

Development of the Cuzco region: the tourism contribution*

El desarrollo de la región de Cuzco: la contribución del turismo

Le développement de la région de Cuzco: la contribution du tourisme

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Abstract

The objectives of this paper are, firstly, to measure the contribution of tourism to the economic growth of the Cuzco region (Peru) using the Ivanov and Webster methodology; and, secondly, to propose actions to turn the sector into its sustainable development trigger. Our results show a significant impact of this sector on the region's economic growth and the relevance of community tourism to manage the natural, cultural and archaeological resources of this rural area characterised by a high level of poverty and serious infrastructures shortages and environmental restrictions. The potential negative effects of tourism could be avoided and the entire society could be profited by modifying the tourism development model with the cooperation of the local population.

Key words: community tourism; sustainable tourism; economic growth decomposition; development, Cuzco region.

Key words plus: social tourism, sustainable development, development strategies, sustainable growth, Cuzco (Peru)

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Resumen

Los objetivos de este artículo son, en primer lugar, medir la contribución del turismo al crecimiento económico de la región de Cuzco (Perú) usando la metodología de Ivanov y Webster; en segundo lugar, proponer actuaciones para convertir el sector en detonante de su desarrollo sustentable. Nuestros resultados muestran un importante impacto del sector en el crecimiento económico de la región y la relevancia del turismo comunitario para gestionar los recursos naturales, culturales y arqueológicos de esta área rural caracterizada por un elevado grado de pobreza y serias deficiencias estructurales y restricciones medioambientales. La modificación del modelo de desarrollo turístico con la cooperación de la población podría evitar los potenciales efectos negativos del turismo y beneficiar al conjunto de la sociedad.

Palabras clave: turismo comunitario, turismo sustentable, descomposición del crecimiento económico, desarrollo, región de Cuzco.

Palabras clave descriptores: turismo social, desarrollo sostenible, estrategias para el desarrollo, crecimiento sostenible, Cuzco (Perú)

Résumé

Les buts de cet article sont, en premier lieu, de mesurer la contribution du tourisme à la croissance économique de la région de Cuzco (Pérou) en utilisant la méthodologie d'Ivanov et Webster; en deuxième lieu, de proposer des idées pour transformer le secteur dans le déclencheur de son développement soutenable. Nos résultats montrent un impact important du secteur dans la croissance économique de la région et l'importance du tourisme communautaire pour gérer les ressources naturelles, culturelles et archéologiques de ce milieu rural caractérisé pour un degré élevé de pauvreté et des très sérieux déficiences structureaux et des restrictions environnementales. La modification du modèle de développement touristique avec la coopération de la population pourrait éviter les possibles effets négatifs du tourisme et pourrait faire du bien à la société.

Mots-clés: tourisme communautaire, tourisme soutenable, décomposition de la croissance économique, développement, région de Cuzco.

Mots-clés descripteur: tourisme social, développement durable, stratégies de développement, croissance durable, Cuzco (Pérou).

Introduction

Development is a multidimensional matter which involves economic social, cultural and ecological factors and the full-life paradigm as Sharpley and Telfer (2002) point out. Therefore, development policies must resort to key instruments as the tourism activity. The differential characteristics of this industry make it an integral element in development policies owing to its potential, quick and less costly impact on growth (Croes & Vanegas, 2008, p. 94). In fact, the most notable effects of tourism activity are the increase of employment and foreign exchange earnings and the boost of economic growth (Ayres, 2000; Muhanna, 2007; Sharpley, 2002).

Nevertheless, the economic evaluation of tourism is not an easy task. A global analysis instrument developed for this purpose is the Tourism Satellite Accounts (TSA) promoted by the World Tourism Organization (WTO). The TSA provide a total measurement of tourism's economic relevance through macroeconomic indicators such as its contributions to the GDP and can descend to a regional level as in the cases of Denmark or Canada.

