies, 2011; Terzić et al., 2014)

Research consistently highlights the importance of participatory activities, such as interpretive trails, artistic workshops, and audiovisual documentation, in effectively showcasing regional resources and fostering strong community connections (Tsipra and Drinia, 2022; Belliggiano et al., 2021; Altin, 2021; Némethy et al., 2020; Montanari, 2015; Perella et al., 2010; Murtas and Davis, 2009; Worts, 2006). Promoting sustainable development through multi-sensory landscape experiences is crucial for advancing environmental education and public awareness (Silva and Figueiredo, 2011). Furthermore, the integration of audiovisual tools and emerging technologies significantly enhances interactive and immersive learning experiences (Castro-Calviño et al., 2020).

Students' perceptions of cultural heritage are significantly shaped by their experiences, which can be further deepened and enriched through interactive and participatory programs (Makridis et al., 2017). By aligning heritage preservation with active community involvement and regional development, these strategies create an engaging and transformative educational process.

Thus, the objectives of a regional educational program within an education-focused ecomuseum should emphasize key aspects, including:

- Strengthening participants' connection to the natural and cultural heritage of their region.
- Raising participants' awareness of issues related to the protection and preservation of valuable local resources and practices.
- Transmitting messages that connect new generations with the knowledge, stories, and collective memories of the past, particularly those related to the human-environment relationship.
- Connecting natural and cultural heritage to the concepts of place, landscape, local community, sense of belonging, and local identity.
- Promoting an understanding of the importance of sustainable management.

In this line, discussions and creative/experiential activities within a rural-based education-focused ecomuseum can include:

- *Interpretive Trails and Multi-sensory Landscape Experiences*: Engaging visitors in immersive experiences that allow them to connect with nature and the landscape through all their senses, deepening their understanding of their significance to local culture and ecology.
- *Participation in Good Agricultural Practices*: Providing hands-on opportunities for participants to learn traditional and sustainable farming methods.
- *Harvesting and Processing*: Involving visitors in the process of fruit harvesting and processing to create traditional products.
- *Participation in Daily Maintenance Activities*: Engaging visitors in the maintenance of the ecomuseum space, such as fertilization and composting, strengthening their connection with nature.
- *Community Seed Bank Participation*: Facilitating the collection and storage of seeds from local produce to preserve and reproduce the region's flora.
- *Tasting and Outdoor Meals*: Exploring local gastronomy through immersive tasting and outdoor dining experiences.
- *Organization of Artistic Workshops and Exhibitions*: Encouraging the creation and showcasing of local art that reflects the traditions and experiences found within the ecomuseum's environment.
- *Creation of Audiovisual Material*: Utilizing photography and video to document these experiences and activities.

These experiential activities collectively compose comprehensive experiences, outlining the key elements of a well-rounded program of experiential workshops that effectively educate participants while fostering a deep and meaningful connection with the local culture and natural world.

4. Experiential Workshops

Experiential workshops can be effectively integrated into both formal and informal educational settings, offering participants valuable opportunities to understand the historical evolution and cultural values of the region through personal experiences and direct interaction with local culture. Formal education encompasses traditional settings such as schools (primary, secondary, and high school), universities, and vocational training schools, providing certified knowledge and degrees. In contrast, informal education encompasses a broader range of activities, including experiential workshops (e.g., traditional arts or agricultural practices), seminars, cultural activities (e.g., dance, music), and lifelong learning programs (e.g., foreign languages, computer courses). Combining formal and informal education can significantly enhance both learning experiences and outcomes. Formal education alone may prove insufficient in complex fields like design, necessitating the support of informal methods such as workshops, competitions, and expert panels (Evliyaoğlu and Gelmez, 2022). The interaction between formal and informal education creates a synergistic effect, where the whole is greater than the sum of its parts, with informal elements like cultural backgrounds and extracurricular activities significantly shaping an individual's ability to contribute (Beard et al., 2024). An illustrative example is a student of agronomy participating in a workshop on cultivating local varieties, gaining valuable practical experience that complements and enhances their theoretical training. Research indicates that students' understanding of formal, non-formal, and informal learning expands as they progress through their studies, with humanities students demonstrating a particularly comprehensive understanding (Diković and Plavšić, 2015). Incorporating intercultural and multicultural competencies into lifelong learning processes necessitates a shift in perspective, moving away from traditional methods towards more open and creative interactions that seamlessly bridge formal and informal educational experiences (García-Peñalvo et al., 2013). This integrated approach has the

potential to result in more thorough and effective learning outcomes across various disciplines.

The organization of experiential workshops that combine experiences and practices from different regions offers participants valuable opportunities to engage with a diverse range of cultural traditions. These workshops, which may encompass activities such as dry stone walling, pottery, and traditional crafts, provide participants with unique opportunities to engage with intangible cultural heritage while developing practical skills. This hands-on experience deepens their understanding and appreciation of local cultural heritage. Furthermore, the diverse range of workshops may also include activities such as basket weaving, painting, wood carving, natural dyeing, ceramics, clay modeling, traditional dances, photography, fresco painting, and weaving, further enriching the participants' cultural experience.

These cultural heritage education programs effectively promote intercultural communication and social cohesion, both locally and across Europe (Kokko and Kyritsi, 2012). Experiential workshops play a crucial role in safeguarding cultural traditions, supporting rural development, and fostering cross-cultural understanding. Building upon the foundation of these diverse experiential activities, the integration of environmental and landscape education within ecomuseum practices significantly enhances participants' understanding of the interconnectedness between cultural heritage, landscapes, and sustainable development.

5. Integrating landscape education

Ecomuseums play a vital role in promoting community involvement and environmental education. This aligns closely with the concept of landscape, understood as a dynamic interaction between humans and their surrounding space. While workshops within ecomuseums foster environmental education and community engagement, the landscape itself serves as both a tangible and symbolic framework for understanding these interactions. Distinct from the broader concept of "environment", which encompasses material elements not always directly perceived, "landscape" emerges when humans perceive and interpret the environment as a cohesive totality (Macia, 1979). According to Simmel (1913/2004), a unique "psychic tone" unifies the elements of a landscape through interaction, making it a living entity defined by these relationships. Unlike the environment, which is often tied to value systems, knowledge, and social perceptions, landscape becomes deeply integrated into daily life, history, and culture, fostering a more direct and personal connection (Appleton, 1980; Pavlis, 2012). This understanding of landscape as a dynamic relationship, rather than a static entity, is central to the role of ecomuseums in effective environmental education.

Landscape represents the most immediate field of interaction between humans and their surrounding space, embodying a dynamic relationship shaped by individual and collective experiences. As a geographical unit, it reflects and expresses the complex interplay between human activity and the environment (Pavlis, 2012). Even as space evolves in today's fluid and changing contexts, landscape remains central to understanding and managing these transformations. Defined by the European Landscape Convention (ELC) as an area shaped by the interplay of natural and human factors, landscape is both a product and a reflection of this dynamic relationship. The ELC emphasizes the critical importance of integrating landscape-related themes into educational curricula to address its values and the challenges associated with its protection, management, and planning. The concept of landscape itself is continually redefined through a complex interplay of sensory, cognitive, emotional, and cultural processes, intricately intertwined with natural, social, and political dimensions.

Workshops may target a diverse range of participants, including students from schools, universities, and other educational institutions as part of environmental education programs, summer schools, and educational trips. However, the target audience extends

beyond students to include local residents from all walks of life, as well as visitors and tourists. Ecomuseums effectively engage these diverse audiences through a variety of programs, including workshops, educational excursions, and summer programs. Their activities extend beyond mere information dissemination, fostering creative thinking and innovative approaches to preserving and enacting sustainable lifestyles. Landscape education plays a crucial role in this process, developing essential skills such as critical thinking, collaboration, data analysis, and creative expression through engaging participants in experiential learning activities that involve sensory interactions with the landscape.

Landscape education equips students with a deeper understanding of fundamental concepts such as space, place, sense of belonging, sustainable development, and rural regeneration, fostering a renewed perspective on the interconnectedness of humans, nature, and society (Relph, 1976; Tuan, 1974, 1977; Terkenli, 2005; Woods, 2005). A comprehensive landscape education curriculum may explore landscape through various lenses: as form, relationship, image, idea, and value (Pavlis, 2021), emphasizing its significance as a core component of both natural and cultural heritage (ELC, Law 3827/2010). By integrating natural and social sciences with the humanities, landscape education effectively promotes the four pillars of sustainability—culture, nature, economy, and society—and underscores the multifaceted applications of landscape studies (Dejeant-Pons, 2006; Pavlis and Terkenli, 2017).

Landscape is understood as an interconnected relationship between self, body, knowledge, and land, emphasizing embodied experiences and practices (Wylie, 2007). This perspective shifts from viewing landscape as a static image to experiencing it as a dynamic space of dwelling and "being-in-the-world" (Ingold, 2000). By engaging participants in sensory and cognitive experiences, workshops cultivate a deeper appreciation for the landscape as a living entity shaped by cultural, emotional, and ecological dimensions, thereby reinforcing its crucial role in education and sustainable development. Activities such as walking, cycling, and gardening are considered "embodied acts of landscaping" that shape both individuals and the landscape itself (Wylie, 2007; Lorimer, 2005). Building upon these insights, landscape education aims to deepen understanding, empower new perspectives, and open avenues for geographic and social research. Ultimately, it contributes to shaping citizens' sense of community and political awareness regarding landscape changes, ultimately working towards the creation of 'democratic landscapes' (Guaran and Michelutti, 2021).

Ecomuseums can serve as valuable platforms for landscape education, engaging students, teachers, visitors, and local residents in activities that deepen their understanding of local areas and encourage active participation in decision-making processes. These institutions play a crucial role in rethinking the relationships between communities and their local territories (Guaran and Michelutti, 2021). Adaptable to diverse, multicultural communities, ecomuseums adopt innovative practices in collection, representation, and participation (Montanari, 2015). They can also function as effective instruments for landscape planning, fostering dialogue between researchers and local communities to enhance awareness and increase involvement in decision-making processes (Perella et al., 2010).

These initiatives not only support the preservation of cultural heritage but also significantly contribute to environmental conservation and the sustainable development of rural landscapes (Jiménez de Madariaga, 2021). By effectively combining traditional techniques with modern innovations like digital fabrication, workshops can actively engage younger generations in the preservation of cultural heritage while fostering creativity and innovation in design. This synergistic approach, which seamlessly integrates traditional practices with modern technologies, sets the stage for the successful integration of e-learning and digital tools, thereby offering new avenues for engaging participants and expanding access to quality cultural heritage education.

6. Integrating e-learning and digital tools

E-learning and digital representation tools are crucial resources for enhancing the involvement of ecomuseums in modern education. Within the context of digital transformation, education that effectively integrates digital tools with experiential learning approaches can significantly strengthen the overall learning experience. The integration of digital tools and e-learning within the ecomuseum framework offers a powerful means of enhancing educational experiences and fostering greater community engagement with cultural heritage. Ecomuseums are actively adapting to the needs of multicultural communities by adopting innovative representation and participation practices (Montanari, 2015).

Digital cultural heritage education encourages critical thinking, experiential learning, and cross-cultural collaboration, while simultaneously boosting digital literacy and cultural awareness among young learners (Orphanidou et al., 2024). A diverse range of tools, including storytelling, serious games, digital libraries, and virtual museums, can be effectively employed to present cultural heritage within engaging e-learning environments (Nikolova, 2022).

A key theme in recent research centers on the role of 3D landscape representations in activating collective memory and shaping community identity. Goussios et al. (2021) emphasize the importance of 3D geovisualization in revitalizing and reinforcing local collective memory, landscape perception, and a broader sense of community and identity. They argue that these elements are interconnected, with landscape perception evoking memories and land uses reflecting past landscape functions and values. When combined with hands-on participation, these digital methods can significantly strengthen the connection between learners and their local natural and cultural heritage.

7. Conclusions

Ecomuseums, through a holistic approach that integrates cultural heritage, education, locality, and social innovation, can serve as powerful catalysts for sustainable development and the enhancement of local identity. By integrating experiential educational actions, promoting local traditions, and effectively utilizing digital tools (e.g., e-learning platforms), ecomuseums enhance the participation and connection of both locals and visitors with the surrounding landscape and local culture. Recognizing the landscape as a living entity shaped by the dynamic interplay of human activity and the environment, ecomuseums play a crucial role in these efforts. By skillfully linking collective memory, landscape perception, and community identity, ecomuseums deepen the understanding of local spaces and foster a stronger connection between people and their environment. Ultimately, ecomuseums significantly contribute to regional development by fostering cultural continuity while simultaneously enabling pathways towards sustainable advancement.

8. References

- Achille, C., and Fiorillo, F. (2022) Teaching and Learning of Cultural Heritage: Engaging Education, Professional Training, and Experimental Activities. *Heritage* 5(3), 2565-2593
- Altin, R. (2021) Learning by cutting. *Antropologia Pubblica* 7 (1), 157-169
- Antweiler, C. (1998) Local knowledge and local knowing: An anthropological analysis of contested cultural products in the context of development. *Anthropos* 93, 469-494
- Appleton, J. (1980) *Landscape in the Arts and the Sciences*, University of Hull
- Badia F and Donato F (2023) Management perspectives for ecomuseums effectiveness: a holistic approach to sociocultural development of local areas. *European Journal of Cultural Management and Policy* 13, 11851
- Beard, A.E. Kim, Y.S., Gunderman. R. B. (2024) Synergy between formal and informal education, *Current Problems in Diagnostic Radiology* 53(2), 175-176

- Bellaigue, M. (1999) Globalisation and memory. *International Journal of Heritage Studies* 5, 35-43
- Belliggiano, A., Bindi, L., and Ievoli, C. (2021). Walking along the Sheeptrack...Rural Tourism, Ecomuseums, and Bio-Cultural Heritage. *Sustainability* 13(16), 8870
- Castro-Calviño, L., Rodríguez-Medina, J., Gómez-Carrasco, C. J., and López-Facal, R. (2020) Patrimonializarte: A Heritage Education Program Based on New Technologies and Local Heritage. *Education Sciences* 10(7), 176
- Choi, M. S. (2017) A New Model in an Old Village: The Challenges of Developing an Ecomuseum. *Museum International* 69, 68 - 79
- Dal Santo, R. D., N. Baldi, A. Del Duca, and A. Rossi. (2017) The Strategic Manifesto of Italian Ecomuseums. *Museum International* 69 (1–2), 86–95
- Davis, P. (2011) *Ecomuseums: a Sense of Place*. 2nd Edition. Continuum, New York, NY
- Déjeant-Pons, M. (2006) The European Landscape Convention. *Landscape Research* 31, 363-384
- Diković, M. and Plavšić, M. (2015) Formal Education, Non-formal and Informal Learning: Knowledge and Experience. *napredak* 156 (1 - 2), 9 – 24
- Doğan, M., and Timothy, D. J. (2020) Beyond Tourism and Taxes: The Ecomuseum and Social Development in the Ak-Chin Tribal Community. *Journal of Tourism and Cultural Change* 18, 133–149
- Doğan, M. (2015) Ecomuseum, Community Museology, Local Distinctiveness, Hüsamettindere Village, Bogatepe Village, Turkey. *Journal of Cultural Heritage Management and Sustainable Development* 5, 61–81
- Druker-Ibáñez, S. and Cáceres-Jensen, L. (2022) Integration of indigenous and local knowledge into sustainability education: a systematic literature review. *Environmental Education Research* 28, 1209 - 1236
- Evliyaoğlu, F., and Gelmez, K. (2022) Examining Workshops in the Intersection of Formal and Informal Architecture Education: The Case of “Bahar Atölyeleri”. *Journal of Design Studio* 4(spi 2), 35-49
- Ezz El-Din, D. (2019) Digital Cultural Heritage as an Emerging Tool to Develop Egyptian Educational Programs: Case-study: Applying interactive technologies in tourist guiding education. *International Journal of Heritage, Tourism and Hospitality* 13(1), 144-151
- García-Peñalvo, F. J., García-Holgado, A. and Cruz-Benito, J. (2013) Formal and informal learning experiences in multicultural scopes. Technological Ecosystem for Enhancing Multiculturality, TEEM '13: *Proceedings of the First International Conference on Technological Ecosystem for Enhancing Multiculturality*, 523 – 527
- Guaran, A., Michelutti, E. (2021) Landscape as ‘Working Field’ for Territorial Identity in Friuli Venezia Giulia Ecomuseums Action. In: Banini, T., Ilovan, OR. (eds) *Representing Place and Territorial Identities in Europe. GeoJournal Library* 127. Springer, Cham, 81–94
- Hsu, K.-W., Lin, M.-L., Chao, J.-C., Huang, S.-F. (2018) Constructing an Evaluation Framework for Eco-Museum Operations-Management Performance, Based on the Case of Jhushan, Taiwan. *Sustainability* 10, 1934
- Jiménez de Madariaga, C. (2021) Dry stone constructions – intangible cultural heritage and sustainable environment, *Journal of Cultural Heritage Management and Sustainable Development* 11(4), 614-626
- Kokko, S. and Kyritsi, A. (2012) Cultural Heritage Education for Intercultural Communication. *International Journal of Heritage in the Digital Era* 1, 165-168
- López-Fernández, J. A., Medina, S., López, M. J., and García-Morís, R. (2021) Perceptions of Heritage among Students of Early Childhood and Primary Education. *Sustainability* 13(19), 10636

- Lorimer, J. (2005) Cultural geography: the busyness of being 'more-than-representational', *Progress in Human Geography* 29, 83-94
- Macia, A. (1979) Visual perception of landscape: sex and personality differences. In Elsner, Gary H., and Richard C. Smardon (Eds.) *Proceedings of our national landscape: a conference on applied techniques for analysis and management of the visual resource*, 279-285
- Makridis, S., Alexiou, S., Vrasida, M. (2017) The Role of Experience in Shaping Student Perception of the Significance of Cultural Heritage. In: Katsoni, V., Upadhya, A., Stratigea, A. (eds) *Tourism, Culture and Heritage in a Smart Economy*. Springer Proceedings in Business and Economics. Springer, Cham, 467-482
- Molina-Torres, M.-P. (2021) Eco-Didactic Project for the Knowledge of a Community Museum. *Sustainability* 13(7), 3918
- Montanari, E. (2015) Ecomuseums and Contemporary Multi-cultural Communities: Assessing Problems and Potentialities through the Experience of the Écomusée du Val de Bièvre, Fresnes, France. *Mathematical Models and Methods in Applied Sciences* 13, 369-384
- Murtas, D. and Davis, P. (2009) The Role of The Ecomuseo Dei Terrazzamenti E Della Vite, (Cortemilia, Italy) in Community Development. *Museum and society* 7, 150-163
- Mustonen, T. (2014) Endemic time-spaces of Finland: Aquatic regimes. *Fennia* 192(2), 120-139
- Norman, K. (1993) Controlling a Future by Admiring a Past: An Ecomuseum in Sweden. *Ethnos* 58, 37-51
- Nemethy, S., Takacs, T., Szemethy, L., Lagerqvist, B., Barocsi, Z., Dinya, A., and Peterffy, I. (2020) Collection, cultivation and processing of medical plants, herbs and spices in the Balaton Ecomuseum – herbal medicine as intangible cultural heritage. *Ecocycles* 6(1), 52-87
- Nikolova, A. (2022) Context-dependent Tools and Models in Cultural Heritage Education. *Serdica J. Computing* 3-4, 93-112
- Orphanidou, Y., Efthymiou, L., and Panayiotou, G. (2024) Cultural Heritage for Sustainable Education Amidst Digitalisation. *Sustainability* 16(4), 1540
- Pappalardo, G. (2020) Community-Based Processes for Revitalizing Heritage: Questioning Justice in the Experimental Practice of Ecomuseums. *Sustainability* 12 (21), 9270
- Pavlis, E. (2021) The perception of the Greek rural landscape over time. The case of the landscape of rural Lesbos. Collected volume in honour of E. Kovani. In Alexakis, E., Thanopoulou, M. and Economou, A. (eds.) *Cultural and social dimensions of the environment - Eleni Kovani's anti-charisma*, Hellenic Society of Ethnology, 39-82 (in Greek)
- Pavlis, E. (2012) *Towards a Geographical Approach to Spatial Conscience and its Application to the Landscape: the Case of the Greek Countryside*, University of the Aegean (in Greek)
- Pavlis, E and Terkenli, T.S., (2017) Landscape values and the question of cultural sustainability: exploring an uncomfortable relationship in the case of Greece. *Norwegian Journal of Geography* 71(3), 168-188
- Perella, G., Galli, A., and Marcheggiani, E. (2010). The Potential of Ecomuseums in Strategies for Local Sustainable Development in Rural Areas. *Landscape Research* 35, 431 - 447
- Ratana-Ubol, A. (2020) Intergenerational Learning Enhanced through Local Wisdom in Thailand. *RMUTK Journal of Liberal Arts* 1(1), 11-16
- Relf, E. (1976) *Place and placelessness*. London: Pion Limited

- Signes-Pont, M. T., Cortés-Plana, J. J., Boters-Pitarch, J., and Mora-Mora, H. (2022) Cultural Heritage and Sustainable Rural Development: The Case of Tàrbena, Spain. *Heritage* 5(4), 3010-3031
- Silva, L. de O., and Figueiredo, L. A. V. de. (2011) Racionalidades e sensibilidades em trilhas interpretativo-perceptivas: promovendo ações formativas de Educação Ambiental na Vila de Paranapiacaba-Santo André (SP). *Revista Brasileira De Ecoturismo* 4(1), 25-58
- Simmel, G. (1913/2004) Landscape Philosophy. In Simmel, G., Ritter, J. and Gombrich, H. (Kavathas, D. ed.) *The landscape*. Potamos Publishing, 11-31 (in Greek)
- Sulima, M. (2022) The Role of Education in the Protection of Cultural Heritage (on the Example of the Project “Journey through Wooden Podlasie”). *Kultura i Edukacja* 136. 9-28.
- Summatavet, K. and Raudsaar, M. (2015) Cultural heritage and entrepreneurship – inspiration for novel ventures creation. *Journal of Enterprising Communities: People and Places in The Global Economy* 9, 31-44
- Terkenli, T.S. (2005) One Space, Many Landscapes: geographical approaches to landscapism. In Louloudis L. - Beopoulos, N. - Troumbis A. (Eds.) *The Rural Landscape: the palimpsest of centuries of agricultural toil*, Ktima Mercouri. 76-88
- Terzić, A., Bjeljic, Z., Jovičić A. and Penjišević, I. (2014) Cultural Route and Ecomuseum Concepts as a Synergy of Nature, Heritage and Community Oriented Sustainable Development Ecomuseum “Ibar Valley” in Serbia. *European Journal of Sustainable Development* 3, 1-16
- Tsipra, T., and Drinia, H. (2022) Geocultural Landscape and Sustainable Development at Apano Meria in Syros Island, Central Aegean Sea, Greece: An Ecomuseological Approach for the Promotion of Geological Heritage. *Heritage* 5(3), 2160-2180
- Tuan, Y.F. (1977) *Space and Place: The Perspective of Experience*, Minneapolis: University of Minnesota Press
- Tuan, Y.F. (1974) *Topophilia: a study of environmental perception, attitudes, and values*, Englewood Cliffs, N.J.: Prentice-Hall
- UNESCO (2018) *What is Local and Indigenous Knowledge*. United Nations Educational, Scientific and Cultural Organization
- Worts, D. (2006) Transformational Encounters: Reflections on Cultural Participation and Ecomuseology. *Canadian Journal of Communication* 31(1), 127-145
- Woods, M. (2005) *Rural Geography: Processes, Responses and Experiences in Rural Restructuring*, London: Sage Publications
- Wuisang, C., Rengkung, J. and Rondonuwu, M. (2018) Towards Sustainable Cultural Landscape: A Challenge in Developing Ecomuseum in Minahasa Region. *3rd International Symposium for Sustainable Landscape Development*. IOP Conference Series: Earth and Environmental Science, 012017
- Wylie, J. (2007) *Landscape*, London: Routledge

Education for Sustainability: Active Learning Approaches

Abstract:

Education for Sustainability (Efs) focuses on the development of social and communication skills among learners who will act with empathy and awareness of emerging environmental and social issues facing the planet. Within this context, the adoption of alternative and innovative methodological approaches is a significant factor for the successful implementation of the principles of Education for Sustainability. Some of these are analyzed in the present work and include the following: project work, problem-solving, brainstorming, concept mapping, the use of cartoons, case studies, role-playing, dramatization, debate, the use of ethical dilemmas, the use of experiments, environmental pathways and the six thinking hats. A key common characteristic of all these methods and techniques is their student-centered nature and emphasis on the active involvement of students in the educational process. The role of the educator is deemed a crucial factor for the successful implementation of innovative methodological approaches, as well as the detachment of the educational system from traditional teaching methods.

Keywords:

Education for Sustainability (Efs), sustainable development, pedagogical methods, pedagogical techniques, interdisciplinarity

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1. Introduction

Education for Sustainability (EfS) aims to raise awareness of emerging social and environmental issues among learners through the implementation of interdisciplinary education programs both in the classroom and in nature, as well as through the application of innovative learning methods. Specifically, it seeks to create individuals who critically examine issues related to sustainable development, understand the needs of others and take a leadership role in decision-making by recognizing existing and emerging social and environmental challenges and internalizing them into specific action plans for the protection of society and the environment (Fang et al. 2023).

According to McFarlane & Ogazon (2011), education and culture are the two main factors influencing our tendency towards sustainability, either individually or collectively. It is increasingly recognized that social and environmental problems must be addressed through a root-cause process, and EfS is called upon to change public perceptions regarding socio-economic and environmental issues by utilizing realistic and achievable educational goals, in order to establish environmentally friendly behaviors among learners (Fang et al. 2023).

Due to its holistic nature, EfS aligns with the latest innovative educational approaches (Kougias et al. 2023). Therefore, these innovative methodological approaches which correspond to the nature of Efs refer to cooperative processes and simultaneously encourage active student participation, the cultivation of free and creative thinking, experimentation, and generally the process of “learning how to learn” (Fermeli et al. 2016). These methods and techniques provide supportive guidelines for approaching EfS and include the active involvement of all participants in the learning process and interactivity (Jeronen et al. 2017).

There is significant scientific interest in identifying the most suitable pedagogical methods and techniques for addressing EfS. To effectively address each thematic area, educators must choose an active learning approach while considering certain key characteristics of the student community, such as the age of the students, their cognitive level, the duration and topic of the program, as well as the specific goals set (Kalaitzidis et al. 2021). Additionally, previous experiences and interests of the students, as well as the training received by the educator regarding the particular educational approach, must be taken into account (Dimitriou 2009).

EfS aims to transmit knowledge, develop attitudes and promote responsible behaviors aligned with the spirit of sustainable development. To achieve this, a range of strategies designed to integrate students’ environmental knowledge, attitudes and behaviors is necessary, enabling them to recognize situations, challenge inconsistencies and make informed decisions regarding their commitment to adopting perspectives which take into account the dimensions of sustainable development (Ballantyne & Packer 2010).

It is clear that developing competencies related to sustainability requires a combination of different active learning approaches. Choosing an active learning approach depends on the teaching objectives set in each case and the particularities of the situation involving students, educators, and specific learning environments. A review of the recent literature on EfS reveals notable efforts to document and analyze the active learning approaches suitable for this form of education (Lozano et al. 2019).

For instance, Ceulemans and De Prins (2010) have suggested implementing teaching methods and techniques which promote active student participation, such as cooperative learning, brainstorming, problem-solving, and case studies. Similarly, Cotton and Winter (2010) recommended role-playing, simulation, audiovisual material observation, image analysis, case studies, field research, and group discussions as appropriate pedagogical approaches for Education for Sustainability. In the same vein, Lambrechts et al. (2013) identified several teaching methods and techniques, including group discussions, recording group or personal journals, the Socratic method, outdoor education, role-playing, brainstorming, problem analysis, bibliographic research, and concept mapping. Lozano et al.

(2017) distinguished some active learning approaches compatible with the nature of EfS, such as participatory action research, lectures, case studies, on-site environmental education, supply chain/life cycle analysis, and concept mapping.

Several educational strategies described below share a common component of combining individual and group work, incorporating both discovery and inquiry-based learning. This combination enhances the achievement of cognitive, emotional, and psychomotor goals on multiple levels, fostering the multifaceted development of students (Kousoulas 2008). It should be clarified that no single approach is uniquely suitable for addressing sustainability issues; instead, multiple alternative methodological options may exist for the same topic (Kalaitzidis et al. 2021). Additionally, it is noted that many other strategies not discussed in this work are equally important for addressing sustainability-related issues.

2. Active Learning Approaches

2.1 Project-based Learning (Project Method)

Project-based learning, commonly known as the Project Method, is considered the most interdisciplinary and comprehensive method, encompassing all other educational approaches within its framework. It emerged from the American progressive education movement and was first clearly defined in 1918 by Kilpatrick in his essay "The Project Method." Kilpatrick grounded his concept in Dewey's theory of experience, which posits that children should gain knowledge and skills by solving practical problems in social contexts. Kilpatrick was significantly influenced by Thorndike's learning psychology (Knoll 1997).

Kilpatrick believed that schools should be more society-oriented, focusing on the child and emphasizing democratic principles. This innovative educational method included interdisciplinary learning, teamwork, and the individualization of learning, enriched by elements of experiential school activities. It stood in contrast to traditional rote teaching, placing action and experience at the core of the educational process (Kołodziejcki & Przybysz-Zaremba 2017).

This student-centered method involves collective decision-making among students. Projects are based on the interests and needs of the students, allowing them complete freedom in selecting topics, processes, and presentation methods for the outcomes of their collective work, which can take the form of speeches, artworks, or construction works. Projects can span from a few days to several months and are typically carried out by small groups. This method is quite popular in Greece and is particularly suitable for addressing environmental issues (Matsagouras 2004). According to Georgopoulos and Tsaliki (1993), the phases of the method include topic selection, research, proposing and processing potential solutions, engagement with the issue, identifying possible strategies for social action, and evaluating them.

Project-based learning centers on the student and seeks to promote active learning through student participation in investigating real issues in a collaborative environment (Hong Sharon Yam & Rossini 2010). According to Zhylykybay et al. (2014), this method can positively influence the quality of teaching, showcase students' knowledge and skills, and contribute to developing their competencies. Moreover, project-based learning captures students' interest, as experiential learning and group work are more accessible to them than traditional teaching methods (Hong Sharon Yam & Rossini 2010). Additionally, it serves as a means for students to develop independence and responsibility while practicing social and democratic behaviors (Knoll 1997).

2.2 Problem-based Learning (PBL)

Problem-based learning (PBL) as an educational approach was established at McMaster University in Canada in the early 1970s and has since spread worldwide (Rhem 1998). It is one of the most innovative educational techniques, which, instead of requiring students to

study a subject and then practice problem-solving in a vacuum, integrates the learning process into real-life problems (Hung et al. 2007). Importantly, the problems addressed are not arbitrary; they are carefully chosen to enhance students' knowledge and understanding of specific issues (Wood 2003).

In PBL, students work in groups to tackle complex, real problems under the guidance of the instructor (Allen et al. 2011). Existing knowledge structures are activated through problem-based experiences, leading students to acquire new knowledge (Capon & Kuhn 2004). This process promotes self-directed learning as students apply new knowledge to solve the problem, fostering collaborative problem-solving and granting them greater responsibilities and autonomy compared to traditional teaching methods (Manolas 2006). The educator's role is to facilitate the learning process rather than to provide knowledge directly (Hmelo-Silver 2004). The educator presents the problem and offers initial guidance, which is gradually reduced (Blionis 2009).

The PBL technique has numerous advantages, as it contributes to a deep understanding of the subject matter (Allen et al. 2011) and fosters collaboration and flexibility (Hmelo-Silver 2004), along with critical and reflective thinking skills. Furthermore, it provides students with opportunities to solve problems in a collaborative environment, create mental models for learning, and develop self-directed learning habits through practice and reflection (Yew & Goh 2016).

PBL is a key tool in EfS and can be combined with other techniques. According to Kalaitzidis et al. (2021), it serves as the primary methodological approach for EfS and can be implemented in various ways. Moreover, the Tbilisi Declaration (1977) stated that Environmental Education (EE) activities should be structured around environmental problems using an interdisciplinary and holistic approach (Blionis 2009). Additionally, Georgopoulos and Tsaliki (1993) noted that if people thought in terms of "problem-solving" in their daily lives, many environmental issues would not exist.

2.3 Brainstorming

This technique aims for the free and spontaneous expression of students' ideas related to a question, problem, or issue presented to them. Participants are invited to quickly respond to the posed question in a relatively informal manner to determine their spontaneous reactions to the specific issue. The answers are recorded by the teacher (Blionis 2009), and then a discussion follows, involving the clarification of concepts, grouping related ideas, and examining them based on established criteria (Kalaitzidis et al. 2021).

Brainstorming is one of the techniques that promote group creativity, allowing members to share thoughts spontaneously in order to find solutions to practical problems (Gogus 2012). The technique was inspired by Alex Osborn in 1953, who used it as a means to enhance creativity in corporate environments. Later, its application expanded to various fields, including education. One of the positive aspects of brainstorming as a teaching technique is that it helps stimulate individuals' ability to produce creative solutions that can be further evaluated and eventually applied in practice (Al-Samarraie & Hurmuzan 2018).

Brainstorming can be implemented in EfS whether students already possess some knowledge about the issue being explored or not. According to Vasala and Flogaiti (2002), this technique can be applied at the beginning of addressing a topic, aiming to assess students' knowledge about the specific subject, explore its components, or clarify concepts. Moreover, it can be used at any other time in teaching a subject, including assessing the amount of knowledge acquired at the end of the process of teaching the particular subject (Blionis 2009).

2.4 Concept Mapping

Concept mapping is a technique used to capture certain concepts and highlight the relationships between them (Kalaitzidis et al. 2021) in a schematic representation. It was developed by Novak and is based on Ausubel's constructivist theory (Blionis 2009). It integrates qualitative and quantitative methods designed to allow the graphical representation of a coherent conceptual framework for any topic of interest (Trochim & McLinden 2017). The graphical representation of knowledge consists of networks of concepts, which in turn are made up of connections and nodes. The connections symbolize the relationships among the concepts and can be unidirectional or bidirectional, while the nodes are intermediate concepts that connect to others (Paraskevopoulos & Korfiatis 2003).

The teaching technique of concept mapping encourages the group to quickly arrive at an interpretable conceptual framework, expressing this framework entirely in the language of the participants, while simultaneously producing a graphic product that displays all the main concepts and their interactions (Trochim 1989). The graphical representation of the concept map can be drawn on a working paper or on the board, but there are now many digital tools available for its electronic representation (Kalaitzidis et al. 2021).

It is a strategy used by many educators to enhance the development of students' critical thinking skills, enabling them to see the relationships between concepts (Davies 2011) and to encourage deep learning, as the concept map links prior knowledge with the development of new concepts. Additionally, it can also be used as a method for assessing acquired knowledge (Akinsanya & Williams 2004).

2.5 The Use of Cartoons

Cartoons are defined as self-sufficient illustrations that may or may not include captions and can serve as illustrated readings in quick, episodic formats (Doring 2000). Through the use of a well-crafted cartoon, complex issues may be approached in a way that is accessible to a broader (non-specialized) audience (Kleeman 2006). Each learner can respond directly to the interpretation of cartoons, according to their personal interpretation, thus enhancing individual thought and shaping personal perceptions (Kabapinar 2005). Therefore, this technique can be used as an alternative tool for cognitive development (Bahrani & Soltani 2011).

Key elements of cartoons include symbolism and exaggeration, as their depictions often contain numerous symbols such as objects, animals, designs, words, or colors (Doring 2000), which the observer is invited to decode. This process not only involves interpretation by each student but also necessitates the discussion that follows as well as the interaction among participants (Kabapinar 2005).

Using cartoons as a teaching technique can yield numerous advantages in learning outcomes. Often, the use of cartoons is employed by educators as an autonomous innovative teaching strategy or may complement traditional teaching methods. Positive results from interpreting cartoons in the classroom include a reduction in boredom, disruptive behavior, school anxiety, and inappropriate behavior (Bahrani & Soltani 2011).

Moreover, familiarity with the interpretation and decoding process enhances the ability to extract information correctly from them (Manolas & Filho 2004), while simultaneously contributing to the development of critical thinking, understanding, creativity, productivity, and divergent thinking. It also increases student interest and fosters motivation for learning, while promoting constructive and collaborative learning (Wyk 2011). It has been observed that using cartoons in teaching positively impacts the students themselves, as they recognize it as a significant aid (Inel & Balim 2013).

An important aspect arising from the use of cartoons is that it can contribute to developing the ability to question dominant perceptions and process alternative solutions, moving away from the biases and stereotypes individuals may have previously held. Thus,

students may grow to become agents of social change, acting towards the elimination of injustices and inequalities (Kleeman 2006).

2.6 Case Study

The case study approach involves studying an issue, which can be done through reading texts or through bibliographic research on the topic. Typically, after studying the issue, a discussion or debate follows with the end of such processes being the drawing of conclusions (Kalaitzidis et al. 2021). This technique was first used as an official educational tool at Harvard University. It serves as a way to bring the real world into the classroom and forms the basis for developing discussion, exchanging opinions, gaining experience, and acquiring knowledge while promoting collaborative reflection (Blionis 2009).

The case study technique is highly adaptable because it facilitates interdisciplinary learning and can be used to enhance the connection between specific scientific subjects and real-world applications. It is argued that through this technique, student motivation to participate in classroom activities increases, while simultaneously promoting critical thinking and the ability to view an issue from multiple perspectives (Bonney 2015).

According to Georgopoulos and Tsaliki (1993), a case study may involve a specific and characteristic environmental issue that students, divided into groups, will be called upon to study and present, aiming to synthesize the presented opinions. They highlight the advantages of the technique, including revealing conflicts between groups, participation in decision-making, collectivity, and the development of dialogue.

