Accounting Information System and Management Control in the Event Business: the Cruise Terminals Study

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Abstract. This paper aims to examine the role of the Accounting Information System (AIS) and management control in the cruise event management process. We consider two *cruise events* typologies: *on ship berthing* and *on terminal*. We compare two terminal concessionaires in the Italian context, evidencing which tools are available to manage and control information needed. This multiple case study creates and identifies some key performance indicators, accounting information systems and control tools. The descriptive analysis evidences that the cruise event management processes are separated.

Keywords: Accounting information system, management control, cruise events management process, cruise terminal concessionaires

1 Introduction

In recent decades, the cruise industry has been interested by a relevant growth phenomenon in spite of the world economic crisis [1, 2, 3], with a greatest improvement of the overall cruise international demand over 85% from 2002 to 2012 [4], involving the North America and significantly the Mediterranean area. Two main phenomena concern the cruise industry development: the increase of the passenger flows and the cruise ship gigantism. In this scenario, the cruise line companies can become shareholders in the management of maritime stations through the establishment of cruise terminal concessionaires[2]. In order to improve the passenger flows and support their revenues, the cruise line companies and cruise terminal concessionaires provide multiple and high standard services, such as the cruise events. One key factor for the success of all the players involved in the cruise event management process is to manage and control information and data in a sharing and wider perspective.

We investigate the management process of two cruise events typologies, the *cruise events on ship berthing* and *on terminal*, from the terminal concessionaire perspective; we argue that especially the concessionaires play a key role in promoting new cruise events which "push" terminal visitors to the cruise ships and in this process we

analyze the tools adopted to manage and control information needed. The current paper uses a multiple case study methodology, comparing two different experiences in the Italian context. This study investigates how the concessionaires manage and control information related to the complexity process and which control systems are applied.

The paper is structured as follows: the sections 2 and 3 analyze the role of the Information Technology (IT) in the events management and, more specifically, the Accounting Information System (AIS) and management control in the relationship systems of the cruise events; the section 4 shows the research methodology and the observations related to the case studies proposing some key performance indicators to support the AIS investigated; the last section evidences some final considerations about the phenomenon analyzed, the main limits of the work and future research perspectives.

2 Information Technology in the Event Management Process

The "cruise events, within a wide category including opportunities and happenings of a diverse nature, can be conceptualized as hallmark events and need to be managed using a number of organizational, management and control tools for its implementation.

The event management process with the main rules and procedures has high levels of complexity and uncertainty due to the multiplicity of players involved and the body of knowledge and information to share [5, 6]. IT plays a key role in the event management process to facilitate and control information and data sharing, especially because of the unpredictability of economic, social, environmental and organizational effects linked to the event. In the event management process, there are diversified and interesting applications of IT and control tools in many areas, such as transportation service, security, health care assistance, financial, socio-economic and cultural impact analysis, communication service, tourism, and so on. Some authors, for instance, analyzed an interesting application of Information and Communication Technology (ICT) in the 2002 Winter Olympic Games in Salt Lake City in the health care service for athletes, event participants, organizers, volunteers, and tourists [7]. Another information service system, called COMPASS2008, was planned to be the mobile digital, multilingual and multimodal companion for participants and visitors of the 2008 Olympic Games in Beijing [8]. In the Sydney Olympic Games 2000, IBM developed for SOCOG a personalized integrated information system, that managed SOCOG services; instead, in the Athens Olympic Games 2004, an innovative IT system was developed, the Process Logistics Advanced Technical Optimization (PLATO) approach for the planning, design, and operation of venues [9]. Hence, IT applications also support the event management process facilitating the coordination among all the players involved, as it happened in the Olympics in Athens between ATHOC and Greek National Tourism Organization (GNTO) [10]. In all the experiences described, IT effectively and efficiently support the mega-events management process facilitating knowledge and information sharing and any communication and coordination activi-

ties, this role and function of IT could be critical also in the cruise event management process.

