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A Socio-economic Study of Marine-based Water Activities in the
West of Ireland

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Ireland

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Abstract

This study seeks to examine the economic impact of companies that offer water-based activities (WBA) to their localities in Ireland. Marine based water activities generated €74.3 million in turnover to the Irish economy in 2007 of which €40 million was Gross Value Added. The sector employed 1090 individuals in Full Time Equivalents. Previously, the local economic impacts of WBA were difficult to measure due to lack of micro data and literature on the sector. This study takes previous national level research on the value of WBA further, by examining the demographics, visitation patterns and expenditures of WBA participants in the West of Ireland. This paper used a face-to-face survey to collate information on participant characteristics and their expenditures on WBA in the local economy during the summer of 2010.

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1. Introduction

Tourism is a major international industry and is the largest global employer, providing 231 million jobs in 2007 (World Travel and Tourism, 2007). Coastal locations are traditional hotspots for tourism and leisure activity (O'Mahany et al., 2009; Hynes and Farrelly, 2010; Jennings, 2004). Indeed, ocean and coastal tourism is widely regarded as one of the fastest growing areas within the contemporary tourism sector (Hall and Page, 2006). Travel and tourism is a rare industry where off-shoring is difficult (Houston, 2008). The tourism experience in Ireland is unique to Ireland; one must visit Ireland to enjoy it. Ireland's island status gives it a comparative international advantage in marine and coastal tourism. The coastal landscape of Ireland is among its best known scenic attributes (Cooper, 2009) and provides a multitude of recreational opportunities including sea-angling, diving, surfing, scenic walkways and wildlife observatories.

In Ireland, the marine leisure and tourism industry is developing rapidly in terms of infrastructural planning, investment and development (Annett et al., 2007; O'Connor, 2007) with a view to developing clusters of linked marine activities in selected locations (Marine Institute, 2002). The economic growth experienced in Ireland since the early 1990s (O'Mahany et al., 2009), coupled with an increased focus on health, leisure and improved lifestyle (Ginty, 2007, Atkins and Butler, 2001) has contributed to an increase in water-based activities (WBA) participation rates year-on-year since 2000 (Fáilte Ireland, 2009). In 2008, 1.2 million of domestic and over-seas holidaymakers engaged in a WBA. In 2007, the most recent year for which data is available, the Irish market for marine leisure generated €453.3 million in gross value added to the Irish economy and employed 5,800 individuals (Morrissey et al., 2010). However, although quantifying the size of the marine tourism sector in the national economy is important from a national policy point of view, it is similarly and perhaps even more important from a policy perspective to examine the industry at the local level.

Tourism is typically identified as a source of economic activity which can generate positive economic and socio-economic impacts in rural and remote areas (Solon and Brunt, 2006; Cawley and Gillimor, 2008). This argument is well-founded as tourists and outdoor recreationists become increasingly attracted to peripheral coastal areas