2.7 Role Play

Role play is one of the oldest active learning approaches, as it has been used since ancient times and seems to resonate with young learners. In role play, participants improvise by taking on roles which may be characterized by different motivations and backgrounds or have different personalities. The scenario and directions are provided by an organizer (usually the educator) or decided collectively. Through this process, conflicts are highlighted, and solutions to oppositions in contradictory situations are sought (Blionis 2009).

For example, a role-play scenario presented by Paraskevopoulos and Korfiatis (2003) involves issues related to various wetland ecosystems, such as the discharge of industrial and urban pollutants into a lake. The involved groups which could be assigned as roles to students could include local residents, fishermen, representatives of environmental organizations, entrepreneurs interested in investing in the area, ministry representatives, etc.

In role play, players speak and act in the way they believe their characters would behave. The positive aspect of this process, besides the enjoyment, is that it offers each player the opportunity for reflection and evaluation of how their character would act in each circumstance (Segoni 2022). Additionally, role-playing helps students deeply understand that often individuals involved in a situation have opposing views and interests regarding the consequences of a specific development (Kalaitzidis et al. 2021).

Moreover, learning through role play helps students delve into the nature of the problem or issue of concern to them, understand the relationships among different characters, and realize the complexity of problems/issues (Ucus 2015).

2.8 Dramatization

Dramatization as an active learning approach should not be confused with role play. Although dramatization is similar to role play, it places greater emphasis on the element of drama and is more complex than a simple role play (Blionis 2009).

The educator can guide the action externally or also participate in the dramatization. The process of dramatization can involve groups that create and enact their own scenarios (Blionis 2009) or groups that transform a narrative text into a theatrical performance. In the

latter case, texts with emotional weight that contain intense dialogues are chosen, as the goal is to highlight emotions related to the central theme. For example, a text about the claim to natural resources could serve as a suitable prompt for highlighting the corresponding environmental message, provided that through dramatization, students isolate the involved parties, study their relationships, and highlight underlying values (Kalaitzidis et al. 2021).

The advantages of choosing dramatization are numerous. First of all, dramatization helps students connect new knowledge with their own experiences through experiential action. Additionally, it contributes to developing critical capacity and empathy, as students identify with the characters they embody and understand their ways of thinking and actions. Also, the application of this approach generates greater student interest in the teaching process (Bolton-Gary 2013). Based on research by Lee et al. (2015), it was found that dramatization has significant effects on the development of children's creative thinking. Another study highlighted that dramatization significantly impacts the development of students' social skills (Obayetin 2023).

2.9 Debate

Debate is a technique which originates from ancient Athens and democratic institutions. It constitutes a form of discussion between two groups of participants. They are presented with a topic for which there are conflicting views, and one group takes on the task of developing arguments supporting one side, while the other group supports the opposite side. For example, a topic which could be the subject of a debate in this approach is whether economic development should or should not be restricted by environmental protection. A specific time frame for each position is agreed upon, while the opposing group has the opportunity to pose questions after each statement. The evaluation of the persuasiveness of the arguments is conducted by neutral judges, such as educators or parents, and constructive feedback is given to each group at the end (Blionis 2009).

The benefits of debate for participating students are many. First and foremost, through their participation, students are informed about current controversial issues and the latest developments regarding the topics of discussion. Simultaneously, they acquire skills which could, in the long term, encourage their active participation in the fields they are interested in, leading to social responsibility on their part (Yang & Rusli 2012). The development of these skills concerns the so-called "soft skills", which are considered essential for creating active citizens in the 21st century. Specifically, these skills include teamwork and communication, critical thinking development, and information management (Aclan et al. 2016; Pharm et al. 2018).

2.10 The use of Ethical Dilemmas

Ethical dilemmas are related to a real or even hypothetical situation. After studying all possible outcomes and considering the conflicting dimensions of the issue, students are called to make a decision, but they may also conclude that they cannot reach any decision. This technique is based on the conflict of values, the prioritization of values, and the process of negotiation (Kalaitzidis et al. 2021). An example of using the ethical dilemma in EfS might involve decision-making regarding the advantages and disadvantages of the daily use of synthetic fertilizers (Rahmawati et al. 2022).

The positive aspects of this technique include the development of critical thinking, with emphasis on students' reflective processes rather than the development of argumentation skills or moral reasoning. As an active learning approach, the ethical dilemma stems from values education and is suitable for teaching controversial topics which require students to rely on their values and knowledge of the specific subject in order to participate in reasoned decision-making, critical reflection, and collective problem-solving (Taylor 2019). Furthermore, research results indicate that through this approach, students gain deep

knowledge of a topic while simultaneously developing reflective social thinking, skills in collective decision-making, and increased awareness of issues related to science within socio-cultural contexts (Rahmawati et al. 2022). Additionally, it has been shown that students exposed to ethical dilemmas develop higher levels of moral sensitivity and moral reasoning than their peers (Billiot et al. 2012).

2.11 The Use of Experiments

Experiments are often used in the teaching of subjects belonging to the realm of natural sciences (Zendler & Greiner 2020). An experiment may involve a series of processes to study a phenomenon under controlled conditions (Kalaitzidis et al. 2021). Controlled conditions mean that researchers have identified all variables and keep them constant, except for those they want to study (Blionis 2009). Thus, in approaching an environmental problem, the proposed solutions are examined in practice in order to better understand the individual aspects of it (Tsaboukou-Skanavis 2004). For example, an experiment can help understand how the average temperature of the Earth is increasing due to the rise of carbon dioxide in the atmosphere (Kalaitzidis et al. 2021).

The procedure for conducting an experiment includes observation, hypothesis formulation, experimentation to test the outcome, drawing conclusions, and making predictions about the evolution of the studied natural phenomena (Dimitriou 2009).

Through experiments, students learn the advantages and limitations of scientific methods, while also developing problem-solving skills and learning to critically examine the information provided to them. Additionally, this approach allows students' prior knowledge to emerge, which they can explore through active experimentation and build upon with new knowledge that arises from the experiment (Blionis 2009).

2.12 Environmental Path

The environmental path is an organized and defined route in a location of interest to a student community. During this route, elements can be identified which will become subjects of discussion among all students, such as species of plants and animals, types of rocks, streams, and geomorphological formations. It is advisable to use maps marking points of interest or applications containing information about each point of interest, so that students can explore them during the excursion (Kalaitzidis et al. 2021).

Environmental paths allow students to observe and explore areas of environmental interest closely, as well as the unique characteristics which distinguish them. Often, the conduct of an environmental path is repeated in different time frames so that students can study the changes occurring in a place over time (Dimitriou 2009). It should be emphasized that environmental paths differ from hiking or climbing trails, which do not have an educational purpose. Examples of environmental paths include the trail in the Dadia forest, leading to the bird of prey observatory, and the route in the environmental awareness park "Antonis Tritsis" in Ilion, Attica (Blionis 2009).

2.13 The Six Thinking Hats (De Bono's Six Hats)

The idea of the six thinking hats was developed by Edward De Bono in 1985. By using six metaphorical hats of different colors, one can explore the implications of a decision by examining it from different perspectives in a simple and effective way. Additionally, it is used to encourage reflection on an issue and to find ways in which an idea can be implemented. The essential purpose of this technique is to guide cognitive processes into six distinct areas, promoting individual focused thinking. It allows students to examine issues, options, or alternatives in a structured and analytical manner (Karmakar & Chattopadhyay 2024).

In this technique, each hat symbolizes a different way of thinking. Specifically, the green hat is the hat of creative thinking, which, when worn, allows for free thinking without

any inclination for criticism. The red hat is the hat of feelings and intuition, with which one can express the emotions and fears evoked by an idea. The white hat is the one which focuses on available information and seeks new data. The yellow hat is the hat of optimism, as wearing it leads to adopting an optimistic way of thinking. The black hat is the hat of pessimism, worn to identify the weak points of an idea. The blue hat is the one that develops the organization mechanism for the initial idea. The technique of the six thinking hats is conducted through a discussion, where when a participant takes the floor, he/she states which hat he/she is “wearing” and then analyzes his/her thought process on the topic of discussion based on the perspective examined by their hat (Kalaitzidis et al. 2021).

This technique seems to adopt elements of role-playing, as the “hats” allow for the examination and expression of ideas that students might not otherwise think of or wish to express openly in front of the entire student community. Furthermore, they allow individuals to handle a specific issue from six different perspectives, directing their attention sequentially from one perspective to another (Toraman & Altun 2013). Thus, it enhances the development of advanced cognitive skills, such as parallel thinking, lateral thinking, innovative thinking, and analytical thinking, while simultaneously promoting collaboration and interaction among participants (Karmakar & Chattopadhyay 2024).

With regard to approaching sustainability issues through the six thinking hats technique, it has been found that critical thinking skills are developed while simultaneously enhancing students’ interest in environmental issues. Furthermore, it fosters questioning, investigation, hypothesis formation, and data interpretation (Dhanapal & Ling 2013). According to Choi & Choi (2014), this technique can contribute to enhancing students’ environmental awareness, a viewpoint also supported by Toraman & Altun (2013) through their own research.

3. Conclusions

Education for Sustainability aims to shape individuals who will be able to contribute to the sustainable transformation of society through the skills acquired from school. Education is the key to achieving the Sustainable Development Goals set in the 2030 Agenda, which can be realized through the adoption of various types e.g. collaborative, interdisciplinary, informal, and non-formal approaches (Hoque et al. 2022). Meanwhile, within the framework of formal education, EfS can find the pathways which will lead to the achievement of its objectives. Therefore, within the limits of formal educational reality, EfS is not an additional subject but appears as an interdisciplinary field, possessing a new dynamic holistic dimension that connects all areas of the curriculum (Athanasakis 2004).

The methodological processes analyzed above allow students to draw information, ideas, and elements from multiple sources (texts, sketches, forests, habitats, museums, libraries, electronic sources, etc.) and to critically analyze and synthesize them in an interdisciplinary and multidisciplinary manner. Additionally, they encourage students to present new knowledge through various expressive means (texts, tables, images, cartoons, videos, dramatizations, etc.) and to evaluate the difficulties encountered during the methodological process followed (Athanasakis 2004).

In this context, educators play a crucial role, as they are called upon to contribute to the formation of future citizens who will be at the forefront of global developments concerning issues of planetary sustainability (Dimitriou & Zachariadou 2005). It has been argued that the most significant factor determining the success of implementing Education for Sustainability is the educators themselves. Thus, if the teaching staff lacks appropriate training and does not possess a responsible attitude towards preparing the curriculum and the suitable teaching approaches related to sustainability, the creation of responsible students capable of contributing to the sustainable transformation of society will not be possible (Ozgur & Yilmaz 2013).

For this social transformation to become feasible, a transformation of schools towards the directions defined by Efs is essential. In turn, this transformation requires the commitment of educators to promote sustainable schools through personal efforts, motivations, and innovative ideas. Therefore, to fulfill this commitment, the educational community must receive appropriate training which meets the challenge of educating creative professionals who think critically (García-González 2020). Consequently, special emphasis must be placed on the professional development of educators to successfully implement all the principles of EfS within the school environment and to apply in practice all those approaches suitable for EfS (Thompson 1997). In any case, the participation of educators in activities which involve a student-centered learning approach and the development of their own beliefs regarding the place of Education for Sustainability in the curriculum are significant components of the successful implementation of EfS (McNaughton 2012).

The application of innovative active learning approaches may be an unfamiliar area for many, as adherence to traditional teaching methods and the use of school textbooks dominate many educational systems. However, the exploration of alternative learning approaches which actively involve students in the educational process and their gradual integration into the curriculum can lead to the transformation of the school community and the development of social and communication skills among students. In conclusion, EfS can serve as the space where the approaches discussed earlier can be piloted, as its subject matter is entirely compatible with the adoption of such teaching processes.

Bibliography

- Aclan, E. M., Aziz, N. H. A. & Valdez, N. (2016). Debate as a pedagogical tool to develop soft skills in EFL/ESL classroom: A qualitative case study. *Social Sciences & Humanities*, 24(1): 213-240.
- Akinsanya, C. & Williams, M. (2004). Concept mapping for meaningful learning. *Nurse Education Today*, 24(1): 41-46.
- Allen, D., Donham, R. & Bernhardt, S. (2011). Problem-based learning. *Wiley, Online Library*, 128: 21-29.
- Al-Samarraie, H. & Hurmuzan, S. (2018). A review of brainstorming techniques in higher education. *Thinking Skills and Creativity*, 27: 78-91.
- Athanasakis, A. (2004). *Teaching about the Environment in Primary, Secondary and Tertiary Education*. Athens: Ch. Dardanos Publications.
- Bahrani, T. & Soltani, R. (2011). The pedagogical values of cartoons. *Research on Humanities and Social Sciences*, 1(4): 19-22.
- Ballantyne, R. R. & Packer, J. M. (2010). Teaching and learning in Environmental Education: Developing environmental conceptions. *The Journal of Environmental Education*, 27(2): 25-32.
- Billiot, M. J., David, D., Sid, G. & TerryAnn, G. (2012). Educational context: Preparing accounting students to identify ethical dilemmas. *American Journal of Business Education*, 5(3): 277-286.
- Blionis, G. (2009). *In the Paths of Environmental Education*. Athens: Kedros Publications.
- Bolton-Gary, C. (2013). Living theory: Dramatization in Educational Psychology, *International Journal of University Teaching and Faculty Development*, 4(3): 147-155.
- Bonney, K. (2015). Case study teaching method improves student performance and perceptions of learning gains. *Journal of Microbiology & Biology Education*, 16(1): 21-28.
- Capon, N. & Kuhn, D. (2004). What's so good about problem-based learning? *Cognition and Instruction*, 22(1): 61-79.
- Ceulemans, K. & De Prins, M. (2010). Teacher's manual and method for SD integration in curricula. *Journal of Cleaner Production*, 18(7): 645-651.

- Choi, S. & Choi, S. (2014). The effects of the Six Thinking Hats Program on environmentally friendly attitude and environmental literacy in elementary science. *Journal of Science Education*, 38(1): 144-159.
- Cotton, D. & Winter, J. (2010). It's not just bits of paper and light bulbs: A review of sustainability pedagogies and their potential for use in higher education. In: Jones, P., Selby, D. & Sterling, S. (Eds.), *Sustainability Education: Perspectives and Practice Across Higher Education*. London, UK: Earthscan.
- Davies, M. (2011). Concept mapping, mind mapping and argument mapping: What are the differences and do they matter? *Higher Education*, 62: 279-301.
- Dhanapal, S. & Ling, K.T.W. (2013). A study to investigate how six thinking hats enhance the learning of environmental studies. *Journal of Research & Method in Education*, 1(6): 20-29.
- Dimitriou, A. (2009). *Environmental Education: Environment, Sustainability: Theoretical and Pedagogical Approaches*. Thessaloniki: Epikendro Publications.
- Dimitriou, A. & Zachariadou, E. (2005). Teachers and environmental education: The case of teachers who serve in schools of primary education in the Prefecture of Evros. *1st Conference of School Environmental Education Programs*, 23-25 September, Isthmos, Korinthos.
- Doring, A. (2000). The use of cartoons as a teaching and learning strategy. Available: http://www.tedi.uq.edu.au/Conferences/teach_conference00/papers/doring.html
- Fang, W., Hassan, A. & LePage, B. (2023). *The Living Environmental Education. Sound Science Toward a Cleaner, Safer, and Healthier Future*. Singapore: Springer.
- Fermeli, G., Roussomoustakaki-Theodoraki, M., Chatzikosta, K. & Gaitlich, M. (2016). *Interdisciplinary Activities in Environmental Education: A Guide*. Athens: Organization for the Publication of School Books.
- García-González, E., Jiménez-Fontana, R. & Azcárate, P. (2020). Education for Sustainability and the Sustainable Development Goals: Pre-service teachers' perceptions and knowledge. *Sustainability*, 12(18), 7741.
- Georgopoulos, A. & Tsaliki, E. (1993). *Environmental Education: Principles, Philosophy, Methodology, Games and Exercises*. Athens: Gutenebrg.
- Gogus, A. (2012). Brainstorming and Learning. In: Seel, N. (Ed.), *Encyclopedia of the Sciences of Learning*. Germany: Springer.
- Hmelo-Silver, C.E. (2004). Problem-based learning: What and how do students learn? *Educational Psychology Review*, 16: 235-266.
- Hong Sharon Yam, L. & Rossini, P. (2010). Effectiveness of project-based learning as a strategy for property education. *Pacific Rim Property Research Journal*, 16(3): 291-313.
- Hoque, F., Yasin, R. M. & Sopian, K. (2022). Revisiting Education for Sustainable Development: Methods to inspire secondary school students toward renewable energy. *Sustainability*, 14(14): 8296.
- Hung, W., Jonassen, D. & Liu, R. (2007). Problem-based learning. In: Jonassen, D., Spector, M., Driscoll, M., Merrill, D., Merrienboer, J. & Driscoll, M. (Eds.), *Handbook of Research on Educational Communications and Technology*. New York: Routledge.
- Inel, D. & Balim, A. G. (2013). Concept cartoons assisted problem-based learning method in science and technology teaching and students' views. *Procedia Social and Behavioral Sciences*, 93: 376-380.
- Jeronen, E., Palmberg, I. & Yli-Panula, E. (2017). Teaching methods in biology education and sustainability education including outdoor education for promoting sustainability—A literature review. *Education Sciences*, 7(1): 1.
- Kabapinar, F. (2005). Effectiveness of teaching via concept cartoons from the point of view of constructivist approach. *Educational Sciences: Theory & Practice*, 5(1): 135-146.

- Kalaitzidis, D., Gotzos, D., Katsenou, Ch. & Nomikou, Ch. (2021). *Environment and Education for Sustainable Development: A Guide for Teachers*. Ministry of Education and Religious Affairs.
- Karmakar, P. & Chattopadhyay, K. N. (2024). Six Thinking Hats: An educational technique to enhance cognitive abilities in education. *Asian Journal of Education and Social Studies*, 50(1): 167-173.
- Kleeman, G. (2006). Not just for fun: Using cartoons to investigate geographical issues. *New Zealand Geographer*, 62: 144-151.
- Knoll, M. (1997). The project method: Its vocational education origin and international development. *Journal of Industrial Teacher Education*, 34(3): 59-80.
- Kołodziejwski, M. & Przybysz-Zaremba, M. (2017). Project method in educational practice. *University Review*, 11(4): 26-32.
- Kougias, K., Sardianou, E. & Saiti, A. (2023). Attitudes and perceptions on education for sustainable development. *Circular Economy and Sustainability*, 3: 425-445.
- Kousoulas, G. (2008). *Approaching Environmental Education. Environmentally Friendly Technologies for Rural Development*. National Center for Social Research, Institute for Urban and Rural Sociology.
- Lambrechts, W., Mulà, I., Ceulemans, K., Molderez, I. & Gaeremynck, V. (2013). The integration of competences for sustainable development in higher education: An analysis of bachelor programs in management. *Journal of Cleaner Production*, 48: 65-73.
- Lee, B., Patall, E., Cawthon, S. & Steingut, R. (2015). The effect of drama-based pedagogy on prek-16 outcomes: a meta-analysis of research from 1985 to 2012. *Review of Educational Research*, 85(1): 3-49.
- Lozano, R., Merrill, M.M.Y., Sammalisto, K., Ceulemans, K. & Lozano, F. J. (2017). Connecting competences and pedagogical approaches for sustainable development in higher education: A literature review and framework proposal. *Sustainability*, 9: 1889.
- Lozano, R., Barreiro-Gen, M, Lozano, F.J. & Sammalisto, K. (2019). Teaching sustainability in European higher education institutions: Assessing the connections between competences and pedagogical approaches. *Sustainability*, 11(6):1602.
- Manolas, E. (2006). Designing a sustainable society: An application of the Richard E. Gross problem-solving model. *Proceedings of the 2006 Naxos International Conference on Sustainable Management and Development of Mountainous and Island Areas*, 1: 292-296.
- Manolas, E. & Leal Filho, W. (2004). The use of cartoons in environmental education: A case study of a learning approach. *Discursos*, Special Issue: 399-405.
- Matsagouras, I. (2004). *Cooperative Teaching and Learning*. Athens: Grigoris Publications.
- McFarlane, D. & Ogazon, A. (2011). The challenges of sustainability education. *Journal of Multidisciplinary Research*, 3(3): 81-107.
- McNaughton, M. J. (2012). Implementing Education for Sustainable Development in schools: Learning from teachers' reflections. *Environmental Education Research*, 18(6): 765-782.
- Obayetin, I. G., Olatunde, F. & Adebayo, A. (2023). Effects of dramatization and mastery learning approach on pupils' achievement in value orientation in social studies. *Nigerian Online Journal of Educational Sciences and Technology*, 5(2):171-190.
- Ozgur, S. D. & Yilmaz, A. (2013). The effect of environmental education on the pre-service teachers' affective tendency towards the environment and cognitive structure. *Procedia – Social and Behavioral Sciences*, 106: 2704-2713.
- Paraskevopoulos, S. & Korfiatis, K. (2003). *Environmental Education: Theories and Methods*. Thessaloniki: Christodoulidis Publications.
- Pharm, V. V., Pharm, H. Y. & Pharm, V. G. (2018). Evaluation of a modified debate exercise adapted to the pedagogy of team-based learning. *American Journal of Pharmaceutical Education*, 82(4), Article 6278: 345-352.

- Rahmawati, Y., Taylor, E., Taylor, P. C., Ridwan, A. & Mardiah, A. (2022). Students' engagement in education as sustainability: Implementing an ethical dilemma-STEAM teaching model in chemistry learning. *Sustainability*, 14(6): 3554.
- Rhem, J. (1998). Problem-based Learning: An Introduction. *The National Teaching & Learning Forum*, 8(1): 34-41.
- Segoni, S. (2022). A role-playing game to complement teaching activities in an 'environmental impact assessment' teaching course. *Environmental Research Communications*, 4(5).
- Taylor, E., Taylor, P.C. & Hill, J. (2019). Ethical dilemma story pedagogy—a constructivist approach to values learning and ethical understanding. In: Rahmawati, Y. & Taylor, P. (Eds.), *Empowering Science and Mathematics for Global Competitiveness*. London: CRC Press.
- Tbilisi declaration (1977). [Tbilisi Declaration \(1977\)](#)
- Thompson, P. (1997). *Environmental Education for the 21st Century*. New York: Peter Lang.
- Toraman, S. & Altun, S. (2013). Application of the Six Thinking Hats and SCAMPER techniques on the 7th grade course unit "Human and Environment": An exemplary case study. *Mevlana International Journal of Education*, 3(4): 166-185.
- Tsmpoukou-Skanavis, C. (2004). *Environment and Society: A Relationship in Continuous Evolution*. Athens: Kaleidoskopio Publications.
- Trochim, W. (1989). An introduction to concept mapping for planning and evaluation. *Evaluation and Program Planning*, 12(1): 1-16.
- Trochim, W. & McLinden, D. (2017). Introduction to a special issue on concept mapping. *Evaluation and Program Planning*, 60: 166-175.
- Ucus, S. (2015). Elementary school teachers' views on game-based learning as a teaching method. *Procedia - Social and Behavioral Sciences*, 186: 401-409.
- Vasala, P. & Flogaiti, E. (2002). Using brainstorming to teach environmental problems. *1st Environmental Conference of Macedonia*, 1-4 March, Thessaloniki, 444-450.
- Wood, D. (2003). ABC of learning and teaching in medicine: Problem based learning. *BMJ: British Medical Journal*, 326(7384): 328–330.
- Wyk, M. (2011). The use of cartoons as a teaching tool to enhance student learning in economics education. *Journal of Social Sciences*, 26(2): 117-130.
- Yang, H. & Rusli, E. (2012). Using debate as a pedagogical tool in enhancing pre-service Teachers' learning and critical thinking. *Journal of International Education Research*, 8(2): 135-144.
- Yew, E. & Goh, K. (2016). Problem-based learning: An overview of its process and impact on learning. *Health Professions Education*, 2(2): 75-79.
- Zendler, A. & Greiner, H. (2020). The effect of two instructional methods on learning outcome in chemistry education: The experiment method and computer simulation. *Education for Chemical Engineers*, 30: 9-19.
- Zhylkybay, G., Magzhan, S., Suinzhanova, Z., Balaubekov, M. & Adiyeva, P. (2014). The effectiveness of using the project method in the teaching process. *Procedia - Social and Behavioral Sciences*, 143: 621-624.

Cultural and Religious Tourism in Lefkada: Management and Contribution to the Development of the Island

Abstract:

The aim of this research is to investigate the management of cultural and religious tourism as a resource for development on the island of Lefkada. The conclusions of the research show that the island is a tourist destination that is increasingly chosen over the years due to its easy access and natural wealth.

The methodology used refers to the literature review, which includes articles from scientific journals and sources. Their material is well exploitable and reliable. Also, sources related to cultural and religious, as well as relevant sources expressing the experts interviewed were used.

The originality of the research lies in the term "management" which reinforces the term "development". This is because the development of a destination is based on the resources that the municipality or private and public body in question manages to enable it to emerge. The utilization of this case study can be done by the municipality concerned.

The findings highlight the reasons that attract tourists to the island and whether tourists choose the destination for the cultural and religious purpose. It is also important to present the development strategy to be followed by the municipality and the region of Lefkada.

Key words: sustainability; alternative forms of tourism; religious tourism; cultural tourism; Lefkada island.

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1. Introduction

1.1 Tourism

Tourism dates to classical antiquity. Historically, in 1500 BC, the Phoenicians and Sumerians began the first commercial journeys. The countries they visited were the Mediterranean, China and India (Walton, 2024). Chronologically, the first cultural travel began with the Ancient Greeks and Romans. Over the following millennia, shipping and trade developed rapidly. The Minoans in the 3rd millennium became known for the development of shipping, while the Mycenaeans in the 14th and 13th centuries BC established key trading posts in areas such as Cyprus, Miletus and southern Italy (Lagos, 2016). Religious tourism at an early stage begins with the Ionians and Dorians, who celebrated the god Apollo by sending delegates from their city to Delos, which was closely linked to the Olympic Games. Other similar celebrations were the Pythia and Isthmia.

From the 6th to the 16th century, Medieval period, travel was both commercial and pilgrimage and exploratory in nature. Primarily associated with well-known religious events, the Crusades are underway and a new social class, the merchants, begins to emerge, centred on Constantinople (Craig, 2022). The next period, that of the Renaissance, makes a significant contribution to the development of tourism. The arts, inventions and the discovery of new countries lead to the journeys that began in this period, known as the "Grand Tour". Tours included Portugal, Spain, Greece, the Middle East, Russia and Scandinavia. The purpose of these trips was educational. In addition, many travel books and guidebooks appear. Finally, it should be noted that the Church played an important role in enhancing the arts and inventions since it financed many works by Leonardo da Vinci, Michelangelo and Raphael (Christou, 2022).

The new era for tourism is marked by the 20th century with the use of the airplane. After the two world wars, transatlantic travel begins. Mass production of cars begins and there is social shielding. In 1930 paid holidays are introduced. Technologies improve and the first small and medium-sized enterprises appear. In the 1980s there is demand for Special and Alternative Forms of Tourism, which are differentiated from mass tourism in terms of individuality and the control of the travel experience by the visitors themselves. This decade would begin to change travellers' perspective on how they travel (Cartwright, 2013).

According to the World Tourism Organization (UNWTO) "Tourism is a social, cultural and economic phenomenon that involves the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (who may be either tourists or excursionists, residents or non-residents) and tourism is about their activities, some of which involve tourism expenditure" (World Tourism Organization, 2008).

The tourism industry is one of the main pillars of the Greek and European economy. After the liberalisation of air transport, it became easy for people to visit other countries. Each trip that is made has a different significance for each person and is engraved differently in their memory. Greece, for Europe and other continents, is the land of sun and sea with a deep cultural heritage (Profyllidis, 2010).

Every year millions of tourists from all corners of the world flock to Greece. Some arrive by plane, others by boat and others by car. In winter they choose destinations such as Athens, Thessaloniki or winter destinations. On the other hand, in summer they choose from the plethora of Greek islands. A brief statistic by the Institute of Tourism Research and Forecasting conducted in 2023 showed that the average hotel occupancy for February 2023 was 43% and the occupancy for February 2024 showed that it was 46% (Institute of Tourism Research and Forecasting, 2024).

2. Sustainability in Special and Alternative Forms of Tourism

At this point it is important to mention a major part of sustainability in Special and Alternative Forms of Tourism. The year 1992 is a milestone in the world history of

environmental issues, as the World Conference on the Environment took place in Rio, Brazil. Three years later, the World Conference was held in Spain where the general principles were formulated in the form of a Charter (Kokkosis, Tsartas, 2019).

In 1997, the 5th Action Programme was carried out by the European Union with industry, energy, transport, agriculture and tourism as the main pillars. All of them were chosen because of their high impact on the environment. Their importance in terms of sustainability is enormous. For tourism it was mentioned that the change in its impact is significant since most EU countries have tourism every year. It is the EMTs that will help sustainable development. If this is not possible many cities will suffer serious problems in natural resources, habitats and in a more general context in their infrastructure (European Commission, 1997).

In 2015, the 2030 Agenda was adopted with 17 sustainable objectives. The implementation of these goals will bring a fairer, more peaceful world and a healthy planet. Of course, intergenerational solidarity will be a challenge and the well-being of young people is a greater task for all (United Nations, 2015).

Nowadays, the preservation of natural and cultural resources, the reduction in waste production, recycling, the reduction of pollution of the natural environment from the facilities and infrastructure we have created over the years for Mass Tourism and the extension of the tourist season to the extent that it will help the resources to renew, all these combined will keep the ecosystem stable. The basic condition for one pillar to work is that all the sustainable objectives must come together in full harmony.

Due to the serious consequences of mass tourism, the need for forms that are environmentally friendly has arisen. The incentives of tourists have shaped the alternative forms of tourism. The more ground these forms gain, the closer the tourist gets to nature. The aim is the sustainability of tourist areas. Thus, through sustainable development, the ecosystem will be able to serve the needs of man but will itself be able to renew the resources that have been used.

3. Tourism in Lefkada

Thousands of tourists every year choose the island of Lefkada because of its easy accessibility. Most of them visit places and locations that are popular for the destination, such as Porto Katsiki, Egremni and Kathisma. However, there are natural landscapes, which the visitor does not see unless they come for a second or third visit. Lefkada may not be one of the largest islands in the Ionian Islands, being the fourth in order, but its abundance of sites makes it worthy to compete with them.

In the primary survey conducted by Stamatelou Maria (2024) in the context of the master's programme of the University of the Aegean "Strategic Management of Tourism Destinations and Hospitality Enterprises", the respondents agreed that 38.4% of the tourists visited the island of Lefkada for the second time and 17.4% for the third time. Finally, 64% of them added that the purpose that motivates tourists to travel to the island includes cultural and religious motives, while there was absolute agreement that Special and Alternative Forms of Tourism will be able to support the extension of the tourist season and more specifically cultural and religious tourism will contribute to its development at a rate of 84.9% (Stamatelou, 2024).

4. Presentation of destination Lefkada

When Organized Mass Tourism began to decline, it was replaced by Alternative Tourism. Visitors began to feel that the country or region they were visiting had something special to offer them. Each tourist/visitor became closer to nature and the natural environment, to culture and religion, and even to customs and traditions.

People start to become more aware and try to give and help the area they visit. He no longer travels not only to consume the endogenous elements of the region but to become one with nature. Through the Special and Alternative Forms, tourism is experiencing elongation and the incentives are now becoming specific and specialised. The visitor escapes from the traditional form of tourism.

Greece is the country that has known these two forms of tourism, cultural and religious, since antiquity. For centuries, travellers from all over what is now Europe came to experience its culture. Kings and generals visited the Oracle of Delphi, the institution of the Olympic Games and the visit to the Acropolis to leave "gifts" for the goddess Athena or the acquaintance with the unwritten law of hospitality due to Zeus Xenius, monks from Jerusalem settled in Rhodes, etc., events that took place in the then Greek territory. The culture of the country was and is known worldwide (Kokkosis, et al., 2020).

With the establishment of Christianity, the building of monasteries began, such as on Mount Athos and Meteora, or churches and temples such as in the city of Thessaloniki, Tinos, Corfu, and thus Greece met monks from all over the Christian territory (Sfakianakis, 2000).

Although so well known as a country for its history, it began to be promoted in 1929, after the establishment of the Greek National Tourism Organisation (EOT). The predominant colors are white and blue. For years the country projected the sun, sea and sand, but it was monotonous. So, from 1990 it started to add slogan advertising, which promised the tourist satisfaction.

The promotion and the projection of the country is done in cooperation with institutions, organisations, travel agents and, in general, with those responsible for tourism. Today, the connection of the Greek tourism product with the international community is made through websites and social media.

4.1 The interesting story of the name

Lefkada has a rich and lively folklore and cultural tradition. During the years that the island passed from "hand to hand" it developed this wealth and year after year it revived its traditions.

Its name is derived from the adjective 'leukos', which was first encountered as the name of the southern cape of the island, called 'Lefkas Petras' or 'Lefkas Akras' and now called 'Lefkatas'. The Corinthians were the first to give this name to the town of Lefkada and later it became the name for the whole island. During the Venetian times the town was called "Agia Maura" after the castle at the entrance of the island (Rontogiannis, 1980).

An interesting point is that "Lefkas" was formed from the word "Lefkatis" which is Ionic type or "Lefkatas" which is Doric type. Its meaning lies in ownership, that is the one who has possession of Lefkas Petra and it was usually the prefix of the god Apollo, the owner of the cape.

4.2 The Homeric Ithaca and the connection with Lefkada

The most widely known theory that caused and still causes a lot of reactions and discussions was that of W. Dörpfeld. The theory was that Lefkada is the Homeric Ithaca, the island that Homer mentions in his poems. It all started when W. Dörpfeld made an extensive excavation on the island of Ithaca (locally Thiaki), which filled him with doubts. Due to Homer's problem of imaginary locations, as well as the error of the locations, the archaeologist started digging in Lefkada in 1901 (Tseres, 2017).

The evidence presented by W. Dörpfeld was related to the local, literary and geological conditions associated with the solution of the centuries-old problem of the location of Homer's Ithaca. The adjectives used by Homer as well as the topographical features refer more to Lefkada. Of course, when the Dorians displaced the Achaeans, Lefkada seems to

have lost the name Ithaca and was referred to as Niritos. Thus, the Corinthians in the 7th century BC gave the name Lefkas (Thermos, 2008).

Historically, it was the Corinthians who cut the isthmus between Lefkada and Acarnania. Today, access is by car due to the floating bridge at the entrance of the island. Moreover, it is a continuous flow, which gives one of the biggest advantages in terms of tourism on the island.

4.3 Capacity of Lefkada

In recent years Lefkada has seen an increase in the number of visitors during the summer months. As the fourth largest island of the Ionian Islands, it attracts thousands of tourists. The infrastructure currently consists of the Marina which has 620 berths (Greek Marinas Association, 2015), over 360 restaurants, 40 cafes/bars and 240 attractions. According to the Greek Chamber of Hotels, 104 units from 5* to 1* stars were noted for 2023.

5. Cultural Environment of Lefkada

5.1 Lefkadian poets and artists

As for its cultural environment, it is the mother of many poets, artists and scientists who have achieved national and international recognition and promotion. Some of them are Aristotle Valaoritis, Lafcadio Hearn, Angelos Sikelianos, Cleareti Dipla-Malamou, Nikos Svoronos, Agni Baltsa, and many other great artists, writers and painters.

5.2 Customs and traditions

The concept of culture encompasses the customs and traditions of a place. As in the whole of Greece, there are a lot of them in Lefkada. Typical examples are:

New Year's Eve: on New Year's Eve, all Lefkadians put in their house the koutsounes. For the island they symbolize the good of the house and the luck of the Lefkadians. Usually, they are bought by children who have run early to collect them to get some money of them, as in carols.

New Year's Day: With the New Year, the whole island welcomes the custom of Diana. Diana means 'morning' hymn, song or prayer. The Philharmonic Orchestra of Lefkada, which passes through the streets of the town before dawn, playing joyful pieces and the 'Morning' hymn. Behind them follow a crowd of people with voices and songs (Sundias, 1999).

Theophany: On the day of Epiphany, everyone goes to church carrying a container to put holy water in. In the town there is a procession that starts with the congregation from the Bishop, followed by the crowd. A special platform has been placed in the Beach area. Then the Bishop throws the cross, tied with a rope, three times into the sea and the third time the prospective swimmers dive to catch it. After the cross is thrown, the attendees hold a bunch of oranges tied with a rope, which they dive into the sea. The oranges are then placed on the icons, where they are kept throughout the year. The old ones are thrown into the sea to be washed away by the waves (Kontomichis, 1995).

Holy Saturday: at 9:00 in the morning, people go out on their balconies or flood the central market to "do their bit". The piece is a clay pot, plate, tile or something glass, as long as it is fragile. It is thrown, according to tradition, to remove the sadness, quiet and mourning of Holy Week. The Philharmonic during this time plays marches and the sound of the music with the breaking of the pieces creates a joyful atmosphere. The debris is picked up the next day and afterwards, by hand.

5.3 Music and Philharmonic Orchestra of Lefkada

An integral part of the Lefkadian culture is music, which is a sample of heterogeneity, since the villages listen to folk and rebetika music to a greater extent, while in the city they listen to mandolin and choir music. This is because of the contact with Rumeli and the close

relationship with Italy due to the Venetian rule (Georgakis, 2023). The Philharmonic played an important role in the development of music education in Lefkada. It was founded in 1850 and is one of the oldest in Greece. It has been an active association until today, taking part in many historical events, such as the Union of the Ionian Islands in 1864, the Athens Olympics in 1896, etc. It also received the Athens Academy Award in 1983.