There are still no regional TSA in Latin America, in spite of being one of future's most promising sectors, and Peru is no exception. The lack of a feasible statistical system for tourism prevents the direct analysis of the demand of goods and services, a component that could be related to tourism within the economy, as well as the observation of the supply of tourism goods and services within the same economy as a reference. This problem was identified by the researchers of the Project "Measurement of the tourism impact on local development and design of Cuzco Regional TSA"¹. However, the direct contribution of tourism to the rise of regional Gross Value Added (GVA) can be measured by following the growth decomposition methodology presented by Ivanov and Webster (2007). This technique has been mostly used at the national level. It has only been used on a regional scale by Brida et al. (2011). Our aim is to apply this technique to measure the contribution of tourism to the economic growth of the Cuzco region, the most visited destination in Peru excluding Lima, owing to its natural, cultural and archaeological heritage, especially, Machu Picchu. In fact, this sanctuary was declared a World Heritage Site in 1983 and the region relies on a native population which plans to reassess its culture and traditions.

Cuzco is a region with a high degree of poverty: with a poverty rate of 51 percent, 49 percent of the households are not equipped with a water supply and 67 percent have no sewer system. Moreover, its illiteracy rate is 14.2 percent, its rural population amounts to 49.7 percent and 45.2 percent of its active population is employed in agriculture (INEI², 2010). That is the reason why the Regional Strategic Programme for Cuzco Region (Plan Q'ente) seeks to turn Cuzco into a competitive and sustainable destination in order to revitalize the regional economy by 2020 (MINCETUR³, 2008a). This plan follows the guidelines of the Sustainable Tourism-Elimination Poverty Program of WTO (2002). Therefore, the tourism sector has boosted the physical capital investment of Cuzco (airport, hotels, railway, etc.) and has been a leading source of foreign currency. In 2009, tourism yielded 2.471 million dollars in this region (MINCETUR, 2010). Nevertheless, Cuzco still has many infrastructure shortages and inadequacies to overcome as well as environmental and based heritage limitations to manage in order to overcome the negative impacts of tourism.

As previously mentioned, the first objective of this paper is to assess the contribution of tourism to the economic growth of Cuzco. Secondly, we explain the restrictions to which Cuzco should face in order use the sector as a trigger of sustainable development and we propose the community tourism as an option for policy-making. As far as we are aware, this is the first study that analyses these issues together.

The remainder of this paper is organised as follows. Section 2 briefly reviews the theoretical framework, Section 3 explains the methodology, Section 4 presents the results and briefly highlights policy implications; while the final section summarises and concludes.

1 VIII Official Announcement of University Cooperation for Development. CICODE of University of Granada.
 2 National Institute of Statistic and Computing of Peru.
 3 Ministry of Foreign Trade and Tourism of Peru.

Theoretical framework

A wide set of studies have been carried out on the impact of tourism on economic growth: Vanegas and Croes (2003) focus on tourism economic growth and its development impacts on a microstate and explore their implications for tourism analysis and planning; Fayissa et al. (2008) explore the potential contribution of tourism to Sub-Saharan African countries economies and NevesSequeira and MaçasNunes (2008) show that tourism is a positive determinant of economic growth but, contrary to previous findings, tourism is not more relevant in small countries. Moreover, Balaguer and Cantavella-Jordá (2002) support the tourism-led growth hypothesis in examining the role of tourism in the Spanish long-run economic development, that is, economic growth in Spain has been sensitive to the persistent expansion of international tourism and the increase of this activity has caused multiplier effects over time. Gunduz and Hatemi-J (2005) found that the tourism-led growth hypothesis is supported empirically in the case of Turkey, Akinboade and Braimoh (2010) demonstrate a unidirectional causality running from international tourism earnings to real GDP, both in the short run and in the long run, in South Africa and Belloumi (2010) concludes that tourism has a positive unidirectional impact on GDP growth in analysing the Tunisian economic growth.

There are also studies related to Latin American countries (LAC's). Eugenio-Martín et al. (2004) consider the relationship between tourism and economic growth for LAC's since 1985 until 1998 and show that the tourism sector is adequate for the economic growth of medium or low-income countries. More recently, Fayissa et al. (2011) investigate the impact of the tourism industry on the economic growth and development of LAC's and conclude that revenues from the tourism industry positively contribute to both the current level of gross domestic product and the economic growth of LAC's as do investments in physical and human capital.

