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The Relationship Between Competition, Tourism and Sustainable Development: Three Interdependent Topics

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Abstract

In recent years, there has been considerable interest in examining the relationship between tourism and sustainable development. For firms to act friendly against the environment, competition authorities must provide them with the appropriate legal certainty they need to make the necessary investments towards sustainability. Also, energy intensity flows must be kept up more closely since the empirical results point out its substantially positive contribution in terms of air pollution Therefore, policy implications should be strengthened towards more installation of renewable energy and a convergence of environmental policies towards more efficient energy use among EU countries. Energy intensity flows must be kept up more closely since the empirical results point out its substantially positive contribution in terms of air pollution.

Keywords: competition (antitrust) policy; sustainable development; tourism.

JEL Classification: K21; Q01; Z30.

Introduction

Effective competition results in products and services with added value, by means of reduced prices and enhanced quality, wider consumer choice through the expansion of the range of products and services provided, enhanced entrepreneurial environment, with firms focusing on efficiency, productivity and innovation and domestic products and services that compete on equal terms in global markets (Fotis and Korre, 2022)

Energy provides facilities for household consumption, resource mining, industrial production, tourism and transportation. Tourism activity has become one of the major players in commercial sector globally and represents the main income sources for many nations. It ranks high in terms of its contribution to economic growth and employment opportunity generation in most economies around the world (UNWTO, 2022a).

This paper analyses the relationship between effective competition, tourism and energy consumption. For this purpose, the analysis focuses on the way that competition may foster tourism development. However, a key point of this mechanism constitutes the effect of tourism development on energy consumption and, therefore, the effect of tourism on sustainable development. So, the enhancement of effective competition in oligopoly markets with high concentration may positively affect the degree of economic development of these markets, via the expansion of tourism activities, but, possibly, may deteriorate their sustainable development through the increase of the use of tourism facilities.

This paper is organized in the following way: in section 1 we present the main characteristics of the relationship between effective competition and sustainable development. In section 2 we analyse the relationship between tourism and Sustainable development. In section 3 we present data of energy consumption within

European Union (EU) and in section 4 we focus on the interdependence between effective competition, tourism and sustainable development. Lastly, but not least, in section 5 we conclude and provide useful policy implications.

1. The Relationship Between Effective Competition and Sustainable Development

1.1. Key articles of Competition Law in European Union

Article 101 of the Treaty on the Functioning of the European Union (TFEU) prohibits all agreements between undertakings, decisions by associations of undertakings and concerted practices which may affect trade between Member States and which have as their object or effect the prevention, restriction or distortion of competition within the internal market, and in particular those which:

- directly or indirectly fix purchase or selling prices or any other trading conditions;
- limit or control production, markets, technical development, or investment;
- share markets or sources of supply;
- apply dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage.

Article 102 TFEU prohibits any abuse by one or more undertakings of a dominant position within the internal market or in a substantial part of it shall be prohibited as incompatible with the internal market in so far as it may affect trade between Member States. Such abuse may, in particular, consist in:

- directly or indirectly imposing unfair purchase or selling prices or other unfair trading conditions;
- limiting production, markets or technical development to the prejudice of consumers;
- applying dissimilar conditions to equivalent transactions with other trading parties, thereby placing them at a competitive disadvantage;
- making the conclusion of contracts subject to acceptance by the other parties of supplementary obligations which, by their nature or according to commercial usage, have no connection with the subject of such contracts.

According to article 2 of Merger Regulation (Council Regulation (EC) No 139/2004 on the control of concentrations between undertakings), in making its appraisal, the European Commission (EC) shall consider the need to maintain and develop effective competition within the common market in view of, among other things, the structure of all the markets concerned and the actual or potential competition from undertakings located either within or out with the Community. Particularly, a concentration which would significantly impede effective competition in the common market or in a substantial part of it, in particular as a result of the creation or strengthening of a dominant position, shall be declared not compatible with the common market.

1.2. Effective Competition and Sustainable Development within European Union

The EU has in recent years made significant efforts to incorporate green growth issues to a concrete framework that enables the implementation of green growth objectives in EU strategic policies, in favour of public and private sectors. Sustainable development should be considered in the enforcement of various areas of EU law, particularly in competition law (Fotis, 2021a).

Competition policy relates to green growth, that is, it can consider environmental and social priorities, through exceptions, exemptions and exclusions; through substantive competition rules fostering social or ecological purposes and through the enhanced application of competition laws (i.e., see article 1A of Greek Competition Law No 3959/2011). The second and the third categories are common methods used in many jurisdictions and are often perceived as the legitimate expression of broader public policy goals.