3 AIS and management control in the *new cruise events* between terminal infrastructures and ships

We analyze the cruise events management process focusing on the management and control of the relationships among partners (public and/or private) and the role of the AIS (system of collection, storage and processing of financial and accounting data inside IT applications). The *cruise events on ship berthing* analyzed regard the events organized during the time of ship-stopping on the quay (e.g. the presentation of projects on board, co-marketing events between the cruise line company and other operators, awards, and so on) and, the cruise events on terminal are the events planned on the infrastructures (e.g. food and beverage events, wedding showroom events, hallmark conferences, maritime conventions, medical conferences, and so on).

The critical aspects concern the management and control of the relationship systems related to each cruise event category especially for the role played by the cruise events in the cruise industry as lever of development to increase the passenger flows. This study analyses the cruise events management process involving the cruise infrastructures. Indeed, the cruise Italian seaports are characterized by partnerships between the concessionaires and cruise line companies [2] and an increasing number of cruise events on ship berthing and on terminal. The concessionaires could support the cruise companies to increase the passenger flows through the management of "new events", both *on terminal* and *on ship berthing*. In this direction, the control is a *key driver* for functioning of each relationship effectively: a software becomes a critical factor to manage and support knowledge and information sharing [11]. The coordination and control of activities among firms are ensured by the exchange and management of information [12]. Besides, the control into Inter-Organizational Relationships has the role to motivate the partners to assume "performance oriented" behaviors and to coordinate the input-output information process within the relationship [13]. The cruise industry adopts innovative IT tools to collect and manage passengers' information (cruise booking, guest preference tracking, catering service management, budgeting, and so on). Only few concessionaires in the Italian context use advanced and integrated software sharing data with the players involved (data collection, elaboration and internal and external reporting) [14]. The AIS and management control tools could facilitate and support the cruise events management process collecting and analyzing information and data, as it occurs for the other hallmark events, such as Olympic Games and World Cup.

4 Case studies

Following the case study methodology we compare two cruise terminal concessionaires: Terminal Napoli S.p.A. (TN) and Venezia Terminal Passeggeri S.p.A. (VTP).

Italy is the main country of the Mediterranean area for the cruise destinations and the selected concessionaires manage significant cruise flows. Besides, both Naples and Venice are located directly in the port cities of cruise destinations. We have selected these two case studies also for the continuity in time of management of the cruise events *on ship berthing* and *on terminal* and the dimensions of the events planned. The study has been conducted through the technique of interviews to managers responsible for the two cruise events processes, observations and data archives analysis. It evidences a specific role of the AIS and management control to support the main partnerships within the cruise events management process in the seaports of Naples and Venice. Indeed, as regard the *cruise events on ship berthing*, we identified the following main organizations involved in the cruise event management process: cruise line company (CC), event specialized organization (ESO), CC or ship agent (SA) and cruise terminal concessionaire (CTC).

In the concessionaire perspective, in order to embark and disembark the participants to the *events on ship berthing*, CC or SA transfer qualitative and quantitative information to CTC. In both CTC interviewed (TN and VTP), the data collection regards: data and type of events (e.g. flag ceremony, maiden call, co-marketing events, meeting, workshop, and so on), the time schedules that includes the arrival of the participants and embarking and disembarking operations, the number of event participants or *temporary cruise visitors*, demographic data of the participants including the identification document, distinguishing the public and private authorities, the number of car places in the parking managed by the concessionaire, security and hostess services, reserved desk and areas for the hospitality. This information is communicated in advance; however, the timing depends on the size of the events. Otherwise, in the two cruise terminal concessionaires (CTCs) the AIS supports the data collection. In TN the information about the event is transferred by e-mail from CC or SA to TN; in terms of operational services provided by CTC, the *temporary cruise visitors* are considered like as passengers. For the management of these cruise events, VTP follows a similar procedure to TN but with a different IT support. Indeed, VTP uses for the *temporary cruise visitors* the *Access on Board*, that is a software "ad hoc" developed by VTP and used always by CC or ship agents (SAs) to communicate the lists of passengers to embark, disembark or in transit. This occurs because, like TN, the *temporary cruise visitors* are considered by CTC as passengers. The data software collects only details about the number and demographic data including the identification document number of the visitors. Further information on the terminal services requested to manage the events is communicated mainly by e-mail, in some cases by fax and, finally, by telephone. TN and VTP do not have a dedicated software on these *special events*. Consequently, the CTCs do not implement budgeting and reporting systems about the *cruise events on ship berthing*. In the accounting systems of both CTCs the revenues for these services are not shown separately, but they are included in the revenues for "embark and disembark" revenue. Indeed, in TN for the security services, TN's security manager is involved and transfers by e-mail information on the event to security operators involved in the process, while for the big events the information is transferred and shared by *ad hoc* "team work". With reference to the control service, the operators are managed by TN's passengers manager and the communications are