In addition to the above-mentioned studies focused on a national level, we can find research based on a regional scale, in which a special attention is paid to rural regions as tourism could be a catalyst to supplement income and a trigger to economic growth. Consequently, Mistilis and Dwyer (1999) address the distribution of the economic impacts of MICE tourism between major cities and regional areas within a host country, Donaldson (2007) found that in Yunnan (China), although tourism contributed to rapid economic growth, it did not reduce rural poverty as much as might be expected from a large rural-based industry. By contrast, Guizhou's relatively small-scale tourism industry, although not contributing significantly to growth, was distributed largely in poor areas and was structured to allow direct participation of poor people. Cortés-Jiménez (2008) analyses the influence of tourism on the economic growth of Spanish and Italian regions, concluding that tourism has a significant and positive role for regional economic growth in these countries, although the pattern of these effects differs among different types of region. Furthermore, Soukiazis and Proença (2008) examine the importance of tourism as a conditioning factor for higher regional growth in Portugal, Feng (2008) identifies the preliminary socioeconomic impacts of Chinese rural tourism development strategy on local communities and Gülcan et al. (2009) highlight the tourism effects on growth and job creation and focus on determining the significance of the tourism industry in the Aegean Region. Das and Rainey (2010) state that economic benefits from on-farm hunting outstrip other agrotourism activities and their impacts reverberate across many other sectors of the local economy. Finally, Brida et al. (2011) focus on the effects of tourism on the economic growth and development of the main tourism regions of Colombia and conclude that a change in tourism expenditure will produce different effects on the economic growth of the regions.

At this point, it should be noted that the impact of tourism on an economy goes beyond its impact on economic growth. The development of a country, or region, can be triggered by boosting the appropriate tourism model. For this, it is especially important to consider the environmental conservation and the reduction of socioeconomic inequalities as objectives of tourism. That is, a model of sustainable tourism has to be taken, as promoted by WTO. Sustainable tourism meets the needs of present tourists and host regions while protecting and promoting opportunities for the future. This

provides a pathway for the management of all resources so that they can meet the economic, social and aesthetic needs, while respecting cultural integrity, essential ecological processes, biological diversity and life support systems (WTO, 2004).

Methodology

The TSA constitute a statistical instrument, based on the methodological principles of the WTO, that characterizes the production and cost structures of tourism industries, reflects the magnitude of the productive capital investments linked to this activity, measures the contribution of the sector to the balance of payment equilibrium and provides a total measurement of tourism's economic relevance through macroeconomic indicators such as its contributions to the GDP or production in terms of demand and employment.

TSA construction at a regional level has a growing importance owing to its usefulness as a regional planning tool. The method used in their creation has consisted in a descending process or in a regional division of national data, in accordance with certain criteria and indicators, for example that of Denmark (Zhang, 2005) or Canada (Baber-Dueck & Kotsovos, 2002 and 2003). In other cases, the TSA are made from the regional Input-Output (I-O) tables, for instance, in Andalucía, Spain (SAETA, 2000). In fact, the evaluation of economic impact of tourism has been based predominantly on I-O Analysis: Lichty and Steinnes (1982) applied this approach to small communities, Kweka et al. (2003) to Tanzania, Polo and Valle (2008) to the Balearic Islands and Pambudi et al. (2009 a and b) to Australian states and territories. However, according to Dwyer et al. (2004) the estimation of the net impact of tourism in an economy using the I-O technique ignores key economic aspects by assuming that there is a free and unrestricted flow of resources to the tourism industry while ignoring the resource limitations, the labour market working and the relations with the rest of the world. Therefore, I-O Analysis, as multiplier techniques do, counts only the positive effects on economic activity and, in that way, usually overestimates the economic impacts of tourism.

Computable General Equilibrium (CGE) models start from an I-O framework, but take into account the links between markets and, therefore, the negative impacts of tourism, as an increase of tourism activity implies, for example, less available resources or consumption for other sectors. Furthermore, as Costas and Eeckels (2009) point out, CGE models are implemented when data are not available or are of low quality. So, this technique has been widely used, above all in Australian studies and in the analysis of impacts of certain events: Dixon et al. (1982), Industries Assistance Commission (1989), Blake et al. (2000), Narayan (2004), Dwyer et al. (2005 and 2006) or Pambudi et al. (2009). Nevertheless, it should be highlighted that CGE models simulate the impact of external crises on an economy, they do not show what has happened as the Ivanov and Webster (2007) method does.