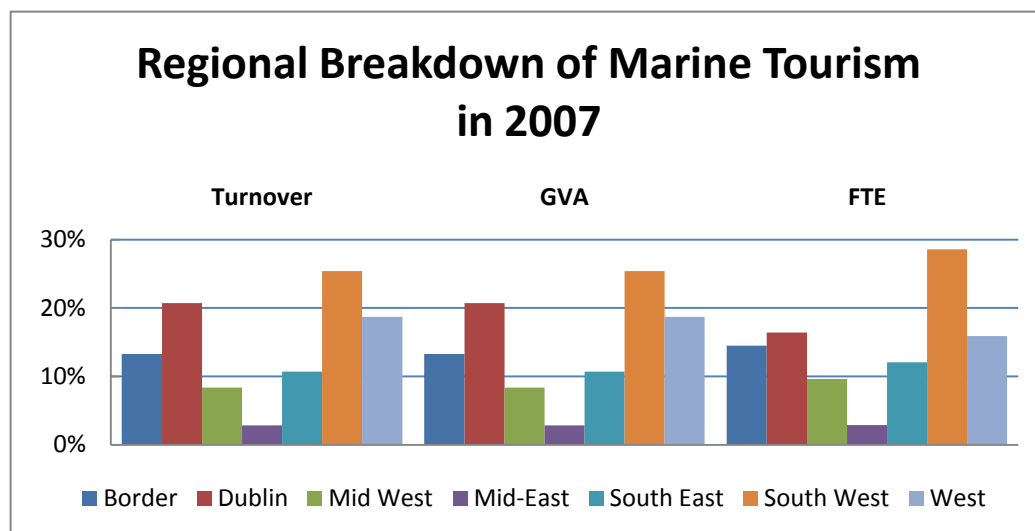
(Garrod and Wilson, 2004; Cawley and Gillmor, 2008) as an antidote to the anomie of urban life (Urry, 2002). However, research has found that if tourism is to flourish in remote, rural areas, the structure of the sector should be complementary to existing economic and social structures in the area (Garrod et al., 2006; Buttimer, 2001). Three features that have emerged from the published literature as being conducive to the development of rural tourism include local resources and ownership, complementarity in use and an appropriate business model scale (Cawley and Gilmore, 2008). Local ownership and a sense of choice on how to use the resource base serve to maximise economic benefits with an area (Shaw and William, 2002) and help foster community identity (Flannery and O’Cinneide, 2009). Tourism activities should be complementary to existing structures and support local resource conservation (Garrod et al., 2006). Part of this complementarity relates to the scope and scale in which the development of the tourism sector is pursued in an area. For rural tourism this generally means indigenously owned, small-scale micro-businesses (Cawley and Gilmore, 2008).

The marine WBA sector is conducive to the development of sustainable rural tourism. In terms of maintaining a sustainable resource base and social capital, WBA companies have a vested interest in maintaining the coastal resource (Given et al., 2006; Wade et al., 2006; Mundet and Ribera, 2001) and encouraging indigenous cultural attractions (Midtgard, 2003) and alternative (non-urban) ways of life (Urry, 2002) that appeal to postmodern tourists (Cawley and Gillmor, 2008). In terms of economic and social complementarity, the WBA sector is characterised by relatively easy entry, high family ownership, low capital and operating costs and desirable locations. Its strong connection with leisure and lifestyle preferences also encourages a sustainable model approach (Getz and Carlson, 2000). In Ireland, companies that offer WBA are dotted along the coastal areas and are generally located outside of the main urban centres, in rural areas. A SEMRU company survey in 2009 (Morrissey et al., 2010) found that the majority of these employed 1-2 persons and were generally family run and sole-ownerships. In 2007, WBA companies generated €74.3 million in turnover of which €40 million was GVA to the Irish economy (Morrissey et al., 2010). Figure 1 provides a breakdown of turnover, GVA and employment for marine tourism by region. From Figure 1, one can see that the WBA companies located in the south west region of Ireland contribute the highest percentage of GVA and employment to

the sector. Dublin and the Western region have the next highest share of marine-based tourism.

Given the growing market share of WBA within the broader tourism profile and that WBA participants are relatively high spenders (ESRI, 2005), a number of international studies have examined the economic impacts and market importance of individuals who engage in WBA at the local level (Mundet and Ribera, 2001; Buckley, 2007; Lazarow, 2007; Nelson et al., 2007; Murphy and Bernal, 2008). Each study found that WBA have a positive economic impact on the local economy and that this economic activity was directly related to the marine resource in the local area. That is, WBA participants only visited the locality to gain access to the marine resource and the visit would not be made otherwise (Nelsen et al., 2007; Murphy and Bernal, 2008; Mundet and Ribera, 2001). To date no research exists on the economic impact WBA companies at the local level in Ireland. Using data obtained via a survey and economic impact analysis, this paper aims to fill this knowledge gap by examining the economic impact of companies offering WBA across a number of sites in Counties Galway and Clare.