The European Green Growth Agenda is part of Commission's policy to implement the United Nations (UN) 2030 Agenda and Sustainable Development Goals (SDGs) and covers all sectors of the economy. It focuses on the transformation of the EU into a competitive economy with no net emissions of greenhouse gases in 2050. The SDGs, adopted in September 2015 by the General Assembly of the UN, cover all sectors of the economy by defining 17 goals for both developed and developing countries, encompassing economic, financial, institutional, social and environmental dimensions (Fotis, 2021b). On 30th of November, 2016, the European Commission, among others, proposed a new 30% energy efficiency target for 2030 (Polemis and Fotis, 2019; Fotis and Polemis, 2018).

The European Green Deal focuses on sustainable growth through smart, inclusive and competitive low-carbon economy. Also, the Circular Action Plan, "*focuses on the entire life of products ……. that the resources used are kept in the EU economy for as long as possible*". Green Growth fosters economic development and natural assets must continue to provide the necessary resources in favour of humanity (Fotis et al, 2017; Fotis and Asteriou, 2017; Fotis and Pekka, 2017). Environmental sustainability seems to provide economic opportunities rather than challenges through the implementation of innovation and investments (OECD, 2011).

2. The Relationship Between Tourism Development and Sustainable Development

2.1. Tourism Activity Before and After the COVID-19 Pandemic

Tourism activity has become one of the major players in commercial sector globally and represents the main income sources for many nations (Fotis and Korre, 2022). It ranks high in terms of its contribution to economic growth and employment opportunity generation in most economies around the world (UNWTO, 2022a).

The COVID-19 pandemic has a negative effect on tourism around the world. Especially, figures show an 87% drop in global tourist arrivals in 2021 compared to 2020 due to increased travel restrictions against new virus upsurge in 2021. When compared to pre- COVID-19 pandemic levels, this would imply a reduction of approximately 260 million global tourist arrivals. (UNWTO, 2021a). Recently, the tourism ministers of 20 developed countries committed to act in favour of the digital transformation of the tourist sector in order to support the survival and sustainability of tourism jobs and businesses and ensuring everyone has fair access to the opportunities that will come from greater innovation and more investment in green tourism infrastructure (UNWTO, 2021b).

After the COVID-19 pandemic, the world is likely to witness a considerable rise in tourism growth, which could help nations recover from economic crises. For instance, international tourist arrivals rose by 18 million in January 2022 compared with a year earlier. This equals the increase for the whole of 2021 from 2020, but January's numbers were still 67% below the same month in 2019 (UNWTO, 2022b).

According to Economist Intelligence Unit (EIU) "the travel and tourism industry continues to be one of the hardest hits by the coronavirus pandemic, with global international arrivals in 2022 set to remain 30% below 2019 levels. Differing levels of border control and variations in vaccine passports will continue to drive tourism trends and make international travel difficult, and companies will come under increased scrutiny to minimise their contributions to climate change" (EIU, 2022).

In Greece, the COVID-19 pandemic negatively affects the tourism growth of Naxos and South Aegean Region tourism markets in Greece from 2020 onwards (Korre, 2021). However, after two years of lockdowns, tourism is making a significant comeback in Greece since 2022 tourism revenues will reach 90% of their pre-COVID-19 pandemic level (18 bl euros - 33 ml arrivals). In April 2022, tourism revenues were above the levels of April 2019, marking an increase of almost 100 million euros, while in May 2022, passenger arrivals at Greek airports from abroad reached an increase of 3,2%, compared to the corresponding month of 2019.

2.2. Activities in Tourism Organizations and Associated Environmental Aspects and Pressures

Tourism positively affects the growth of an economy via earning foreign exchange and enhancing employment opportunities. It also contributes to greater energy consumption due to the various tourist activities such as hotel accommodations and transportation. European Commission (EC) has presented activities in tourism organizations (Hotels, Campsites, Restaurants and Tour Operators) and associated energy environmental aspects and pressures (EC, 2016) (Table 1).