Starting from the growth of GDP per capita, g_r , as a measure of the economic growth:

$$g_r = \left[\frac{\frac{Y_{q_1}(p_0)}{N_1}}{\frac{Y_{q_0}(p_0)}{N_0}} - 1 \right] * 100$$

Where $Y_{q_1}(p_0)$ is the GDP in constant prices, $Y_{q_0}(p_0)$ is the GDP in the base year, N is the average size of population, index 1 denotes the current period and index 0 is the base period, Ivanov and Webster (2007) disaggregate the tourism GDP in constant prices, $Y_{q_1}^t(p_0)$ from the GDP in constant prices of the

other industries, $\sum_{i \neq 1} Y_{q_1(p_0)}^i$, and tourism GDP in the base period, $Y_{q_0(p_0)}^t$, from GDP of other sectors in the base period, $\sum_{i \neq 1} Y_{q_0(p_0)}^i$, obtaining the following expression:

$$g_r = \left[\frac{\frac{Y_{q_1(p_0)}^t}{N_1} - \frac{Y_{q_0(p_0)}^t}{N_0}}{\frac{Y_{q_0(p_0)}}{N_0}} + \frac{\frac{\sum_{i \neq 1} Y_{q_1(p_0)}^i}{N_1} - \frac{\sum_{i \neq 1} Y_{q_0(p_0)}^i}{N_0}}{\frac{Y_{q_0(p_0)}}{N_0}} \right] * 100$$

Thus, the part of real GDP per capita growth resulting from tourism would be:

$$g'_r = \frac{\frac{Y_{q_1(p_0)}^t}{N_1} - \frac{Y_{q_0(p_0)}^t}{N_0}}{\frac{Y_{q_0(p_0)}}{N_0}} * 100$$

It should be noted that g'_r does not capture the secondary (indirect and induced) effects of tourism on economic growth. They are depicted by the difference between g_r and g'_r and are considered direct effects of other industries on economic growth. On the other hand, we should emphasise that Ivanov and Webster methodology, in contrast to other techniques more useful to predict external crises impact, allows us to assess the contribution of tourism to the economic growth of our selected area, the Cuzco region.

Our data have been collected from the Departmental Series of National Accounts supplied by the National Institute of Statistics and Computing of Peru (INEI) for the 2001-2009 period and from the estimates and projections of population of the INEI and the United Nations Population Fund (2009). The series available at the departmental level collect data of GVA, which does not preclude the application of the methodology of Ivanov and Webster. As we use national accounts data, our analysis considers only the tourism activities directly linked with tourism included under the Hotels and Restaurants heading.

Results

As Table 1 shows, tourism activity in Cuzco, measured by GVA constant 1994 prices, has registered a cumulative average rate of change of 6.94 percent during the period 2001-2010; while Lima, the most visited destination of Peru, and the whole country experienced an increase of 6.44 percent and 6.5 percent, respectively. Cuzco has also maintained higher year-on-year rates of growth than Lima and National Total during the analysed period, with the exception of 2007 and 2010. We must highlight the rates reached by Cuzco in 2003, 2007 and, above all, in 2008. According with MINCETUR⁴ the arrival of tourists rose by 14.59, 15.68 and 7.27 percent in those years and in 2008 the overnight stays grew by 10.79 percent. Nevertheless, as previously mentioned, Lima and National Total had higher year-on-year growth rates than Cuzco in 2007. That year the tourists who came to this region were considerably less than the visitors to Lima or to the whole country as they had chosen alternative routes⁵. The lowest rate

4 Data available at <http://www.mincetur.gob.pe/stadistica>

5 MINCETUR (2008b) shows three touristic routes in Peru: North, Center and South. Cuzco is included in the last one.

recorded by Cuzco in 2010 was due to the closure of the sanctuary during the months of February and March and the consequent reduction in the number of visitors of almost 200.000 people.