Figure 1 Regional Breakdown of Marine Tourism in 2007 (Source: SEMRU Company Survey, 2010)



The paper continues as follows: section 2 begins by introducing the two locations, counties Clare and Galway used for this analysis. The section continues by outlining the survey instrument...

2. Site Description

Communities located in peripheral, coastal areas have long sought to identify and implement means of addressing the problems they face because of their location (Garrod and Wilson, 2004). As outlined in the introduction, tourism is typically identified as a key development sector in peripheral and rural areas. In Ireland, almost three-quarters of domestic activity holidays take place on the Irish Western seaboard and more than one third of such holidays are family holidays (Fáilte Ireland, 2008). Research on the economic impact of demand for these activities is difficult to perform due to the lack of micro-level data on tourist activities and expenditures (Murphy and Bernal, 2008). This paper focuses on whether marine WBA activities and their economic impacts on the local economy may be able to serve a role in overcoming these issues in two coastal counties in the West of Ireland, County Clare and County Galway.

Galway has a coastline of 1,298km in length and in 2010 nine of its [beaches](#) were awarded blue flags. The largest beaches are found in Roundstone and Renvyle in Connemara. In terms of marine tourism capacity, a study conducted by the Marine Institute (2002) identified Galway city and county as having significant potential to develop water based tourism utilising its current resource base. Table 1 provides an inventory of the WBA offered by companies in County Galway. From table 1, one can see that in 2010 thirty-five companies offered a variety of WBA in Galway, the most prevalent of which were diving, sea-angling and sailing. The three companies selected for this analysis in County Galway are based in North West Connemara. Connemara is traditionally a strong tourism destination for both domestic and overseas tourists. A proportion of North Connemara, Connemara National Park (2,999 ha) is designated a nature reserve. In 2002, a report published by the Marine Institute, *Water Based Tourism: A Strategic Vision for Galway* (2002) highlighted the potential for developing clusters of water-based tourism along the coast of Connemara. The report further recommended the branding of Killary Harbour (in North West Connemara) as a national marine water sports destination.

Clare has a coastline of 360km in length and eight beaches in Clare were awarded blue flag status in 2010. From table 1, one can see that similar to Galway, thirty five

companies offered a variety of WBA in County Clare in 2010. Clare is renowned for its surf and there are six companies offering surfing activities in the county. The two companies chosen in Clare were located in the sea-side resorts of Lahinch and Kilkee in West Clare. Tourism, particularly domestic tourism has long been one of the mainstays of West Clare. However, the tourism industry in West Clare has been suffering over the last two decade as with many tourism resort areas in the British Isles (Garrod and Wilson, 2004). However, new marine-based tourism, notably marine ecotourism, is being developed in the area, with the Marine Ecotourism: A Marketing Initiative in West Clare (2001) highlighting the potential for marine-based ecotourism in Co. Clare.

Table 1 The Range of Marine WBA in Counties Clare & Galway (Source: Morrissey, 2010)

Activity	Clare	Galway
Adventure Centre	1	2
Aquarium/Attraction	2	1
Blue Flag Beaches	8	9
Sea Cruises	0	1
Diving	4	3
Marinas	1	0
Sailing	3	4
Sea-Kayaking	0	1
Sea-Angling	4	12
Surfing	6	0
Whale & Dolphin Watching	6	1
Wind Surfing	0	1
Total Number of Companies	35	35

Although, the economic impact of tourist demand for WBA in Galway and Clare has been limited to date, a supply side analysis found that companies offering WBA in the two counties generated €15.8 million in turnover of which €8.1 million was GVA in 2007. The sector employed 225 full time equivalences (Morrissey, 2010). Similarly, Ginty (2010) examining the economic impact marine WBA operators in the West of Ireland (Galway, Mayo and Roscommon) estimated that these businesses contributed €24.2 million to the Western region in 2006. Using multiplier analysis, Ginty (2010) estimated that the total economic impact of marine WBA operators in the West of

Ireland was €35.9 million. Section 3 outlines the survey instrument used to collect the data necessary for a demand side assessment of marine WBA and the methodology used to examine the economic impact of WBA companies on the local economy.