- **Lefkada's Studies Society**

It was founded in 1949 and the statutes of the Association were approved in 1970. Its uniqueness lies in the fact that it is the only scientific association on the island and with its continuous mobilizations it has managed to contribute to the study of the Lefkadian past. The aim and objective of the Association is to collect folklore, linguistic and historical material, which will be published and will serve the research and study of all issues that promote the culture of the island.

- **Architecture**

The urban planning system of Lefkada is unique in Greece and Europe. It is a great example of medieval urbanism, and its fabric was developed during the Venetian rule. The island being earthquake-prone and due to its terrain, it began to motivate its inhabitants to find a new way of building to endure. The raw material was wood. They licked huge logs with curd and tar, where they served as resorts, which they left in the lagoon for some time and then covered them with sand, stones and porcelain dust. This helped so that in cases of earthquakes the base would shake as a single unit without breaking or cracking.

The ground floor consisted of stone walls, with iron on the outside to tie up the floor. The first floor was mainly wooden and the outside was clad with sheet metal, which was painted in soft colours. The style used to make the house flexible for earthquakes was called "tsatumas". It was timbered and in the openings it left, bricks joined with mud made of sand, lime and porcelain were inserted (Papadatou - Giannopoulou, 2021).

Finally, there were rich urban and mansion houses, which were built on large plots with courtyards and impressive front windows. In the mountain villages, the rural Lefkadian architecture, which was mainly made of stone, prevailed.

- **The Intangible Cultural Heritage of Lefkada**

The cultural heritage of Lefkada started to be inscribed in the UNESCO National Inventory in 2019 and today counts five intangible cultural heritage elements, which are:

Karsaniko Embroidery: It is a kind of embroidery art, which was conceived and created by Maria Stavvaka (Koutsochero) and over the years it evolved into an art by the women in the village of Karya. This particular embroidery is delicate and delicate, there is precision and it is done with a sewing needle and silk or cotton thread. The fabrics chosen are linen or cotton. The process to embroider a Karsan Embroidery is time consuming and requires great concentration to get the distances right.

Egklouvis' lentils: On the plateau of Agios Donatos, Vouni, lentils are cultivated. Their uniqueness comes from the rich subsoil in trace elements, potassium, iron, etc. It is a mixture of remarkable genetic material, primordial. The seeds in the area have been endemic for over 400 years, which is historically proven by documents found in archives and libraries, as well as in reports of wills and dowries. Finally, a sample of it is kept at the UN and the ICARDA Drylands in Syria.

Porsaniko Knife of Lefkada: The Porsaniko Knife has a 300-year history. Still, the work is done by hand. The two components needed are a blade and a handle. The first is made of soft or hard steel. The steel rods are forged, dyed in olive oil and come to the shape and thickness they need. Stitches are engraved on the blade and then smeared with wax. Then nitric acid is poured in to make the corrosion and imaging. The blade is then polished. The handle is created from bronze, which is engraved and cut with absolute symmetry. Finally, the metals other than bronze can be silver and gold. Variations also occur in the horn with precious stones.

Lefkadian Ladopita: Traditional sweet made from olive oil, flour, sugar (or honey) and grape molasses. Ladopita is offered at all social events in the life of the Lefkadians. It is offered at engagements, weddings, baptisms, christenings, ceremonies, car purchases, house building, funerals and memorial occasions. Even at the birth of a child they place a small amount on the third day, on the baby's headrest for good luck. It is also the New Year's cake for the island, since they used to put a coin in it. Finally, it accompanies the daily coffee.

The ampali of Lefkada: In the café of "Pallas" there was a dodgeball court, which was made of dirt so that the balls would roll better in a rectangular parallelogram (30 x 15m with a depth of 20-30cm). It is played with special wooden balls, in different shapes made of purple wood. The balls are slightly elliptical and at one point they have a "steering wheel" which is a small nose. There are two groups. The players stand at one end of the court and throw the ampali (that's what the ball is called). Each team has their own wooden balls, of a different colour, where they try to get close to the ampali. Each team can move the ampali away from the opposing team. This is done when the ball is surrounded by balls, which make the game difficult to progress. This is called a "sboukio".

- **Literature and Art Festivals**

Every year, since 1955, the Literature and Art Festivals have been held, featuring major foreign orchestras, choirs, composers, soloists and chamber ensembles. A notable event was the presence of Aristotle Onassis and Maria Kallas in 1964, who sang the aria 'Kavalearia Roustikana' accompanied by the musician Kyriakos Sfetsas. Still, troupes, both foreign and Greek, and the state stages have performed. Finally, Greek poetry and prose writers, state artists, scientists, researchers, etc. have made their appearance, while in the field of dance, Greek and foreign bands have performed.

Of course, from the name, this is a plethora of events that take place during the period of the festival. Musical events, theatre, sports competitions, religious events, dance parties, book and folk-art exhibitions, poetry evenings, painting and photography exhibitions, folklore events, tributes, symposia and conferences are some of the evenings that one will find in Lefkada, culminating in the International Folklore Festival.

- **International Folklore Festival**

It started in 1962 and is part of the Festivals of Speech and Art. The great inspiration and creator was Antonis Tsevelekis, who was President of the Association of Athens Leukadians, in cooperation with the Society of Leukadic Studies. Another factor that helped to realize this idea was the Orpheus Music Group.

The International Folklore Festival begins with the parade of all the bands along the market. The parade ends at the Open Theatre where each group has a few minutes of dance, giving at the end everyone together the slogan for peace, friendship and cooperation between the peoples. Every day, the countries representing the bands are presented, in a row, having an hour of dance on stage. On the last day there is the closing ceremony, where there is a gift exchange and all the bands dance the dance of peace, as well as on the opening day. The groups that take part are from every corner of the world.

- **Barcarola**

The word comes from the Italian barca meaning boat. Barcarola is a musical composition, referring to songs of fishermen and boatmen. Its rhythmic treatment is medium speed, in 6/8, reminiscent of the rocking of the Italian gondola while rowing. The Varkarola is performed every year by the "Nea Chorodia" and the Agiomavritiki Parea, reflecting the image of the Lefkada serenades and melodies.

- **Religious Environment**

- **General religious information about Lefkada**

A large part of the Lefkadian society is also played by the religious nature of the island. It has a rich historical past and its monuments are remarkable. Its religious monuments are scattered

throughout the island. Before taking their present form four characteristic sites had pagan temples. These were the temple of the goddess Artemis of Leucadia where today is built the Holy Monastery of Panayia of Faneromeni, the church of god Apollon of Leukata, where the lighthouse of the cape of Lefkata has taken its place, the Temple of goddess Aphrodite of Ainiades that was located on the "island of Ahi Nikola" in the valley of Demata and the temple of goddess Dimitra that today dominates the Holy Monastery of St. John at the site of Rodaki.

The town of Lefkada has been acquiring single-aisle churches in a simple, runic basilica style over the centuries. Local hagiographers begin to acquire the perspective of post-Byzantine art and later, the Renaissance. Today, only in the city, there are eighteen churches built between 1685 - 1740.

Historically, in 1821, the clergy and the people became one and joined together in support of the Revolution and the resistance. While in 1864 the church of Ionian Islands was united with the church of Greece. The Bishop of Lefkada and Agia Maura wrote, at that time, a resolution. In 1899 the Holy and Sacred Synod of the Church of Greece will be part Ithaca and thus the title of the Metropolis becomes: Holy Metropolis of Lefkada and Ithaca.

- **The most important monasteries of the island**

Holy Monastery of Panagia Faneromeni: After the First Ecumenical Council (325 AD), two of the five Fathers who followed Bishop Agathargos settled in the monastery. Gradually they built the first cells, enlarged the church and organized monasticism on the island. The name "Faneromeni or Pefphaneromeni" was given because of the icon of the Virgin Mary. It was commissioned by Constantinople. There it was revealed, "unmanufactured" to Callisto, a monk and hagiographer, after his prayers. But a fire destroyed it and in 1887 it was rebuilt where it received the new icon of the Virgin Mary, a faithful copy of the first one. It was crafted on Mount Athos by the monk Veniamin Kontrakis. Today, the monastery has been restored.

Monastery of the Holy Fathers: three of the five Fathers who followed Bishop Agathargos after the First Ecumenical Council were monks in this cave. It is one of the oldest Christian monuments. It is located above the village of Nikiana. Today, inside, there are the tombs of the fathers and from the tomb of one of them, holy water gushes out, which never decreases in level.

Holy Monastery of the Virgin Mary Hodegetria: The oldest surviving monastery on the island dating back to the 11th century. It is in the olive grove of the town (Apolpena). It is the oldest church in the area, located in the oldest part of the village of Hodegetria. Today, the church is not open to pilgrims, but restoration efforts are already underway. Historically, it was in this monastery that the chieftains and Friends held their meetings before swearing to the Virgin of Vlaherna.

- **Other special and alternative forms that appear on the island**

- **Gastronomic Tourism:**

The gastronomy of each place reveals the special characteristics that make it so special. Gastronomy is part of the tradition. In Lefkada you can taste the traditional ladopita, ladokouloura, the lentils of Egklouvi, the lathiria, the Lefkadian bourdeto, the palamidi on the tile, the riganada, the savoro, the sofigado, the frygadelia, the pasteli, the mandolata, the mantolas and pies such as maridopita, macaronopita and rice pie. The local soft drink is sumada and the local liqueurs are rozoli and rose. Finally, since 2018 there is a Gastronomy Club on the island.

- **Wine Tourism:**

On the island of Lefkada the wine road includes four wineries and one by appointment, located in Nydri, towards Sivota - Vasiliki and in the mountains of Ellomenou and Karya. The best-known wine varieties are Verjami and Vardea. The varieties are distributed in such a way

that local wines are produced in specific areas according to their colour type. The names of the wineries are:

- Winery 'Siflogo'
- Winery Vertzamo
- Winery «Lefkadian earth»
- Winery 'Karsanikos Oinos'
- Winery "Plagies of Lefkada"

- **Marine Tourism & Water Sports Tourism / Nautical Tourism:**

Most of the beaches of Lefkada are famous and hold a blue flag. Marine tourism that has developed on the island includes yachting, day cruises, outdoor recreation and sports. The Marina in the town of Lefkada hosts hundreds of boats, sailing boats, etc. every day. Some activities that a visitor can do are sailing, yachting, kitesurfing, windsurfing, underwater fishing, diving, swimming and a variety of water sports.

There are several yacht charter companies operating on the island, offering boat hire of all types, ranging from small boats to luxury catamarans. Finally, as far as water sports are concerned, the most favored areas are those of Agios Ioannis and Vasiliki with a huge number of athletes flocking every year for kitesurfing, windsurfing and sailing.

- **Rambling Tourism:**

Lefkada has trails and routes throughout its range. The routes vary, starting from 30 minutes and going up to 2:30 hours. The difficulty level starts at 3.5 and goes up to 1. Each route is unique. In addition to the hike, the hiker will encounter monuments, monasteries and convents scattered throughout. However, there are many visitors who go hiking and trekking during the summer months in places such as the Melissa Gorge, the Dimosari Falls, the trails in the mountain of Skari, the Daphne Forest in Syvros, etc.

6. Research Methodology & Results

6.1 Statistical tools

The methodology used was the quantitative method and the research tool was the questionnaire. The sample of the research was public and private institutions of the place and the wider region, which are related to tourism as well as cultural and religious tourism. In total, 86 responses were collected, of which 29 were received in person and 57 electronically.

The quantitative method itself offers the researcher a high level of impartiality, which should characterise a research/scientific work. Additional characteristics are objectivity and reliability. Quantitative analysis, design and measurement were used as a tool. In each quantitative method the statistical analysis of the data collected appears. The data collected are mostly presented in numerical form, ensuring the easiest and most accurate way to compare the data collected.

Finally, the sampling used is discretionary. This method gives more chances to collect sample and thus fulfill the aims and objectives of the research conducted by the researcher (Kelly, et al., 2010).

6.2 Presentation of the research

The aim of the research conducted in 2024 was to highlight the management of special and alternative forms of tourism and cultural and religious tourism in Lefkada so that they can be used as a resource for the development of the island.

Included were institutions such as: the Holy Metropolis of Lefkada and Ithaca, the Municipality of Lefkada, the Regional Unit of Lefkada, travel agencies and offices of the island, the Association of Hoteliers of Lefkada, the Society of Lefkadian Studies, Public and Private Cultural Music and Dance Clubs, the Cultural Centre and the Airport of Aktion.

The survey collected the results through which questions were answered regarding the reasons for attracting tourists to the island, the current situation in relation to tourism and the

development of cultural and religious tourism, as well as the reasons that act as an obstacle to their development. Due to these factors, the policy measures highlighted by public and private stakeholders were given.

6.3 Results of the research: Descriptive Statistics

After the completion of the questionnaire and data collection, the order of analyses was determined, coding of data called variables, graphs and tables were created and checks for correct entry and input of the statistical tool used (SPSS). It is important to note that in the reliability test conducted, Cronbach a obtained a value of 0.917, which ensures consistency, efficiency and reliable conclusions. Regarding the questionnaire responses, the sample was 48 men and 38 women between 36 - 55 years old in the majority. 24.4% have more than 20 years of experience in their organisation and 18.6% between 3-5 years. Still, the education levels of the respondents 54.7% are higher education and only 3.5% hold a doctoral degree.

Of great interest is the current situation presented from the experts' perspective. Statistical data found within the institutions and their experience in tourism, showed conclusions such as that tourists visit Lefkada 1-2 times a year in 46.5%, while 38.4% travel to the island for the 3-4th time. This ensures visitors, who are called repeaters. The average number of overnight stays of these visitors is 5-7 nights while many visitors from the surrounding areas come on the same day. The preferred season is summer.

A large part of the motivation for visitors to travel and visit the island again and again is cultural and religious reasons. The figure was worth 64%.

Cultural and religious monuments and churches that are visited the most are the Holy Monastery of Faneromeni, the Metropolitan Church of Evangelistria, the Museum "Angelos Sikelianos", the archaeological site of the ancient city "Nirikos" and the castle of "Agia Maura" that dominates the entrance of the island.

One of the biggest advantages of the island is the floating bridge at its entrance. 95.3% of the operators believe that it is one of the main reasons why tourists visit Lefkada, while there was absolute agreement that Special and Alternative Forms of Tourism can extend the tourist season, with the two mentioned forms of tourism having "space" to develop more.

In addition, the obstacles that the island of Lefkada faces that act as a barrier to its development are the incomplete development plan of the Municipality and the Region for cultural and religious tourism, the lack of infrastructure, such as the problem of water and power cuts and the weakness of the internet and mobile phone network during periods when the island is overcrowded.

Also, the lack of a road network designed to satisfy the thousands of tourists who flock with their cars, who are faced with a lack of parking space. Of course, Lefkada is an island which, according to the experts, has not been sufficiently promoted but has also been described as an expensive destination in terms of quality and price.

The markets / countries where Lefkada should be promoted to attract more cultural and religious tourists are those markets that are interested in learning about new cultures as well as those that are interested in broadening their knowledge about other religions. 57% of the operators believe that attention can also be directed to markets with similar cultural interests and 41.9% believe that the municipality should turn to countries with the same religious ideology and spirit.

The actions that will enhance the two specific forms of tourism are promotion in the media, in magazines and in social media. 43% of respondents believed that there should be initiatives in the private and public sectors to achieve more significant results. At the same time, greater financial support should be provided both by the state itself and by the European Union. 22.1% added that seminars/ training/ workshops for human resources in both sectors, by people who are experts in tourism, should be added to the actions.

Finally, reference was made to the development programmes, strategic planning and the island's development plan, in which cultural and religious tourism should be an integral part.

6.4 Correlations' results

The correlations used to make more correct conclusions are from Chi - square, Spearman and Cluster Analysis tests. Important results obtained were:

- The average number of trips made by travellers each year shows an indication of a significant correlation with the motivations that drive tourists, if indeed they are cultural and religious motivations. The conclusion given was that experts agree that the motivation for visiting the island is the two specific forms of tourism
- Cultural and religious motives are correlated with the number of overnight stays and the period of visit to the island, i.e. these alternative forms of tourism bring more overnight stays on the island during the summer period. Tourists with such motives are discouraged from travelling to the island because of the destination's perceived high price for what it offers, the lack of infrastructure and the general lack of planning for these forms of tourism.
- These two categories of tourists are not affected by the easy access to the island (floating bridge) and whether this has been promoted enough. They choose it because of its long history of culture and religious monuments
- From the correlations another important result that emerged was that punctuality is a barrier to attracting cultural and religious tourists who want to experience new cultures or have similar cultural interests and share the same religion. It may still affect the promotion of the island and the enhancement of cultural and religious tourism more.
- The lack of a strategic plan is an obstacle to the development of the island in relation to the visibility in the media, magazines and social media, as well as the increase in financial support from the state and the European Union to support the alternatives explored
- The lack of adequate visibility of the island of Lefkada is another obstacle to its development. This proposal showed a high correlation with tourists coming from countries with the same or similar cultural interests or religion, with markets interested in expanding their knowledge of other religions, with financial support from the State and the EU to strengthen cultural and religious tourism, with training of human resources and with the partnership between the private and public sectors to strengthen these forms. Therefore, there should be more promotion of the island of Lefkada to attract the relevant visitors, but also to provide financial support, training and mutual assistance between the public and private sectors.
- The lack of infrastructure on the island is another disincentive for visitors with cultural and religious motives, as well as for the partnership of the private and public sectors to further enhance them.

In addition, cluster analyses were chosen to be carried out, which gave results for the strengths of the island, the weaknesses and the opportunities that the island of Lefkada presents.

Cluster 1 considered the island's strengths to be accommodation/food and natural landscapes/locations. Cluster 2 placed only the natural landscapes and locations while Cluster 3 added access/infrastructure and the religious/cultural monuments that there are in Lefkada.

Cluster 1 placed accommodation/food and value for money as the weak points of the island, Cluster 2 and Cluster 3 showed agreement with Cluster 1. The former in relation to accommodation/food and the latter in relation to quality-price ratio.

Regarding the opportunities for the island to be more highlighted, Cluster 1 believes that it is the trend of visitors for alternative forms of tourism, Cluster 2 believes that it is the easy access available from the rest of mainland Greece and the increasing number of tourists on the island. Cluster 3 notes agreement with Cluster 2.

6.5 Measures of Political Research

The policy measures come because of the research that has taken place and which will enable those proposals to be formulated to bring about change. The specific policy measures were proposed by private and public stakeholders.

Strategic planning is the first policy measure proposed. It should be implemented through the Municipality of Lefkada and the Regional Unit of Lefkada to present the solutions to the problems on the island and to formulate later the development plan that will include cultural and religious tourism.

The second measure is the organization of events and seminars on tourism, with the aim of deepening over time the cultural and religious tourism and other alternative forms of tourism offered by the place.

To organize existing museums and create new ones with the cooperation of the private and public sectors. In this way, the island can be promoted more in terms of its history and culture and more finds will be hosted with the glamour they deserve.

The Municipality and the Communities should be funded through European Programmes for the organisation and further development of the green areas of the island, the burial of rubbish, and the cleaning of the island's coastline and the city's inner alleys. The main concern should be the cleaning of the lagoon.

The next measure is financial support for cultural and religious organisations/institutions, with the common goal of developing the island.

The exploitation and promotion of historical human monuments, such as monasteries, watermills, windmills, bridges, the Taol winery, archaeological sites, salt pans, etc., as well as natural monuments, such as gorges, paths, biotopes, etc.

Upgrading the International Folklore Festival and the Literature and Art Festivals to make them more attractive to visitors.

Also, recurring information seminars for residents so that they all become participants and promoters to promote the island and the human potential of the institutions.

An important measure is to highlight the history and tradition of the place, its particularities and to make a clear connection between Lefkada and Homer's Ithaca. Cooperation between stakeholders for the development of cultural and religious tourism.

In addition, the network of paths should be marked, shaped and completed and the old monasteries that were spiritual centres should be restored. The footpaths could pass through cultural and religious monuments so that tourists can be linked to them historically.

More frequent participation in international tourism exhibitions, promoting the island and its tradition, as well as promotion in the media focusing on markets / targets.

Finally, there should be areas that are currently not utilized at all or underutilized, so that they can be made greener and, in this way, create more parks, bike paths and thus support the "Green" side of the island.

7. Conclusion

Lefkada is an island that can be developed and developed further. Year after year more and more tourists are coming, but apart from the criteria of sun and sea, they choose alternative forms of tourism as an incentive to visit the island.

Its rich tradition, the cultural 'routes' that the place offers every year during the summer months, its religious monuments that are so special and with a history of centuries, the combination of water sports and rural and mountain activities show and highlight its best side.

In conclusion, from the research we saw that tourists with cultural and religious motives tend to visit Lefkada more than tourists who travel there for leisure/ holidays or with some other motive. How often a tourist travels and how often they visit the island are two different decisions they will make before travelling.

Finally, these alternatives can help to lengthen the tourist season on the island, attracting more visitors for more months of the year. Their development on the island has nothing to do with the obstacles they face, so they develop independently.

8. References

- Bouzis, St., Poulaki, P., (2021). The contribution of Spatial Augmented Reality to the synergy of Special and Alternative Forms of Tourism in Greece. Source Title: ICT as Innovator Between Tourism and Culture. DOI: 10.4018/978-1-7998-8165-0.ch001. IGI Global Publisher of Timely Knowledge. <https://www.igi-global.com/chapter/the-contribution-of-spatial-augmented-reality-to-the-synergy-of-special-and-alternative-forms-of-tourism-in-greece/292756>
- Cartwright, M., (2013). World History Encyclopedia. [Online] Available at: <https://www.worldhistory.org/trans/el/2-605/>.
- Christou P., (2022). The History and Evolution of Tourism. CABI Publications. [Online] Available at: https://www.researchgate.net/publication/355102046_The_History_and_Evolution_of_Tourism
- European Commission (1997). Towards sustainability: progress report and action plan of the European Commission for the 5th policy and action programme on environment and sustainable development. Luxembourg: Office for Official Publications of the European Communities.
- Georgakis, Th., (2023). Lefkadian Folk Music Trails. Athens: Ostria
- Greek Marinas Association, (2015). greek-marinas.gr. [Online] Available at: <https://greek-marinas.gr/el/marinas/lefkas-marina/>
- I.T.E.P., 2024 [Online]: <https://www.itep.gr/review/%ce%b5%cf%84%ce%ae%cf%83%ce%b9%ce%b1-%ce%ad%cf%81%ce%b5%cf%85%ce%bd%ce%b1-%ce%b3%ce%b9%ce%b1-%cf%84%ce%bf%ce%bd-%ce%be%ce%b5%ce%bd%ce%bf%ce%b4%ce%bf%cf%87%ce%b5%ce%b9%ce%b1%ce%ba%cf%8c-%ce%ba%ce%bb%ce%ac%ce%b4%ce%bf-2023-%ce%bc%ce%b5-%ce%b4%cf%85%ce%bd%ce%b1%ce%bc%ce%b9%ce%ba%ce%ae-%ce%b1%ce%bb%ce%bb%ce%ac-%ce%ba%ce%b1%ce%b9-%cf%85%cf%80%ce%b1%cf%81%ce%ba%cf%84%ce%ad%cf%82-%cf%80%cf%81%ce%bf%ce%ba%ce%bb%ce%ae%cf%83%ce%b5%ce%b9%cf%82-%ce%bf-%ce%be%ce%b5%ce%bd%ce%bf%ce%b4%ce%bf%cf%87%ce%b5%ce%b9%ce%b1%ce%ba%cf%8c%cf%82-%ce%ba%ce%bb%ce%ac%ce%b4%ce%bf%cf%82/>
- I.T.E.P., (2024) [Online]: https://www.grhotels.gr/app/uploads/2024/03/02_Hotels_2023_Regional.pdf
- Craig, K. M., (2022) Medieval Tourism. [Online] Available at: <https://academic.oup.com/edited-volume/43181/chapter-abstract/375015282?redirectedFrom=fulltext>
- Kelly, S. E., Bourgeault, I., & Dingwall, R., (2010). The SAGA Handbook of Qualitative Methods in Health Research. New York: SAGE Publications Ltd.
- Kokkosis, Ch. & Tsartas, P., (2019). Sustainable Tourism Development and the Environment. 2nd ed. Athens: Kritiki
- Kokkosis, H., Tsartas, P. & Grimba, E., (2020). Special and Alternative Forms of Tourism: Demand and Supply of New Tourism Products. 2nd ed. Athens, Greece: Critique.
- Kontomichis, P., (1995). Folklore assemblages of Lefkada. Athens: Michael P. Grigori.
- Lagos, D. G., (2016). Theoretical Approaches to Tourism. 1st ed. Athens: Kritiki.

- Papadatou - Giannopoulou, H., (2021). The inventive anti-seismic construction of the buildings of the island of Lefkada. Lefkada: Fagottobooks.
- Poulaki, P., Kritikos, A., Vasilakis, N., (2021). Digital Technology as a means of promoting cultural tourism in Greece – Case Study: Acropolis Museum. Journal "Sustainable Development, Culture, Traditions". Volume 1a/2021. DOI: 10.26341/issn.2241-4002-2021-1a-1 <http://sdct-journal.com/index.php/2015-10-18-22-23-19/2021-volume-1-a/468-digital-technology-as-a-means-of-promoting-cultural-tourism-in-greece-case-study-acropolis-museum>
- Poulaki, P., Kritikos, A., Vasilakis, N., Valeri, M., (2021). The contribution of female creativity to the development of gastronomic tourism in Greece: The case of the island of Naxos in the South Aegean. Source Title: New Governance and Management in Touristic Destinations. Pages: 13. DOI: 10.4018/978-1-6684-3889-3.ch015. IGI Global Publisher of Timely Knowledge. https://www.researchgate.net/publication/357495487_The_Contribution_of_Female_Creativity_to_the_Development_of_Gastronomic_Tourism_in_Greece_The_Case_of_the_Island_of_Naxos_in_the_South_Aegean_Region
- Poulaki, P., Lagou, M., Valeri, M., (2021). The Contribution of Female Entrepreneurship to the Development of Agritourism in Greece. EMERALD Publishing, “Gender and Tourism: Challenges and Opportunities” Editors: Marco Valeri, Niccolo Cusano University, Rome, Italy, Vicky Katsoni, University of West Attica, Greece.
- Profyllidis, V., (2010). Air Transport & Airports. Athens: Papatiririou.
- Rachiotis, Th., Poulaki, P., (2022). The contribution of cultural routes to the enhancement of urban cultural tourism. Journal of Hospitality and Tourism. 2022 Volume 20 No.2 Chapters. <https://johat.org/wp-content/uploads/2022/12/2.pdf>
- Rachiotis, Th., Poulaki, P., (2023). Management of cultural routes in the Attica region as the new status quo in urban cultural tourism. In book “Knowledge Management in Tourism and Hospitality”. Emerald. Editor: Marco Valeri, Niccolo Cusano University, Rome, Italy.
- Rodogiannis, P., (1980). History of the island of Lefkada - Volume A. Athens: Lefkadian Studies Society.
- Sfakianakis, M., (2000). Alternative forms of tourism. Athens: Hellenic
- Stamatelou, M., (2024). The management of cultural and religious / pilgrimage tourism as a development resource in Lefkada. Postgraduate thesis in tourism. University of the Aegean, Chios.
- Sundias, P., (1999). People and places of my homeland. Athens.
- Thermos, N., (2008). Wilhelm Dörpfeld's Lefkada 1891-1913. Lefkada: Fagottobooks
- Tseres, D., (2017). The Ottoman aqueduct of Agia Mavra. Lefkada.
- United Nations (2015). UN Regional Information Centre. [Online] Available at: <https://unric.org/el/17-%cf%83%cf%84%ce%bf%cf%87%ce%bf%ce%b9-%ce%b2%ce%b9%cf%89%cf%83%ce%b9%ce%bc%ce%b7%cf%83-%ce%b1%ce%bd%ce%b1%cf%80%cf%84%cf%85%ce%be%ce%b7%cf%83>
- Walton, J., (2024). Britannica. [Online]: <https://www.britannica.com/topic/tourism>
- World Tourism Organization, (2008). [Online]: <https://www.unwto.org/glossary-tourism-terms>

From European security and defense policy to Re-arm Europe

Abstract:

D. Trump's re-election in 2024 has significantly shaken the established international order, particularly in relation to U.S. policy on Ukraine. Trump's reversal of the Democratic Party's previous policy of supporting Ukraine has intensified tensions with the EU and raised questions about a possible shift in EU-US relations (e.g. the question of whether "the West" can still be understood as a more or less united front or a supposed community of shared values and strategic aims, as promoted by governments on both sides of the Atlantic after the end of World War II). In March 2025, the President of the European Commission, U. von der Leyen, announced the *Re-arm Europe* plan (a plan of €800 billion "to bolster Europe's defence industry and increase its military capability"). This plan is the latest in a series of efforts in the field of Common Security and Defence Policy. These efforts over the past decades are reviewed in the first section, where the *Re-arm Europe* plan is also presented. In the following section, the criticisms to *Re-arm Europe* are discussed (criticisms regarding the economic and legal consequences, the failure of diplomacy, the military instead of social priorities, and the timing and risks of the plan).

Keywords: Re-arm Europe, SAFE, European security and defence policy, defence expenditure

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1. Introduction

After his re-election in 2024, US President D. Trump's decisions to various issues have shaken the established international order. In particular, Trump's rejection of the previous political stance of the US Democratic Party on supporting Ukraine has intensified disputes with the EU and deep concerns about a potential shift in EU-US relations, often understood as "the Trump administration's sharp turn away from Kyiv and toward Moscow" (Skorić 2025). After an unsuccessful on-camera meeting between D. Trump, J. D. Vance, and V. Zelenskyy on February 28, 2025, a global audience witnessed what was described as Zelenskyy's "brutal humiliation at the hands of Trump" (The Guardian 2025). Immediately after this episode, European leaders renewed their support to Ukraine². This and other similar events (e.g., the announcement of cutting off American military and intelligence support to Ukraine) have caused turbulence in the international system and raised the question of whether "the West" can still be understood as a more or less united front or a supposed community of shared values and strategic aims, as promoted by governments on both sides of the Atlantic after the end of World War II. Whether a peace agreement between Russia and Ukraine can be reached and on what terms remains an open question. However, the announcement of the *Re-arm Europe* plan by the President of the European Commission in March 2025 signifies a rapid shift in Europe's defence policy. *Re-arm Europe* is the latest in a series of efforts over the past decades, which are reviewed below. After the plan is presented, the criticisms of it follow.

2. The course to Re-arm Europe

One of the reasons why the implementation of a common European security and defence policy did not evolve as quickly in the last decades as other fields of European policy (for instance the European Monetary Union) was the existence of NATO, which was expected to guarantee its members' security after World War II. Additionally, diverse security priorities, varying perceived or actual threats and conceptions of national sovereignty among different countries also played a significant role in the slow development of a common defence policy. However, such a project has remained active (for the following overview of steps and EU treaties concerning security and defence see Merlingen/Ostraukaite 2006, Jones 2007, Merand 2008, and Grevi/Helly/Keboane 2009).

Early initiatives included the European Defence Community (EDC) proposed in 1950 by the then-French prime minister M. Plevin who sought to create a European military force. This idea was abandoned in 1954 when France refused to ratify it³. Then, there was the Fouchet Plan (1961–1962) which aimed to foster cooperation in defence matters, and the European Political Cooperation framework in the 1970s for coordinating foreign policy among members of the European Economic Community (EEC). However, concerns over national sovereignty and the potential impact on NATO led to the stagnation of these initiatives which reflected the spirit of the Cold War. Thus, the Fouchet Plan, the European Defence Community and the European Political Cooperation have not resulted into a deeper cooperation (Jones 2007: 14).

The "Common Foreign and Security Policy (CFSP)" was one of the Maastricht's Treaty (1992) pillars, aiming to enhance security cooperation. Defence policy remained primarily intergovernmental, requiring unanimous decision-making. The Amsterdam Treaty in 1997 refined judicial and policing matters and led to the establishment of a "High Representative for Common Foreign and Security Policy". In 1998, a Franco-British summit in St. Malo resulted in a declaration which introduced the concept of the EU's "autonomous action," and stated a need to reinforce institutional defence foundations. In 1999, the

² "Ukraine is Europe. We stand by Ukraine," were, for instance, the words of EU's foreign policy chief K. Kallas. "Today, it became clear that the free world needs a new leader. It is up to us, Europeans, to take this challenge," she stated (Euronews 2025).

³ See the correspondence at that time in *The Guardian* (2025a).

European Security and Defence Policy (ESDP) was initiated as a distinct sector of the Common Foreign and Security Policy (CFSP). The ESDP's declared objectives included establishing a unified defence and security agency, standardizing national equipment, advancing defence-related research and technology, and supporting the idea of a European defence industry. In the framework of the Treaty of Nice in 2001, the European Defence Agency (EDA) was established in order to enhance defence capabilities, crisis management, intelligence, and security and defence. The Lisbon Treaty in 2007 introduced the Common Security and Defence Policy (CSDP) in an attempt to deepen and strengthen cooperation on defence matters, equipment, and a unified approach to asylum and border policies. Under the Lisbon Treaty's "mutual solidarity" clause, the EU committed to provide military assistance if a member state experienced an attack defined as terrorist.

As a result of these political efforts for security and defence, several institutions, common actions and undertaken operations constituted gradual steps towards a common basis of security and defence. In this direction, the Eurocorps⁴, the European Maritime Force⁵, the European Union Battlegroups⁶ and Frontex⁷ were established among others. More recent developments include the establishment in 2017 of the "Permanent Structured Cooperation" (PESCO) on defence issues and projects, in order to strengthen EU's military capabilities. Notably, "the key difference between PESCO and other forms of cooperation is the legally binding nature of the commitments undertaken by the participating member states" (PESCO 2025). In 2021, the European Defence Fund (EDF) was launched to finance military equipment, technology and defence research. The EDF promotes "cooperation between companies (...), to boost defence capability development through investments, to help EU companies develop cutting-edge and interoperable defence technologies" (European Commission 2025).

Up to now, the European Security and Defence Policy – later evolving into the Common Security and Defence Policy – has been intergovernmental. Decisions required unanimity among EU member states rather than being imposed by a central authority. This meant that the EU could not operate as an independent military power interfering in the defence policies of EU member states or deviating from NATO's strategic framework. It also meant that neither a unified European army would be established nor would national defence structures be replaced by European ones under the Common Security and Defence Policy. Given that the EU does not hold a "monopoly of violence" (M. Weber) over a specific

⁴ Established in 1992, Eurocorps is a military corps initially formed by France and Germany, and later joined by other countries. Connected with NATO, it "still keeps its autonomy and is available for both organizations after a unanimous decision (...). Since its early creation, agreements were signed to put EUROCORPS at the disposal of both entities" (See <https://www.eurocorps.org/>).

⁵ Formed in 1995, Euromarfor claims to undertake "conflict prevention (e.g. humanitarian and disaster relief and non-combatant evacuation) and post-conflict stabilization"; operations of peace-keeping and "regional security and stability through dialogue"; operations for "the maintenance of a secure and safe maritime environment" (maritime security operations and situational awareness; protection of energy infrastructure) (See <https://www.euromarfor.org/overview/9>).

⁶ The EU Battlegroups are military units formed for "rapid reaction capacity to respond to emerging crises and conflicts around the world". Their deployment is subject to a unanimous decision by the EU-Council and they can undertake tasks such as conflict prevention, initial stabilization at the field, and humanitarian and rescue operations (See https://www.eeas.europa.eu/node/33557_en)

⁷ FRONTEX, the European Border and Coast Guard Agency coordinates border control of European and Schengen-associated countries. Its tasks include joint operations, involvement in border control, and cooperation with other agencies like Europol. (See <https://www.frontex.europa.eu/>)

territory in the sense that nation states do and that it is not an institutionally harmonized or fully integrated political entity, defence policies remain shaped by national governments, distinct security priorities, threat perceptions, and military orientations. As a result, the unanimity requirement in decision-making reinforces the principle that the EU's security and defence role complements, rather than replaces, NATO and national defence.

The plan *Re-arm Europe*, announced in March 2025 by the European Commission's President U. von der Leyen, does not challenge this *modus operandi*, as it focuses on national defence spending (Dervine 2025). It is a plan of €800 billion and constitutes the latest development in the field of Common Security and Defence Policy. It aims "to bolster Europe's defence industry and increase its military capability" and "help provide urgent military support for [Ukraine](#) after the US suspended aid to Kyiv" (European Commission 2025 [a]). According to von der Leyen (2025), the "priority domains" of the EU in the framework of *Re-arm Europe* are "air and missile defence, artillery systems, missiles and ammunition, drones and anti-drone systems, strategic enablers and critical infrastructure protection, including in relation to space, military mobility, cyber, artificial intelligence and electronic warfare".

In addition, the EU will create a financial instrument ("SAFE") to allow member states more fiscal space for defence expenditure by providing them "with loans backed by the EU budget. With up to €150 billion within five years, this instrument would strongly support EU efforts to achieve a rapid and significant increase in investments in Europe's defence capabilities" (von der Leyen 2025). As regards the consequences of indebtedness, member states can increase their defence expenditure without triggering the so-called Excessive Deficit Procedure, as "the Commission will propose to activate in a coordinated manner the national escape clause of the Stability and Growth Pact⁸" (ibid.). Moreover, *Re-arm Europe* aspires to mobilise private capital through the European Investment Bank ("The European Investment Bank Group's Security and Defence Action Plan is an important first step and we must ensure its swift implementation", ibid.). A further goal is to "mobilise private capital" and give EU companies "the best possible access to capital, to finance, so as to bring their solutions to industrial scale and secure optimal funding throughout their production chains, from R&D to delivery" (ibid.). In sum, *Re-arm Europe* is one of the broadest and most costly security and defence projects, raising a series of questions discussed below.