Table 1. Activities in tourism organizations and associated environmental aspects and pressures

Service/Activity	Main environmental aspects	Main environmental pressures
Administration	▪ Office management; ▪ Reception of clients.	▪ Energy, water and material (mainly paper) consumption; ▪ Generation of municipal waste (large amounts of paper) and hazardous waste (e.g., toner cartridges).
Technical services	▪ Production of hot water and space heating/cooling; ▪ Lighting; ▪ Elevators; ▪ Swimming pools; ▪ Green areas; ▪ Pest and rodent control; ▪ Repair and maintenance.	▪ Energy and water consumption; ▪ Consumption of a range of hazardous products; ▪ In some cases, use of CFC and HCFC refrigerants; ▪ Emissions to air (air pollutants, greenhouse gases); ▪ Generation of a wide range of potentially hazardous waste types such as empty chemical containers – Generation of waste water.
Restaurant/bar	▪ Breakfast, dinner, lunch; ▪ Beverages and snacks.	▪ Supply chain pressures (see 'Purchasing'); ▪ Energy, water and raw material consumption; ▪ Generation of municipal waste (especially food waste and packaging waste).
Kitchen	▪ Food conservation; ▪ Food preparation; ▪ Dish washing.	▪ Supply chain pressures (see 'Purchasing'); ▪ Significant consumption of energy and water; ▪ Generation of municipal waste (especially food waste and packaging waste); ▪ Generation of vegetable oil waste.
Room use	▪ Use by guests; ▪ Products for guests' use; ▪ Housekeeping.	▪ Energy, water and raw materials consumption; ▪ Use of a wide range of hazardous products; ▪ Generation of waste packaging and small amounts of municipal waste; ▪ Generation of waste water.
Laundry	▪ Washing and ironing of guests' clothes; ▪ Washing and ironing of towel, bedclothes, etc.	▪ Significant consumption of energy and water; ▪ Use of hazardous products; ▪ Generation of waste water.
Purchasing	▪ Selection of products and suppliers; ▪ Storage of products.	▪ Supply chain pressures (land occupation, degradation or destruction of ecosystems, disturbance of wildlife, energy and water consumption, emissions to air; ▪ Air pollutants and greenhouse gases, emissions to water, waste generation); ▪ Generation of packaging waste; ▪ Hazardous substance leakages.
Transport	▪ Transport of guests; ▪ Transport of employees;	▪ Energy (fuel) consumption; ▪ Emissions to air;

Service/Activity	Main environmental aspects	Main environmental pressures
	▪ Transport by suppliers; ▪ Energy (fuel) consumption; ▪ Emissions to air; ▪ Infrastructure pressures (see 'Building and construction').	▪ Infrastructure pressures (see 'Building and construction').
Additional services	▪ Medical services, supermarkets, souvenir shops, spa and wellness, hairdresser, etc.; ▪ Construction of new areas or services; ▪ Repair of existing areas or services; ▪ Land occupation; ▪ Degradation or destruction of ecosystems; ▪ Disturbance of wildlife.	▪ Energy, water and raw materials consumption; ▪ Generation of municipal waste, and some specific hazardous waste types (e.g., sanitary waste); ▪ Energy and water consumption; ▪ Significant consumption of raw materials and hazardous products; ▪ Significant generation of construction waste; ▪ Generation of hazardous waste.

Notes: * CFC and HCFC stand for chlorofluorocarbon and hydrochlorofluorocarbon.
Source: EC (2016).

It is evident from Table 1 that tourism and energy consumption are linked. They used to be interconnected concepts since tourism activities are closely associated with various environmental aspects and energy pressures.

3. Evidence of Energy Consumption within European Union

Energy consumption has a significant effect on economic growth (GDP), as it is the basis for modern industrial societies (Apergis and Payne, 2010). According to (Fotis et al., 2017), the relationship between real GDP growth rate and per capita energy consumption exhibits an inverted U-shape for 34 European Union (EU34) countries, Eurozone and 28 European Union (EU28) countries. However (Menegaki, 2011) does not confirm causality between renewable energy consumption and GDP even though empirical tests unfold, inter alia, short-run relationships between renewable energy and greenhouse gas emissions. In any case, development and economic growth cannot be achieved without a more significant use of energy. However, the use of renewable sources of energy negatively affects pollution. Therefore, the more the renewable energy we use the less the air pollution (Fotis and Pekka, 2018).

Fotis (2019) presents energy efficiency indicators as the share of renewable energy in gross final energy consumption, the electricity generated from renewable sources of gross electricity consumption and energy saving from primary energy consumption. The empirical results indicate that the share of electricity produced from renewable energy sources to the national electricity consumption contributes to the elimination of emissions, but a more pronounced effect is revealed by the contribution of the share of renewable energy in gross final energy consumption. Fotis (2019) also points out that the empirical results derived from the indicator of energy saving indicator suggest that EU energy policy should be also strengthened towards a more efficient use of energy at all stages of the energy chain from its production to its final consumption.