3. Data and Methodology

Survey Instrument

The data used in the paper was collected via face-to-face user surveys. These surveys were conducted on site across the five WBA companies participating in the research in Counties Galway and Clare during July and August 2010. The target population for this study were individuals over the age of 18 years old who had participated in a water-based activity at the particular company site. The survey questions were developed using the National Survey of Water-Based Leisure Activities in Ireland 2003 booklet. The survey comprised two sections: Section 1 contained personal information, socio-economic information, travel and, visit information. In section 2, individuals were asked for their spending by local (within 25km of the company site) and non-local expenditure. Each question asked can be considered to be limited. As a gesture of good will for allowing on-site surveys, one market research question for each company was included in the survey. This question was supplied by the individual companies at each site. The average response burden for each survey was five to ten minutes. One hundred and nine completed surveys were collected across the five company locations. Three of these surveys were spoiled and were not used. In total one hundred and six surveys were used for this analysis. The data from these surveys was inputted into an excel spreadsheet and analysed using stata econometrical software.

Economic Impact Analysis

Individuals and companies providing tourism products and services generate economic impacts that contribute to the economy via the flow of expenditure associated with their business (Nelsen et al., 2007). These impacts include the jobs, wages, and taxes associated with the business itself and the expenditures by visitors to the companies on food, accommodation and equipment in the locality. Tourism economics refers to the quantification of these economic impacts on a regional or

national economy. The magnitude of these economic impacts is governed by a multitude of factors including;

- The level of economic development of the destination area
- The level of economic integration of the destination within the national economy
- The volume and intensity of expenditure in the destination
- The nature (for example free versus fee-based attractions) of the main attraction and its attractiveness to tourists

A number of economic tools may be used to examine the economic impact of tourism. However, by far the most popular is the Keynesian multiplier approach and regional input-output techniques (Murphy and Bernal, 2008). To measure the total economic impact for a region, the direct, indirect and induced effects of tourism spending must be summed.

- Direct effects refer to the total expenditure by the tourist on goods and services within an area. This represents the initial round of spending induced by the tourism industry.
- Indirect effects are those which occur when the tourism operators in receipt of initial expenditure, in turn purchase additional goods and services to meet demand. This downstream or second round of spending results in further production and employment.
- Induced impacts refer to the additional consumer spending, which takes place when the income generated from the direct and indirect impacts is spent.

A regional multiplier calculated by Maloney (2008) and used by Ginty (2008) to examine the impact of marine water-based operators in the West of Ireland was used. Multipliers capture the secondary effects (indirect and induced) of spending in a region and represent the interdependency between sectors within an economy (Murphy and Bernal, 2008). Table 2 presents a breakdown of the multiplier used by Ginty (2010) in her analysis of the economic impact of marine water based operators. A regional rather than national multiplier was used as it is assumed that 'leakages' are

quite high for the rural areas used in this paper. Leakages refer to the fact that money spent across different sectors (I.e. expenditure in the food and beverage sector) ‘leaks out’ of the regions economy to pay for goods and services not manufactured in the region. Calculating a separate multiplier for regional economic impact analysis allows one to capture these leakages and provides a more realistic estimate of the direct and indirect impact of expenditure in an area.

Table 2 Regional Tourism Multipliers (Source: Ginty, 2010)

	Multipliers	
Direct Impact	1.0	
Indirect Impact	0.30	
Induced Income	0.18	
Total Economic Impact (Income Multiplier)	1.48	For every €1 spent by marine tourists in the West of Ireland, approximately €0.48 was generated by secondary effects

4. Results

Using the data collected by the survey instrument this section first examines the demographic and socio-economic characteristics of participants in WBA across the five company sites. Second we examine the economic impact of WBA participants and the companies who provide these services on the local economy. This analysis provides us with the first comprehensive overview of WBA participants and their economic impacts on the local economy in counties Clare and Galway.