4. Criticisms to Re-arm Europe

4.1 Economic effects: *Re-arm Europe* is the peak of a tendency to increase defence expenditure. Because of the geopolitical turbulences caused by the war in Ukraine⁹, between 2021 and 2024, total defence spending by EU member states increased by over 30%, reaching approximately 1.9% of the EU's GDP in 2024. Defence expenditure stood at €149 billion in 2005 and rose to €326 billion in 2024. Investments at the field of defence were at €25 billion in 2005 and rose to €102 billion in 2024 (European Council of the EU 2025). *Re-arm Europe* increases defence expenditure even more, raising questions about the economic viability of the project and its possible consequences. Even in countries cautious with creating public debt, such as Germany, the parliamentary majority voted to bypass the "debt brake" (the constitutional rule *Schuldenbremse*). Concerns are justified that the plan may cause a new economic slump, require cuts to public spending, or/and further delay economic recovery in

⁸ The Stability and Growth Pact sets limits on government deficits, which must not exceed 3% of GDP, and public debt, which must not exceed 60% of GDP. If the "escape clause" is activated, member states are allowed to exceed these limits without penalties. This applies to emergencies or specific crises (e.g., the COVID-19 pandemic).

⁹ "When Ukraine was first attacked, the European Union and its Member States mobilised major contributions to the defence of Ukraine —from finance for the Ukrainian economy to military support. We have supported Ukraine with around EUR 140 billion, including about EUR 50 billion in military support, and trained more than 73,000 Ukrainian troops" (von der Leyen 2025).

countries, which were worst hit by the financial crisis of the 2010s and the COVID-19 pandemic. This is acknowledged even by the European Commission (2025[b]): “The magnitude and the speed of the increase of expenditure in defence industrial capabilities required from Member States and supported by the *Re-arm Europe* Plan is likely to have, in the immediate future, a major impact on national public finances at a moment where the budgets of several member states continue to be strained”. The proposed solution of the European Commission (ibid.) is that of more loans: “SAFE” ([Security Action for Europe](#)), a “temporary, emergency instrument (...) in the form of loans”.

Legal Concerns: According to von der Leyen (2025), the new financial instrument to be used for *Re-arm Europe* will be subjected to Article 122 of the Treaty on the Functioning of the European Union (TFEU), which is related to a state of emergency. According to Article 122, “without prejudice to any other procedures provided for in the Treaties, the Council, on a proposal from the Commission, may decide (...) upon the measures appropriate to the economic situation, in particular if severe difficulties arise in the supply of certain products, notably in the area of energy” (Official Journal 2008). For Dermine (2025), previous Article 122-based initiatives (e.g. the [“EU Recovery Instrument”](#), the [“Gas Demand Reduction”](#), the [“Emergency Intervention”](#) regulations adopted during the energy crisis) were more or less indeed connected to economic policy. However, the connection between defence expenditure and Article 122 for energy issues hardly exists. “Should this approach materialize”, Dermine (2025) argues, “the mobilisation of Article 122 TFEU for defence purposes will inevitably spark heated legal debates regarding its constitutionality and compatibility with the Common Foreign and Security Policy”. Nevertheless, the European Commission insists on a different interpretation of the use of Article 122, “in a context of emergency”¹⁰.

Failure of diplomacy: The ongoing militarization of Europe can be understood as the result of a lack of capacity of the European Union’s leaders to resolve the conflict by political and diplomatic means since the Russian invasion. EU did not prevent NATO’s expansionism, an actual or perceived threat to Russia that contributed to its imperialist invasion of Ukraine. Russian aggression cannot be understood separately from NATO’s policies of eastwards enlargement. In her book *“Not One Inch: America, Russia, and the Making of Post–Cold War Stalemate”*, Sarotte (2021: 367) notes that critics of the American foreign policy argued already since the mid-1990s that NATO’s expansion was “humiliating Moscow, and undermining arms control”. Moreover, European leaders did not manage to deescalate the war and the resulting humanitarian crisis, which affected millions of lives. As put by Tornielli (2025), during the war the EU “demonstrated an inability to take diplomatic initiatives. It has only seemed capable of supplying arms to Ukraine, which was unjustly attacked by Russian troops, but not of proposing and pursuing concrete negotiating paths to end the bloody conflict”.

Military instead of social priorities: Given that where budgets are directed is not a politically neutral decision, the *Re-arm Europe* plan reveals a prioritization of the interests of the military-industrial complex rather than the interests of social majorities. The plan funds, as Tornielli (2025) notes, are not “used to combat poverty (...), to enhance welfare, education, and schools, to ensure a humane future for technology, or to support the elderly. Instead, they are being used to fill arsenals and thus the pockets of arms manufacturers”. It is hardly

¹⁰ “Article 122 TFEU is the appropriate legal basis for financial assistance responding to crisis or exceptional event and is not confined to crises of a financial or financial stability nature. The Council has a broad margin of discretion for assessing whether it is necessary to have recourse to that instrument in a context of emergency. In the past, it has used this provision to provide financial assistance to Member States experiencing sudden and exceptional increases in public expenditure, such as during the COVID-19 pandemic (...). Similarly, the Council is entitled to invoke this provision in the current exceptional security context to provide financial assistance, (...) to Member States that need to make urgent and massive investments in the EU’s defence manufacturing capacities” (European Commission 2025[b]).

convincing that this exorbitant defence expenditure will not lead to a further reduction in social spending, both in the European budget and in individual national budgets, and to a new round of over-indebtedness that workers will have to bear. Many European countries, especially those in Southern Europe, where harsh austerity programs were implemented during the financial crisis of the 2010s (Markantonatou 2022), have been plagued by policies benefiting capital rather than labor and the private rather than the public sector. Meanwhile, the welfare state, social services and the institutions of labor protection have been attacked by neoliberal forces and have shrunk. Militarization can only exacerbate these issues, deepening social insecurity. Varoufakis (2025) describes *Re-Arm Europe* as a form of “military Keynesianism” and argues that “the only way Europe can rearm is by shifting funds from its crumbling social and physical infrastructure – further weakening a Europe already reaping the bitter harvest of popular discontent, which is fueling the rise of far-right forces across the continent”. Lieven (2025) examines the ongoing discussion around *Re-Arm Europe*, which debates whether the EU should continue purchasing American arms or produce its own European ones. Lieven (2025) too highlights the “desperately needed investment in infrastructure and social welfare programs vital to domestic stability,” emphasizing their importance in ensuring long-term societal well-being.

Timing and risks of the plan: IUS (2025) sets the question: “Why now?” Why does Europe aspire to ‘re-arm’ at a moment in which all involved sides (Russia, Ukraine, USA) have declared their intentions to end the war?” Moreover, several other points are made by the IUS. They argue that the military industry, “which has vast resources and powerful influence on politicians and the media, blows on the fire of an openly belligerent narrative.” According to them, the instrumentalization of the “fear of Russia” is “stirred up as a bogeyman”, and the idea that Russia has expansionist aims towards Europe is “nourished by instigating exaggerated fear.” They believe that systematic diplomacy could help Europe “go back to its peaceful coexistence and collaboration with Russia.” Additionally, they emphasize that “major conflicts have always been preceded by massive military investments”. They view *Re-arm Europe* as a project that may create disasters and problems rather than resolve them. The world has seen serious crises in the 21st century such as the financial crisis in 2008, the COVID-19 pandemic in 2019, the refugee crisis in 2015, and the wars in Ukraine (2022) and Gaza (2023). Additionally, there are global challenges such as famine in the global South, largest-ever socioeconomic inequality, and risks of pandemics and nuclear war (ibid.). “The last thing we need today is the Old Continent to move from a beacon of stability and peace to becoming a new warlord”, IUS (2025) argues.

Different perceptions of threat: One more issue is how real the threats are that justify such a massive effort of military equipment. In a European Union of more than 445 million people, lacking political, institutional, and social coherence, who decides, and based on what criteria, who the common “enemy” is? Given that foreign policy remains determined by national views and understandings of threat, a common “enemy” cannot simply be constructed *ad hoc*. For instance, “Italy and Spain, far from Russia and the frontline states in the ongoing migrant crisis across the Mediterranean, simply do not see their own vital interests as threatened by Moscow” (Lieven 2025). Some countries are reluctant to further worsen longstanding relations with Russia, while others see a potential conflict with it as resulting in more burdens than benefits. Turkey’s (a non-EU country) invitation to and participation in the London Summit (02.03.2025) on Ukraine and the EU’s endeavor for defence empowerment were understood by the country’s leadership as an opportunity to deepen its Europeanization process and achieve a long-sought stronger role in the EU¹¹. However, for Greece, the same idea raises a series of concerns¹².

¹¹ According to T. Erdoğan: “As an integral part of Europe, we consider our European Union membership process as our strategic priority. Recent developments have once again underlined the importance of Turkey-EU

5. Final Remarks & Conclusions

The details and exact steps of the *Re-arm Europe* plan, as announced by the European Commission's President, have not yet been fully developed or clearly articulated. The questions and concerns raised in the previous section relate to the initial announcements regarding this plan, and additional issues are expected to emerge, for instance, regarding the countries' concrete lending mechanisms, the specific terms of the new loans, the scope and scale of new defence investments, the countries and companies involved, and the priorities of the initiative. Furthermore, the potential impact on national budgets and the possible imbalances caused between EU member states remain unclear.

However, the *Re-arm Europe* plan possibly signifies a break with the pre-Trump international order, an attempt at militarization rather than a systematization of coherent diplomatic efforts for peace, and a prioritization of the interests of the defence industry over the needs of societies. It also reflects a broader geopolitical shift in which European states are increasingly expected to take on greater military responsibilities, raising concerns about the implications for their foreign policy and their autonomy to decide what constitutes a threat. Last but not least, the new defence project is set to deepen the longstanding problems faced by European societies, such as economic insecurity, the precarious position of labor in society, and the prolonged crisis of the welfare state.

6. References

- Dermine, Paul, Funding Europe's Defence: A First Take on the Commission's Re-Arm Europe Plan, *Verfassungsblog: On Matters International*, 05.03.2025. Available Online: <https://verfassungsblog.de/rearm-europe-law/>
- Duval, Guillaume, The End of the 'West' and Europe's Future, *Social Europe*, 28.02.2025. Available Online: <https://www.socialeurope.eu/the-end-of-the-west-and-europes-future>
- Euronews, European leaders unite behind Ukraine following Trump-Zelenskyy confrontation, 28.02.2025. Available Online: <https://www.euronews.com/2025/02/28/after-zelenskyy-and-trump-argue-eu-leaders-voice-their-full-support-for-ukraine>
- European Commission, EDF: Developing tomorrow's defence capabilities, 2025. Available Online: https://defence-industry-space.ec.europa.eu/eu-defence-industry/european-defence-fund-edf-official-webpage-european-commission_en
- European Commission [a], Press statement by President von der Leyen on the defence package, 04.03.2025. Available Online: https://ec.europa.eu/commission/presscorner/detail/sv/statement_25_673
- European Commission [b], Proposal for a Council regulation: Establishing the Security Action for Europe (SAFE) through the reinforcement of European defence industry Instrument, 19.3.2025 COM (2025) 122, Brussels. Available Online: https://defence-industry-space.ec.europa.eu/document/download/6d6f889c-e58d-4caa-8f3b-8b93154fe206_en?filename=SAFE%20Regulation.pdf
- European Council of the European Union, EU defence in numbers, 2025. Available Online: <https://www.consilium.europa.eu/en/policies/defence-numbers/>
- Grevi, Giovanni, Helly, Damien, Keohane, Daniel (eds.), *European Security and Defence Policy: The First Ten Years*, Institute for Security Studies, European Union, Paris, 2009

relations. European security is unthinkable without Turkey." *WSWS.org.*, 10.03.2025. Available Online: <https://www.wsws.org/en/articles/2025/03/10/frdf-m10.html>

¹² Meinardus, Ronald, Greece watches warily as Turkey seeks greater influence in Europe, *Kathimerini*, 15.03.2025. Available Online: <https://www.ekathimerini.com/opinion/1264116/greece-watches-warily-as-turkey-seeks-greater-influence-in-europe/>

- IUS (International Union of Scientists), Against Militarization: Scientists Unite in Opposition to EU Rearmament, 14.03.2025. Available Online: <https://www.iuscientists.org/against-militarization-scientists-unite-in-opposition-to-eu-rearmament/>
- Jones, Steth, The Rise of European Security Cooperation, Cambridge University Press, Cambridge, 2006
- [Lieven](#), Anatol, What Europe's New Rearmament Plan Gets Wrong, Time, 14.03.2025. Available Online: <https://time.com/7268137/europe-rearmament-ukraine-defense-russia/>
- Markantonatou, Maria, A decade of austerity politics and neoliberal reform: Overview of the Greek financial crisis (2010-2020), in Castellano Fernando Lopez, Lizarraga, Carmen, Manzanera-Ruiz, Roser (eds), Neoliberalism and Unequal Development: Alternatives and Transitions in Europe, Latin America and Sub-Saharan Africa, Routledge, London, 2022
- Merand, Frederick, European Defence Policy: Beyond the Nation State, Oxford University Press, 2008
- Merlingen, Michael, Ostrauskaite, Rasa, European Union, Peacebuilding and Policing: Governance and the European Security and Defence Policy, Routledge, 2006
- Official Journal, Consolidated version of the Treaty on the Functioning of the European Union, Part three: Union policies and internal action: Economic and Monetary policy, Article 122, 2008
- PESCO (Permanent Structured Cooperation), 2025. Available Online: <https://www.pesco.europa.eu/>
- Sarotte, Mary E., Not One Inch: America, Russia, and the Making of Post-Cold War Stalemate, Yale University Press, New Haven/London, 2021
- Skorić, Toni, European Commission: The First 100 (Stormy) Days, Friedrich Naumann Foundation, 11.03.2025. Available Online: <https://www.freiheit.org/europe/european-commission-first-100-stormy-days>
- The Guardian, Friend or foe? Keir Starmer now walks a tightrope between Europe and US, 01.03.2025. Available Online: <https://www.theguardian.com/politics/2025/mar/01/friend-or-foe-keir-starmer-now-walks-a-tightrope-between-europe-and-us>
- The Guardian (a), The plan for a European army within Nato – archive: 1952, 28.02.2025. Available Online: <https://www.theguardian.com/world/2025/feb/26/the-plan-for-a-european-army-within-nato-1952>
- Tornielli, Andrea, Questioning rearmament in a world increasingly incapable of diplomacy, 06.03.2025, Vatican News. Available Online: <https://www.vaticannews.va/en/vatican-city/news/2025-03/rearm-europe-plan-peace-pope-francis-diplomacy-abusurdity-war.html>
- Varoufakis, Yanis, The Case Against European Rearmament, Project Syndicate, 06.03.2025. Available Online: <https://www.project-syndicate.org/commentary/case-against-european-rearmament-by-yanis-varoufakis-2025-03>
- Von der Leyen, Ursula, Letter from the President to the European Commission, 04.03.2025, Available Online: <https://ec.europa.eu/commission/presscorner/api/files/attachment/880628/Letter%20by%20President%20von%20der%20Leyen%20on%20defence.pdf>

Organisers and Dependents: Immigrant Employment and Informal Economy in Athens

Abstract:

The paper deals with the complex relations between immigrant employment and socio-economic and labour market informality in the Athens conurbation. It starts by presenting the transition of Greece from an emigration to an immigration country, it elaborates further on the informal economic sector and discusses the characteristics of informal economy and labour markets in Greece. Finally, the paper contains a discussion as regards the relation between informal labour markets and immigrant employment in Athens through the scheme of organisers of informal work and dependents on it.

Key words: Informal economy, informal labour markets, immigrant employment, Athens

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1. Introduction

This paper concerns informal arrangements of mainly undocumented foreign immigrants in the Athens conurbation. It argues that the informal economy must be seen as an integral part of the wider socio-economic system and as a "process" rather than as a distinct sector. It tries to identify the interrelationships between formal, and unregulated, concealed economic activities and highlights the hierarchical and heterogeneous character of informality. Hence while for some informal work is a means for survival or their only available option, for others it is an income generation system combined with more formal economic practices. Evidence to support these notions is presented in relation to immigrants' informal employment in Athens. They are based on research findings from a field study in the city conducted by a combination of participant observation in various immigrant areas and a series of face-to-face interviews with immigrants from Albania, Egypt and the Philippines.

2. Greece: from emigration to immigration

For the most of the 20th century Greece was a country of mass emigration towards various destinations worldwide. The emigration can be broadly divided into two sub-periods: before and after the Second World War. Between 1900 and 1924 an estimated 420,000 left the country for overseas destinations, mainly the United States. After the Second World War and due to severe social and economic problems emigration accelerated and the exodus was supported by successive Greek governments as an additional means of their economic and development policies. Available data indicate a gross emigration of around 1.4 million Greeks during 1945-1974 but this type of statistical data must be considered as an estimate because it does not take into account unregistered emigration and return migration flows. During most of post-war emigration period Germany was the destination of the majority of migrants. Other significant countries of destination were Belgium, Australia, the United States and Canada.

The broad causes of post-war Greek emigration can be related to various factors ranging from political reasons, especially after the 1946-1949 civil war, to high levels of open unemployment, poverty and hardship both in the countryside and in several towns and cities (Fakiolas and King 1996). However after 1970 emigration started to decline and return migration started to take place on a large scale. The most important contributing factors to this change were the relative deterioration of economic and labour market conditions in various destination countries, the difficulties of proper assimilation in host countries (especially in Germany), and the restoration of parliamentary democracy in 1974. For Greece there followed a period of economic development and low unemployment.

In the 1980s, foreign immigration replaced return migration of Greeks as the key element in the positive migratory balance of the country. The immigrant population in Greece comprises mainly three main categories. First there are ethnic-Greek immigrants from several republics of the former USSR, Albania, and to a lesser extent from other eastern European countries. According to the National Foundation for the Reception and Settlement of Returnees Greeks, between 1987 and 1993 47,436 ethnic-Greeks arrived and settled in the country mainly from the former Soviet Union. The second category is that of the legally employed foreigners. In 1992 there were 33,892 legally employed foreigners in the country, almost 68 per cent of whom were from other EU or European countries (Katsoridas 1994). The third and most numerous category is constituted by nationals of several east European, African and Asian countries. Only estimations can be made about their approximate number because the vast majority are undocumented. Estimates put the numbers of Albanians at between 150,000 and 200,000, Poles at 100,000, Egyptians at 55,000 and Filipinos at between 30,000 and 40,000. There are also smaller but nevertheless significant immigrant communities from Iraq, Pakistan, Bulgaria, former Yugoslavia and various African countries. Estimates based on numbers of deportations and on empirical observation put the overall total number at between 300,000 and 450,000, that is between 8 and 11 per cent of a total labour

force of 3.9 million. It seems that Greece has, in proportion to its population, more immigrants than any other southern European country (King and Konjhodzic 1995).

The most important reasons for the transformation of Greece into an immigration country are briefly the following:

- The first reason is mainly geographical and is related to the relative ease of entry into the country through its extended mountainous borders and the numerous islands of the Aegean Sea. Despite recent efforts made by the government, the control of the borders remains inadequate to prevent the inflows. Furthermore the heavy reliance of the country on shipping and tourism makes it more easily accessible by potential immigrants.
- The second reason is related to the imposing of stricter immigration controls by the traditional host countries of Northwestern Europe in combination with the relatively lax Greek immigration policy. Hence there is a 'diversion effect'.
- The third reason is the relative narrowing of the economic differential between Greece and other more advanced European countries in recent decades in combination with intense economic and demographic pressures in countries of the other side of the Mediterranean. Another strong push factor is the political and economic change in the countries of Eastern Europe after 1989-1990. The massive influx of Albanians into Greece after 1990 and the increasing numbers of entrants from the former Yugoslavia, Poland, Bulgaria, etc. can be attributed mainly to this factor.

The last important factor is the demand for low paid, unskilled migrant labour due to the specific socio-economic and labour market characteristics of the country. Three interrelated reasons explain this demand. First is the persistence of a large informal economy in Greece and the fragmentation of the economy into numerous, in many cases family organised, small and very small firms. Second is the seasonality and labour intensity of many sectors of the Greek economy such as agriculture, construction, tourism and other services. The third reason is the rejection of low paid, low status jobs by natives due to higher educational levels, higher socio-economic aspirations and delayed labour market entrance of the young.

As the paper concerns mainly this last pull factor, specific theoretical and empirical aspects of the functions of the informal economy are presented in the next parts with specific reference to the Greek case.

3. The informal economy

Defining the informal sector generally is not a straightforward task because informal activities must be seen more as a socio-economic process rather than a object. Rather than being a set of survival tactics and practices or a euphemism for poverty informal activities are part of an income generation process that are unregulated by the institutions of society, existing in a legal and social environment in which similar economic activities are regulated (Portes et. al. 1989). So informal activities are defined by the regulatory system and they do not exist in a totally non-regulated and permissive socio-economic context.

Also the informal sector is not a set of totally distinct economic activities from the regulated formal economy but is articulated with it by a series of interrelationships and interdependencies, so that it can be seen as an integral part of the whole economy and as a continuum with the formal sector. There are two broad ways of measuring the size of the informal sector in a given economy. On the one hand there are various macroeconomic approaches, for example estimations of the size of the informal economy by comparing the ratio of outstanding currency to demand deposits with the average, for a selected period, when underground activities were assumed to be near zero. On the other hand, and in order to overcome limitations of macroeconomic monetary approaches, other social scientists have started to engage in first-hand field research in order to contribute to the understanding of the

underlying structural and socio-economic processes and to make estimations about the real extent and economic weight of informal activities (Castells and Portes 1989).

The informal economy is not homogeneous and is highly hierarchical. A clear distinction exists between, on the one hand, the organised black market work in which employees work either for companies which operate wholly underground or for regular companies which employ some staff on a black market basis and, on the other hand, the individual black market work which ranges from the casual one off cash-in-hand job to the concealment of a substantial part of (if not all), their earnings by the self employed (Williams and Winderbank 1995).

Both types, as we shall discuss in the next part of the paper are relevant for immigrant employment in the Greek informal sector. The contemporary diffusion of informal activities in developing and developed countries can be explained by various causes such as the decline of traditional labour processes in sectors like agriculture or construction, the move towards flexible arrangements in manufacturing and the trends towards tertiarisation and expansion of personal household and economic services to firms. Especially the third cause and, to some extent, the second explain the expansion of the informal sector in advanced countries, while informal activities were seen as a structural characteristic of the developing countries' economies. The following table shows some estimations of the magnitude of the black market sector in EU counties: Greece has the highest incidence of 'black market' GDP.

Table 1: Estimates of the magnitude of the black market sector obtained through indirect methods as % of GDP.

Countries	Smallest	Highest	Average estimate
Ireland	0.5	7.2	3.9
UK	1.0	34.3	6.8
Germany	3.4	15.0	8.7
Netherlands	9.6	9.6	9.6
Denmark	6.0	12.4	10.1
Belgium	2.1	20.8	10.9
Spain	1.0	22.9	11.1
France	6.0	23.2	11.4
Portugal	11.2	20.0	15.6
Italy	7.5	30.1	17.4
Greece	28.6	30.2	29.4

Source: Williams and Winderbank 1995

Regarding the special characteristics of the informal sector in comparison of those of the formal, Thomas (1992) summarises them using data obtained from developing countries' experiences. Nevertheless most of them display similarities with the situation in Southern European countries and especially in Greece. Table 2 presents these general characteristics.

Table 2: General characteristics of informal and formal economic sectors

Informal sector
<ol style="list-style-type: none"> 1. Ease of entry 2. Reliance on indigenous resources 3. Family ownership of enterprise 4. Small scale of operation 5. Labour intensive methods of production and adapted technology 6. Skills acquired outside the formal school system 7. Unregulated and competitive markets
Formal sector
<ol style="list-style-type: none"> 1. Difficult entry 2. Frequent reliance on overseas resources 3. Corporate ownership 4. Large scale of operation 5. Capital intensive and often imported technology 6. Formally acquired skills, often expatriate 7. Protected markets(through tariffs, quotas and trade licences)

Source: Thomas 1992.

There are a series of influences which explain the genesis, expansion or persistence of the informal economy, some of them stronger and some weaker according to different socio-economic conditions and environments in different countries. Firstly there are economic influences such as the industrial structure, flexibilisation of production, the tax and social contribution levels. For example areas dominated by a few large companies engage in relatively little black market work while in areas or countries like Greece with a plethora of small firms informal activities are not only more likely to flourish but they are also more likely to be undertaken on an organised than on an individual basis.

Also, and particularly in Southern Europe, there is a link between flexibilisation of production through subcontracting and the expansion of informal work where workers previously employed in large firms have been forced to seek jobs in smaller marginal firms or to do piecework in their own homes, thus blurring the distinction between formal and informal work. Moreover an extensive burden of tax and social premiums influences the level of black market, informal work. Secondly, there are institutional influences such as rigid labour laws, strict welfare benefit regulations, and corporate agreements which try to limit the rights of employees to take on outside jobs, do overtime and so on. Finally there are various social influences to the extent of the informal sector such as the density of social networks, the socio-economic mix, local cultural traditions, education levels and environmental influences such as size and type of a given locality, region or area and the availability of housing (Williams and Winderbank 1995).

4. Informal economy and labour market in Greece

Next I examine, in more detail, patterns of the informal economy and labour market of Greece as it accounts for the employment of almost all undocumented immigrants in the country. The most important contributing factors to the persistence and expansion of informal economic activities in recent years in Greece can be summarised as follows (Vavouras and Petrinioti 1990):

- The size and structure of the labour force. The increase in the size of the labour force due to population growth, higher participation rates or foreign immigration is considered to have an impact on the expansion of the informal sector. Furthermore the high rate of self-employment affects informal work as it is easier for the self employed to conceal part or all of their economic activities from state regulatory authorities. Greece, in 1984, had a proportion

of 27.3 per cent of self-employment out of total employment, a rate much higher than the mean rate of OECD countries of 9 per cent at the same year. Self employment rates for selected OECD countries in 1984 were 7.9 per cent for Austria, 12.3 per cent for Belgium, 8.2 per cent for W. Germany, 17.9 per cent for Spain, 6.4 per cent for Sweden, 13.0 per cent for Japan, 9.6 per cent for the UK, 7.6 per cent for the USA, 4.9 per cent for Holland, 9.1 per cent for France and 20.6 per cent for Italy.

- The level of unemployment and underemployment. The increase in unemployment and underemployment, especially in periods of economic crisis, affects positively the supply and demand of informal work, as in these periods the overlooking of state regulations, especially labour regulations, becomes more widespread. In the Greek case, the official unemployment rate grew from 1.7 per cent in 1974 to almost 10 per cent today. Furthermore the length of unemployment has some impact on the supply and demand of informal work. In Greece, and for the period from 1974 to 1987, those who have been unemployed more than one year accounted for 2.8 per cent and 44.0 per cent of the total unemployed respectively, so the increase in long-term unemployment over the years was substantial.
- The tax burden. The tax system in general is considered one of the most important factors affecting the extent of the informal economy. It seems that for the Greek case the tax burden is higher than that in other countries with similar economic characteristics such as Italy, Portugal and Spain, and even higher than that of countries such as the United States, Japan or Canada. It is however slightly lower than Germany and the UK.
- The labour costs. Another very important factor affecting the persistence and expansion of informal work are labour costs, both in the forms of wage and non-wage costs. Although Greece is considered a low-wage country, low productivity leads to relatively high labour costs in many sectors. The increase of workers' contributions for social security, pensions and related benefits in recent years (from 7.1 of the GDP in 1974 to 12.1 in 1987) creates economic incentives for involvement in the informal sector, usually in the form of double employment.
- The overregulation of the labour market by the state which creates a rigid formal labour market and increases the attractions and potential returns of black market work. Moreover changes of the labour relations framework, especially after the restoration of parliamentary democracy in 1974, led to employer protests and grievances over the increasing rigidities in the Greek labour market.
- The conditions and structures of production and marketing. The increase in competition, especially after the accession of Greece to the EEC in 1981, led to an increase in informal economic strategies and practices, especially among firms and sectors which are characterised by a low technological level and are organisationally more traditional.
- Also the informal economy is affected by the degree of danger of persecution of persons involved in it. It is generally accepted that in Greece, there is a relative tolerance of informal activities either because of bureaucratic difficulties of imposing the law or because in many cases the informal sector is considered helpful and useful for the economy because it generates incomes and jobs.
- Finally, general economic characteristics of Greece, such as specialisation in labour intensive production, reliance on relatively cheap labour at least in some sectors, the small size of internal market and firms, the low technological level and limited international competitiveness, affect positively the proliferation of irregular forms of production and employment.

The size of the informal economy in Greece was estimated to be about 27 per cent of the GDP in 1982 and about 35 per cent of the GDP in 1988 by various researchers using mainly macroeconomic approaches and data derived from national economic statistics and national accounts records (Kanellopoulos et. al. 1995). Also one can observe a substantial increase of the size of the informal sector over the years. For example in 1974 informal

domestic household consumption accounted for 40 per cent of total consumption and by 1988 this figure grew to 47 per cent. This increase is directly related to the above contributing factors whose weight became more important during the period after 1974. Informal activities are widespread in almost all sectors of the economy although unequally so. Extended informal activities can be found in industry and artisan firms (85.9 per cent of output in 1988), in health education and recreation (84.7 per cent), trade (43.5 per cent), housing rentals (39.9 per cent), construction (71.7 per cent) and transport and communications (43.8 per cent). On the contrary, limited informal activities can be found in sectors such as mines, agriculture (10.3 per cent) and banking and insurance services (2.6 per cent).

5. Informal employment of immigrants in Athens

I now make a series of explicit connections between the foregoing debate on the informal sector in the Greek economy and the research I have carried out on immigrant workers in Athens. During 1995 I interviewed 141 Albanian, Egyptian and Filipino immigrants, as well as their 'key informants', and observed the behaviour of immigrant groups in various settings. The results of this field research are still being analysed; in this section of the paper I present some preliminary, mainly qualitative findings of this survey, concentrating on the nature and social relations of immigrants' work. Almost all the Albanian and Egyptian interviewees were male; most of the Filipinos female.

The main sectors and employment types which concentrate immigrant employment in Athens are construction, cleaning, small firms, street vending and domestic work or related services. The majority of Albanians were found to work in construction with significant numbers also in small firms and in cleaning. Egyptians were found to work as construction labourers, as small firm employees and as street vendors. The vast majority, almost all, the Filipinas work as domestic helpers or offer related services such as baby-sitting, elderly nursing etc. Immigrants' employment is informal because it is undeclared and concealed from state authorities by employers. In this way employers avoid non-wage costs, social and employment regulations and hence they reduce substantially their labour costs.

The formal/informal interplay and the distinction between organisers of informal work and black market immigrant labourers were found to be present in almost all sectors which concentrate immigrant employment. The broad construction sector can be divided into two sub-sectors: the household construction sector and the public works and "larger project" construction sector. The first is related to construction and building of individual houses, household repairs, extensions and various other kinds of household works. When the skill requirements of the task are low, immigrants are usually employed directly by the household leader and informally. In cases like that, usually repairs or other household works, the household leader acts directly as the organiser of informal work and profits substantially because he or she pays much lower wages to the immigrant employees in comparison with the formal wage levels paid for similar tasks to native employees. Another important characteristic of this type of work is that it is a "task" type undertaken usually for a short period of time and thus extremely unstable and casual in all aspects such as working conditions, hours of work and payments.

On the other hand when the skill requirements are relatively high immigrants are used as helpers by builders or other skilled workers whose relationship with the household leaders, at least on payments, is usually formal. In this case skilled builders act as organisers of informal work. They and the householders, benefit from immigrants employment by reducing the cost of unskilled manual work which constitutes a high proportion of the overall work in this sector.

The other type of construction constitutes larger building projects and public works. Here the employment relation of the immigrants involved, was found to be with subcontractors who usually undertake a part of the whole project. In most of the cases subcontractors employ

two categories of labour. The first is that of high or medium skilled workers and the second is that of low skilled labourers. Almost all immigrants were found to be employed in the latter. While in the first category economic relations between subcontractors and employees are usually formal, in the second category immigrants' employment is informal and casual, depending on the varying needs of the project. Subcontractors, as organisers of informal work in this case, make additional profits by the differential between pre-planned budget costs and real costs.

The division of labour according to skill levels, employment stability and level of informal arrangements is even more evident in small firms which are dominant in the Greek economy and constitute one of the main driving forces of informalisation and labour market segmentation in the country. Immigrants (Albanians and Egyptians) were found to be employed in small companies and firms such as hotels, restaurants, take-aways, clothing, footwear, transport, removal, paper companies, etc. Small firms are usually formal economic entities, registered with the appropriate authorities and their owners pay taxes according to the level of profits. Nevertheless in many cases the declared profits are an underestimation of the actual ones and undeclared, black-market work contributes to higher profitability. A relatively clear distinction exists within the Greek small firm sector between the central, primary work force and the secondary. The former is usually that of family labour or /and that of special-expertise workers and the latter is that of the more casual, unstable and low-skilled labour. The latter is usually employed informally and under precarious, exploitative and hard working conditions. Employers in small firms, as organisers of black market work, benefit in two ways: firstly, they reduce their firms' labour costs and secondly, they increase the numerical flexibility of their firms as demand for their products and services are in many cases characterised by substantial seasonal fluctuations.

The household service sector comprises different types of work such as domestic service (where usually the employee lives with employers) and various other services like baby sitting, cleaning, nursing etc. usually undertaken on a part-time basis. The majority of the Filipinas in Athens were found to be engaged in such activities and especially in domestic service. The Filipino case differs markedly from the cases of the other groups of immigrants, not only because of the gender difference and the higher degree of employment specialisation but also because of their legal status and its implications for their employment arrangements. The vast majority of Filipino immigrants in Athens enter the country holding a work permit. This is arranged by recruitment agencies in the Philippines. They are bound to one specific employer who is responsible for the renewal of their work and residence permit in the country. When Filipino immigrants decide to leave their employer for another one, they usually lose their work permit and become illegal immigrants. Their vulnerability increases even further when employers hold their passports and other legal documents and threaten not to renew their work permits and to report them to the police if they leave or if they disagree with the employer's terms and conditions of work. The implication of this legal and labour market situation for the Filipino immigrants in Athens is that they are divided into two categories: those who work holding a work permit, and the undocumented. The latter work, in most cases, under totally informal conditions, with low payments, long hours of daily work, no social insurance and health benefits, restricted outings and hardship. But even the former category does not escape informality because household leaders employ them in the first place in order to organise informal arrangements to their benefit. For example, even when employers contribute to the social insurance of their immigrant employees, their contribution is much lower than the legally required amount. As several Filipina immigrants in Athens reported, in this case usually the employer contributes 50 per cent of the amount and the other 50 per cent is contributed by the immigrant worker. In that way employers reduce their working costs and introduce informal practices to their benefit as the two parts, the employer and the employee, are so unequal in terms of power. Not surprisingly, one of the most

important demands of Filipino immigrant representatives in Greece is the abandonment of the link between work permits and one specific employer.

Immigrants engaged in cleaning activities display similar characteristics to those employed in household construction work. They are employed directly and informally by household leaders who act as the organisers of informal work. This employment type is again a 'task' type, characterised by great casuality and instability. In many cases however, immigrants work regularly (every week or every two weeks and so on) for the same employer. In this case they tend to accept more easily disadvantageous informal practices, pay and working conditions, in exchange with the reduction, to some extent, of job insecurity.

A proportion of Egyptian immigrants were found to work as street vendors selling a variety of consumer goods such as clothing, footwear, perfumes etc. in open markets or in the busy, crowded central avenues and streets of Athens. Only this small group of workers seems to be engaged actively in the informal economy acting in most cases as the main organisers of informal work. Nevertheless there is a relationship of hidden dependency in many cases: the relationship between the provider of the goods and the immigrant seller/trader. In many instances the provider of traded goods keeps a proportion of the total earnings, a very rare practice in formal supplier-trader economic relationships. In this way suppliers not only assist the organisation of informal trade activities but make additional profits firstly because the activity is informal and secondly because the vendor is an immigrant, weak in socio-economic and legal power and rich in vulnerability.

Finally one remark which is considered to be important must be made. There is a widespread notion that immigrants are the dependents in the formal/informal interplay just because of their illegality in terms of work and residence in the country. At the present stage of immigration into Greece it is true that because the vast majority of entrants are undocumented their only possible option is to work informally. But according to other views, and as the situation of legally employed Filipinos indicates, regularisation will have a very limited impact on labour market practices because informalisation is reinforced by segmentation along gender and nationality lines and is not simply a situation reflecting legal vulnerability. This vulnerability may be an additional contributing factor to the dependent position of immigrants within the informal economy but it is not its cause. One must take into account that apart from illegal immigrants, other categories of workers such as minorities (the Muslim minority in Thrace region), women or unskilled manual labourers comprise high proportions of informal dependent workers.

6. Conclusions

Evidence, not only from this research, but of research undertaken in other EU countries, challenges some 'common sense' notions about the characteristics and functions of the informal economy. It challenges the view of the informal sector as simply a survival strategy of the very poor, taking place in marginalised or peripheral localities. This view undermines the heterogeneity and social stratification in the informal economy and tends to see it as separate from the formal regulated economic activities. In reality informal and black market work is usually organised by individuals who are also engaged in formal economic activities as well. This is the usual case because the preconditions of organising informal activities are the existence of resources and experience. Individuals such as the long term unemployed or illegal immigrants are more likely to undertake a more narrower range of informal work, being in the position of the dependent, because they own fewer capital goods, less property and have less working experience than individuals of middle or higher income groups who usually organise such activities. (Williams and Winderbank 1993). Furthermore research evidence suggests that in richer and more affluent regions and cities, more informal economic activity exists and is of more rewarding kind than in poorer areas. (see the evidence reviewed in Williams and Winderbank 1993).

