

THE EFFECTS OF TECHNICAL PROGRESS ON ITALIAN TOURISM COMPANIES

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Purpose. The purpose of the present research was to determine the effects of technical progress on the value of Italian tourism companies.

Design/methodology/approach. The research was performed on the data on three tourism companies listed on the Borsa Italiana: Autogrill, GrandiViaggi, and Snai. The research was based on publicly available data on technical progress retrieved from the ProQuest database. The effects of the technical advancement were measured using the event-study method. All the data on the asset prices was retrieved from the database of the stock exchange.

Findings. The research indicates that on average the implementation of any kind of technical advancement augments the company's market value by 1% within 21 days surrounding the release of the information to the market. However, the results differentiated strongly among the different types of technical advancement projects.

Research limitations. The main limitation is that the research covered only the technical advancement projects from one country.

Originality/value. The paper fulfils the knowledge gap concerning the results of the technical progress in tourism enterprises.

Keywords: tourism enterprise, technical progress

Conference participant

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Introduction

Technical progress is usually attributed to such business fields as electronics, aviation, pharmaceutical industry etc. However, technical progress is also provided by the low-tech industries to a significant extent.

In the extensive work on technical progress and innovation Lundvall [2010] distinguishes incremental and breakthrough technical changes. He indicates that the substantial part of the incremental progress originates from the routine actions. In such approach, the every-day operations, and the minor upgrades are more important than the formal R&D (at the same time, that the breakthrough advancements are more likely to occur in specialised research facilities). Furthermore, the routine every-day actions occur in both high-tech, and low-tech industries, and therefore the chances for minor upgrades to occur are virtually the same in both.

Tourism is the low-tech industry. However, it has a crucial role in the economy of the European Union [WTTC 2014]. It contributes to both – GDP and employment [Ernst & Young 2013].

In order to study the effects of the technical progress of tourism enterprises the event-study method was employed. The results indicate, that the technical advancement causes the market value to increase on average by 1%.

The paper is organised as follows. First, the tourism enterprises are defined. Second, the method is presented. Third, the results of the empirical investigation are delivered. Fourth, the discussion and conclusions are delivered.

Tourism enterprise

In the current research, the definition

of tourism enterprises was retrieved from the United Nations World Tourism Organisation. According to the UNWTO tourism enterprises cover: accommodation for visitors, food and beverage servicing activities, passenger transportation, travel agencies, and other reservation activities [UNWTO 2010]. However, the distinction may be problematic, if a company is engaged in different activities. In such case, an enterprise will be classified as tourism if more than a half of the value added is generated by the tourism-related activity [UNWTO 2010].

Method

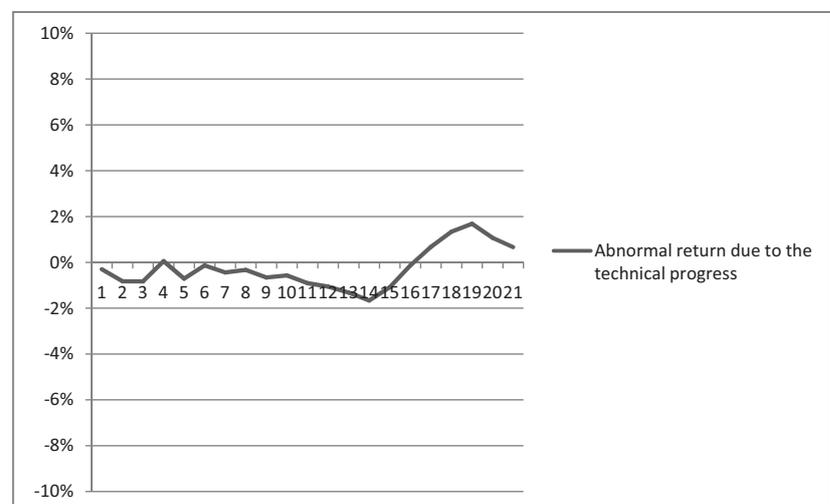
The purpose of the present research was to determine the effects of technical progress on the value of Italian tourism companies. The spatial scope encompassed Italy. The research was focused on tourism enterprises listed on the main market of Borsa Italiana. The

data on technical progress was retrieved from the ProQuest database. Within the studied period three different types of technical progress were identified:

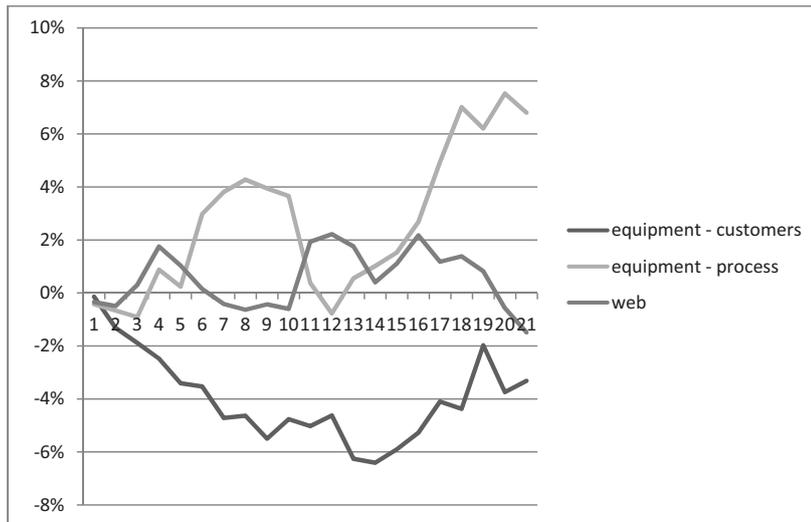
- Advancement in the equipment used directly to provide services to customers.
- Advancement in the machinery used in the internal processes of companies.

Implementation of web technologies.

The effects of technical advancement projects were measured using the event-study method [Campbell, Lo, MacKinlay 1997; McWilliams, A. & Siegel 1997]. The changes in market value resulting from the technical changes were measured in the short-term due to the assumption about the market efficiency [Fama 1970]. The abnormal returns were calculated as the difference between the actual ones, and the ones calculated using the Fama & French



Graph 1. Abnormal returns due to the technical progress made by tourism enterprises
Source: own development



Graph 2. The abnormal returns resulting from different types of technical progress

Source: own development

three-factor model. In the preliminary research on the effects of innovation [Szutowski 2014] it was ascertained that the most recognisable abnormal returns occur within the period of 21 days surrounding the event. Therefore in present study such period was employed.

Results

The results indicate that the cumulated gain in the market value resulting from the technical progress projects managed by tourism enterprises equals 1%. The distribution of the abnormal returns over the period of 21 days is presented in the graph 1.

As it may be seen, the highest gain in market value may be observed several days after the information of the technological project is announced. It may be related to the fact, that the technical progress may require some time to be acknowledged by the market (probably, the more complicated the project is, the more time the investors will need to acknowledge it).

Three types of technical progress were identified: advancement in the equipment used directly to provide services to customers, advancement in the machinery used in the internal processes of companies, and implementation of the web technologies. The results of the technical progress in all three fields were strongly diversified. Precise data is presented on the graph 2.

The abnormal returns vary strongly among the different types of technical advancement. The most profitable for

the tourism enterprises is to invest in technologies that improve processes. The less profitable technological improvements are the ones focused on customers.

Conclusions

Technical advancement is of key importance for the development of companies. It is usually associated with high-tech industries, but the low-tech ones also play an important role. The good examples are the tourism enterprises.

The research was performed on the Italian tourism enterprises, listed on Borsa Italiana. The data on technical progress was retrieved from the ProQuest database. The technical advancement projects were divided into three groups: advancement in the equipment used directly to provide services to customers, advancement in the machinery used in the internal processes of companies, and implementation of the web technologies.

The results indicate that the projects focused on technical changes increase the market value by 1%. The most profit-making for the tourism companies are the technologies, which improve the internal processes. This may be based on the fact, that the profits in this case do not depend on the market reaction (customers' reaction) and bring less uncertainty.

The further research should be expanded to cover other markets. Also it seems beneficial to augment the sample in order to extract more types of technical advancement and generalise the results.

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