Characteristics of WBA Participants

The data collected reveals that the participants who visited the five WBA companies were on average 32.5 years old, highly educated (83% have third level education), employed (92%) in professional occupations (34%) and earned between €30,000 and €49,999 per year (Table 3). The data found an equal balance between gender (52% of participants were male). The data also found that across the five site locations 35% of

participants were from Dublin. This indicates the high willingness of individuals to travel to WBA sites on the West coast of Ireland.

The survey included questions about frequency of participation in WBA. Specifically, respondents were asked how many WBA trips they had taken in the previous twelve months, the number of years they had been engaged in WBA, the number of free days they had per annum to engage in WBA and their specific reason for visiting the area. The average number of trips taken by the respondents in the previous year was 7.25. Although, it is interesting to note that 20% of respondents had made only one trip to a WBA site in the previous twelve months. Respondents had an average 7 years experience in WBA and had on average forty-four free days to engage in WBA. Interestingly, 92% of individuals stated that the specific reason they visited the area was to engage in WBA. This indicates that the expenditure associated with the trip would not have been spent without the presence of the WBA companies in the localities.

We compare the WBA participants from our five sites to other sources that describe the demographic and socio-economic characteristics of marine WBA participants. The Marine Institutes Report, A National Survey of Water-Based Leisure Activities in Ireland 2003 (Marine Institute, 2005) examined the demographic and socio-economic characteristics of water-sport enthusiasts by four categories; water-skiing/jet-skiing, surfing, scuba-diving/snorkelling and other sea-sports. They found that across the four categories males had higher participation rates than females, except in the surfing category. In terms of social class (self-employed, farmer, professional, skilled manual, unskilled manual and other manual) self-employed individuals had the highest participation rates in water-skiing and other sea-sports, professionals had the highest participation in surfing and farmers had the highest participation in diving activities. We therefore find that visitors to the WBA sites in this survey are different to previous research findings, particularly in terms of gender profile.

Table 3 Demographic and Socio-Economic Characteristics of WBA Participants

	Average/Majority	Percentage of Respondents
Gender	Male	52%
Age	32.5 years	---
Marital Status	Single	56%
Education	Third level	83%
Employed	Yes	92%
Occupation	Professional	34%
Income	€30,000 to €49,999	38%
County Residence	Dublin	35%
Years taking part in WBA	7 years	---
Trips in last 12 months	7.25 trips	---
Days free to engage in WBA p/a	44 days	---
Specific reason for visit to area	WBA	92%

Table 4 presents the trip characteristics for each WBA participant across the five company locations. The survey finds that 87% of participants used their own private vehicle to access the site, the average distance travelled to access the site was 202km and 3 hours travel time. The majority of respondents stayed overnight in the area (80%) and the average number of nights for a visit was 2. The survey found that for 29% of respondents that stayed overnight hostels were the most popular accommodation type (39%). In terms of trip characteristic comparisons, international research has indicated that WBA participants are willing to travel long distances to access WBA sites that are deemed of a high standard (Nelsen et al., 2007; Murphy and Bernal, 2008; Mundet and Ribera, 2001). However, this analysis is examining participation in company specific WBA. Given that 92% of the survey respondents indicated that the specific reason for their visit was to engage in the WBA offered by the company, the long distances travelled by respondents indicates the importance of these companies to the local economy.