My research reveals that the organisers of immigrants' black market work are either small firm owners, subcontractors, skilled workers or household leaders, almost all of middle income and middle class orientation and already employed. Their economic activities constitute a mix of formal and informal practices influenced by moves towards greater flexibility, labour cost considerations and different skill requirements. So viewing and analysing informal work from the dependents' side conceals the fact that its generation and organisation reflects paid employment and formal practices and that it is an income generation system which mirrors and reinforces social and geographical inequalities and stratification.

7. References

- Castells, M. and Portes, A. (1989) World underneath: the origins, dynamics and effects of the informal economy, in Portes, A. et.al. (eds) *The Informal Economy, Studies in Advanced and Less Developed Countries*. London: The John Hopkins University Press.
- Fakiolas, R. and King, R. (1996) Emigration, return, immigration: a review and evaluation of Greece's post war experience of international migration, in *International Journal of Population Geography*, 2: 171-190.
- Kanellopoulos, K. et.al. (1995) *Para-economy and Tax Evasion. Estimations and economic Impacts*. Athens: KEPE. (in Greek).
- Katsoridas, D. (1994) *Foreign(;) Workers in Greece*. Athens: Iamos. (in Greek).
- King, R. and Konjhozic, I. (1995) Labour, employment and migration in Southern Europe, Brighton: *Sussex Research Paper in Geography*, 19.
- Portes, A., Castells, M. and Benton, L. (eds) (1989) *The Informal Economy, Studies in Advanced and Less Developed Countries*. London: The John Hopkins University Press.
- Poulopoulou, I.E. (1990) *Immigrants and Refugees in Greece*. Athens: Eklogi. (in Greek).
- Thomas, J.J. (1992) *Informal Economic Activity*. Exeter: Harvester Wheatsheaf.
- Vavouras, I. and Petrinioti, X. (1990) An attempt to track an invisible activity: the undeclared employment in Greece, in Vavouras, I. (ed) *Para-Economy*. Athens: Ktitiki. (in Greek).
- Williams, C.C. and Winderbank, J. (1993) Social and spatial inequalities in the informal economy: some evidence from the European Community, in *Area*, 25(4): 358-364.

Sustainable Communities and Cultural Capital: The Example of the Axioupolis Natural History Museum Today

Abstract:

The Axioupolis Natural History Museum has served as a significant example of utilizing cultural capital to empower the local community and promote sustainable development. In the decade following research conducted in 2015, the museum has continued to play a central role in promoting local identity and social cohesion through educational programs and events. However, the evolution of the concept of a sustainable community in Axioupolis and the museum's contribution to it remain challenges that require constant adaptation and strategic planning. This paper examines the current situation and proposes strategies to enhance the museum's role as a catalyst for sustainable development in Axioupolis.

Keywords:

Sustainable community, cultural capital, Axioupolis Natural History Museum, local development, cultural heritage.

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1. Introduction

The concept of a sustainable community refers to the ability of a local society to develop while preserving and utilizing its natural and cultural resources, ensuring social cohesion and economic prosperity. Cultural capital plays a crucial role in shaping and maintaining local identity, while also contributing to the sustainability of a community (Bourdieu, 1986). In this context, the Axioupolis Natural History Museum is a characteristic example of leveraging cultural capital to promote local development.

In 2016, the author completed a thesis that examined the contribution of two major museums in Northern Greece, the Axioupolis Natural History Museum and the Petralona Museum, to local development and the preservation of cultural heritage. The research highlighted that both museums had developed significant initiatives in their regions, promoting social cohesion and local identity through their cultural and educational programs. The Petralona Museum, with its paleontological significance and global recognition due to the discovery of the *Archanthropus*, has significantly contributed to attracting visitors and boosting cultural tourism (Grombanopoulou, 2016).

The same research also revealed challenges faced by both museums, such as the lack of sufficient funding, the need for improved digital infrastructure, and the attraction of specialized personnel for better management of their cultural resources (*ibid.*).

Today, in 2024, this analysis focuses exclusively on the Axioupolis Natural History Museum and its development from the 2015 research to the present. We examine whether there has been growth or stagnation in recent years and what steps can be taken to ensure the museum's sustainability in the future. Despite the ongoing challenges it continues to face, such as funding and adapting to technological advancements, the museum has the potential to play a pivotal role in local development. This research proposes strategies to upgrade the museum, enabling it to contribute even more to the preservation of the area's natural and cultural heritage.

2. The Role of Cultural Capital in Sustainable Development

Cultural capital is a key factor in the sustainable development of a community, as it encompasses the cultural resources, knowledge, and values that strengthen local identity and social cohesion. According to Bourdieu (1986), cultural capital is divided into three forms:

- (1). embodied, which refers to the knowledge, skills, abilities, and intellectual habits acquired through socialization and education and embedded in the individual;
- (2). objectified, which refers to material cultural assets such as books, artworks, scientific instruments, and other cultural products that can be owned or bought; and
- (3). institutionalized, which refers to academic qualifications and certifications that officially recognize an individual's knowledge and skills, such as degrees and diplomas (Throsby, 1999:3) (Bourdieu, 1986:243-244). Each of these forms plays an important role in preserving and promoting cultural heritage at the local level.

For the creation and development of cultural capital, investment in human capital, particularly creative talent, is essential. New cultural and economic challenges can be addressed with proposals that enhance production and expression across all fields of arts and sciences, which, in turn, promote innovation across social strata and sectors of the economy (Kyriakidis, 2006:106-108). The Axioupolis Natural History Museum serves as an example of how these forms of capital can be leveraged to empower the local community and promote sustainable development.

2. Axioupolis Natural History Museum: A Pillar of the Local Community

Since its establishment, the Axioupolis Natural History Museum has functioned as a center for education and culture, promoting environmental awareness and local identity. Through its educational programs, the museum strengthens local culture and contributes to the

development of the local community (Throsby, 2001). Additionally, the museum's ongoing presence and activities enable residents to develop a strong sense of belonging, while encouraging their participation in cultural and environmental activities. The museum's aim and purpose have always been to promote environmental education and raise visitors' awareness of the need to protect the natural environment.

Through its actions, the museum creates a space where the local community can discover, learn about, and highlight the unique characteristics of the area's natural and cultural wealth. The preservation of natural history and local heritage provided by the Axioupolis Natural History Museum goes beyond showcasing its rich exhibits; it deeply influences the collective identity of the residents. The concept of development must be characterized by sustainability and longevity. Economic development signals endogenous growth, which, in turn, is based on local development. When we talk about local development, we refer to the residents, local institutions, and traditions (Korres G., & Tsobanoglou G., 2007). The development of a place is built on local particularities, the identity of the region, and the mechanisms that can sustain and renew economic activities in the area. Economic sustainability is inherently linked to social sustainability, including integration and inclusion through work within the community (Tsobanoglou, 2007).

Over the years, the museum has become a reference point for the region, offering residents and visitors insights into the area's natural history and the evolution of its landscape. Through its activities, it helps strengthen the bond between citizens and the environment in which they live. The presence of the museum in a small community like Axioupolis acts as a cultural beacon, enhancing local identity. Its exhibitions, educational initiatives, and focus on preserving natural history provide residents with a strong incentive to actively participate in preserving their heritage. The museum thus becomes an important tool for the development of the region's cultural and social capital (Grombanopoulou, 2016).

One of the main pillars of the museum's operation is its educational role. Through a series of programs aimed at students of all ages, as well as the general public, the museum provides knowledge related to local natural history, paleontology, and the environment. These activities contribute to fostering environmental awareness and strengthening the community while giving young people the opportunity to connect with their region and develop a sense of responsibility toward the preservation of natural resources. The museum's educational programs are not limited to traditional tours. They include creative and interactive learning methods, where participants can touch exhibits, attend lectures, and take part in workshops. This allows the museum to actively engage visitors, making them participants in the process of learning and preserving cultural and natural heritage.

However, the museum faces significant challenges in its effort to expand its educational role. One of the main difficulties is the lack of permanent specialized staff, which limits its ability to organize and implement large-scale educational programs. Additionally, the lack of digital infrastructure makes it difficult to participate in the broader trend of digitizing cultural heritage and educational tools. Utilizing new technologies and developing online educational resources could help the museum reach more students and visitors, especially from remote areas. Like most cultural institutions, the Axioupolis Natural History Museum faces serious financial issues. Securing funding is an ongoing challenge, especially in a time of economic uncertainty. Seeking sponsorships is one of the most immediate and effective solutions to cover the museum's financial needs. Sponsorships could be used to hire permanent specialized staff, as well as for the restoration and maintenance of exhibits and the museum's facilities. Moreover, securing resources is essential for the implementation of educational programs and the preservation of collections, which form the foundation of the museum's operation.

A key factor contributing to the museum's sustainability is increasing visitor numbers. The periodic exhibitions organized by the museum broaden its thematic scope and attract new

visitors, renewing interest in the space. At the same time, the creation of workshops and seminars with a small fee can boost the museum's revenue while promoting knowledge and cultural participation within the local community.

Another important aspect that enhances the museum's role in the local community is the involvement of residents in its activities through volunteering. Volunteers can fulfill essential needs such as organizing events, cleaning, welcoming visitors, and managing the gift shop. Volunteering in cultural organizations is especially important as it creates a strong bond between the organization and the community, fostering a sense of belonging and active participation. Volunteering is particularly crucial during times of economic crisis when resources are limited, and organizational needs increase. With the help of volunteers, the Axioupolis Natural History Museum could ensure its continuous operation and enhance its activities while maintaining the quality of services offered to visitors.

One of the main issues preventing the increase in the museum's visitor numbers is insufficient signage. Installing signs at key locations, both on the Euzonoi-Polykastro National Road and within the city, could significantly boost the museum's visibility and attract more visitors. The museum's external signage should be clear and eye-catching, inviting passersby to visit the space.

Additionally, strengthening public relations is crucial for promoting the museum. Collaboration with local media (radio, television, press) can enhance the visibility of the museum's activities and increase its recognition both locally and regionally.

From the above, it is evident that local development is based on the residents, local institutions, and the traditions of the area (Tsobanoglou, 2007). In the case of Axioupolis, the museum acts as a bridge between the local community and broader cultural initiatives, fostering social cohesion and solidarity. The residents actively participate in the museum's activities, while collaboration with local bodies, such as schools and cultural associations, strengthens collective identity and social empowerment. In the 2015 study, Mr. S. Papadimitriou (Forester and former board member of the Axioupolis Natural History Museum) stated that "visitors to the Municipality of Paionia can also combine other forms of alternative tourism, such as religious-monastic tourism and agritourism. After all, there is no similar museum in the area; it is the only one" (Grombanopoulou, 2016).

The role of culture in the cultural development of a local community is very important. For this reason, cultural investments are ranked as top priorities in planning. Culture and the development of a local community are closely interconnected concepts. It is a fact that utilizing a place's cultural development leads to the revitalization of those areas. Every society understands that culture is, by itself, a driver of development due to its economic and social benefits (Karachalis, 2006).

3. Challenges and Opportunities for Sustainable Development in Axioupolis

Despite the significant role the Axioupolis Natural History Museum plays in the local community, recent years have presented certain challenges that affect its development and operation. One of the main challenges is the change in the museum's management. Specifically, after the complete transfer of the museum to the Municipality of Paionia, without the existence of a public-benefit enterprise and with the museum no longer operating under the framework of a private company, there have been organizational restructurings that, to this day, have not been fully completed.

While these reorganizations are necessary, they have created a transitional state that has made the museum's smooth operation difficult. One of the major problems the museum faces today is the lack of a website, which significantly limits its ability to communicate with the public, promote its activities, and attract visitors from a broader audience through digital

channels. Paradoxically, there is no mention of the Axioupolis Natural History Museum on the official website of the Municipality of Paionia.

Despite these organizational challenges and the lack of technological infrastructure, new educational programs for the upcoming school year have been designed by the Department of Culture. These programs represent a positive step toward strengthening the museum's relationship with the local community and schools in the region. However, it remains unclear whether these programs will be successfully implemented, given the internal challenges that have not yet been fully resolved. Addressing these challenges requires a strategic approach, focusing on completing the organizational changes and immediately addressing the lack of technological infrastructure. Additionally, enhancing the museum's digital presence and implementing the educational programs with the support of new communication and learning tools could strengthen its role as a central cultural and educational hub in the Axioupolis area. The enhancement of the museum's digital presence and the development of new, innovative programs can serve as a growth driver, contributing to the creation of a resilient and sustainable community.

The contribution of local development and the distribution of cultural products lies in the fact that arts and culture attract visitors who spend money on cultural products such as food, souvenirs, accommodation, and more. The benefits are economic, social, and cultural (Bille & Schultze, 2006). Culture becomes a marketing tool aimed at renewing and upgrading the political image and, consequently, strengthening the economy, tourism, and revitalizing the area (Gasparinatos et al., 2006).

4. Challenges Facing the Axioupolis Natural History Museum in Its Development Today

The Axioupolis Natural History Museum faces a series of challenges that hinder its development and its contribution to the sustainable growth of the local community, as mentioned earlier. One of the most significant issues is limited funding and a lack of resources. This financial difficulty affects the maintenance of exhibits, the upgrading of facilities, and the development of new programs. Reduced investment results in limited visitor attraction and hampers the implementation of innovative actions that could boost the local economy and further highlight the museum's contribution to the community.

At the same time, the museum suffers from a serious shortage of specialized personnel. There is a need for educators, conservators, and administrative staff trained in managing cultural organizations, so the museum can successfully carry out its educational and cultural initiatives. The lack of staff limits the museum's ability to offer high-quality services to visitors and to organize educational programs with consistency and quality.

Additionally, the museum's limited digital presence and inadequate technological infrastructure represent one of its biggest challenges. In an era where digital access and the use of technology are critical for promoting and preserving cultural heritage, the Axioupolis Natural History Museum struggles to respond adequately. The lack of a strong digital presence limits the museum's visibility and its ability to attract new audiences, particularly among younger generations who are accustomed to interactive and digital experiences.

The broader region of Axioupolis is also facing socio-economic challenges, such as unemployment and population decline, which directly affect the museum's visitor numbers and the local residents' participation in its activities. The economic insecurity of the citizens limits their ability to engage in cultural activities, while the scarcity of resources makes it difficult to support the programs offered by the museum.

Furthermore, the museum must adapt to modern environmental challenges. Given that its focus is on natural history, updating its content to reflect current environmental concerns, such as climate change, is imperative. However, this requires additional resources and expertise, both of which the museum currently lacks.

Maintaining and continually updating the exhibits also poses significant challenges. The need for specialized equipment and preservation materials is substantial, and without adequate resources, the deterioration of exhibits is inevitable. This could reduce visitor interest and damage the museum's image as a center for preserving natural heritage.

Another obstacle the museum faces is the difficulty in collaborating with other institutions. Partnerships with academic institutions, research organizations, and cultural bodies are crucial for enhancing the museum's activities, but challenges often arise due to bureaucracy, lack of coordination, or a common strategy.

Addressing these challenges requires a clear strategic plan, investment in human resources and infrastructure, and strengthening cooperation with local and international entities. Developing a comprehensive approach that combines the preservation of cultural heritage with innovation and digital integration could help the Axioupolis Natural History Museum overcome existing difficulties and continue to contribute meaningfully to the sustainable development of the local community.

5. Conclusions

The comparison of the Axioupolis Natural History Museum's condition from the past to the present reveals both significant improvements and the persistence of certain challenges that affect its sustainability and development. According to research conducted in 2016, the museum had already been recognized as a crucial pillar of the local community, contributing significantly to promoting local identity and empowering citizens through educational programs and cultural activities. However, that research also highlighted ongoing issues, such as a lack of funding, limited digital presence, and the need for specialized personnel, which remain largely unresolved today.

In 2024, the Axioupolis Natural History Museum continues to play a central role in the local community, strengthening local culture and promoting social cohesion. Nevertheless, the problems identified in 2016 have not been fully addressed. The museum's transfer to the Municipality of Paionia, without the establishment of a public-benefit enterprise or operation as a private company, has led to organizational changes that remain incomplete. While these changes are necessary, they have created transitional difficulties that impact the museum's smooth functioning. The ongoing lack of funding remains one of the most pressing issues, limiting the museum's ability to maintain and develop its exhibits, as well as organize new programs.

Additionally, a significant obstacle today is the absence of a website, which restricts the museum's visibility and its ability to reach a new audience through digital channels. This is particularly problematic in an era where digital access and the digitization of cultural spaces are crucial for promoting their activities. The museum misses the opportunity to engage the public through digital platforms, showcase its programs, and offer interactive experiences that are essential for attracting younger generations.

However, there are also positive developments. New educational programs have been designed for the upcoming school year, which demonstrate the museum's commitment to strengthening its presence within the local educational community. These programs have the potential to enhance the museum's educational role by fostering relationships with local schools and providing students with valuable opportunities for learning and connecting with the natural history of the region. However, it remains uncertain whether these programs can be successfully implemented, given the unresolved organizational and technological challenges.

The past shows that the museum consistently played the role of a "cultural beacon" for the local community. Its activities contributed to strengthening local identity and cultivating environmental awareness among citizens, while the natural and cultural heritage of Axioupolis was showcased through its exhibitions and programs. Today, these activities

continue, but the lack of specialized staff limits the museum's ability to carry out large-scale educational initiatives and adapt to modern demands.

Additionally, inadequate signage along major roads and within the city limits hinders visitor numbers and the museum's ability to attract new audiences, an issue already noted in previous research. Placing signs in strategic locations could help draw more visitors and enhance the museum's role as a tourist destination.

Overall, the museum remains a pillar of the local community, but it continues to face serious challenges. As in 2016, its current situation requires strategic planning and adaptation to new socio-economic and technological realities. Securing sponsorships, hiring specialized personnel, and improving digital infrastructure are crucial steps for ensuring the museum's sustainability and its ongoing contribution to the local development and social cohesion of Axioupolis.

6. References

- Bille, T., & Schultze, G. (2006). Culture in urban and regional development (pp. 1051-1093). In V. A. Ginsburg & D. Throsby (Eds.), *Handbook of the Economics of Art and Culture* (Vol. 1). Amsterdam: Elsevier.
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of Theory and Research for the Sociology of Education*. New York: Greenwood Press.
- Gasparinos, K., Ioannidis, G., & Kalogirou, A. (2006). The role of Local Government in issues of modern society, Part B: Culture and Development. Notes for the joint phase of studies at E.S.T.A., Athens.
- Grombanopoulou, E. (2016). Local cultural capital and development. The case of natural paleontological (wealth) culture in Northern Greece: The Public Natural History Museums of Axioupolis, Kilkis, and Petralona, Halkidiki. Master's thesis, Hellenic Open University, Available at Apothesis.
- Karachalis, N. (2006). Culture and Local Development: The role of cultural regions in modern cities. Unpublished doctoral dissertation, Athens, Panteion University.
- Korres, G., & Tsobanoglou, G. (2007). Tourism development and competitiveness in Greece. In G. Tsobanoglou (Ed.), *Social Development and Community Cohesion: Sociological Approaches*. Athens: Papazisis.
- Kyriakidis, T. (2006). Reassessing cultural capital as a means of development, in *Tetradia Politismou, Megenthynseis: The economics of culture*. Athens.
- Throsby, D. (1999). Cultural Capital. *Journal of Cultural Economics*, 23(1-2), 3-12. Available at <http://link.springer.com/article/10.1023/A:1007543313370#page-1> (last accessed 10/03/2024).
- Throsby, D. (2001). *Economics and culture*. Cambridge: Cambridge University Press.
- Tsobanoglou, G. (2007). Ethics and the Social Aspect of Development. In G. Tsobanoglou (Ed.), *Social Development and Community Cohesion: Sociological Approaches*. Athens: Papazisis.

A Diagnosis of the Economic and Social Effects of the War in Ukraine

Abstract:

The conflict in Ukraine has led to extensive economic repercussions globally. This paper provides a thorough analysis of these impacts across various sectors. It explores disruptions in trade, humanitarian crises, and infrastructure damage within Ukraine. Additionally, it scrutinizes effects on global energy markets, financial systems, and supply chains. The paper also discusses implications for regional stability and international relations, including EU and NATO concerns. Furthermore, it examines the international response through sanctions and reconstruction efforts. Overall, the paper aims to reveal the intricate relationship between conflict and economics, offering insights into the broader economic landscape influenced by the war in Ukraine.

Keywords: Ukraine, Economic Effects, Social Effects, War, NATO

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1. Introduction

The conflict in Ukraine ignited on February 24, 2022, has not only inflicted profound humanitarian suffering but has also catalyzed a complex web of economic repercussions that extend far beyond the borders of the embattled nation. As the world watches the unfolding events in Ukraine with a mixture of concern and apprehension, it becomes increasingly evident that the economic dimensions of this conflict are as critical and far-reaching as its geopolitical and humanitarian facets. This paper endeavors to undertake a comprehensive analysis of the economic impacts stemming from the war in Ukraine. By dissecting its effects on various sectors such as trade, energy markets, financial systems, and global supply chains, it aims to unravel the intricate interplay between conflict and commerce, shedding light on the broader ramifications for regional stability and international relations. Through this exploration, we seek to provide insights into how the reverberations of the conflict in Ukraine resonate across the global economic landscape, shaping the trajectories of nations and markets alike.

2. Methodology

This section outlines the approach taken to gather, analyze, and interpret data on the economic impacts of the war in Ukraine. The methodology employed in this assignment is primarily qualitative, aiming to analyze and interpret the economic impacts of the war in Ukraine through a comprehensive review of existing literature, reports, and data sources. Additionally, where appropriate, quantitative data may be utilized to support qualitative findings and provide empirical evidence.

A systematic review of academic journals, books, policy papers, and reports from reputable sources such as international organizations, government agencies, and research institutions will be conducted to gather relevant information on the economic impacts of the war in Ukraine.

Official statistics, databases, and reports from organizations such as the World Bank, International Monetary Fund (IMF), World Trade Organization (WTO), and relevant national statistical agencies will be utilized to obtain empirical data on trade flows, investment trends, energy markets, currency fluctuations, and macroeconomic indicators.

The thematic analysis identifies key themes, patterns, and trends emerging from the literature review and data sources. This involves systematically organizing and categorizing qualitative data to identify recurring themes and draw meaningful conclusions.

Descriptive statistics, trend analysis, and regression analysis are used to analyze quantitative data obtained from official statistics and empirical studies, providing insights into the magnitude and direction of economic impacts.

Based on the findings from the literature review and data analysis, a conceptual framework is developed to structure the discussion of the economic impacts of the war in Ukraine. This framework outlines key dimensions such as trade disruptions, investment trends, energy markets, currency fluctuations, and macroeconomic stability, providing a systematic approach to examining the multifaceted impacts of the conflict.

The findings from the data analysis are interpreted in light of theoretical frameworks, economic principles, and relevant literature to elucidate the underlying drivers and mechanisms shaping the economic impacts of the war. Emphasis is placed on synthesizing qualitative and quantitative evidence to provide a nuanced understanding of the complexities involved.

Potential limitations of the methodology, such as data availability, reliability, and generalizability are acknowledged. The inherent challenges in assessing the economic impacts of geopolitical events, including data lags, measurement issues, and uncertainty, will be

considered, and efforts will be made to mitigate these limitations through robust analysis and triangulation of multiple data sources.

Ethical principles, including integrity, objectivity, and respect for intellectual property rights, will guide the research process. Proper citation and acknowledgment of sources will be ensured, and confidentiality will be maintained where applicable, particularly in the case of expert interviews.

3. Literature Review

This chapter highlights the diverse theoretical and empirical approaches to understanding the economic impacts of conflicts, particularly within the context of the war in Ukraine. By synthesizing these findings, this study aims to contribute to a comprehensive understanding of the economic ramifications of the conflict and inform policy responses to mitigate its adverse effects.

3.1 Trade Disruption and Comparative Advantage

The conflict in Ukraine has significantly disrupted regional and global trade flows (Orhan, E. (2022)), impacting comparative advantage dynamics and reshaping production patterns. Traditionally, Ukraine has been a major exporter of agricultural products, including grains, sunflower oil, and soybeans, as well as minerals such as iron ore and steel. Its strategic location as a transit country for energy resources, particularly natural gas from Russia to Europe, further underscores its significance in global trade networks.

Traditional suppliers of agricultural commodities, such as Ukraine, have seen their market shares eroded, as buyers seek alternative sources to fulfill their demand. Countries with surplus production capacity, such as the United States, Brazil, and Argentina (Mbah, R. E., & Wasum, D. F. (2022)), have capitalized on the opportunity to expand their market presence and increase exports to compensate for the shortfall from Ukraine.

The disruption of trade flows due to conflicts has been a subject of interest for scholars exploring its implications for comparative advantage. Classical economic theories, particularly those of David Ricardo (Costinot, A., & Donaldson, D. (2012)), emphasize the benefits of trade based on comparative advantage, wherein countries specialize in producing goods and services where they have a lower opportunity cost. However, conflicts disrupt these trade patterns, leading to shifts in comparative advantage dynamics and potential inefficiencies in global production.

Empirical studies, such as those by Liu, L., Wang, W., Yan, X., Shen, M., & Chen, H. (2023) and Baldwin and Qineti, A., Rajcaniova, M., & Matejkova, E. (2009), have examined the impacts of conflicts on trade patterns and comparative advantage. These studies provide insights into how conflicts alter trade flows, affect specialization patterns, and ultimately impact economic efficiency.

3.2 Supply and Demand Dynamics

The disruptions caused by conflicts, such as the ongoing situation in Ukraine, reverberate throughout energy markets and supply chains, leading to fluctuations in prices and disruptions in the flow of goods and services.

Theoretical frameworks such as the law of supply and demand (Gale, D. (1955)) and the concept of market equilibrium (Radner, R. (1974)) provide a foundation for understanding these dynamics.

In energy markets the conflict in key producing regions like Ukraine can directly impact supply curves, affecting the availability and cost of energy resources. The uncertainty surrounding production and distribution due to conflicts can lead to increased volatility in energy prices, as market participants adjust to changing supply conditions and geopolitical

risks. Empirical studies, such as those by Zhang, Q., Yang, K., Hu, Y., Jiao, J., & Wang, S. (2023) on the impact of geopolitical events on oil prices, offer insights into the relationship between conflicts and supply-demand dynamics in energy markets.

Ukraine is a significant exporter of agricultural commodities such as grains (wheat, corn, barley), sunflower oil, and soybeans. The conflict disrupted planting and harvesting seasons, damaged infrastructure critical for agricultural production and transportation (including roads, railways, and ports), and led to uncertainty among farmers and traders. As a result, global markets experienced disruptions in the supply of key agricultural commodities, leading to price volatility and supply shortages (Ben Hassen, T., & El Bilali, H. (2022)).

Ukraine is a major producer of metals and minerals, including iron ore and steel. The conflict disrupted mining operations (Johnston, R. (2022)), transportation networks, and supply chains for these commodities. Infrastructure damage, interruptions in electricity and water supply, and logistical challenges hampered production and export activities, contributing to supply shortages and price fluctuations in global metal markets.

The automotive industry relies on a complex network of global supply chains for components and parts. Ukraine is home to several automotive component manufacturers, and the conflict disrupted the production and delivery of these critical parts. Supply chain disruptions in Ukraine, coupled with broader geopolitical tensions affecting global trade routes, led to shortages of key components, production delays, and increased costs for automakers worldwide (Allam, Z., Bibri, S. E., & Sharpe, S. A. (2022)).

The conflict in Ukraine disrupted also the electronics and pharmaceutical supply chains, impacting global markets (Akter, S., Debnath, B., & Bari, A. M. (2022)). Ukraine's electronics manufacturing facilities play a crucial role in the global supply chain for components like semiconductors and microchips. However, production operations, logistics, and supply chains were disrupted, leading to shortages and price increases in the global electronics market. Similarly, Ukraine's significant role in chemical and pharmaceutical production was disrupted. The conflict affected production, distribution, and supply chains for critical medicines and raw materials, resulting in shortages and affordability issues worldwide.

3.3 Financial Markets and Exchange Rate Volatility

Conflicts often lead to increased volatility in financial markets and exchange rates as investors react to geopolitical uncertainties (Poon, S. H., & Granger, C. W. J. (2003)). Economic theories such as the efficient market hypothesis (EMH) and theories of exchange rate determination provide insights into how financial markets respond to conflicts.

The Efficient Market Hypothesis suggests that financial markets are efficient in reflecting all available information. In an efficient market, asset prices quickly adjust to new information, making it difficult for investors to consistently outperform the market. In the context of conflicts, the EMH suggests that financial markets will swiftly incorporate information about geopolitical uncertainties, such as the outbreak of war, into asset prices. Investors react to these uncertainties by buying or selling assets, leading to increased volatility in financial markets. (Yen, G., & Lee, C. F. (2008)).

Theories of Exchange Rate Determination suggest that exchange rates are influenced by a variety of factors, including interest rates, inflation rates, and geopolitical events such as conflicts (Mussa, M. L. (1984)).

Various theories seek to explain how exchange rates are determined. One prominent theory is the Mundell-Fleming model, which posits that exchange rates are influenced by both monetary and fiscal policies, as well as external factors such as capital flows and geopolitical events (Frenkel, J. A., & Razin, A. (1987)). In the context of conflicts, exchange rates may fluctuate as investors assess the geopolitical risks associated with the conflict and adjust their currency holdings accordingly.

Studies like those conducted by Smales (2021) provide empirical evidence regarding the impact of geopolitical risk on stock markets, offering insights into the relationship between conflicts and financial market volatility. Similarly, research on exchange rate determination, exemplified by studies conducted by Ilzetzki, Reinhart, and Rogoff (2022), elucidates how exchange rates adapt in reaction to geopolitical events.

3.4 Impact on Global GDP and Economic Growth

The conflict in Ukraine has implications for global GDP and economic growth, as disruptions in trade, energy markets, and supply chains can affect aggregate demand and supply globally. Economic theories related to aggregate demand and aggregate supply (Dutt, A. K. (2006)) provide insights into how conflicts impact economic output and growth rates.

Aggregate demand reflects the total demand for goods and services in an economy, encompassing consumption, investment, government spending, and net exports. Conflicts disrupt trade and supply chains, leading to reduced consumer and business confidence, lower investment levels, and decreased government expenditure. This can dampen aggregate demand, resulting in decreased economic activity and slower GDP growth.

Aggregate supply, on the other hand, represents the total quantity of goods and services that producers are willing and able to supply at a given price level. Disruptions in trade and supply chains caused by conflicts can lead to decreased productivity, shortages of critical inputs, and higher production costs. These supply-side shocks can constrain economic output, leading to decreased potential GDP growth.

Empirical studies, such as those by C Collier, P., & Hoeffler, A. (2007) on the economic cost of civil war, offer insights into the long-term economic impacts of conflicts on GDP and growth. Similarly, studies by Murdoch, J. C., & Sandler, T. (2002) on the impact of geopolitical tensions on economic growth provide empirical evidence on the relationship between conflicts and economic performance.

3.5 Economic Sanctions and Trade Restrictions

The use of economic sanctions and trade restrictions in response to conflicts has been a subject of interest for scholars in the field of international trade and political economy. Theoretical frameworks such as the theory of strategic trade policy and the theory of trade retaliation provide insights into the dynamics of trade disputes and the use of trade policy instruments for geopolitical objectives.

The theory of strategic trade policy (Brander, J. A. (1995)) suggests that governments may strategically intervene in trade to promote domestic industries, gain leverage in negotiations, or exert pressure on other countries. This framework considers the interactions between governments, firms, and international markets, highlighting the potential for trade policies to be used as tools of economic statecraft.

Similarly, the theory of trade retaliation of Bhagwati, J. N. (2014) examines the dynamics of responses to trade disputes, including the escalation of retaliatory measures. This theory recognizes that countries may respond to trade restrictions imposed by others with countermeasures of their own, leading to a cycle of retaliation and escalation.

Empirical studies provide valuable insights into the effectiveness and consequences of economic sanctions and trade retaliation. Research by Afesorgbor, S. K. (2019) on the effectiveness of economic sanctions offers empirical evidence on the impact of sanctions on trade flows, economic outcomes, and targeted countries' behavior. Similarly, studies conducted by Nzalibe (2005) delve into the dynamics of trade retaliation, exploring how countries react to trade disputes and the factors influencing the escalation or de-escalation of tensions.

4. Historical Context and Overview of the Conflict

The conflict in Ukraine has its origins in an intricate mix of historical, political, and geopolitical factors. Delving into its historical context is essential for understanding the underlying tensions and dynamics fuelling the present crisis. Furthermore, such understanding is crucial for exploring potential paths toward resolution and reconciliation.

The roots of the conflict in Ukraine can be traced back to the dissolution of the Soviet Union in 1991. Ukraine, formerly a Soviet republic, gained independence, but the transition to a sovereign state was accompanied by challenges, including economic restructuring, political instability, and regional tensions.

One of the key flashpoints in Ukrainian history is the Orange Revolution of 2004, a series of protests triggered by allegations of electoral fraud in the presidential election (Lane, D. (2008)). The revolution led to the annulment of the election results and the eventual victory of pro-Western candidate Viktor Yushchenko. However, deep-seated divisions between pro-Western and pro-Russian factions persisted, fueling ongoing political tensions.

In 2014, Ukraine experienced another pivotal moment with the Euromaidan protests (Zelinska, O. (2017)), which erupted in response to then-President Viktor Yanukovich's decision to abandon an association agreement with the European Union in favor of closer ties with Russia. The protests culminated in Yanukovich's ousting and the installation of a pro-Western government.

The annexation of Crimea by Russia in March 2014 marked a significant escalation of tensions in the region. Following Crimea's annexation, pro-Russian separatist movements emerged in eastern Ukraine, particularly in the Donetsk and Luhansk regions. These separatist movements, supported by Russia, declared independence and engaged in armed conflict with Ukrainian government forces (Grant, T. D. (2015)).

The conflict in eastern Ukraine, often referred to as the Donbas War, has resulted in thousands of casualties and significant humanitarian suffering. Efforts to broker ceasefires and peace agreements, including the Minsk agreements in 2014 and 2015, have been largely ineffective in resolving the conflict.

The conflict that erupted on February 24, 2022, represents a continuation and escalation of the tensions that have simmered in Ukraine for years. The trigger for the latest escalation was Russia's invasion of Ukraine, purportedly aimed at "denazifying" and "demilitarizing" the country. The invasion has led to widespread condemnation from the international community and has brought Ukraine to the brink of a humanitarian catastrophe.

The conflict has also exacerbated existing divisions within Ukraine, with some regions experiencing intense fighting and others mobilizing in defense of the nation. The situation is further complicated by geopolitical rivalries and the involvement of various external actors, including NATO, the European Union, and other international stakeholders.

5. Economic Impact on Ukraine

The conflict in Ukraine has unleashed a wave of economic repercussions, profoundly affecting various aspects of the nation's economy. This chapter explores the significant economic impacts, focusing on trade disruption, humanitarian crises, and infrastructure damage.

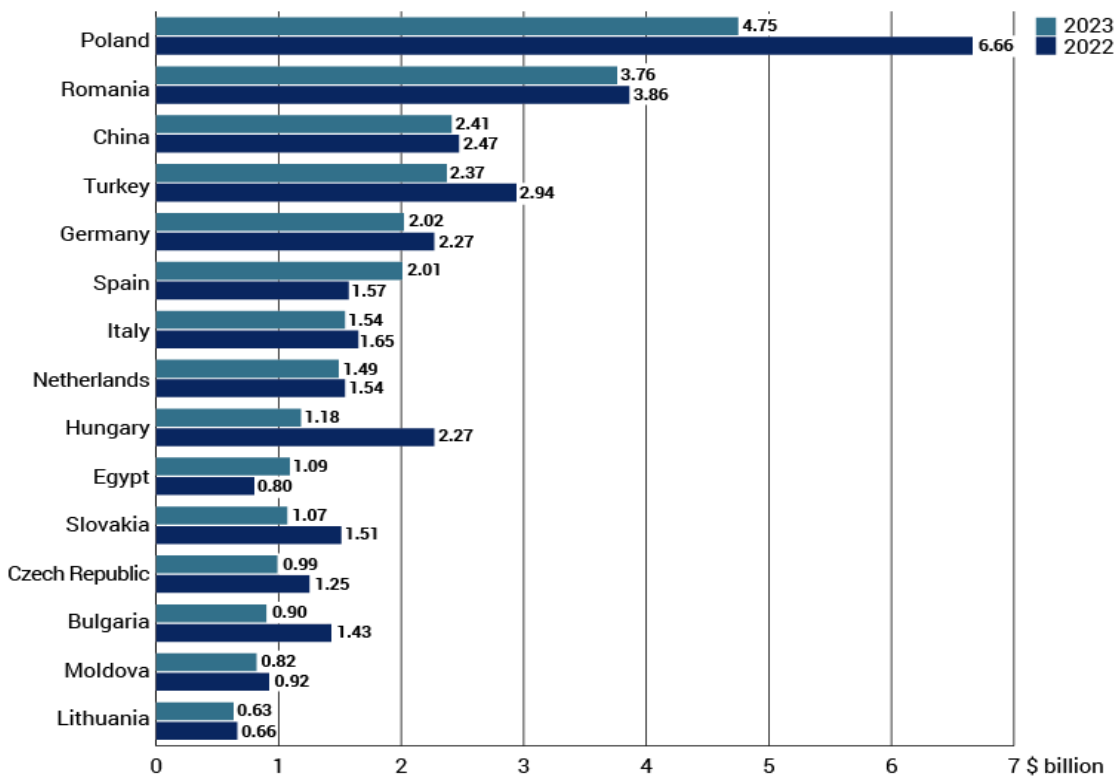
5.1 Trade Disruption

The conflict has inflicted severe disruptions on Ukraine's trade activities, impacting both imports and exports. Security concerns have led to significant interruptions in key trading routes, causing shipment delays and escalating transportation costs. Additionally, certain countries' imposition of trade barriers and embargoes has further impeded Ukraine's participation in global trade.