At this point, we would like to stress the main limitations suffered by Cuzco as a tourism destination; firstly, the desirable environmental sustainability and, secondly, its connectivity. The number of tourists that can access to Machu Picchu is limited to 2.500 people a day due to the capacity of the unique path that leads to the citadel, which obviously limits regional supply. According MINCETUR (2011) a maximum of 2 million people could visit Machu Picchu each year without compromising the sanctuary. This would require the appropriate management of visitor flows and time of visit, for what it would be necessary to create alternative paths, limit the time of visit in the most crowded places and create two shifts of visits.

In addition, despite the physical capital investment efforts made, according to MINCETUR (2008a), the present Cuzco airport will be unsustainable shortly owing to the rising demand: over 755 thousand tourists are expected to visit Cuzco in 2013 according to BADATUR⁶. In fact, a new airport construction project has been presented and its prompt economic profitability is expected. In addition, several small airports would be needed in order to improve the Nazca-Colca-Manu connectivity: an airport close to Quillabamba, located 50 km from Machu Picchu, which allows a new entrance channel to this destination; and an Air Hub, which would make the destinations of the Cuzco Amazon accessible with less environmental impact than roads. In regard to the road network, it bears mentioning that most of them has not been implemented or is compounded by trails.

On the other hand, we must stress the slowing down suffered in the growth of GVA in tourism in 2009 in all the areas considered, but the behavior of Cuzco is better again. The recession made tourist arrivals increases drop to -6.17, -3.27 and -3.72 percent rates in Cuzco, Lima and Peru; while overnight stays in Cuzco grew to 10.87 percent, but to just 4.96 percent in Peru in year-on-year terms (MINCETUR)⁷.

Table 1
Growth of GVA in tourism constant 1994 prices (%)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2001-2010
<i>CUZCO</i>	4,69	7,81	5,37	5,42	6,7	8,72	13,96	2,38	0,80	6,94
<i>LIMA</i>	2,87	4,4	4,46	5,39	5,14	9,09	10,77	2,24	7,30	6,44
<i>NATIONAL TOTAL</i>	3,06	4,66	4,49	5,37	5,31	8,88	11,1	2,26	7,01	6,50

Source: National Institute of Statistic and Computing of Peru and own

Table 2
Growth of GVA in constant 1994 prices (%)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2001-2010
<i>CUZCO</i>	-4,06	6,19	17,87	8,82	11,84	9,59	7,22	4,42	14,85	8,36
<i>LIMA</i>	3,84	3,65	5,12	6,92	8,99	10,61	10,90	0,43	9,95	6,65
<i>NATIONAL TOTAL</i>	5,13	3,91	4,82	6,65	7,90	9,14	9,55	1,10	8,52	6,27

Source: National Institute of Statistic and Computing of Peru and own

6 Data available at <http://www.badaturperu.com>

7 Data available at <http://www.mincetur.gob.pe/stadistica>

Table 3
Growth of population (%)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2001-2010
<i>CUZCO</i>	0,94	0,9	0,86	0,84	0,81	0,77	0,74	0,72	0,70	0,91
<i>LIMA</i>	1,82	1,76	1,7	1,63	1,54	1,46	1,42	1,43	1,47	1,78
<i>NATIONAL TOTAL</i>	1,41	1,36	1,32	1,28	1,23	1,17	1,14	1,13	1,13	1,40

Source: National Institute of Statistic and Computing of Peru and own

The average cumulative growth rate of Cuzco's total gva during the analysed period is higher than that of Lima and of National Total (see Table 2). Nevertheless, its year-on-year rates of increase were lower than those of the other considered areas in 2002 and 2008. Reasons for this can be found in the fall suffered by the activities of *Mining* and *Electricity* and *water* in 2002 (64.9 percent and 83.7, respectively) and *Trade* in 2008 (89.4 percent).

However, the Cuzco population rise was almost half that of Lima and lower than that of National Total in average cumulative terms (see Table 3), as well as its year-on-year rates being lower during the 2001-2010 period. Furthermore, it should be highlighted that all the selected areas followed a downward trend in this respect, with the exception of Lima in 2009 and 2010.