Table 4 Trip Characteristics for WBA Participants

	Average/Majority	Percentage
Transport	Own Vehicle	87%
Travel km	202km	---
Length of journey	3 hours	---
Day Visit	Yes	20%
Stay Overnight	Yes	80%
Nights in Area	2.3 nights	---
Accommodation	Hostel	29%

Economic Impacts of WBA

Trips to recreational sites generate two distinct kinds of economic impacts for the coastal and marine economy; market impacts and non-market impacts (Pendleton and Kildow, 2006). Market impacts refer to the flow of money through an economy and the associated jobs, wages, and taxes associated with these flows (Nelsen, 2007). Included in economic impacts are expenditures by visitors to coastal areas on food, accommodation and equipment. In contrast, non-market impacts refer to the consumer surplus that a resource provides. For example, Curtis (2002) points out less obvious than the economic benefits of recreational activity is the importance of leisure for quality of life. Leisure opportunities have been consistently found to be important determinant of people's perception of their quality of life (Jefferes & Dobos, 1993; Michalos, 2005; Brajsa-Zganec, 2010). Although, the focus of this paper is on the economic impact of WBA, the economic values of the coast is important and must be included in policy decisions pertaining to coastal management, investment and policy formulation.

Individuals attracted to the WBA offered by companies generate impacts that contribute to the local economies. WBA participants provide economic input by spending money in local accommodation, restaurants and shops. The survey found that over 90% of the respondents visiting the five site locations were from outside Counties Galway and Clare and generate an important economic impact on the local economies. Table 5 provides an overview of expenditure by the WBA participants across the five sites. Across the five sites total expenditure by WBA participants

generated €39,373. The survey also included a breakdown of expenditure within the locality (up to 25km) and outside the locality. Expenditure by the WBA participants within the local economies totalled €35,147 (89% of the total expenditure). Expenditure outside the local economies totalled €4,231. As outlined in the section 1, if rural tourism businesses are to succeed, they must demonstrate positive economic impacts within the local economy (Ray, 1999; Cawley and Gillmor, 2008). The high proportion of expenditure by WBA participants within the local economy, indicates a high willingness for these individuals to engage in the local community.

The average expenditure for individuals who participated in WBA across the five company sites was €371.55. This figure includes all the local expenses and all the outside locality expenses which also included lessons and equipment from both areas. However, given that this paper is examining company-based WBA, a significant expenditure for the respondents will be on the lessons/activities and equipment offered by the companies. These costs may be viewed as the price of accessing the services offered by the company. As such they are company-specific, rather than location specific. This expenditure while creating an indirect, secondary impact on the local economy through the job and income creation, it does not have a direct impact on the local economy. Excluding the costs of lessons and equipment from overall expenditure, we find that the average expenditure by WBA participants is €260.60 across the local economies.

Table 5 Average Total Expenditure, Local Expenditure and External Expenditure

	Average Expenditure	Equipment & Lessons Excluded
Within Locality	€331.57	€260.60
Outside Locality	€39.91	€35.41
Total Expenditure	€371.55	€296.01

Table 6 presents the breakdown of average spending of individuals on goods and services who participated in water-based activities with the local economy. The eight expenditures categories included accommodation, catering, transport, fuel, retail, local

services, excursions/tours, other services, lessons and equipment. From table 6, one can see that on average accommodation generated the highest average expenditure (€106 or 33% of average expenditure), followed by catering (€80 or 24% of average expenditure) and lessons (€53 or 16% of average expenditure).

Table 6: Average Expenditure on Goods & Services

Expenses	Average Expenditure Within Locality
Accommodation	€106.09
Catering	€80.07
Transport	€6.04
Fuel	€31.19
Retail	€16.84
Local Services	€4.34
Excursions/Tours	€8.56
Other Services	€7.69
Lessons	€52.62
Equipment	€18.34

Based on an average expenditure of €331.57 across the five company sites within the locality (including lessons and equipment) and a total of 769 visits (the total visits captured in this survey) we estimate that the annual expenditure of this small subset of WBA participants is worth €250,000 to the local economies. Again examining expenditures without lessons and equipment (the expenditures going directly to the companies), we estimate that annual expenditure of the respondents generated €200,000 across the five local economies. This expenditure may be seen as the economic impact of having a WBA company in the locality. We cannot extrapolate our findings to the total population of WBA participants who accessed the services and activities offered by the five companies in our survey as the survey is not random.