These trade disruptions have reverberated throughout Ukraine's economy, affecting industries heavily reliant on exports and hampering access to essential imports such as food and medical supplies. Furthermore, the prevailing trade uncertainty has deterred foreign investment, exacerbating the country's economic challenges.



Graph 5.1.1 Ukraine's Trade Balance from Jan 1998 to Dec 2023



Source: State Customs Service of Ukraine.

Graph 5.1.2 Ukraine's foreign trade decline in the second year of the war

5.2 Humanitarian Crisis

The conflict in Ukraine has precipitated a dire humanitarian crisis, with millions of civilians displaced and in urgent need of assistance. The destruction of homes, schools, and essential infrastructure has left many communities in ruins, exacerbating the suffering of vulnerable populations. The displacement of people has been massive, creating a profound strain on resources and infrastructure within Ukraine.

This crisis has stretched Ukraine's already limited resources and infrastructure to their breaking point. Funds that could have been allocated to economic development initiatives are now diverted to providing humanitarian aid and rebuilding efforts. The influx of internally displaced persons has placed additional pressure on social services and support systems, further complicating efforts to address the economic fallout of the conflict (Patel, S. S., & Erickson, T. B. (2022)).

As a result, Ukraine faces a dual challenge of addressing both the immediate humanitarian needs of its people and the long-term economic repercussions of the conflict. Rebuilding homes, restoring essential services, and providing assistance to those affected by the crisis are paramount tasks that require significant financial resources and international support. The humanitarian crisis not only underscores the human cost of the conflict but also hampers Ukraine's ability to recover and rebuild its economy in the aftermath of the devastation.

“According to the UN refugee agency, more than thirteen million people, or nearly a third of Ukraine’s prewar population, have been displaced since the invasion. Of that, more than five million are internally displaced, while over eight million are refugees living in neighboring countries. In comparison, the continent saw some one million refugees during the 2015 wave from Africa and the Middle East, and up to four million refugees during the Yugoslav Wars of the 1990s. As of June 2023, at least 8,983 civilians have died and 15,442 have been injured. These are only confirmed casualties; the actual figures are likely to be considerably higher. They have been concentrated in the eastern Donetsk and Luhansk regions, collectively known as the Donbas, where fighting has been fiercest.”

Meanwhile, U.S. officials say Russian forces have forcibly transferred up to 1.6 million Ukrainian refugees to Russian territory as of July 2022. Rights groups say many were coerced into renouncing their Ukrainian nationality. Forcible transfers are a war crime under international law; Russia characterizes its actions as humanitarian evacuations.

Health officials also remain concerned about the spread of infectious diseases given the deterioration in healthcare infrastructure. They warn that COVID-19 transmission remains high, with only 38 percent of Ukrainians fully vaccinated against the disease. In the Russia-occupied city of Mariupol, officials imposed a quarantine over fears of cholera and dysentery, while the UN human rights mission in Ukraine expressed concern regarding reports that Ukrainian prisoners of war have contracted diseases including hepatitis A and tuberculosis.”(Council on Foreign Relations.2023)



Graph 5.2.1 Number of Ukrainian refugees reported by European countries as of May 2023 Source: Council on Foreign Relations,2023

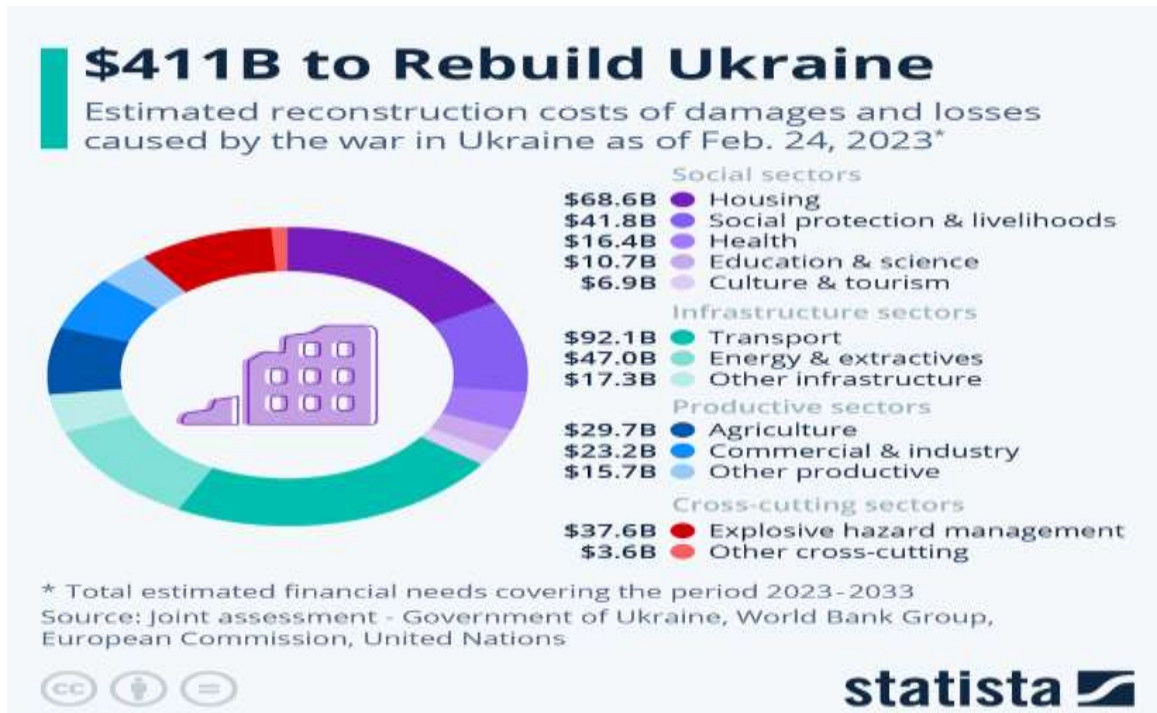
About 2.9 million people, or 35 percent of Ukrainian refugees in Europe, have headed east to Russia. Poland, already home to an estimated 1.3 million Ukrainians (both naturalized citizens and temporary migrant workers), has welcomed the second-largest amount, at more than 1.6 million. Most of the remaining refugees have fled to the Czech Republic, Moldova, Romania, Slovakia, and other European countries, many of which already had sizable populations of Ukrainian nationals prior to the war.

5.3 Infrastructure Damage

The conflict has inflicted extensive damage on Ukraine's infrastructure, including roads, bridges, and energy facilities. Critical infrastructure, such as power plants and water treatment facilities, has been targeted during military operations, disrupting essential services and hindering economic activity.

Russian air strikes have hit healthcare facilities, residential neighborhoods, and power plants, leaving millions of people without electricity during the winter. Ukrainian authorities accuse Russia of destroying the Nova Kakhovka dam, which Russian officials deny. The dam's collapse leaves hundreds of thousands of people without drinking water, threatens the nearby Zaporizhzhia nuclear power plant, and has triggered mass evacuations. Millions more around the country continue to have little to no access to heat, clean water, and other basic supplies. A December 2022 World Bank estimate puts the likely cost of reconstruction at up to \$641 billion (Council on Foreign Relations.2023).

The destruction of infrastructure not only poses immediate challenges in terms of reconstruction but also has long-term implications for Ukraine's economic development. The cost of rebuilding damaged infrastructure is substantial and diverts resources away from other priorities, such as education and healthcare.



Graph 5.3.1 Estimated reconstruction needs to repair damages and losses caused by the war in Ukraine as of Feb. 24, 2023.

6. Global Energy Markets

The conflict in Ukraine has reverberated throughout global energy markets, with significant implications for both natural gas supply and oil prices. This chapter delves into the intricate dynamics of these impacts, examining the disruptions in natural gas supply chains and the fluctuations in oil prices.

6.1 Natural Gas Supply

Natural gas plays a critical role in the energy mix of many countries, and disruptions in its supply have far-reaching consequences. Ukraine is a key transit route for Russian natural gas exports to Europe, with pipelines traversing Ukrainian territory. The conflict has raised concerns about the security and reliability of these transit routes, leading to fears of potential disruptions in natural gas supply to Europe (Chen, S., Bouteska, A., Sharif, T., & Abedin, M. Z. (2023).

As tensions escalate, there is a risk of supply interruptions or disruptions in transit routes, which could have severe repercussions for European energy markets. Countries heavily reliant on Russian natural gas, particularly in Eastern and Central Europe, are particularly vulnerable to supply disruptions, which could lead to energy shortages and price spikes (Cui, L., Yue, S., Nghiem, X. H., & Duan, M. (2023).



Graph 6.1.1 Impact on Global Gas Prices 2022

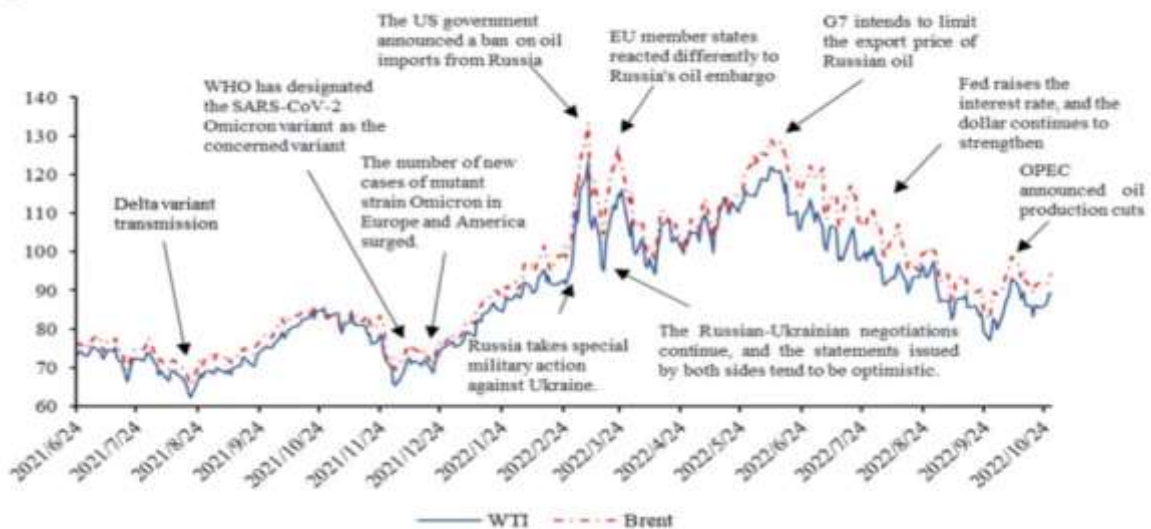
Efforts to diversify energy sources and reduce dependence on Russian natural gas have gained renewed urgency in the wake of the conflict. Investments in alternative energy sources, such as renewable energy and liquefied natural gas (LNG) terminals, are being pursued to enhance energy security and mitigate the impact of supply disruptions.

6.2 Impact on Oil Prices:

The conflict in Ukraine has also contributed to volatility in global oil prices, with implications for both producers and consumers. Geopolitical tensions and the prospect of supply disruptions have led to fluctuations in oil prices (Bagchi, B., & Paul, B. (2023), with prices surging in response to heightened uncertainty and risk.

The study of Zhang, Q., Hu, Y., Jiao, J., & Wang, S. (2024), The impact of Russia–Ukraine war on crude oil prices: an EMC framework “utilizes the daily spot prices of WTI and Brent crude oil for research. The trend chart in Fig. 2 highlights the fluctuations in crude oil prices during the analysis window and marks the factors contributing to these changes.” The line chart below displays the trend of crude oil prices within the analysis window and indicates the reasons for the significant fluctuations in crude oil prices during this period.

Fig. 2: Prices of WTI and Brent crude oil from June 24, 2021 to October 27, 2022.



Graph 6.1.1 Trend of crude oil prices

The conflict has raised concerns about potential disruptions to oil supply routes, particularly those passing through key transit points such as the Black Sea and the Turkish Straits. Any disruption in these transit routes could affect the flow of oil to global markets, leading to supply shortages and price spikes.

Moreover, the conflict has exacerbated existing concerns about the stability of oil-producing regions, such as the Middle East, further contributing to market volatility. Uncertainty surrounding the conflict's duration and outcome continues to influence investor sentiment and drive fluctuations in oil prices.

7. Financial Markets and Currency Fluctuations

The conflict in Ukraine has not only affected physical commodities like natural gas and oil but has also left a significant imprint on financial markets, resulting in exchange rate volatility and capital flight. This chapter delves into the intricate dynamics of these impacts, analyzing the fluctuations in exchange rates and the phenomenon of capital flight.

7.1 Exchange Rate Volatility

The uncertainty surrounding the conflict in Ukraine has led to increased volatility in currency markets, with significant fluctuations observed in exchange rates. Geopolitical tensions and economic uncertainties have prompted investors to reassess their exposure to currencies perceived as risky, leading to sudden shifts in demand and supply (Sokhanvar, A., Çiftçioğlu, S., & Lee, C. C. (2023).

The Ukrainian hryvnia, in particular, has been subject to heightened volatility, reflecting the country's economic and political instability. Fluctuations in the value of the hryvnia have had wide-ranging implications for businesses and consumers, affecting import costs, inflationary pressures, and overall economic stability.

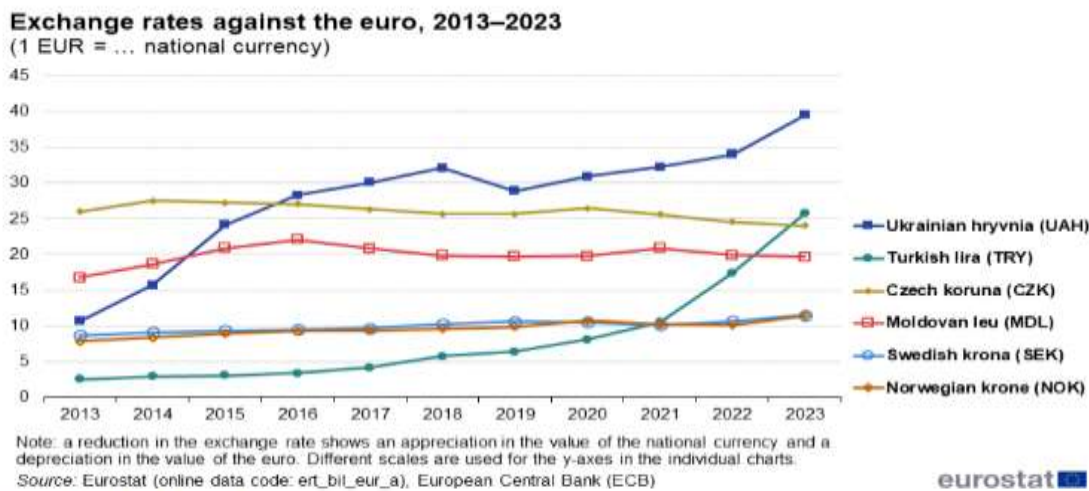


Figure 1c: Exchange rates against the euro, 2013–2023

(1 EUR = ... national currency)

Source: Eurostat (ert_bil_eur_a), European Central Bank (ECB)

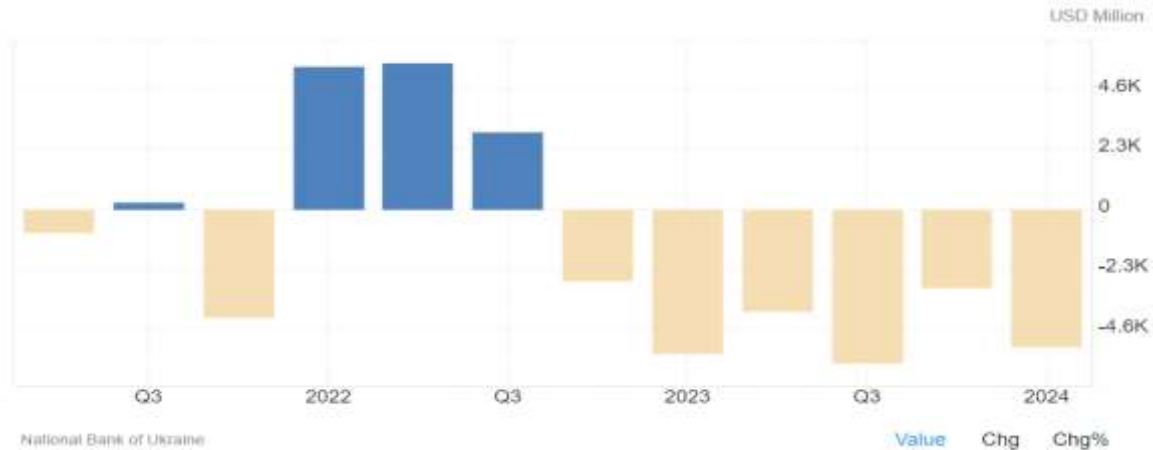
Graph 7.1.1 Ukrainian hryvnia Exchange rates against the Euro 2013-2023

Moreover, neighbouring currencies and currencies of countries closely tied to Ukraine, such as those in Eastern Europe, have also experienced volatility as investors react to developments in the region. The ripple effects of exchange rate fluctuations extend beyond Ukraine's borders, affecting regional and global currency markets.

7.2 Capital Flight

The conflict in Ukraine has prompted concerns about capital flight, as investors seek to mitigate risks and preserve their assets in the face of uncertainty. Capital flight refers to the rapid outflow of funds from a country, often driven by fears of economic instability, political unrest, or currency depreciation (Kant, C. (2002))

Ukraine has experienced significant capital flight in recent years, exacerbated by the conflict and geopolitical tensions. Investors, both domestic and foreign, have withdrawn funds from Ukrainian assets, seeking safer havens for their capital. This capital flight undermines Ukraine's economic stability, reducing investment and exacerbating liquidity pressures.



Graph 7.2.1 Capital Flows Ukraine 2022-2024

Furthermore, capital flight can have long-term consequences for Ukraine's economy, including reduced access to financing, currency depreciation, and increased borrowing costs. Addressing the underlying drivers of capital flight, including political instability and economic uncertainty, is essential for restoring confidence in Ukraine's financial markets and fostering sustainable economic growth.

8. Global Supply Chains

The conflict in Ukraine has rippled through global supply chains, triggering disruptions in key industries and prompting shifts in manufacturing and sourcing strategies. This chapter delves into the profound impacts of the conflict on supply chains, analyzing the disruptions in key industries and the resultant changes in manufacturing and sourcing patterns.

8.1 Disruption in Key Industries

The conflict in Ukraine has disrupted supply chains across various industries, with sectors such as manufacturing, agriculture, and technology particularly affected. The reliance on Ukrainian exports, especially in industries like steel and agriculture, has made global supply chains vulnerable to disruptions emanating from the conflict (Cui, L., Yue, S., Nghiem, X. H., & Duan, M. (2023).

For example, Ukraine is a major exporter of steel, with its steel industry playing a crucial role in global supply chains. Disruptions in Ukrainian steel production due to the conflict have reverberated throughout downstream industries, affecting manufacturing operations and construction projects worldwide.



Fig 8.1.1 Disruption in steelwork

Similarly, disruptions in agricultural supply chains have led to shortages of key commodities, impacting food prices and exacerbating global food insecurity. Ukraine is a significant exporter of grains, and disruptions in agricultural production have had ripple effects on global food markets, contributing to price volatility and supply uncertainties.

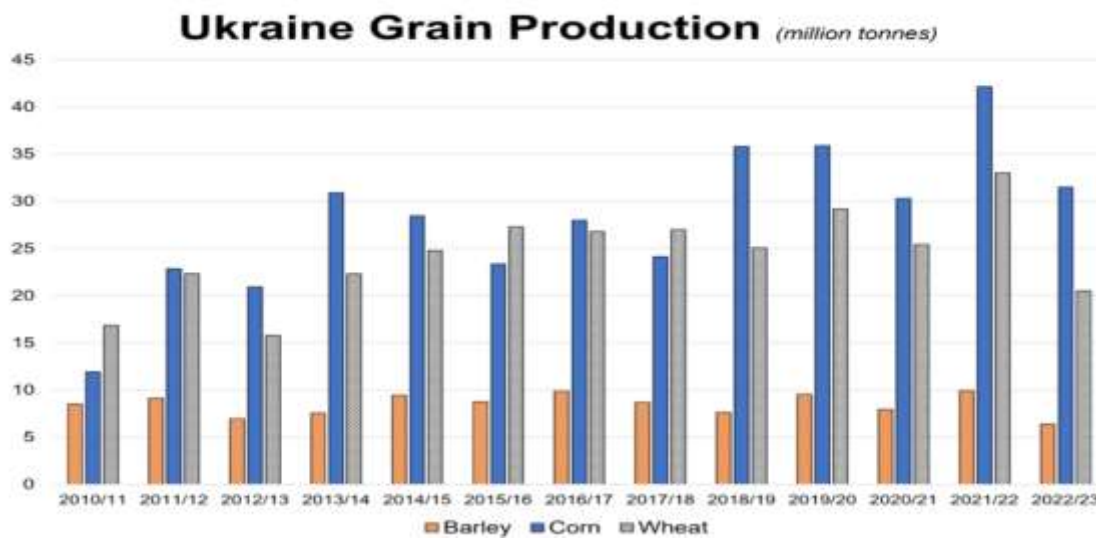


Fig 8.1.2 Disruption in agriculture

8.2 Shifts in Manufacturing and Sourcing

The conflict in Ukraine has prompted shifts in manufacturing and sourcing strategies as companies seek to mitigate risks and adapt to changing geopolitical dynamics. The reliance on Ukrainian inputs and production facilities has prompted many companies to diversify their supplier base and reduce dependence on Ukrainian sources.



Fig 8.2.1 Russia-Ukraine War Impact on Manufacturing

For example, companies in the technology sector that rely on Ukrainian software developers or semiconductor manufacturers have sought alternative sources to minimize disruptions. Similarly, automotive manufacturers dependent on Ukrainian steel have explored sourcing options from other countries to ensure a steady supply of raw materials.

Moreover, the conflict has accelerated broader trends towards regionalization and localization of supply chains, with companies seeking to reduce reliance on global suppliers and build more resilient and agile supply networks. This shift towards regional sourcing and production has implications for global trade patterns and economic integration.

In summary, the conflict in Ukraine has upended global supply chains, causing disruptions in key industries and prompting shifts in manufacturing and sourcing strategies. The impacts of these disruptions are far-reaching, affecting businesses, consumers, and economies worldwide, and underscore the importance of building resilient and adaptable supply chains in an increasingly uncertain geopolitical landscape.

9. Regional Stability and Geopolitical Implications

The conflict in Ukraine has not only disrupted the nation's stability but has also sent shockwaves across the broader European region, influencing the dynamics within the European Union (EU) and the North Atlantic Treaty Organization (NATO). This chapter delves into the implications of the conflict on regional stability and explores the geopolitical ramifications for the EU and NATO.

9.1 Impact on European Union

The conflict in Ukraine has had significant implications for the European Union, both politically and economically. Geopolitical tensions and security concerns stemming from the conflict have strained relations between the EU and Russia, leading to a reassessment of the EU's approach to its eastern neighborhood.

	Short-term effects (1-2 years)	Long-term effects (3-5 years)
Trade and foreign direct investment	Collapse of exports to Russia. Reduced capital for EU firms.	Restructuring of supply chains and foreign direct investment flows away from Russia.
Refugees and reconstruction	Large inflows of refugees to EU states lead to additional fiscal costs.	No lasting effect. Most refugees are likely to return to Ukraine or enter the EU workforce. Contribution to the rebuilding of Ukraine.
Defense	Added costs of weapons and military support for Ukraine weigh on defense budgets.	Increases to EU defense budgets.
Efficiency	No short-term effect.	EU firms to reconsider their reliance on extended supply chains and just-in-time delivery schemes, causing further deglobalization and reduced efficiency.
Food	Higher food prices as Ukrainian and Russian crop yields fall, reducing global supply and damaging fragile developing economies.	No lasting effect.
Energy	Higher energy bills. Reduced efficiency from temporary reliance on outdated energy sources. Possible supply disruptions. Added costs from alternative sourcing.	New energy sourcing. More energy integration at the EU level. Accelerated transition to renewables.
Uncertainty	More precautionary saving.	Possible drive towards closer EU policy integration.



Source: Adapted from Olivier Blanchard and Jean Pisani-Ferry's Policy Brief, *Fiscal support and monetary vigilance: Economic policy implications of the Russia-Ukraine war for the European Union*.

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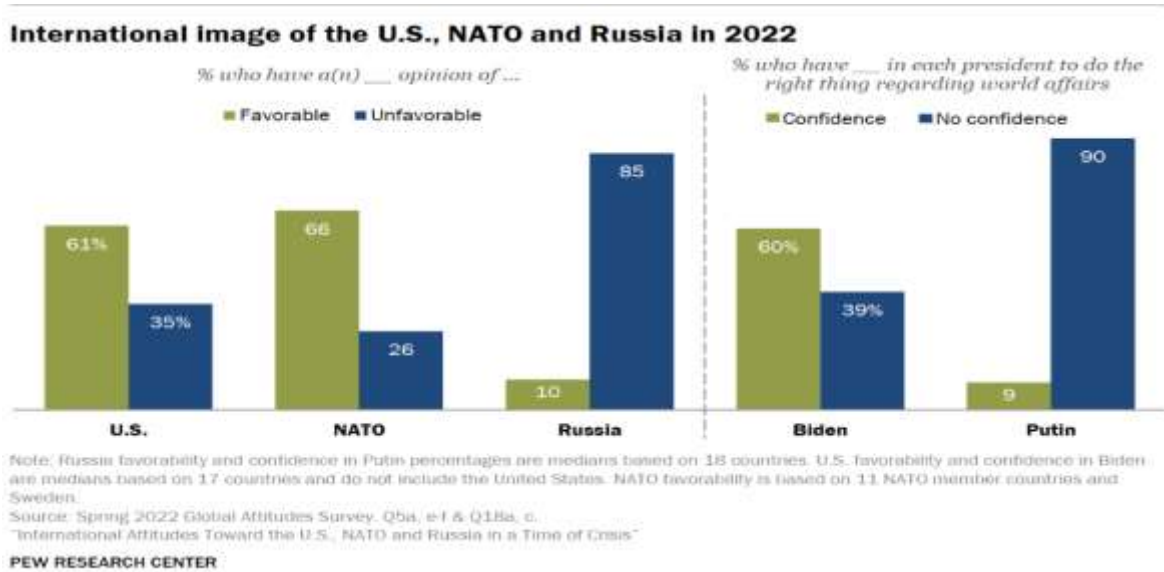
Fig 9.1.1 Short and long-term implications of the Russia-Ukraine war for the European Union

Moreover, the conflict has raised questions about energy security within the EU, as the bloc grapples with dependencies on Russian natural gas and the vulnerability of energy supply routes passing through Ukraine. Efforts to diversify energy sources and enhance energy security have gained renewed urgency in the wake of the conflict, shaping the EU's energy policies and strategies.

Furthermore, the conflict has underscored the importance of unity and solidarity within the EU, as member states navigate divergent interests and responses to the crisis. Coordination and cooperation among EU member states are crucial for effectively addressing the economic, humanitarian, and security challenges posed by the conflict and safeguarding the EU's interests and values.

9.2 NATO and Security Concerns

The conflict in Ukraine has heightened security concerns within NATO and underscored the importance of collective defense and deterrence in the face of emerging security threats (Lepskiy, M., & Lepska, N. (2023)). NATO member states, particularly those in Eastern Europe, have expressed concerns about Russian aggression and expansionism, prompting calls for enhanced defense capabilities and deterrence measures.



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Fig. 9.2.1 International image of the U.S., NATO, and Russia in 2022

The conflict has also raised questions about NATO's role and relevance in the 21st-century security landscape, as the alliance grapples with evolving security challenges and geopolitical uncertainties. Efforts to strengthen NATO's deterrence posture and adapt to emerging threats, including hybrid warfare and cyber-attacks, have gained traction in the wake of the conflict.

Moreover, the conflict has highlighted the need for NATO to engage in dialogue and cooperation with partners and stakeholders in the wider region, including Ukraine and other countries in Eastern Europe. Building partnerships and fostering security cooperation are essential for enhancing stability and resilience in the face of common security challenges.

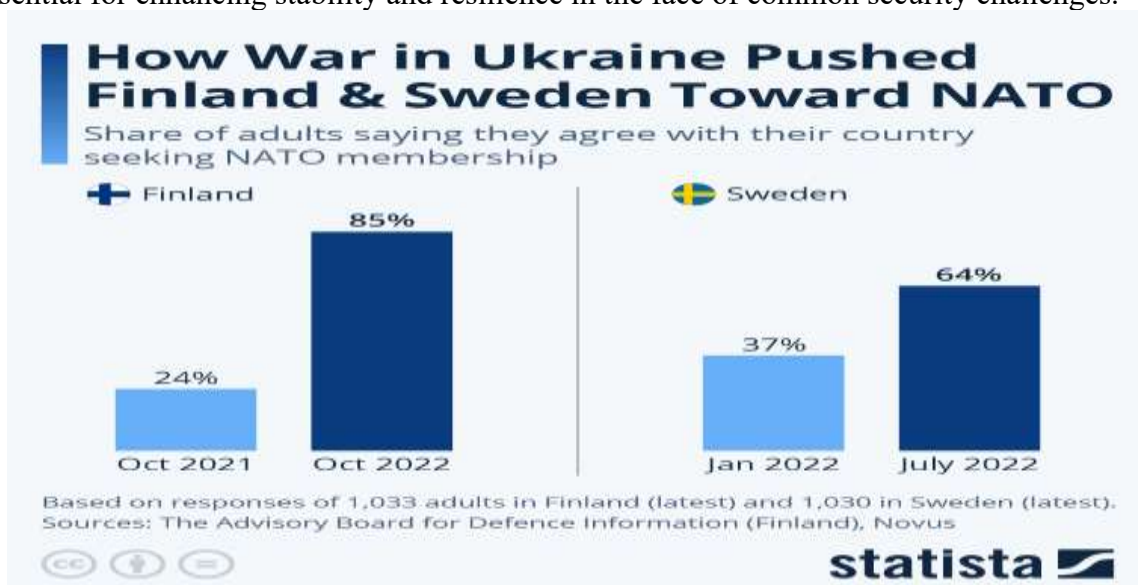


Fig. 9.2.2 Russia-Ukraine War impact on NATO

In summary, the conflict in Ukraine has profound implications for regional stability and geopolitical dynamics within the European region. The EU and NATO are confronted with complex challenges as they seek to navigate the fallout of the conflict and respond effectively to emerging security threats, underscoring the importance of unity, cooperation, and resilience in addressing shared challenges and safeguarding common interests.

10. International Response and Sanctions

The conflict in Ukraine has prompted a swift and multifaceted international response, with economic sanctions and trade restrictions emerging as key tools in the effort to exert pressure on involved parties and address the crisis. This chapter explores the international community's response to the conflict, focusing on the imposition of economic sanctions and trade restrictions.

Who sanctioned Russia, by country

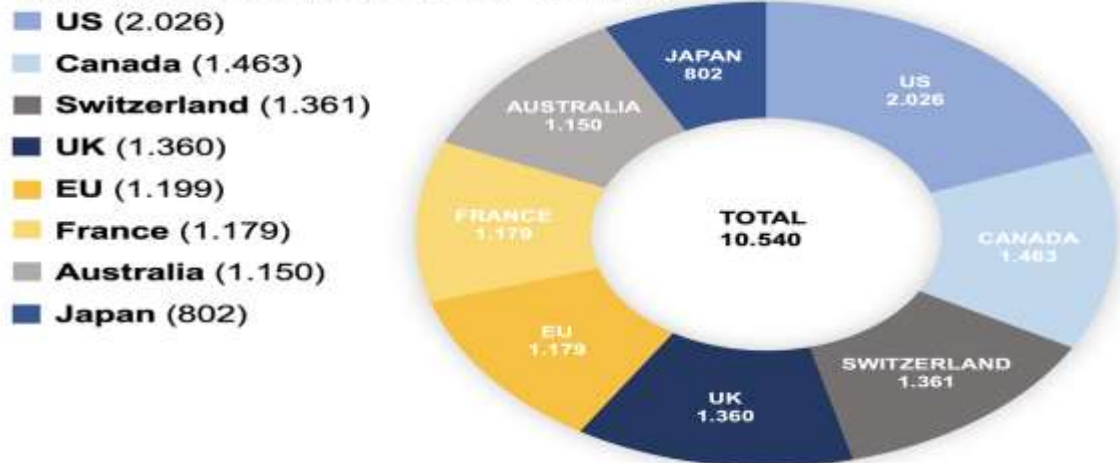


Fig 10.1 Sanctions against Russia by country

10.1 Economic Sanctions

Economic sanctions have emerged as a primary instrument of the international community's response to the conflict in Ukraine. These sanctions are aimed at imposing economic costs on involved parties, deterring further aggression, and promoting compliance with international norms and principles.

The imposition of economic sanctions has targeted individuals, entities, and sectors perceived to be complicit in the conflict or supportive of destabilizing actions. Sanctions have included asset freezes, travel bans, and restrictions on financial transactions, effectively isolating targeted individuals and entities from the global financial system.

Moreover, sanctions have targeted key sectors of the Russian economy, including finance, energy, and defense, in an effort to inflict economic pain and compel a change in behavior. The effectiveness of economic sanctions, however, remains subject to debate, with questions raised about their impact on targeted economies, unintended consequences, and the ability of sanctioned entities to adapt and circumvent restrictions.

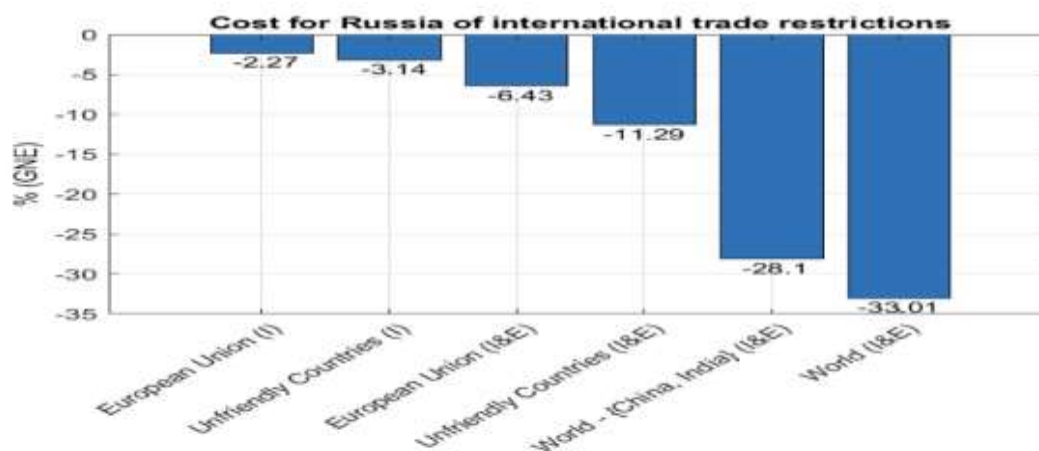


Fig 10.1.1 Sanctions against Russia by EU

10.2 Trade Restrictions

In addition to economic sanctions, trade restrictions have been imposed as part of the international response to the conflict in Ukraine. These trade restrictions are aimed at limiting the flow of goods and services that could be used to support the conflict or benefit involved parties.

Trade restrictions have targeted imports and exports related to industries deemed to be linked to the conflict, such as arms and military equipment. Moreover, restrictions on dual-use technologies and strategic goods have been imposed to prevent their diversion for military purposes.



Notes: This figure presents the cost for Russia of international trade restrictions under six different scenarios as a percentage of Gross National Expenditure (GNE). (I) trade restrictions are for imports only; (I&E) trade restrictions are for both imports and exports. For example, World - [China, India] (I&E) indicates that trade restrictions are taken at the world level excluding China and India and concern both imports and exports.

Fig 10.2.1 Costs for Russia of international trade restrictions (as a percentage of GNE)

Source: Vox EU CERP (2022)

Furthermore, trade restrictions have affected the flow of goods and services through key transit routes, such as ports and border crossings, in an effort to disrupt logistical support for the conflict. These restrictions have led to disruptions in trade flows, increased transportation costs, and delays in delivery times, affecting businesses and consumers alike. In summary, the international response to the conflict in Ukraine has included the imposition of economic sanctions and trade restrictions as key measures to exert pressure on involved parties and address the crisis. The effectiveness of these measures remains subject to ongoing

evaluation, with debates surrounding their impact, implementation, and potential for achieving desired outcomes.

11. Economic Reconstruction and Recovery Efforts

The aftermath of the conflict in Ukraine presents daunting challenges, but also opportunities for economic reconstruction and recovery. This chapter examines the role of international aid and investment opportunities in facilitating the rebuilding of Ukraine's economy and fostering long-term growth and stability.

11.1 Role of International Aid

International aid plays a crucial role in supporting the reconstruction and recovery efforts in post-conflict Ukraine. Humanitarian aid, provided by international organizations and donor countries, addresses the immediate needs of affected populations, including food, shelter, and medical assistance.



"Ukraine can count on the EU's full support. We stand ready to take a leading role in the international reconstruction efforts to help rebuild a democratic and prosperous Ukraine. This means investments will go hand in hand with reforms that will support Ukraine in pursuing its European path."

Ursula von der Leyen, President of the European Commission

Moreover, development aid focuses on rebuilding infrastructure, restoring essential services, and promoting economic recovery. This aid may come in the form of grants, concessional loans, or technical assistance, aimed at rebuilding damaged infrastructure, revitalizing key industries, and fostering sustainable development.