Fotis (2021b) indicates that in the less concentrated electrical markets such as Czechia, Greece, Slovakia, Greenhouse Gas Emissions (GGE) have decreased more than in the less competitive markets (Estonia, France, Croatia, Cyprus). Also, the less concentrated electrical markets exhibit also a higher degree of share of renewable energy than in the less competitive electrical markets. These results indicate that the higher the degree of competition in electrical markets, the lower the electrical prices. Overall, EU28 countries have a primary energy

consumption of almost 1.526 Mtoe in 2019 and they are quite close to achieve the energy efficiency target of Europe 2020 strategy implemented by Directive 2012/27/EU on energy efficiency.

Energy intensity positively affects environmental pollutants. Even though the energy intensity of the EU countries reduced by 24% between 1995 and 2011, it seems that this endeavour must be reinforced in the future. As in the case of the renewable energy intensity indicators, the recent update by the EU of a new 30% energy efficiency target for 2030 will certainly further improve the elimination of emissions.

4. The Interdependence Between Effective Competition, Tourism and Sustainable Development

The interconnection between competition policy and sustainable growth is unquestionable. The former may play crucial role by enhancing sustainability through competition rules. National competition authorities must be the mechanism fostering sustainable growth by considering various aspects of externalities and comparing discounted gains against environmental costs. The analysis reveals that EU countries should strengthen their efforts towards Sustainable Development, particularly by eliminating their dependency from energy imports. Competition policy should offer the incentives to firms to improve technological progress towards greener technologies and to avoid investments funds being channelled to brown technologies for short-term returns. For these purposes, it should balance the negatives and positives during the evaluation of firms' anti-competitive behaviour for protecting the environment (Fotis, 2021a). Table 2 provides critical thoughts from a "competitive" point of view regarding sustainability issues.

Table 2. Competition thoughts towards sustainable economy

▪ The transition to a sustainable economy will be successful if it is supported by all public and private actors
▪ Integration of sustainability issues into business strategies
▪ Enforcement of competition law in a way that actively and directly contribute to the attainment of sustainability issues
▪ Competition economics should enhance in its objective function various externalities regarding sustainability issues
▪ Competition law should become more "upgraded" with key concepts of sustainability
▪ Provisions to the firms with the appropriate legal certainty they need in order to make the necessary investments towards sustainability
▪ Adoption by competition authorities clear set of rules that clarify under which conditions the private sector may take action(s) to promote sustainability objectives
▪ Adoption by competition authorities reviews of past merger and/or antitrust cases in order to identify points of friction between sustainable economy and competition law/economics
▪ Collaboration of competition authorities with other regulatory authorities

Source: HCC (2022a).

It is evident from Table 2 that competition policy may foster the transition to sustainable economy through various channels. For instance, the integration of key sustainability issues into firms' daily business strategy will enable the latter to incorporate in their objective function various externalities regarding sustainability issues and competition law will become more "upgraded" with key concepts of sustainability.

Conclusions and Policy Implications

In recent years, there has been considerable interest in examining the relationship between tourism and sustainable development. Energy consumption is significantly associated with climate change and carbon emissions. Therefore, appropriate policies are required to reduce tourism-induced energy consumption around the world. Policymakers must provide incentives to the tourism industry's firms to adopt cleaner energies, carbon-neutral transportation and hybrid energies to achieve the desired level of 2050 roadmap. Hotels and other similar tourism facilities could be encouraged to use renewable sources more intensively and government could provide firms tax rebates or low-cost opportunities for installing environment-friendly technologies.

For firms to act friendly against the environment, competition authorities must provide them with the appropriate legal certainty they need to make the necessary investments towards sustainability. For instance, competition authorities must adopt clear set of rules that clarify under which conditions the private sector may take action(s) to promote sustainability objectives.

Policy implications should be strengthened towards more installation of renewable energy and a convergence of environmental policies towards more efficient energy use among EU countries, and energy intensity flows must now be kept up more closely since the empirical results point out its substantially positive contribution in terms of air pollution. The 30% energy efficiency target for the year of 2030 adopted by the EC aims to implement such policies towards the Energy Roadmap 2050. This target must be updated at regular intervals in order to be monitored effectively (Fotis and Polemis, 2018, Fotis, 2021).

Credit Authorship Contribution Statement

The authors conducted all the activities associated with preparing, researching, and writing the paper. The corresponding author, in particular, is accountable for ensuring the accuracy of the descriptions and that these are agreed upon by both contributing authors.

Conflict of Interest Statement

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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