Economic Impact Analysis: Multiplier Analysis

Economic impact analysis was used to examine the total direct, indirect and induced impact of the WBA participants captured by our survey. Table 7 presents the results. As outline above, it was estimated that the annual expenditure of the small subset of WBA participants generated €250,000 within the local economy. This is the direct impact of the WBA companies in the local economy. Following Ginty (2010), we apply a regional indirect multiplier of 0.30 to capture second round spending that occurs when the businesses in receipt of the direct expenditure in turn purchases goods and services in the local economy. The indirect impact of this expenditure is estimated to be €75,000. Finally, the induced effect refers to the additional consumer spending, which takes place when the income generated from the direct and indirect expenditure is spent. Using a multiplier of 0.18 (Ginty, 2010), the induced spending of €45,000 may be seen as the proportion increase in direct income spent in the Galway and Clare. The total economic impact of the WBA participants captured in this study was €370,000 across the respective localities.

Table 7 Total Expenditure in the Local Economy

	Multipliers	Total Impact
Direct Impact	1.0	€250,000
Indirect Impact	0.30	€75,000
Induced Income	0.18	€45,000
Total Economic Impact (Income Multiplier)	1.48	€370,000

Although these findings cannot be extrapolated to the general population and only capture a small subset of WBA participants, this study shows that the economic impact of marine tourism on local economies at any visitation level is substantial. Knowing the value of a potential or existing sector can be a powerful tool in developing and maintaining a market within a locality. The results presented in this paper would indicate that the impact of the WBA tourism sector should be considered in any local market, coastal development and tourism development issues.

5. Discussion

Tourism is often identified as a vehicle for safeguarding the integrity of rural areas, while enhancing the local economy and maintaining rural ways of life (Roberts and Hall, 2001; Garrod et al., 2006). This is particularly true in rural, coastal areas (Garrod and Wilson, 2004). In Ireland, prolonged economic growth has resulted in increased coastal development in the form of hotel and summer homes, ocean attractions, artificial coastal reinforcements and real estate investment (Hynes and Farrelly, 2010; Cooper and McKenna, 2009). However, to be economically effective in the long run, rural tourism depends on the prudent use of natural, social and built resources in the short term (Garrod et al., 2006). For example, Cawley and Gillmor (2008) state that rural tourism should be complementary to existing local economic structures; avoid social conflict and support existing policies for resource conservation. Flannery and O’Cinneide (2008) also highlight the need for local communities to perceive that any development is having a positive economic effect in the locality.

WBA tourism fits well within this recommended framework. With regard to sustainability of natural and cultural resources, WBA companies and participants have a vested interest in maintaining the coastal resource (Wade et al., 2006; Given et al., 2006) and actively seek out peripheral areas (Garrod and Wilson, 2004) as a repository of older and alternative ways of life (Urry, 2002; Cawley and Gillmor, 2008). Examining the complementarity of business models for WBA and the local economy, a SEMRU company survey (2010) found the majority of WBA were family owned, micro-business, employing on average 6 individuals. In terms of economic benefits, international research has indicated that WBA participants and companies have a positive impact on local economies (Murphy and Bernal, 2008; Nelsen et al., 2007). Within Ireland, this paper found using economic impact assessment that based on an average expenditure of €331.57 across the five company sites and a total of 769 visits the direct, indirect and induced effect of the WBA participants was €370,000 to the local economies.

This paper found that marine WBA tourism has a significant direct and indirect economic impact on coastal localities. Previous national and international research has indicated that WBA participants are active stakeholders in maintaining the social

fabric of rural areas and coastal resource. The maintenance of the coastal resource and rural identity (Garrod et al., 2006) is the main attraction for these tourists. Thus, for marine tourism to develop in Ireland, policy makers must be aware that the key issue lies in being able to combine economic viability while ensuring that the natural environment is not damaged.

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