"Since the start of Russia's war of aggression, the EU and its Member States and the European financial institutions, in a Team Europe approach, are making available €98.5 billion in financial, humanitarian, emergency, budget and military support

- €49.4 billion to support its overall economic, social, and financial resilience.
- €32 billion in military assistance
- up to €17 billion made available to Member States to cater for the needs of people fleeing the war

The EU is also promoting green reforms, as well as green reconstruction and modernization of Ukraine bilaterally, within the Eastern Partnership and the Energy Community." (European Commission. 2023)

"The World Bank Group, the European Commission, and the United Nations currently estimates that as of 31 December 2023 the total cost of reconstruction and recovery in Ukraine is \$486 billion over the next decade, up from \$411 billion estimated one year ago.

In 2024 alone, Ukrainian authorities estimate the country will need around around \$15 billion for immediate reconstruction and recovery priorities at both the national and community level, with a particular focus on supporting and mobilizing the private sector alongside restoration of housing, soft infrastructure and services, energy, and transport. The RDNA3 highlights that while some \$5.5 billion of this funding has been secured, from both Ukraine's international partners and its own resources, about \$9.5 billion is currently unfunded."

(The World Bank.2024)

The coordination and effectiveness of international aid efforts are critical for maximizing impact and ensuring that resources are directed towards priority areas. Collaboration between governments, international organizations, and non-governmental organizations (NGOs) is essential for leveraging resources, sharing expertise, and addressing the multifaceted challenges facing post-conflict Ukraine.

11.2 Investment Opportunities

Despite the devastation wrought by the conflict, Ukraine offers significant investment opportunities in various sectors, including infrastructure, energy, agriculture, and technology. The reconstruction and modernization of infrastructure, such as roads, bridges, and utilities, present lucrative opportunities for domestic and foreign investors.

“The EU has just set up the Ukraine Investment Framework, the financial arm and an integral component of the €50 billion Ukraine Facility to incentivise public and private investments for the recovery and reconstruction of Ukraine.

At the inaugural meeting of the Steering Board of the Ukraine Investment Framework, on 17 April, EU Member States adopted the rules of procedure and the Strategic Orientations for the Ukraine Investment Framework, kick-starting work on the first investment programmes, expected to be signed at the Ukraine Recovery Conference on 11 and 12 June in Berlin. The Board provides strategic and operational guidance and ensures its alignment with the Ukraine Plan, Ukraine's strategy for reforms and investments in the next four years, which has been positively assessed by the Commission this week.

The Ukraine Investment Framework is equipped with a financial package totalling €9.3 billion, with €7.8 billion for loan guarantees and €1.51 billion for blended finance. The Ukraine Investment Framework is expected to mobilise up to €40 billion in public and private investments over the next years.”

(European Commission. 2024)



Fig 10.2.1 Ukraine's Foreign Direct Investment from March 2023 to Feb 2024

Moreover, Ukraine's abundant natural resources, fertile agricultural land, and skilled workforce provide a solid foundation for investment in agriculture and agribusiness. Opportunities also exist in the technology sector, with Ukraine's vibrant IT industry and highly educated workforce attracting investment in software development, cybersecurity, and innovation.

Foreign direct investment (FDI) plays a crucial role in driving economic growth and creating employment opportunities in post-conflict Ukraine. Governments can incentivize FDI through measures such as tax incentives, regulatory reforms, and investment promotion initiatives, aimed at attracting capital and expertise to support the country's recovery efforts.

12. Conclusion

The conflict in Ukraine has unleashed a cascade of economic, political, and humanitarian consequences that have reverberated across the globe. This comprehensive analysis has shed light on the multifaceted impacts of the conflict, examining its effects on trade disruption, energy markets, financial systems, supply chains, regional stability, and international relations.

Throughout this study, several key findings have emerged:

- Firstly, the conflict has disrupted global supply chains, causing ripple effects across various industries and prompting shifts in manufacturing and sourcing strategies. Disruptions in key industries and logistical networks have highlighted the vulnerability of interconnected global supply chains to geopolitical tensions and conflict.
- Secondly, the conflict has had profound implications for regional stability and security, particularly within the European Union and NATO. Geopolitical tensions and security concerns have prompted a reassessment of defense capabilities, energy security, and diplomatic relations, shaping the strategic landscape of the European region.
- Thirdly, the conflict has underscored the importance of international cooperation and collective action in addressing shared challenges. Efforts to mitigate the economic, humanitarian, and security impacts of the conflict require coordinated responses from governments, international organizations, and civil society actors.

Moving forward, addressing the challenges posed by the conflict in Ukraine will require sustained commitment, collaboration, and resilience. Efforts to promote economic reconstruction, foster regional stability, and uphold international norms and principles are essential for building a peaceful and prosperous future for Ukraine and the wider European region.

In conclusion, the conflict in Ukraine serves as a stark reminder of the fragility of peace and the interconnectedness of the global community. By learning from the lessons of the past and working together towards common goals, we can overcome the challenges posed by the conflict and build a more secure, prosperous, and peaceful world for future generations.

13. References

- Afesorbor, S. K. (2019). The impact of economic sanctions on international trade: How do threatened sanctions compare with imposed sanctions?. *European Journal of Political Economy*, 56, 11-26.
- Akter, S., Debnath, B., & Bari, A. M. (2022). A grey decision-making trial and evaluation laboratory approach for evaluating the disruption risk factors in the Emergency Life-Saving Drugs supply chains. *Healthcare Analytics*, 2, 100120.
- Allam, Z., Bibri, S. E., & Sharpe, S. A. (2022). The rising impacts of the COVID-19 pandemic and the Russia–Ukraine war: energy transition, climate justice, global inequality, and supply chain disruption. *Resources*, 11(11), 99.
- Bagchi, B., & Paul, B. (2023). Effects of crude oil price shocks on stock markets and currency exchange rates in the context of Russia-Ukraine conflict: Evidence from G7 countries. *Journal of Risk and Financial Management*, 16(2), 64.
- Ben Hassen, T., & El Bilali, H. (2022). Impacts of the Russia-Ukraine war on global food security: towards more sustainable and resilient food systems? *Foods*, 11(15), 2301.
- Bhagwati, J. N. (2014). *The world trading system at risk* (Vol. 1142). Princeton University Press.
- Brander, J. A. (1995). Strategic trade policy. *Handbook of international economics*, 3, 1395-1455.
- Chen, S., Bouteska, A., Sharif, T., & Abedin, M. Z. (2023). The Russia–Ukraine war and energy market volatility: A novel application of the volatility ratio in the context of natural gas. *Resources Policy*, 85, 103792.

- Collier, P., & Hoeffler, A. (2007). Civil war. *Handbook of defense economics*, 2, 711-739.
- Costinot, A., & Donaldson, D. (2012). Ricardo's theory of comparative advantage: old idea, new evidence. *American Economic Review*, 102(3), 453-458.
- Council on Foreign Relations.2023, <https://www.cfr.org/in-brief/ukraine-humanitarian-crisis-refugees-aid>
- Cui, L., Yue, S., Nghiem, X. H., & Duan, M. (2023). Exploring the risk and economic vulnerability of global energy supply chain interruption in the context of Russo-Ukrainian war. *Resources Policy*, 81, 103373.
- Cui, L., Yue, S., Nghiem, X. H., & Duan, M. (2023). Exploring the risk and economic vulnerability of global energy supply chain interruption in the context of Russo-Ukrainian war. *Resources Policy*, 81, 103373.
- Dutt, A. K. (2006). Aggregate demand, aggregate supply and economic growth. *International review of applied economics*, 20(3), 319-336.
- European Commission (2023) <https://www.worldbank.org/en/news/press-release/2024/02/15/updated-ukraine-recovery-and-reconstruction-needs-assessment-released>
- European Commission (2024) https://neighbourhood-enlargement.ec.europa.eu/news/eu-sets-investment-framework-under-its-ukraine-facility-boost-investments-recovery-and-2024-04-18_en
- Frenkel, J. A., & Razin, A. (1987). The Mundell-Fleming model a quarter century later: a unified exposition. *Staff Papers*, 34(4), 567-620.
- Gale, D. (1955). The law of supply and demand. *Mathematica scandinavica*, 155-169.
- Grant, T. D. (2015). Annexation of crimea. *American journal of international law*, 109(1), 68-95.
- Ilzetzki, E., Reinhart, C. M., & Rogoff, K. S. (2022). Rethinking exchange rate regimes. In *Handbook of international economics* (Vol. 6, pp. 91-145). Elsevier.
- Johnston, R. (2022). Supply of critical minerals amid the Russia-Ukraine war and possible sanctions. *Columbia Center on Global Energy Policy*.
- Kant, C. (2002). What is capital flight? *World Economy*, 25(3), 341-358.
- Lane, D. (2008). The Orange Revolution: 'People's Revolution' or Revolutionary Coup?. *The British Journal of Politics and International Relations*, 10(4), 525-549.
- Lepskiy, M., & Lepska, N. (2023). The war in Ukraine and its challenge to NATO: peacekeeping to peace engineering. *American behavioral scientist*, 67(3), 402-425.
- Liu, L., Wang, W., Yan, X., Shen, M., & Chen, H. (2023). The cascade influence of grain trade shocks on countries in the context of the Russia-Ukraine conflict. *Humanities and Social Sciences Communications*, 10(1).
- Mbah, R. E., & Wasum, D. F. (2022). Russian-Ukraine 2022 War: A review of the economic impact of Russian-Ukraine crisis on the USA, UK, Canada, and Europe. *Advances in Social Sciences Research Journal*, 9(3), 144-153.
- Murdoch, J. C., & Sandler, T. (2002). Economic growth, civil wars, and spatial spillovers. *Journal of conflict resolution*, 46(1), 91-110.
- Mussa, M. L. (1984). The theory of exchange rate determination. In *Exchange rate theory and practice* (pp. 13-78). University of Chicago Press.
- Nzelibe, J. (2005). The credibility imperative: the political dynamics of retaliation in the world trade organization's dispute resolution mechanism. *Theoretical Inquiries in Law*, 6(1), 215-254.
- Orhan, E. (2022). The effects of the Russia-Ukraine war on global trade. *Journal of International Trade, Logistics and Law*, 8(1), 141-146.
- Patel, S. S., & Erickson, T. B. (2022). The new humanitarian crisis in Ukraine: Coping with the public health impact of hybrid warfare, mass migration, and mental health trauma. *Disaster medicine and public health preparedness*, 16(6), 2231-2232.

- Peterson Institute for International Economics (2022). <https://www.piie.com/research/piie-charts/war-ukraine-likely-worsen-europes-economic-problems>
- Poon, S. H., & Granger, C. W. J. (2003). Forecasting volatility in financial markets: A review. *Journal of economic literature*, 41(2), 478-539.
- Qineta, A., Rajcaniova, M., & Matejkova, E. (2009). The competitiveness and comparative advantage of the Slovak and the EU agri-food trade with Russia and Ukraine. *Agricultural Economics*, 55(8), 375-383.
- Radner, R. (1974). Market equilibrium and uncertainty: concepts and problems. *Frontiers of quantitative economics*, 2, 43-105.
- Smales, L. A. (2021). Geopolitical risk and volatility spillovers in oil and stock markets. *The Quarterly Review of Economics and Finance*, 80, 358-366.
- Sokhanvar, A., Çiftçioglu, S., & Lee, C. C. (2023). The effect of energy price shocks on commodity currencies during the war in Ukraine. *Resources Policy*, 82, 103571.
- The World Bank (2024). <https://www.worldbank.org/en/news/press-release/2024/02/15/updated-ukraine-recovery-and-reconstruction-needs-assessment-released>
- Vox EU CERP (2022). <https://cepr.org/voxeu/columns/strength-unity-economic-cost-trade-restrictions-russia>
- Yen, G., & Lee, C. F. (2008). Efficient market hypothesis (EMH): past, present and future. *Review of Pacific Basin Financial Markets and Policies*, 11(02), 305-329.
- Zelinska, O. (2017). Ukrainian Euromaidan protest: Dynamics, causes, and aftermath. *Sociology Compass*, 11(9), e12502.
- Zhang, Q., Hu, Y., Jiao, J., & Wang, S. (2024). The impact of Russia–Ukraine war on crude oil prices: an EMC framework. *Humanities and Social Sciences Communications*, 11(1), 1-12.
- Zhang, Q., Yang, K., Hu, Y., Jiao, J., & Wang, S. (2023). Unveiling the impact of geopolitical conflict on oil prices: A case study of the Russia-Ukraine War and its channels. *Energy Economics*, 126, 106956.

Ottoman Cultural Entrepreneurship in Thessaloniki: Case Study of the Kemal Atatürk Museum

Abstract:

The Kemal Atatürk Museum in Thessaloniki plays a key role in the local development of the city, especially through its influence on tourism and the wider economy. As the birthplace of Mustafa Kemal Atatürk, the founder of modern Turkey, the museum is an iconic destination for both Turkish and international visitors. This cultural significance, combined with the wider historical appeal of Thessaloniki, positions the museum as a key driver of cultural entrepreneurship and development in the city. This paper examines the role of the Kemal Atatürk Museum in the local development of Thessaloniki and explores examples of cultural entrepreneurship related to the museum.

Keywords: Kemal Atatürk Museum, Thessaloniki, Ottoman cultural entrepreneurship, Cultural heritage, Local development, Ottoman heritage, Ottoman cultural entrepreneurship

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1. Introduction

Thessaloniki's strategic location and rich cultural heritage have historically positioned it as a crossroads of cultures, combining influences from the Byzantine, Ottoman and modern Greek periods. Today, the city is recognized for its vibrant cultural scene, attracting tourists from all over the world. The Kemal Atatürk Museum plays a key role in this context, attracting thousands of Turkish visitors every year, contributing significantly to tourism and the local economy of the city. (Mazower, 2006a)(Mazower, 2006b)

The Kemal Atatürk Museum is an emblem of the intertwined history of Greece and Turkey, highlighting the relationship between Mustafa Kemal Atatürk, the founder of modern Turkey, and his hometown. As one of the few surviving remnants of Thessaloniki's Ottoman past, the museum not only preserves Atatürk's legacy, but also serves as a symbolic bridge between the two nations. (Agtzidis, 2015) (Faroghi, 2004)

2. Historical and Cultural Context of the Kemal Ataturk Museum

Mustafa Kemal Atatürk was born in Thessaloniki in 1881, at a time when the city was part of the Ottoman Empire. Thessaloniki was a vibrant and multicultural city, home to a diverse population of Greeks, Turks, Jews and others, a fact that deeply influenced Atatürk's upbringing. This environment played an important role in shaping his early political and social views, ultimately contributing to his vision of reforming and modernizing Turkey (Hlepas, 2021). According to Amygdalou (2014), the cosmopolitan character of Thessaloniki exposed Atatürk to various ideas and ideologies, which he later translated into his political philosophy that guided the establishment of the secular Turkish Republic (Alexandrou, 2002)

The house where Atatürk was born was a humble Ottoman-style residence in the Upper City of Thessaloniki. It was in this house that he spent his childhood before leaving for military school. This early phase of his life was critical, as the atmosphere of cultural pluralism and political activism in Thessaloniki during the Ottoman period influenced his thoughts on nationalism and governance (Walton, 2016). His connection to Thessaloniki remained an important part of his identity, which is why his hometown has been preserved as a place of historical and cultural significance (Hatzisiosif, 2003).

The house was turned into a museum in 1935, following an agreement between the Greek and Turkish governments. Its establishment was intended to honor the life and legacy of Atatürk, who had by then become a symbol of modernization and national unity for Turkey (Fountouki, 2015). The museum was inaugurated with objects, documents and photographs depicting Atatürk's life, his early years in Thessaloniki and his later achievements as a statesman (Gkika, 2010).

In the mid-20th century, the museum experienced an increase in Turkish visitors, reflecting the impact and interest in Atatürk's cultural heritage both at home and abroad (Stuckey, 2019). In 2012, the museum underwent a major renovation, jointly funded by the Greek and Turkish governments, further enhancing its historical and cultural appeal. This renovation updated the museum with modern exhibits, including multimedia presentations that contextualized Atatürk's early life and the importance of the city of Thessaloniki as part of the Ottoman Empire (Vakalopoulos, 1990, Vakalopoulos,1983) The renovation also aimed to preserve the original Ottoman architecture of the building, while enhancing the visitor experience through educational programs.

3. The role of the Kemal Ataturk Museum in the local development of Thessaloniki

The historical significance of the museum resonates with Turkish tourists, many of whom consider a visit to the museum/home as a form of cultural pilgrimage. Atatürk's birthplace has deep symbolic value for Turkish citizens, making Thessaloniki a prominent destination for heritage tourism. (Kavtantzoglou, 2012) A significant number of Turkish nationals travel to Thessaloniki annually, especially to visit the museum and other sites associated with the

history of the Ottoman Empire in the region; the museum represents a connection to the national history and heritage of the founder of their nation (Katsoni et al., 2016).

In addition to Turkish visitors, the museum also attracts a wider international audience interested in the interconnected history of Greece and Turkey, as well as the wider historical significance of the Ottoman Empire. Scholars, historians and tourists with an interest in Atatürk's life and the socio-political dynamics of the region often visit the museum. As a result, the museum has become a cornerstone of cultural tourism in Thessaloniki, attracting visitors not only from Turkey but also from different parts of the world (Tzanelli, 2012),(Paparrigopoulou, 1998).

The influx of visitors to the Kemal Atatürk Museum contributes significantly to the development of the local tourism sector of Thessaloniki. The presence of the museum helps to enhance the attractiveness of the city as a cultural destination, complementing other historical attractions such as the White Tower and the Rotunda. As more and more tourists include the museum in their itineraries, this has created a multiplier effect on the entire local economy, especially in sectors such as accommodation, catering and transport (Fotiadis, 2016).

One notable impact of the museum's popularity is the increase in demand for accommodation in Thessaloniki. With the museum acting as a major attraction for Turkish and international tourists, local hotels and guesthouses have experienced higher occupancy rates, especially during peak tourist periods. According to the Thessaloniki Hotel Association, the number of Turkish visitors to the city increased significantly after the renovation of the museum in 2013, with many tourists staying for long periods of time to explore the wider cultural and historical landscape of the city (Fotiadis, 2016). This increase in visitors also increases the demand for other hospitality services, such as restaurants, cafes and guided tours, which benefit from the museum's presence.

The wider economic impact is not limited to immediate business benefits, but also includes long-term benefits for the infrastructure and development of Thessaloniki. The municipality has invested in improving the areas surrounding the museum, including improving public transport and pedestrian access to accommodate the increasing number of visitors. These improvements not only benefit tourists, but also improve the quality of life for local residents, creating a more vibrant and economically sustainable urban environment (Katsoni et al., 2016).(İnalçık, 1994)

4.Examples of Cultural Entrepreneurship in Thessaloniki

4.1.Cultural Tours and Partnerships

One of the most important examples of cultural entrepreneurship in Thessaloniki is the rise of guided tours that incorporate the Kemal Atatürk Museum into broader cultural experiences. Local tour operators have recognized the importance of the museum as part of the city's multi-ethnic heritage and have included it in itineraries that highlight Thessaloniki's Ottoman past and its contemporary cultural renaissance. These tours often include visits to the Old Town the Ottoman baths and various Byzantine monuments, offering a comprehensive view of the city's multi-layered history.

These tours are particularly popular among Turkish tourists, many of whom visit Thessaloniki to explore the birthplace of Atatürk. For these visitors, the Kemal Atatürk Museum functions not only as a historical site but also as a cultural bridge between Greece and Turkey. The influx of Turkish tourists has boosted cooperation between Thessaloniki-based organizations and Turkish cultural institutions. For example, there are initiatives, where Greek and Turkish tourism boards are collaborating on cross-border cultural tourism projects, aiming to improve the visitor experience for Turkish nationals, while promoting Thessaloniki as a cultural destination (Manola, 2023a)

Such initiatives not only benefit the local economy, but also promote greater understanding and appreciation of the shared history between the two nations. This approach

to cultural entrepreneurship leverages the military location and historical significance of Thessaloniki to create a sustainable tourism model. According to Katsoni et al. (2016), "cultural entrepreneurship initiatives, such as guided tours that emphasize the common cultural heritage between Greece and Turkey, have grown in popularity, adding to the city's cultural economy". These tours also demonstrate Thessaloniki's efforts to position itself as a cultural hub in Southeast Europe, using its Ottoman and Byzantine heritage as central elements of its tourism strategy. The action program was launched in.. 2010 "Thessaloniki: a Crossroads of Cultures⁴" aimed "to make the best use of the city's cultural wealth and to give Thessaloniki a unified cultural and tourist identity to both the Balkans and Athens" and offered the city a unique opportunity to showcase its multicultural history on a global level. The action helped tourism development through the appropriate management and promotion of the city's cultural resources, while the connection with neighboring countries and the development of the city's cultural heritage was also promoted.

4.2. Local Business inspired by the ottoman heritage

Another aspect of cultural entrepreneurship that has flourished around the Kemal Atatürk Museum is the development of local businesses inspired by the city's Ottoman past. The museum, located in the traditional residential district of Thessaloniki, has become a focal point for various creative and hotel ventures. In the area around the museum, many restaurants, cafes and shops have adopted décor and cuisine inspired by the Ottoman tradition, reflecting the cultural heritage represented by the museum. These businesses cater to both local residents and international visitors, offering a unique blend of traditional Greek and Ottoman flavours, thus creating a gastronomic and cultural fusion that is an attraction for tourists (Tzanelli, 2012).

For example, many cafes and restaurants near the museum serve traditional Ottoman-style dishes, such as baklava and kebab, along with Greek specialties, offering a cultural experience directly linked to the Ottoman history of Thessaloniki. These businesses not only take advantage of the historical importance of the museum, but also contribute to the cultural regeneration of the city. Tzanelli (2012) points out that "businesses around the Kemal Atatürk Museum have capitalized on its historical significance by offering Ottoman-style products and services that appeal to both local and foreign visitors". The blending of culinary traditions not only enhances the cultural atmosphere of the area, but also promotes the preservation and continuation of Ottoman influences within the modern urban environment.

In addition to food-related businesses, shops in the area sell as souvenirs handmade items, jewellery and textiles based on Ottoman designs. (Manola, & Balermipas, 2020) (Manola, 2020). These creative businesses reflect the broader cultural influence of the museum by incorporating elements of Ottoman architecture and Ottoman design into their products. This type of cultural entrepreneurship not only supports the local economy, but also acts as a form of cultural preservation, ensuring that the Ottoman heritage remains a vibrant part of Thessaloniki's identity (Dimitrova, 2015).

The continued operation of the Kemal Atatürk Museum and the preservation of its cultural value is important for the enhancement of cultural entrepreneurship in Thessaloniki. The museum can act as a catalyst for the development of the city, promoting new cultural activities and fostering new forms of cultural entrepreneurship. The strengthening of the museum's infrastructure and its international promotion will contribute to the further development of Thessaloniki as a cultural and tourist destination. The use of history and culture as a basis for cultural entrepreneurship will attract tourists and enhance the

⁴ Thessaloniki Crossroads of Cultures (2010) *To Vima*. Available at: <https://www.tovima.gr/2010/09/03/culture/b-thessaloniki-b-br-stayrodromi-politismwn/>

international image of the city. (Maniou et al., 2024) (Mitoula, & Kaldis, 2018).),(Maniou, 2023b),(Maniou, 2024b).

5. Summary and Conclusions

The Kemal Atatürk Museum fosters the development of cultural enterprises in Thessaloniki, such as guided tours and local businesses that leverage the city's Ottoman heritage, enhancing its cultural and economic revival. Cultural entrepreneurship, with examples like tours and local businesses inspired by Ottoman heritage, demonstrates how the museum serves as a catalyst for innovation and economic activity in Thessaloniki. The revitalization of surrounding areas and the development of tourism infrastructure highlight the museum's potential to promote sustainable local growth. Thessaloniki has the potential to further utilize the Kemal Atatürk Museum to promote cultural tourism and strengthen the local economy. The preservation and development of the museum, combined with cultural initiatives and the enhancement of international relations, can contribute to the city's long-term economic development and the preservation of its cultural identity.

Strengthening Thessaloniki's local and international standing through Ottoman entrepreneurship can contribute to achieving sustainable development by leveraging its Ottoman cultural heritage.

6. Bibliography

- Agtzidis, V. (2015) *The Roots of Modern Turkey: From Kemal to Erdoğan*. Athens: Patakis.
- Alexandrou, P. (2002) *Cultural Relations between Greece and Turkey*. Athens: Papadopoulos.
- Amygdalou, K. (2014) *A tale of two cities in search of a new identity: The politics of heritage and modernization in early 20th-century İzmir and Thessaloniki*. UCL. Available at: <https://discovery.ucl.ac.uk/id/eprint/1443533/> (Accessed: 3 October 2024).
- Dimitrova, N. (2015) 'Bitola destination for cultural tourism: 7000 years of history', *Journal of Process Management – New Technologies*, 3(1), pp. 57-72. Available at: [http://eprints.ugd.edu.mk/12808/1/6.%20BITOLA%20DESTINATION%20FOR%20CULTURAL%20TOURISM%20u2013%207000%20YEARS%20OF%20HISTORY%20u2013%20\(FROM%20GURGUR%20THROUGH%20TO%20HERACLEA%20BITOLA\).pdf](http://eprints.ugd.edu.mk/12808/1/6.%20BITOLA%20DESTINATION%20FOR%20CULTURAL%20TOURISM%20u2013%207000%20YEARS%20OF%20HISTORY%20u2013%20(FROM%20GURGUR%20THROUGH%20TO%20HERACLEA%20BITOLA).pdf) (Accessed: 3 October 2024).
- Faroqhi, S. (2004) *The Ottoman Empire and the World Around It*. London: I.B. Tauris.
- Fotiadis, A. (2016) *Restarting tourism: Thessaloniki's cultural sites and their impact on tourism growth*. ResearchGate. Available at: <https://www.researchgate.net/publication/359204067> (Accessed: 3 October 2024).
- Fountouki, A. (2015) *The role of the banks in the promotion of contemporary art and its institutions since 1989-Istanbul: A case study*. IHU. Available at: <https://repository.ihu.edu.gr/xmlui/handle/11544/103> (Accessed: 3 October 2024).
- Gkika, A. (2010) *The History of Turkey from Kemal Atatürk to Erdoğan*. Athens: Savvalas.
- Hatzisiosif, C. (2003) *Nationalism and Its Cultural Dimensions in Greece and Turkey*. Athens: Nefeli.
- Hlepas, N. K. (2021) 'Thessaloniki', in *The Politics of Local Innovation*. Taylor & Francis. Available at: <https://www.taylorfrancis.com/chapters/edit/10.4324/9781003084006-12> (Accessed: 3 October 2024).
- İnalçık, H. (1994) *An Economic and Social History of the Ottoman Empire, Volume 1: 1300-1600*. Cambridge: Cambridge University Press.
- Katsoni, V., Arıkan, I. and Dündar, A. (2016) 'Tourism strategic and marketing planning and cultural cooperation channels between Greece and Turkey', in *Springer*. Available at: https://link.springer.com/chapter/10.1007/978-3-319-27528-4_24 (Accessed: 3 October 2024).

- Kavantzoglou, S. (2012) *Ottoman Monuments in Thessaloniki and Their Significance for the Modern City*. Thessaloniki: Committee for the Preservation of Monuments.
- Manola, M. and Balermipas, A. (2020) 'Souvenirs: Their Role In Tourism Industry, Cultural Heritage And Their Utilization In Experiential Teaching', *Archives of Business Research*, 8(9), pp. 1-10.
- Manola, M. (2020) 'Personal experiences as a determining factor in choosing souvenir', *ITI - Intercultural Translation Intersemiotic*, 9(2).
- Manola, M. (2023a) *The Greek Literature Park of Athens as a Starting Point for Experiential Learning and Literary Tourism*. Educational Sciences, June.
- Maniou, F. (2023b) 'Cultural entrepreneurship and sustainable tourism in Mediterranean islands', *Journal of Tourism Research*, 30(B).
- Maniou, F., Mitoula, R. and Kostakis, I. (2024) 'The possibilities for cultural entrepreneurship in Eleusis as the European capital of culture', *International Journal of Science and Research Archive*, 13(01), pp. 841–849. DOI: <https://doi.org/10.30574/ijrsra.2024.13.1.1750>.
- Maniou, F. (2024b) *Cross-border cultural entrepreneurship with a focus on the Ottoman monuments of Lesvos*. In *1st Open-Air Cities International Conference: Local and Regional Sustainable Development & Urban Reconstruction*.
- Mitoula, R. and Kaldis, P. (2018) *City Branding and Sustainable Development - The Case of Cultural Routes*. Athens: Papazisis.
- Mazower, M. (2006a) *Salonica, City of Ghosts: Christians, Muslims and Jews, 1430-1950*. New York: HarperCollins.
- Mazower, M. (2006b) *Thessaloniki, City of Ghosts: Christians, Muslims and Jews, 1430-1950*. Athens: Alexandria.
- Paparrigopoulou, K. (1998) *The History of Modern Greece and the Political Formation of Thessaloniki*. Thessaloniki: University of Macedonia Press.
- Stuckey, L. (2019) *Guests in the homeland: Transnational heritage tourism in Greece and Turkey*. University of Michigan. Available at: <https://deepblue.lib.umich.edu/handle/2027.42/149982> (Accessed: 3 October 2024).
- Tzanelli, R. (2012) *Ill-defined heritage: Exploring Thessaloniki's selective agenda*. ResearchGate. Available at: <https://www.researchgate.net/publication/255682748> (Accessed: 3 October 2024).
- Vakalopoulos, K. (1990) *Macedonia: From the Fall to the Liberation*. Thessaloniki: Kyriakidis.
- Vakalopoulos, K. A. (1983) *History of Thessaloniki, 316 B.C.-1983*. Thessaloniki: Vantias.
- Walton, J. F. (2016) *Geographies of revival and erasure: Neo-Ottoman sites of memory in Istanbul, Thessaloniki, and Budapest*. Brill.

Websites

- Thessaloniki Crossroads of Cultures (2010) *To Vima*. Available at: <https://www.tovima.gr/2010/09/03/culture/b-thessaloniki-b-br-stayrodromi-politismwn/> (Accessed: 3 October 2024).

Defining Lean Production: Current concepts and trends

Abstract:

Lean production may be defined as an integrated socio-technical system aiming to eliminate business operations waste by concurrently reducing or minimizing supplier, customer, and internal variability. Lean production refers to a business model and associated methods to eliminate non-value-added activities that waste resources for more efficient production and better product quality. Lean production is a collective term for production practices aimed at increasing value creation and reducing waste in all forms, shortening the timeline between customer order and shipment, as well as cutting costs and improving quality, by identifying and eliminating waste in the value stream, yet maintain high levels of quality and productivity. This paper investigates the implementation of lean production paradigm as a shift towards value creation, enabling firms to respond to competition.

Keywords: Lean Production, Lean Management, Efficiency, Performance

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1. Introduction

One of the most important hypotheses in modern economic theory assumes optimising behaviour, either from a producer or a consumer approach. As far as producer behaviour is concerned, economic theory assumes that producers optimise both from a technical and economic perspective (Ghobakhloo & Fathi, 2019, Lavopa & Szirmai, 2018):

- From a technical perspective, producers optimise by not wasting productive resources.
- From an economic perspective producers optimise by solving allocation problems involving prices.

However, not all producers succeed in solving both types of this optimisation problem, under all circumstances. In real economic life, it is unlikely that all (or possibly any) producers operate at the full efficiency frontier, with failure to attain the efficiency frontier implying the existence of inefficiency (Reifschneider and Stevenson, 1991). A main measure of evaluating the performance at producer level is productive efficiency through production frontier, a concept which compares the transformation process of converting input into output. Each production process involves an efficiency production frontier, representing the maximum output attainable from each input level is (Coelli et al., 2005).

2. Efficiency

Efficiency measures can be defined as relative productivity over time or space, or both (Lansink et al, 2001). Efficiency production frontiers indicate the maximum expected output for a given set of inputs. They are derived from production theory and are based on the assumption that output is a function of the level of inputs and the efficiency of the producer in using those inputs. This function defines the output associated with the best practice use of the inputs, while also recognizing the stochastic nature of the data arising from mis- or un-measured determinants of production. A producer operating on the efficiency frontier is productively efficient (Achanga, et al, 2006).

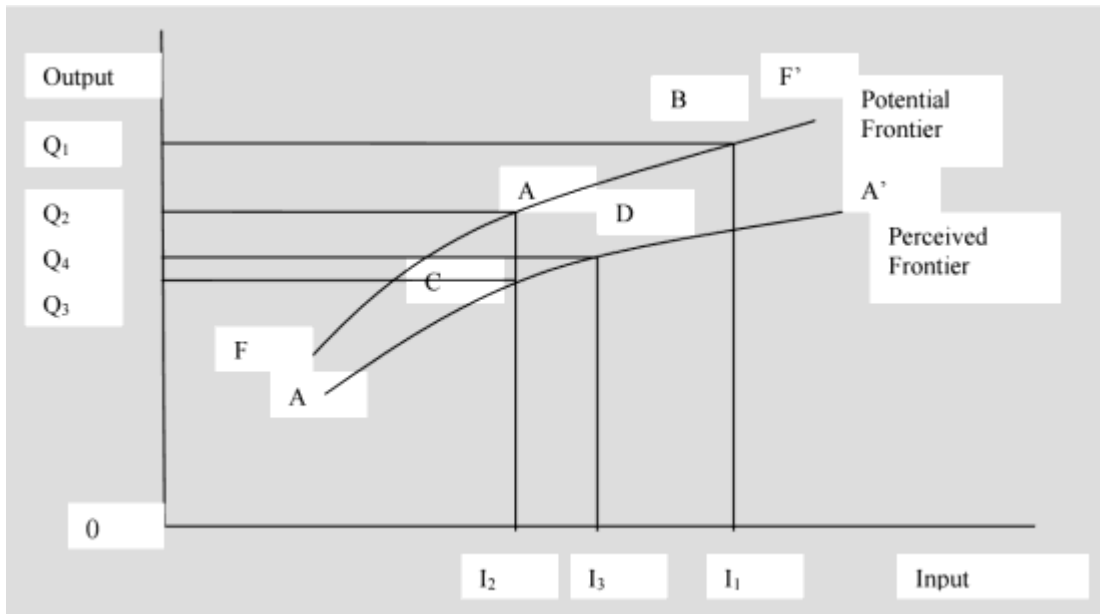
As analytically described in Kalirajan and Shand (1999), while the concept of technical efficiency is as old as neoclassical economics, interest in its measurement is not. This is probably explained by the fact that neoclassical production theory presupposes full technical efficiency. Then, the question raises as to why should one measure technical efficiency. There are two principal arguments for its measurement (Bauer, 1990 a,b; Kalirajan and Shand, 1992). Technical efficiency becomes central to the achievement of high levels of economic performance at the producer level, as does its measurement. The basic concept underpinning the measurement of technical efficiency starts with the description of production technology.

Production technologies can be represented using isoquants, production functions, and cost functions or profit functions. These four models provide four different tools for measuring technical efficiency. Although analyses based on these models appear to be distinct, they constitute the same basic approach and ideally their results should converge:

In neoclassical theory, all producers are assumed to operate at potential technical efficiency at points along the frontier FF' . Any inefficiency will be solely allocative. Thus, if a producer is operating on its frontier FF' , its point of economic efficiency may be at B, the point of tangency with its price line. If it operates at B, with inputs I_1 and output Q_1 there will be maximum profits π_1 and no allocative or economic inefficiency. It should be noted that, provided producers are operating on their technical frontiers, allocative (in) efficiency will be the same as economic (in) efficiency (they are used synonymously in the literature) because of the theoretical assumption of potential technical efficiency. Thus if a producer is operating at point A on its frontier, using I_2 inputs and producing Q_2 output, its profits may be π_2 , and its allocative / economic inefficiency will be measured as π_2 / π_1 . In practice, with a new technology, producers operate at less than potential technical efficiency owing to incomplete knowledge of best technical practices or to other organisational factors that prevent it from

operating on its technical frontier. Thus, a producer will operate on an actual or perceived production function which is below the potential frontier, e.g. on AA' . At I_2 inputs, it operates at point C , produces Q_3 output and earns π_3 profits. On this actual production function, point C is allocatively inefficient. To maximise its profits (π_4) it would have to operate at point D , use I_3 inputs and produce Q_4 output. At D , however, it would not achieve potential economic efficiency, potential economic efficiency can only be achieved with potential technical efficiency.

Figure 1. The concepts of efficiency



Source: Kalirajan and Shand (1999), p. 151

To be consistent with neoclassical production theory, efficiency should only be measured in relation to the frontier production function FF' . Thus if a producer is operating at C on its actual or perceived production function, its economic inefficiency would be measured in profit terms by the ratio π_3/π_1 , or in output terms by the ratio Q_3/Q_1 . Now, it can easily be seen that this economic inefficiency comprises two components, technical and allocative inefficiencies. In profit terms, the total loss in economic inefficiency in operating at point C is $\pi_1 - \pi_3$. Of this, the loss from technical inefficiency is $\pi_3 - \pi_2$, and the loss due to allocative inefficiency is $\pi_1 - \pi_2$. In output terms, the losses are $Q_2 - Q_3$ and $Q_1 - Q_2$ respectively. The various models for measurement that follow are based upon this conceptual framework.

Finally, when taken together, allocative efficiency and technical efficiency determine the degree of 'economic efficiency' (also known as total economic efficiency). Thus, if an organization uses its resources completely allocatively and technically efficiently, then it can be said to have achieved total economic efficiency. Alternatively, to the extent that either allocative or technical inefficiency is present, then the organization will be operating at less than total economic efficiency.