If we consider the gva in tourism in per capita terms, we can observe that the Cuzco region showed a higher rate of year-by-year growth than Lima and National Total, except in 2010 owing to the mentioned closure of the sanctuary. Data compiled in table 4 reached their greater values in 2003, 2007 and 2008. In fact, the average cumulative growth rate registered by Cuzco during the period was 5.29 percent versus 4.06 and 4.46 percent of the Lima region and the whole country, respectively. The analysis of gva per capita gives similar results. Cuzco's average cumulative rate of change was above that of the other areas. Nevertheless, the region suffered a drop in its gva per capita in 2002 (-4.96 percent) while Lima and Peru both increased (1.99 and 3.67 percent, respectively). On the other hand, we must also point out that the behavior of the regions was the opposite of the above mentioned one in 2009: Cuzco grew by 3.67 percent and Lima and the National Total fell by 0.99 and 0.02 percent respectively (see Table 5). That year, Cuzco's *Trade* activity grew by 904.2 percent; while *Fishing*, *Manufacturing* and *Trade* activities fell in both Lima and the whole country.

As regards the assessment of the contribution of tourism activity to the economic growth, data in table 6 must be interpreted as the percentage of the gva per capita growth generated by the increase of tourism activities. Our results reveal a similarity between the figures reached in Lima and the National Total: 0.21 and 0.19 percent on average during 2001-2010 period, respectively. The tourism contribution to the Cuzco growth almost doubled in comparison to that of these areas: 0.36 percent on average in the same period. It was higher in all the analysed years except in 2010. Nevertheless, tourism contribution to Cuzco's economic growth was highest in 2008: 0.81 percent while in the case of Lima, the main entrance of the country, and Peru was of 0.46 and 0.41 percent, respectively. These data are significant if we take into account that the results of Brida et al. (2008) analysis were much lower for the USA, Spain, France or Italy when the temporal series match up: they are placed under 0.1 percent.

At this point, we must consider that the weight of the gva yielded by Hotels and Restaurants over the total gva in Cuzco is greater than that registered in Lima and, above all, in Peru: 6.6 percent on average during the analysed period versus 5.18 percent and 24 percent, respectively. Thus, our results stress the tourism relevance for the Cuzco's economy and, therefore, the potential influence of an adequate decision-making to develop the sector in the region. In this respect, it is crucial to take into account its socioeconomic characteristics and its limitations related to environmental protection and archaeological heritage. As previously mentioned, Cuzco is a rural region⁸ with high indices of poverty

8 It should be highlighted that rural environment includes district capitals as their configurations, dimensions and lifestyles are still rural.

affecting women to a greater extent. Nevertheless, it counts on wide natural and cultural resources: the historic sanctuary of Machu Picchu is located in a Protected Natural Area which is home to endangered species and several Inca settlements. Therefore, the community tourism could be an excellent option to diversify Cuzco's economic activities and, furthermore, the tourist supply over and above the cultural tourism which had been the main objective of tourism promotion policies until the 1990s and, consequently, characterises Peru as destination.

According to MINCETUR(2008a), the rural community tourism is any activity developed in the rural environment in a drawn up and sustainable way. It should be based on the local population participation and on the rural culture⁹ and be organised to benefit the whole community. Therefore, it answers the tourist demand for new experiences, boosts the area's economic development, improves the environmental conservation and prevents the undesirable impacts of tourism (López-Guzmán & Sánchez-Cañizares, 2009; Maldonado, 2005; Manyara & Jones, 2007; WWF Internacional, 2001). In addition, WTO(2002) and MINCETUR(2008a) point out that this kind of tourism could, as a complementary activity to agriculture, reduce poverty in rural areas poverty as it could be an export and employment source. It could also generate opportunities for creating small business intensive in women's labour as the experiences of the Salt pans of Maras¹⁰, Raqchi and Pampallaqta hamlets¹¹ and Chinchero weaver women¹² show.