supported by *handheld transceiver* (HT). As regard to parking service the CC or SA transfers by e-mail to TN the number of the Authorities and their name, surname and number of identify card; the number of the guests' cars. In VTP the control services for embarking are supported by *Access on Board*.

In the *cruise events on terminal* management processes, the TN and VTP have a different organization. TN entrusts the management to its Congress Department (CDep). The main events in this terminal are: congress, meeting, workshop, fair, and so on. In this case the main relationship investigated is between the CDep and ESO. The data collection regards mainly: type of event, timing schedules, number of visitors, number of rooms occupancy, hostess, security, interpreters, wireless, hospitality, parking, catering, and so on. ESO transfers information to CDep mostly by e-mail and, in some cases, by fax. A database with excel sheets program is used by CDep. The program creates a budget including profit and loss for each event and also can collect data processing and make quantities and values reports. This program does not communicate with other TN departments, only CDep's manager and board members authorized have the access. This database supports the management control on these events, but it is not "integrated technically" with the TN accounting system. CTC in Naples provides to ESO the infrastructure spaces and also specific organizational services using own suppliers. Consequently, the relationships system is characterized from other partnerships where the tool used to collect and share information is the electronic data processing through some spreadsheets, such as excel. However, an Integrated Information System (IIS) is not implemented to allow a quick access to information needed and reduce the mistakes. IIS can create a competitive advantage in the seaport systems for all activities that involved more firms [15]. CTC analyzes customer satisfaction data collected by questionnaires. Finally, to supply the services for the events on terminal, CTC communicates with other departments in TN by e-mail.

VTP manages 8 infrastructures whom 7 are used for this typology of events. VTP entrusts to its subsidiary VTP Events S.r.l. (VTP_E), 100% owned, the events management process *on terminal*. The main events planned are: press conference, workshop, congresses and fair. The size of the event determinates the number of the visitor flows (e.g. 30 visitors for a press conference, 300 visitors for a workshop, from 500 to 1000 visitors and so on). VTP_E planes and manages the events according to its calendar. The main relationships identified are: between VTP_E and ESO, and between VTP_E and VTP. Two phases compose the process: first, VTP_E collects data from ESO, mainly by e-mail and fax, on the type of event, timing schedules, number of *event terminal visitors* and other information on services (e.g. hostess, catering, interpreters, safety, and so on); second, regarding the services suppliers (e.g. catering) VTP_E obtains the list of names by ESO, and this last keeps the direct relationship with them. At the same time, to obtain the availability of infrastructures slots, VTP_E requires by e-mail the permission to VTP that starts sub-relationships to receive from the seaport public authorities the authorizations to organize the event. VTP_E has an own database based on spreadsheets, but the system is not integrated with the accounting of the VTP. The management control and reporting activities are based on the financial statements. However, to improve management control in the relationships described, it is possible to identify the following performance indicators:

1. With refer to the *cruise events on ship berthing*:
A1) *performance measures*:
[1] revenue of the operational services for *temporary cruise visitors*
B1) *effectiveness index*:
[2] no. of complaints for non-compliance with transit-time/no. events on ship berthing managed
[3] no. of *temporary cruise visitors* embarked in delay/total number of *temporary cruise visitors* indicated in the list
C1) *efficiency index*:
[3] time of control of the *temporary cruise visitors*/No. of the security agents managed by CTC

The index [1] permits to evaluate if the respect of the transit-time is strategic for the CC. Its value may vary from 0 to 1, if the value tends to 1 it signs the ineffectiveness of process and coordination activities between two players, but if the value is 0 may indicate an effective relationship for data and information sharing. The index [2] describes the process ineffectiveness when its value tends to 0. The causes may be ascribed to not visible or unclear signals in the terminal otherwise reasons linked to visitors. The index [3] signs the efficiency in the control management process. In this case, the rapid access to the information on the event (e.g. list of visitors) consents to CTC to plan the resources.