In deterministic frontiers analysis, it is assumed that each of N producers faces the same production technology represented by the conversion of a vector X of inputs into a single output y . For simplicity, and following Aigner and Chu (1968), assume that efficient production can be represented by a Cobb–Douglas production function with two inputs:

$$y = Ax_1^{\beta_1} x_2^{\beta_2} \quad (2.3)$$

This production function, showing the maximum output from given input usage, will serve as the basis for efficiency measurement. Allowing inefficiency, production function becomes:

$$y = Ax_1^{\beta_1} x_2^{\beta_2} u \quad (2.4)$$

where $u \leq 1$ represents inefficiency. Models that seek to estimate u are considered deterministic because measurement error and other statistical noise are assumed away.

This production frontier is deterministic insofar as y_i is bounded from above by the non-stochastic (deterministic) quantity $exp(x_i \beta)$. Therefore, any shortfall in output y_i from maximum feasible output $f(x_i, \beta_i)$ is solely attributable to the inefficiency of the producer. The goal is to estimate the unknown parameters of the model. Central to frontier productivity analysis is the determination of the efficient production technology, identification of those efficient decision-making producers on the technological frontier and of those inefficient producers not on the frontier and, for the latter, determination of the degree and sources of their inefficiency.

Efficiency of a production unit represents a comparison between observed and optimal values of its output and input. This comparison comes in two forms. The first is the ratio of observed to maximum potential output obtainable from a given level of input. The second is defined by considering first the given level of input and is measured as the ratio of minimum potential to observed input required producing the given output.

By the efficiency of a producer, we have in mind a comparison between observed and optimal values of its output and input (Kokkinou, 2011a, 2010, 2009a,b, Maty et al, 2022, Hoellthaler, et al 2018, Konte et al, 2022, Parente & Prescott, 1994, Rasche & Seidl, 2019). One of the main paradigms towards efficiency attainment is Lean Production (Kruse., et al 2021, McMillan, et al, 2014).

Within this framework, lean production can be defined as an integrated socio-technical system aiming to eliminate waste by concurrently reducing or minimizing supplier, customer, and internal variability (Shah and Ward, 2007). The main goal of each enterprise is to meet the needs of consumers and all interested parties. After all, the consumer provides a high demand for the goods and services provided, which contributes to the company's entry into a leading position in the market (Bondareva et al., 2021).

3. Lean production

Lean production is particularly related to the operational model implemented in the 1950s and 1960s by the Japanese automobile company Toyota. Toyota's system was erected on the two pillars of just-in-time inventory management and automated quality control, with no wastes. According to this model, the main wastes comprise the waste of superfluous inventory or raw materials and finished goods, the waste of overproduction (producing more than what needed), the waste of over-processing (processing or making parts beyond the standard expected by customer), the waste of transportation (unnecessary movement of people and goods inside the production and supply chain system), the waste of excess motion (mechanizing or automating before improving the method), the waste of waiting (inactive working periods due to job queues), and the waste of making defective products (reworking to fix avoidable defects in products and processes). Four different notions of lean have been identified:

- Lean as a fixed state or goal (being lean)

- Lean as a continuous change process (becoming lean)
- Lean as a set of tools or methods (doing lean/toolbox lean)
- Lean as a philosophy (lean thinking)

However, this process has been expanded to enterprises and has been later defined as lean (Krafcik, 1988), consisting of five key principles: Precisely specify value by specific product, identify the value stream for each product, make value flow without interruptions, let customer pull value from the producer, and pursue perfection (Allied Consultants Europe, 2008). Companies nowadays employ lean strategy to increase efficiency, by improving industrial and administrative processes, using a logistics management line of approach. Striving for an optimal flow is therefore the fundamental principle of Lean production (Madsen, et al, 2016) and the concept of lean production allows to eliminate the main causes of costs and losses in the organization, such as:

- overproduction of products
- the appearance of excess stocks in warehouse
- irrational transportation of finished products
- moving production equipment
- reduced waiting time
- excessive processing of raw materials
- the release of defective products for sale

Generally, the use of tools and methods of the lean production concept makes it possible to reduce actions that do not add value to the product at the entire stage of its production, which ensures an increase in the quality of finished products, a reduction in equipment downtime, an increase in the production plan and a reduction in losses (Jasti and Kodali, 2014, Filatova et al. , 2015, Bondareva et al., 2022).

Then, Karlsson and Ahlstrom (1996) developed a model which operationalizes the different principles in lean production, with a focus on those that concern the work organization in the manufacturing part of a company. The model has been developed using available theory and has implications both for research and practice. For research, it can be used as a model for operationalizing lean production to be able to study change processes properly. In practice, the model can be used as a tool to assess the development taking place in an effort to become lean. Finally, it can be used as a checklist for what to aim at when trying to implement lean production. Lean should be seen as a direction, rather than as a state to be reached after a certain time and, therefore, the focus lies on the changes in the determinants, not on their actual values.

More precisely, for a producer to be efficient, it should be lean, holding three major requirements:

- The first requirement of technical efficiency is that the maximum possible amount is produced with the resources used, or in other words, it must be impossible to reduce the volume of any input without reducing the volume of output. Technical efficiency may then refer to the physical relationship between the inputs used (i.e. capital, labour and equipment) and output. These outcomes may either be defined in terms of intermediate outputs or final output.
- The second requirement is that the cost of any given level of output is minimized by combining inputs in such a way that one input cannot be substituted for another without raising the total cost. This is allocative efficiency, where an allocatively efficient producer would produce that output using the lowest cost combination of inputs.
- The third requirement is that the mix of outputs of different goods and services produced from the given resources maximizes the benefit to consumers.

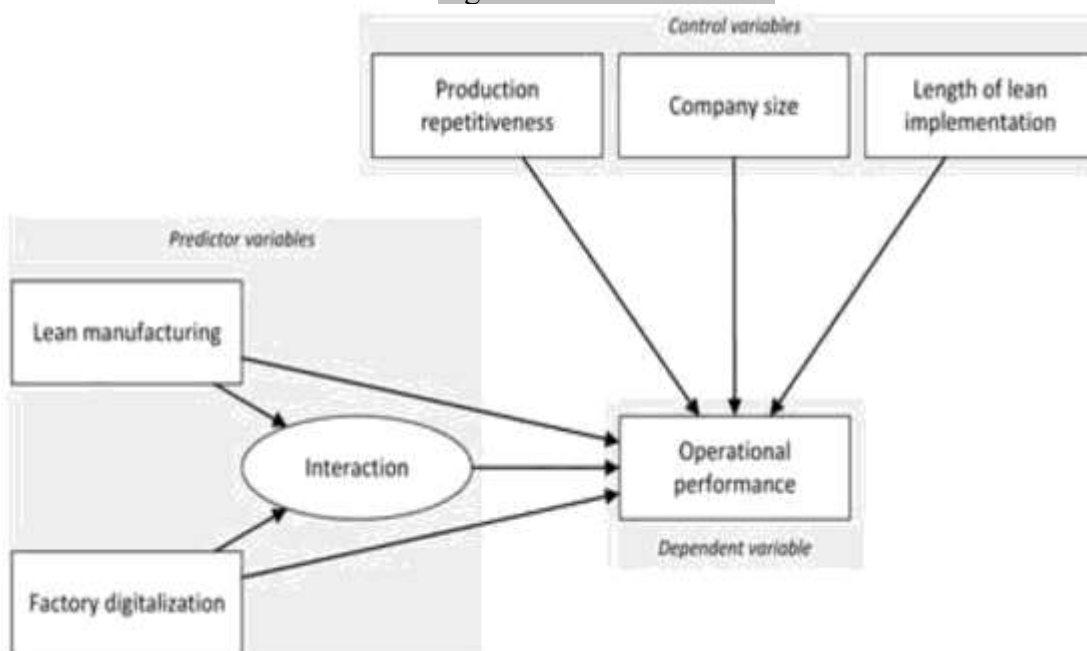
Lean production paradigm qualifies the above approach, as well as the three related requirements.

Shah and Ward (2007) attempted to clarify the semantic confusion surrounding lean production by conducting an extensive literature review using a historical evolutionary perspective in tracing its main components. They identified a key set of measurement items by charting the linkages between measurement instruments that have been used to measure its various components from the past literature, and using a rigorous, two-stage empirical method and data from a large set of manufacturing firms, they narrowed the list of items selected to represent lean production to 48 items, empirically identifying 10 underlying components. In doing so, they mapped the operational space corresponding to conceptual space surrounding lean production. Configuration theory provided the theoretical underpinnings and helped to explain the synergistic relationships among its underlying components. The introduction and maintenance of lean production elements allows to produce products that are in demand from interested parties, which contributes to the increase of the efficiency and effectiveness of organizations, through:

- Technology management
- Materials and inventory management
- Scheduling materials
- Scheduling services of production
- Accelerating the adaptive process of the industry to the structural changes
- Developing an environment in the favour of initiative and development of enterprises
- Encouraging the favourable environment for business cooperation
- Favouring the industrial potential of the research, technologic development and innovation policies

Lean concentrates on maximizing the value which 'streams' towards the customers, and it traces and eliminates waste. For each family of products, a process is used to identify which processes add value to the products or services provided by the company, and which don't. The goal is to make a "value stream" as large as possible. This is done by gearing the steps which add value to one another, and by eliminating steps that do not add value (Alvesson & Thompson, 2005). More specifically, this goal can be achieved by introducing the concept of lean production into the organization.

Figure 2. Lean Production



Source: Buer et al (2020)

Lean production is an integrated approach based on optimizing processes, providing management infrastructure and changing the way of thinking and behavior of employees (Pozzi et al., 2021). The lean production system is based on a constant desire to eliminate all types of losses and use only the necessary resources of the company (Andreoni & Tregenna, 2020).

Basically, lean manufacturing was mainly applied by companies that produce goods via a series of consecutive steps (Bakås, et al 2023, D'Andreamatteo et al, 2019, Krafcik, 1988, Womack et al, 1990). Later, lean evolved into a process management method that is generally applicable (Kumar, et al, 2006), covering subjects, such as:

- Lean production (right ideas for good lean production, methods and tools of industrial engineering for lean performance and production effectiveness,)
- Lean administration (definition of administration process in the company, process analyse and improvement for efficient administrative processes, teamwork and motivation for lean administration and production)
- Lean logistics (core principles of effective enterprise logistics, material and information flows in the lean production and administrative logistics, activities in enterprise logistics)
- Lean in innovation processes (Good innovation concepts)

Today, analyzing a comprehensive sample of 5,582 firm-year observations spanning 1993 to 2020 derived from archival empirical data, Xue et al (2025) suggested that companies with a higher long-term orientation are associated with a higher degree of lean production implementation. In other words, lean is founded on the concept of continuous and incremental improvements on product and process while eliminating redundant activities. Lean manufacturing allows businesses to eliminate that which does not add value to deliver the best possible product to the customer, with continually improving processes to ensure that waste is eliminated wherever possible. The advantages of applying the lean manufacturing concept are provided by:

- continuous improvement of product quality at all stages of production
- cost savings on the production of raw materials
- reduction of unnecessary space
- involvement of employees of all departments
- increasing the satisfaction of stakeholders
- competitiveness in the market

However, the strategic elements of lean can be quite complex, and comprise multiple elements. Therefore, integration of the quality management system and the lean production management system is carried out by creating a unified flow management system that provides planning, implementation, control and improvement of products or services with the necessary characteristics of quality, cost and time of product flow in accordance with the requirements of consumers and other stakeholders of the organization (Temasova, et al, 2022).

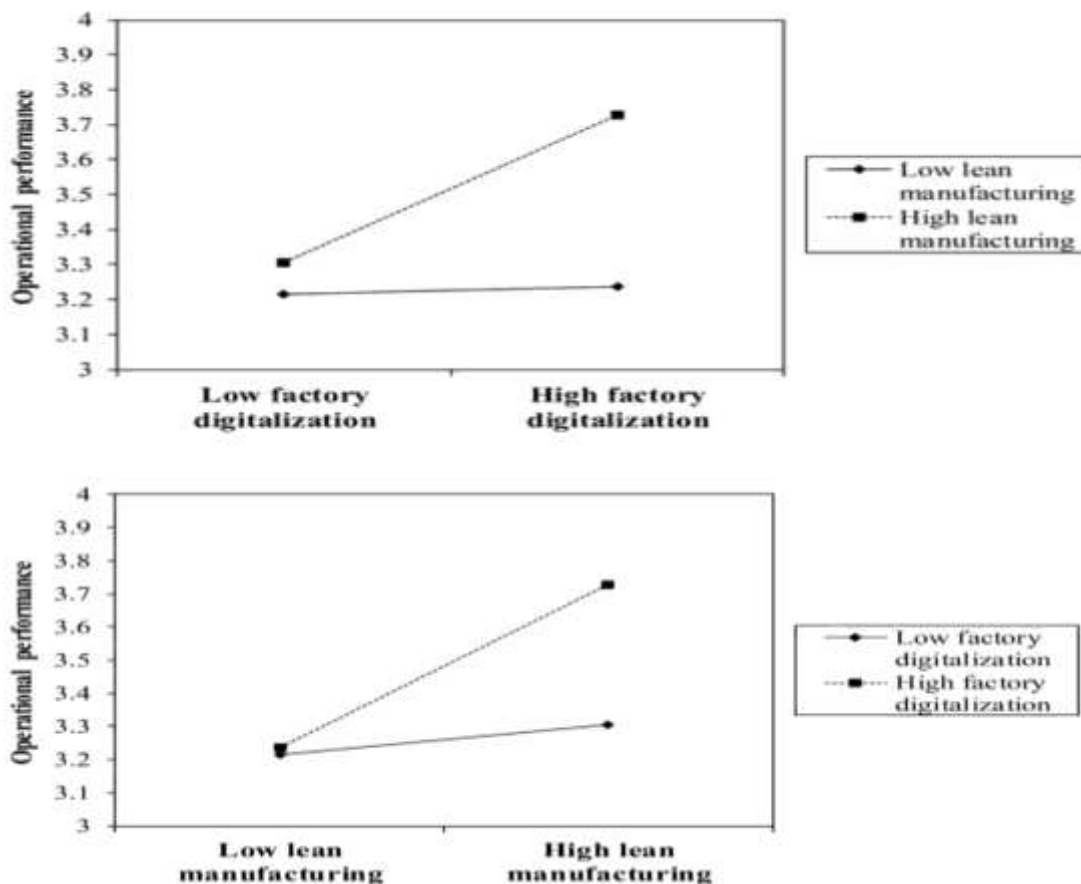
Within this framework, economic processes that create and diffuse new knowledge are critical in the development process and there are powerful contacts between the investment in human capital, technological change and productive efficiency. The reason is that the new technologies lead to increase of productivity of factors of production, contributing in the long-term improvement of efficiency (Kyle, 2012, Mazzocato et al, 2010, Radnor & Osborne, 2013, Kokkinou, 2011a). As productive efficiency through lean production and management becomes an increasingly important issue within Europe and worldwide, policy planning should draw attention towards efficiency estimation and effectiveness attainment, with a focus

on eliminating all forms of waste in a process, through (Bondareva, et al. 2022, Chiarini & Brunetti, 2019 , Ndubuisi, et al, 2022, Rath, 2019):

- Technology management
- Materials and inventory management
- Scheduling materials
- Scheduling services of production
- Product design
- Process design
- Human Capital/organizational elements
- Manufacturing planning and control

At a given moment of time, when technology and production environment are essentially the same, producers may exhibit different productivity levels due to differences in their production efficiency. Within economic growth process, therefore, efficiency of productivity of resources becomes a critical element in economic growth, through utilizing the available, yet scarce, resources more productively.

Figure 3. Lean Production and New Technologies



Source: Buer et al (2020)

Within this framework, therefore, there are two complimentary sets of conditions need to be satisfied for industries to sustain productivity and efficiency in competitive environment. The first is that they must have suitable levels of both physical infrastructure and human capital. The second is that, in the new knowledge-based economy, they must have

the capacity to innovate and to use both existing and new technologies effectively. Industrial and innovation policy is aimed at strengthening the competitiveness of producers by promoting competition, ensuring access to markets and establishing an environment which is conducive to R&D. As recognized, lack of innovative capacity stems not only from deficiencies in the research base and low levels of R&D expenditure but also from weaknesses in the links between research centers and businesses, and slow take-up of information and communication technologies (Tortorella & Fettermann, 2017, Wittrock, 2015).

4. Conclusions – Policy Implications

The use of lean methods to drive sustainable competitive advantage has been a cornerstone of worldwide manufacturing strategy since the mid 1990's. Today, as productive efficiency enhancement becomes an increasingly important issue within Europe and worldwide, policy planning should draw attention towards a wide range of policy implications, including policies geared towards stability and efficiency, eliminating market distortions and uncertainties, as well as improvements in the economic system efficiency (Rossini et al, 2019, Kyle, 2012).

While researchers and practitioners have long known that organizational culture plays a key role in lean's ability to improve operational performance, only recently have researchers begun to unpack this complex relationship. For example, they have identified unique human resource practices that support lean, such as team players, flexible workers, workers who embrace change, small-group problem solving, and decentralized decision making. They have also shown that an organizational culture which nurtures learning, communication, and knowledge sharing best supports lean. Finally, they show that organizational cultural attributes such as collectivism, future orientation, a humane orientation, and a lower level of assertiveness, positively moderate the relationship between lean and operational performance (Hardcopf, 2021).

Explaining the course of lean management on technical efficiency and determining factors which might affect it, have been for a long time, and continue to be, one of the most important topics of economic literature. A framework more reliant upon efficiency has become an important policy objective in all European countries to promote efficiency, effectiveness and competitiveness. Upon this background efficiency analysis plays an important role for the determination of technical efficiency. Nowadays, the role of manufacturing industries to the economy is even more important taking into consideration the slowdown in the world economy, and the effects on the business environment created by the financial crisis. Thus, manufacturing industries have a very important role in creating opportunities making an important contribution to economic growth and development. However, due to their nature, manufacturing industries are characterized by being very heterogeneous since they differ in their endowments of resources as well as on the risks involved in their productive activities.

For this reason, it is of great importance, on the one hand to analyze their efficiency level and potential, and in addition, to analyze the factors which determine their efficiency potential (Alexiades et al, 2011, Wilson, et al, 2009, Yusuf, et al, 2016, Anttila, et al. 2021, 2019).

Finally, technical progress is another major determinant as new technologies allow the automation of production processes that have led to many new and improved products. allow for better and closer links between firms. and can help improve information flows and organization of production. At the same time, technical progress can be embodied in new equipment and trained workers can only be fully productive if they have the appropriate equipment with which to work. Increases in physical capital are clearly necessary as there are spillovers from capital investment to productivity growth. Thus it is not appropriate to

consider physical capital, human capital and technology as separate factors since their contributions are closely linked. It is the combination of these three factors and the way in which they are organized and managed within the industry that will determine the extent of productivity growth. For sustained output growth, it is also important that a balance between the three main factors be maintained (Korres et al, 2011).

Knowledge and access to it has become the driving force of productivity, much more than natural resources or the ability to exploit abundant low-cost labor, have become the major determinants of economic competitiveness (Appelbaum, et al, 2000, Bondareva, et al. 2021, Temasova et al, 2022). Education, therefore, holds the key to maintaining and strengthening efficiency which in turn is essential for achieving sustained economic development (European Commission, 2023a, b). More specifically:

- Strong emphasis needs to be placed upon the management of the interfaces between human capital policy and other policy realms:
- Competition policy, intellectual property rights, standardization, education and training, labor market, employment and social policy,
- Creation of a sustainable supply chain management environment, along with fiscal instruments and incentives
- Creation of think-tanks (idea pooling)
- Smart cities/Resilient cities
- Green circular economy/ecological impact and recovery
- Block-chain technologies (methodology and applications)
- Interdisciplinary/Inclusive approaches
- Stakeholders: Clusters/Networks
- Ethical Governance (energy, production)
- Systems (political, financial, local governance)
- Earth dynamics (geology, geophysics) and civil engineering
- Innovation (sustainable, responsible, inclusive)
- Resilience (environmental - climate change –, urban planning)

Moreover, the potential for technical efficiency enhancement is considered to a large extent to depend on economies capability to move towards what makes more productive use of its resources (Holmemo et al, 2018, Kumar et al, 2009). Much will depend on the capacity of markets to facilitate the reallocation of resources to industries that show rapid productivity growth. However, it is difficult to predict which industries will be the most productive in the future, as technology and innovation trends are inherently difficult to forecast. For now, a productive use of a larger input from skilled employment and the exploitation of ICT investments in manufacturing industries appear the most successful policy avenues for a European productivity revival.

Promoting technical and productive efficiency into the European Union has resulted in a growing challenge for policymakers. Productive and regional disparities and inequalities are an increasing issue for the European Union to consolidate, as a result policy makers have to adapt the policy agenda considering industrial and innovation policy in order to enhance technical and productive efficiency capabilities.

Moreover, efficiency, lean management and policy planning is a major matter which due to the wide interpretations and implications should have a clear mix of principles and priorities, mainly focusing on the effectiveness of the related EU policies. EU industrial and innovation policy should aim to bridging the technical efficiency gaps, both in industrial and country level, benefiting for economic cohesion, allowing members states with a backwards economy or backwards industries to modernise and thus compete in European and

international markets, promoting convergence, competitiveness and cooperation. Infrastructure, innovation and investments should be among the main goals.

As it has been asserted above, globalization and worldwide competition has shifted the comparative advantage of corporations and economies towards the factor of knowledge and innovation, where entrepreneurship based on the technical efficiency enhancement plays a rather important role, as far as the growth, productivity and competitiveness enhancement are concerned. In order to promote innovation activities and technological opportunities entrepreneurship enhancement seems to have a significant importance not only to business success, but also to the long run performance of the economy as a whole. Under this perspective, growth policies should focus on creating favorable environment for the cooperation between firms and institutions that support the development and exploitation of knowledge and innovation and technical efficiency. Furthermore, policies should promote the entrepreneurial relations between firms and institutions, fostering the development and dissemination of the expertise, the mobility of human and physical capital and the enhancement of the relationships between business and research entities. Specifically, they should encourage actions such as, promoting innovation, technology transfer and interactions between firms and higher education and research institutes, networking and industrial cooperation and support for research and technology supply infrastructure (European Commission, 2023).

Overall, however, lean production and today's Industry 4.0 evolution are two concepts that have been studied in recent years, focusing mainly on the relationship that exist between them, stating that lean manufacturing cannot be efficient without the implementation of Industry 4.0 technologies (Cagnetti, et al, 2021). Prior to managing a company's processes in the presence of a combination of paradigms, there is a need to understand their underlying interaction between lean production and the fourth industrial revolution (Industry 4.0) of today.

5. References

- Alexiadis, S., Kokkinou, A. and Ladas C. (2011) *Sustainable Growth and Adoption of Innovation*, International Conference on Integrated Information - IC-ININFO, 2011, Kos Island, Greece.
- Andreoni, A. & Tregenna, F. (2020) Escaping the middle-income technology trap: A comparative analysis of industrial policies in China, Brazil and South Africa, *Structural Change and Economic Dynamics*, Elsevier, vol. 54(C), pages 324-340.
- Anttila, T., Oinas, T. and Mustosmäki, A. (2021) Lean in Europe and the USA – A New Dominant Division of Labour?, in T. Janoski and D. Lepadatu (eds.) *The Cambridge International Handbook of Lean Production: Diverging Theories and New Industries around the World*. Cambridge: Cambridge University Press, pp. 423–447.
- Anttila, T., Oinas, T., & Mustosmäki, A. (2019) Towards formalisation: the organisation of work in the public and private sectors in Nordic countries. *Acta Sociologica*, 62(3), 315–333.
- Allen, F. and D. Gale (2004) Competition and Financial Stability, *Journal of Money, Credit, and Banking*, 36(3), 453-480.
- Allied Consultants Europe (ACE) (2008) *Operational and Lean Management*. Brussels: Allied Consultants Europe.

- Alvesson, M. & Thompson, P. (2005) Postbureaucracy? In: Ackroyd, S., Batt, R., Thompson, P. & Tolbert, P. S. (eds.), *The Oxford Handbook of Work and Organizations*. Oxford: Oxford University Press, pp. 485–507.
- Appelbaum, E., Bailey, T., Berg, P., Kalleberg, A. L., & Bailey, T. A. (2000) *Manufacturing Advantage: Why High-Performance Work Systems Pay Off*. Ithaca, NY: Cornell University Press.
- Achanga, P., Shehab, E., Roy, R., Nelder, G. (2006) Critical success factors for Lean implementation within SMEs, in *Journal of Manufacturing Technology Management*, Vol. 17, Issue 4: pp. 460-471.
- Bakås, O., Govaert, T., Van Landeghem, H. (2023) *Challenges And Success Factors For Implementation Of Lean Manufacturing In European SMES*, NTNU Engineering Series, 1.
- Benders, J. & van Bijsterveld, M. (2000) Leaning on lean: the reception of a management fashion in Germany. *New Technology, Work & Employment*, 15(1), 50.
- Benders, J., van Grinsven, M., & Ingvaldsen, J. (2019) The persistence of management ideas. In: Sturdy, A., Heusinkveld, S., Reay, T., & Strang, D. (eds.), *The Oxford Handbook of Management Ideas*. Oxford: Oxford University Press, pp. 271.
- Bondareva, G. I., Temasova, G. N., Shkaruba, N. Zh., Leonov, O. A., & Vergazova, Yu. G. (2021) Ensuring the smooth functioning of the equipment during operation. *AIP Conference Proceedings*, 2402(1), 070022.
- Bondareva, G. I., Temasova, G. N., Shkaruba, N. Zh., Leonov, O. A., & Vergazova, Yu. G. (2022) Assessing External Defects at Manufacturing Enterprises. *Russian Engineering Research*, 42(2), 151-154.
- Buer, S. V., Semini, M., Strandhagen, J. O., & Sgarbossa, F. (2020). The complementary effect of lean manufacturing and digitalisation on operational performance. *International Journal of Production Research*, 59(7), 1976–1992.
<https://doi.org/10.1080/00207543.2020.1790684>
- Cagnetti, C., Gallo, T. Cecilia Silvestri, Alessandro Ruggieri (2021) Lean production and Industry 4.0: Strategy/management or technique/implementation? A systematic literature review, *Procedia Computer Science*, Volume 180, 2021, Pages 404-413, ISSN 1877-0509, <https://doi.org/10.1016/j.procs.2021.01.256>.
- Chiarini, A. & Brunetti, F. (2019) What really matters for a successful implementation of Lean production? A multiple linear regression model based on European manufacturing companies. *Production Planning & Control*. 30. 1-11.
- D'Andreamatteo, A., Ianni, L., Rangone, A., Paolone, F., & Sargiacomo, M. (2019) Institutional pressures, isomorphic changes and key agents in the transfer of knowledge of lean in healthcare. *Business Process Management Journal*, 25(1), 164–184.
- European Commission (2023a) <https://cordis.europa.eu/article/id/147137-tools-for-lean-product-and-process-design>
- European Commission (2023b) https://www.business-improvement.eu/lean/lean_manufacturing_eng.php
- Fagerberg, J. (2000) *Technological Progress, Structural Change and Productivity Growth: A Comparative Study*, Working Papers 5, Centre for Technology, Innovation and Culture, University of Oslo.
- Ghobakhloo, M., & Fathi, M. (2019) Corporate survival in Industry 4.0 era: the enabling role of lean-digitized manufacturing. *Journal of Manufacturing Technology Management*, 31(1), 1–30. <https://doi.org/10.1108/jmtm-11-2018-0417>.
- Hardcopf, R., Liu, G., Rachna Shah (2021) Lean production and operational performance: The influence of organizational culture, *International Journal of Production Economics*, Volume 235, 2021, 108060, ISSN 0925-5273,
<https://doi.org/10.1016/j.ijpe.2021.108060>.

- Hoellthaler, G., Braunreuther, S., & Reinhart, G. (2018) *Digital lean production approach to identify potentials for the migration to a digitalized production system in SMEs from a lean perspective*. 11th CIRP Conference on Intelligent Computation in Manufacturing Engineering.
- Holmemo, M. D.-Q., Rolfsen, M., & Ingvaldsen, J. A. (2018) Lean thinking: outside-in, bottom-up? The paradox of contemporary soft lean and consultant-driven lean implementation. *Total Quality Management & Business Excellence*, 29(1–2), 148–160, doi: 10.1080/14783363.2016.1171705
- Jasti, N. V. K., & Kodali, R. (2014). Lean production: literature review and trends. *International Journal of Production Research*, 53(3), 867–885. <https://doi.org/10.1080/00207543.2014.937508>
- [Karlsson, C.](#) and [Åhlström, P.](#) (1996) Assessing changes towards lean production, *International Journal of Operations & Production Management*, Vol. 16 No. 2, pp. 24-41. <https://doi.org/10.1108/01443579610109820>
- Krafcik, J.F. (1988) *Triumph of the Lean Production System*. Sloan Management Review, 30, 41-52.
- Kruse., H. & Emmanuel Mensah & Kunal Sen & Gaaitzen de Vries (2021) *A manufacturing renaissance? Industrialization trends in the developing world*, WIDER Working Paper Series wp-2021-28, World Institute for Development Economic Research (UNU-WIDER).
- Kokkinou A. (2011a) Innovation Policy, Competitiveness, and Growth: Towards Convergence or Divergence? in Patricia Ordonez de Pablos, W.B. Lee and Jingyuan Zhao (editors) *Regional Innovation Systems and Sustainable Development: Emerging Technologies*, Information Science Reference, Hershey, New York, pp. 187 – 201.
- Kokkinou A. (2010) Estimating Technical Inefficiency: An Empirical Approach to EU Industries, *Regional Science Inquiry Journal*, Vol. II (2), pp. 95 -104.
- Kokkinou A. (2009a) Strategy for Entrepreneurship and Innovation Activities in the knowledge Economy in *Women Participation and Innovation Activities: Knowledge Based Economy*, Women's Press, New Delhi, India.
- Kokkinou A. (2009b) Economic Growth, Innovation and Collaborative Research and Development Activities, στο *ICBE 2009*, 4th edition.
- Kokkinou A. (2008) *Innovation Policy, Competitiveness, and Growth: A Strategy towards Convergence of European Regions*, 48th European Congress of the Regional Science Association, Liverpool, U.K.
- Konte, M. & Wilfried A Kouamé & Emmanuel B Mensah (2022) Structural Reforms and Labor Productivity Growth in Developing Countries: Intra or Inter-Reallocation Channel?," *The World Bank Economic Review*, World Bank Group, vol. 36(3), pages 646-669.
- Korres, G. M., Tsobanoglou, G. O. and Kokkinou, A. (2011) Innovation Geography and Regional Growth in European Union, *SAGE Open* published online 17 June 2011, DOI: 10.1177/2158244011413142, the online version of this article can be found at: <http://sgo.sagepub.com/content/early/2011/06/15/2158244011413142>
- Kumar, M., Antony, J., Douglas, A. (2009) Does size matter for Six Sigma implementation? Findings from the survey in UK SMEs, *TQM Journal*, Vol. 21, Is. 6; pp. 623-635.
- Kumar, M., Antony, J.; Singh, R. K.; Tiwari, M. K.; Perry, D. (2006) Implementing the Lean Sigma framework in an Indian SME: a case study, *Production Planning and Control*, Volume 17, Number 4, June 2006, pp. 407-423.
- Krzywdzinski, M. (2021) *Lean Production in Germany: A Contested Model*, In: Janoski, Thomas Lepadatu, Darina (Ed.): *The Cambridge International Handbook of Lean*

- Production. Diverging Theories and New Industries around the World*, ISBN 978-1-108-33387-0, Cambridge University Press, Cambridge, pp. 507-528.
- Kyle B. S. (2012) Four decades of lean: a systematic literature review, *International Journal of Lean Six Sigma*, 10.1108/20401461211243702, 3, 2, (112-132).
- Jostein Langstrand, Erik Drotz (2015) The rhetoric and reality of Lean: a multiple case study, *Total Quality Management & Business Excellence*, 10.1080/14783363.2015.1004307, 27, 3-4, (398-412).
- Lavopa, A. & Szirmai, A. (2018) Structural modernisation and development traps. An empirical approach, *World Development, Elsevier*, vol. 112(C), pages 59-73.
- Madsen, D. Ø., Storsveen, M., Klethagen, P., & Stenheim, T. (2016) The diffusion and popularity of lean in Norway: an exploratory survey. *Cogent Business & Management*, 3(1), doi: 10.1080/23311975.2016.1258132.
- Maty K. & Wilfried A K. & E. B Mensah (2022) Corrigendum to: Structural Reforms and Labor Productivity Growth in Developing Countries: Intra or Inter-Reallocation Channel?, *The World Bank Economic Review*, World Bank Group, vol. 36(3), pages 800-800.
- Mazzocato, P., Savage, C., Brommels, M., Aronsson, H., & Thor, J. (2010) Lean thinking in healthcare: a realist review of the literature. *Quality & Safety in Health Care*, 19(5), 376–382.
- McMillan, M. & Rodrik, D. & Verduzco-Gallo, Í. (2014) Globalization, Structural Change, and Productivity Growth, with an Update on Africa, *World Development, Elsevier*, vol. 63(C), pages 11-32.
- Mayr, A., Weigelt, M., Kühn, A., Grimm, S., Erll, A., Potzel, M., & Franke, J. (2018) *Lean 4.0 - A conceptual conjunction of lean management and Industry 4.0. Procedia CIRP*, 72, 622–628. <https://doi.org/10.1016/j.procir.2018.03.292>.
- Ndubuisi, G. & Otioma, C. & Owusu, S. & Tetteh, G. K. (2022) ICTs quality and technical efficiency: An empirical analysis, *Telecommunications Policy*, Elsevier, vol. 46(10).
- Parente, Stephen L & Prescott, Edward C. (1994) Barriers to Technology Adoption and Development, *Journal of Political Economy*, University of Chicago Press, vol. 102(2), pages 298-321, April.
- Radnor, Z. & Osborne, P. (2013) Lean: a failed theory for public services? *Public Management Review*, 15(2), 265–287.
- Rajnoha, R., Dobrovič, J., Gálová, K. (2018) The Use of Lean Methods in Central Eastern European Countries: the Case of Czech and Slovak Republic. *Economics and Sociology*, 11(2), 320-333. doi:10.14254/2071-789X.2018/11-2/22
- Rasche, A. & Seidl, D. (2019) Management ideas as standards. In: Sturdy, A., Heusinkveld, S., Reay, T., & Strang, D. (eds.), *The Oxford Handbook of Management Ideas*. Oxford: Oxford University Press, pp. 337–353.
- Rees, G. H. & Gauld, R. (2017) Can lean contribute to work intensification in healthcare? *Journal of Health Organization and Management*, 31(3), 369–384.
- Rodrik, D. (2016) Premature deindustrialization, *Journal of Economic Growth*, Springer, vol. 21(1), pages 1-33, March.
- Rath, Badri Narayan & Akram, Vaseem, (2019) A reassessment of total factor productivity convergence: Evidence from cross-country analysis, *Economic Modelling*, Elsevier, vol. 82(C), pages 87-98.

- Rossini, M., Costa, F., Tortorella, G.L. *et al.* (2019) The interrelation between Industry 4.0 and lean production: an empirical study on European manufacturers, *The International Journal of Advanced Manufacturing Technology*, 10.1007/s00170-019-03441-7, 102, 9-12.
- Shah, R. and Ward, P. T. (2007) Defining and developing measures of lean production, *Journal of Operations Management*, Volume 25, Issue 4, 2007, Pages 785-805, ISSN 0272-6963, <https://doi.org/10.1016/j.jom.2007.01.019>.
- Schumacher, S., Bildstein, A., & Bauernhansl, T. (2020) *The Impact of the Digital Transformation on Lean Production Systems*. *Procedia CIRP*, 93, 783–788.
- Tarek M Harchaoui & Murat Açengâr, (2018) The Lion on the Move Towards the World Frontier: Catching Up or Remaining Stuck?, *Journal of African Economies*, Centre for the Study of African Economies (CSAE), vol. 27(3), pages 251-273.
- Temasova, G., Leonov, O., Shkaruba, N., & Vergazova, Y. (2022) Introduction Of A Lean Production System At Industrial Enterprises. In I. Kovalev, & A. Voroshilova (Eds.), *Economic and Social Trends for Sustainability of Modern Society (ICEST-III 2022)*, vol 127. *European Proceedings of Social and Behavioural Sciences* (pp. 243-249). European Publisher.
- Tortorella, G. L., & Fettermann, D. (2017) Implementation of Industry 4.0 and lean production in Brazilian manufacturing companies. *International Journal of Production Research*, 56(8), 2975–2987.
- Wittrock, C. (2015) Reembedding lean: the Japanese cultural and religious context of a world changing management concept. *International Journal of Sociology*, 45(2), 95–111.
- White, R.E, Pearson, J.N., Wilson, J.R, (1999) JIT Manufacturing: A Survey of Implementations in Small and Large U.S. *Manufacturers*, *Management Science*, Vol. 45, No. 1 (Jan., 1999), pp. 1-15.
- Wilson, Mark M.J., Roy, Ram N. (2009) Enabling lean procurement: a consolidation model for small-and medium-sized enterprises, *Journal of Manufacturing Technology Management*, Vol. 20, No 6, pp. 817-833.
- Womack, J.P., Jones, D.T & Roos, D. (1990) *The Machine that Changed the World*, Rawson Associates, New York.
- Yusuf, A. A., Peter, O., & Uma, K. G. (2016) Lean Concepts and Methods: 3P. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*, 1, 20-24.
- Xue, X., Nan Hu, Fangjuan Qiu, Gang Li (2025) Chief operating officers' long-term orientation and corporate lean production, *Journal of Business Research*, Volume 191, 2025, 115247, ISSN 0148-2963, <https://doi.org/10.1016/j.jbusres.2025.115247>

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