Nevertheless, it should be stressed that the success of this process can only be made possible by the local communities playing the leading role since the main objective of this policy is to build an active local fabric where the social and economic balances can be regulated in respect to the individual, the communities and cultural as well as social lifestyles. Additionally, it would be necessary to improve education and training in tourism, housing habitability (light, water and sewer system), access to new communications and information technologies and road networks. Ultimately, it would be essential the action of local networks of cooperation in tourism planning, as Ladkin and Martinez (2002) pointed out. In this regard, it should be pointed out that the 86.1 percent of the Cuzco's municipalities had already started activities to boost tourism; while the 93.5 percent had undertaken actions to preserve the environment in 2009 (INEI, 2010). This could be considered a good signal of the current communities' interest.

Table 4
Growth of GVA in tourism per capita in constant 1994 prices (%)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2001-2010
<i>CUZCO</i>	3,71	6,85	4,47	4,54	5,84	7,89	13,12	1,65	0,09	5,29
<i>LIMA</i>	1,03	2,6	2,72	3,7	3,54	7,52	9,21	0,8	5,75	4,06
<i>NATIONAL TOTAL</i>	1,62	3,26	3,14	4,04	4,03	7,61	9,85	1,12	5,81	4,46

Source: National Institute of Statistic and Computing of Peru and own

9 The rural culture includes customs, heritage, gastronomy and values and lifestyles, as well.

10 A set of 3000 natural pools on the hills side where salt is extracted for human consumption since Inca age.

11 Little hamlets of Cuzco farmers and potters who have converted their homes to receive tourists and share with them their ancient Inca customs and traditions.

12 Chinchero weaver women have constituted a cooperative to preserve their traditional way of making blankets and bags and to promote their sales to Europe and USA.

Table 5
Growth of GVA per capita in constant 1994 prices (%)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2001-2010
<i>CUZCO</i>	-4,96	5,24	16,86	7,91	10,94	8,75	6,42	3,67	14,04	7,49
<i>LIMA</i>	1,99	1,86	3,37	5,20	7,33	9,02	9,34	-0,99	8,35	4,99
<i>NATIONAL TOTAL</i>	3,67	2,51	3,46	5,31	6,60	7,87	8,32	-0,02	7,31	4,97

Source: National Institute of Statistic and Computing of Peru and own

Table 6
Tourism contribution to economic growth (%)

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2001-2010
<i>CUZCO</i>	0,25	0,51	0,34	0,31	0,38	0,49	0,81	0,11	0,01	7,49
<i>LIMA</i>	0,056	0,14	0,15	0,20	0,19	0,38	0,46	0,04	0,29	4,99
<i>NATIONAL TOTAL</i>	0,071	0,14	0,14	0,17	0,17	0,32	0,41	0,05	0,25	4,97

Source: National Institute of Statistic and Computing of Peru and own

Conclusions

Tourism is considered as a cornerstone of development policies since its characteristics can boost economic growth and decrease poverty. Ample economic literature review these tourism impacts at national and regional levels using methodologies based on Input-Output Tables such as the Tourism Satellite Accounts which are promoted by the WTO. Nevertheless, the lack of feasible statistical data for Latin-American regions hampers the application of these techniques to assess the contribution of this sector to the economic growth of Cuzco. This objective can be reached by the economic growth decomposition methodology as it provides a direct measure of tourism impact.

Our results show that tourism in Cuzco has been more dynamic than in Lima or in Peru as a whole, since the GVA generated by this activity has registered a cumulative growth rate higher than the other selected areas during the period 2001-2010. In year-on-year terms, this region stands out from Lima and National Total except in 2007, when the tourist preferred alternative routes. A similar trend can be observed in analysing the whole and tourism GVA in per capita terms: Cuzco's average cumulative rate of growth was above the other selected areas in the analysed period. Finally, we must stress that the contribution of tourism activity to the economic growth of Cuzco was double than that of Lima and the national total.

So, tourism could play a key role in Cuzco's development. However, the area suffers a high degree of poverty and is characterised as a rural region with infrastructures shortages and environmental restrictions which need to be managed in an adequate way to avoid the negative effects of tourism in its natural, cultural and historical heritage. In this respect, community tourism promotion presents the following advantage over other supply modes: it facilitates a higher incorporation of women into the labour market; its profits are directly shared by the local population; it respects the environment; and it allows for the preservation and reassessment of the ethnic and cultural identity as well as for the transmission of heritage.

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