2. With regard to the *cruise events on terminal*:
A2) *performance measures*:
[4] revenue of the operational services for *event terminal visitors*
B2) *effectiveness index*:
[5] no. of complaints for non-compliance with transit-time/no. events on terminal managed
C2) *efficiency index*:
[6] time of control of the *event terminal visitors* /no. of the security agents managed by CTC
[7] no. seating occupied by *event terminal visitors* /no. seating available in the rooms used for the events by CTC

The number of key performance indicators depends on the information needed by CTC. Indeed, the index might support the implementation of “new events between land and sea”. In this way, the concessionaire could play an active role in leading the *event terminal visitors* towards the ships are stopped on the quay. So, the visitors become *temporary cruise visitors* and, in future, they could participate into a cruise, becoming cruise passengers.

However, the introduction of an IIS in these relationships requires the sustainment of high investments by CTCs, but first of all the interest of the CC to share resources and information about possible passengers and on the “knowledge innate” in the management of the ships.

5 Conclusions

This paper contributes to the existing literature focusing on issues that previous studies have not investigated, such as the role of AIS and management control in the *cruise events on ship berthing* and *on terminal* management processes. The competitive advantage for all the players involved in the process investigated depends on the capacity to collect, manage and control information, data and knowledge in a wide and sharing perspective.

Two case studies, TN and VTP, evidence that AIS and management control tools play a critical role for the effectiveness and efficiency of these processes; otherwise, their role in terms of adoption changes related to the two cruise events, in the cruise events on ship berthing AIS plays a limited and less important role than the cruise events on terminal. In the cruise events on ship berthing, the concessionaires is more focused on the traditional embarking and disembarking services, instead, in the cruise events on terminal, the focus is more on the events, indeed, IT applications play a critical although they are still rudimentary and at the primary stage.

Regarding the *cruise events on ship berthing*, the CTCs do not implement budgeting and reporting systems, in fact, in the process the *temporary cruise visitors* require operational services (e.g. control, embarking and disembarking, and so on). Indeed, the CTCs do not have a database. Besides, pursuing the aim to increase the passenger flows, the event *on ship berthing*, promoted and mainly managed by CC, already favourites the visit tour of the ship to the event participants, that are temporary cruise visitors. So, in these relationships an information system technical integrated among the players involved could improve the efficiency and the effectiveness of the terminal operations.

As regard the *cruise events on terminal*, the analysis shows that the events and the related flows of *event terminal visitors* are managed in slots of the cruise infrastructures separated by cruise passenger flows and, more, generally from the cruise activities on terminals. In Naples and in Venice, we observed two different organizational structures. In both cases, even if the structures dedicated to the management of these events have a database created with a software "*ad hoc*", there is not an AIS technically integrated. In TN and VTP the information on processes is mainly sharing by e-mail. More specifically, in TN the *internal reporting* (profit and loss, financial resources, some key indicators and so on) is transferred by CDep to Board members by e-mail; in VTP the annual financial statements and any statements (only if requested by VTP) are transferred by VTP_E to VTP by e-mail. In this paper, the identification of a key performance indicators set supports the actually control systems adopted by CTCs. In particular for the *cruise events on terminal* the set could push the CTCs to offer to cruise line companies, that are customers and, in the case some of which are also shareholders of the concessionaire, to realize "new events" in sharing between "terminal infrastructures and ships". In this way, the CTCs could assume an active role to support the cruise companies and, more in general the seaport systems to increase the passenger flows.

Even though the study allows us to emphasize the key role of AIS and management control in the cruise events management process, it is a qualitative study in the con-

cessionaire perspective. For this reason we might develop a research design involving also the perspective of analysis of the cruise companies and the other players in the cruise industry .

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