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ECONOMICS, ECOLOGY AND THE ENVIRONMENT

Working Paper No. 84

**Wildlife-Based Recreation and Local Economic
Development: The Case of the Pinnawala
Elephant Orphanage in Sri Lanka**

by

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The Case of the Pinnawala Elephant Orphanage in Sri Lanka

Abstract

There has been little study of the economic contribution of the wildlife-based outdoor recreation to local economic development in developing countries. This study presents the results from a survey of a sample of shopkeepers/vendors in the vicinity of the Pinnawala Elephant Orphanage (PEO), a unique captive elephant-based recreation facility in Sri Lanka. The aims were to assess the fundamental characteristics of the businesses in this area, their dependency on the PEO, the nature of the backward economic linkages, and their ability to generate employment. We also canvassed opinions of these businessmen about possible improvements to the Orphanage environment and facilities. We find that the businesses established in this area outsource regionally a host of activities. Although some variations exist among the businesses in the sample, the majority depend heavily on the PEO. Most have established significant economic linkages with the local and regional economies. Differences in relation to their ability to generate employment for local people relate to the nature of the activities that the businesses are involved in. Overall, the businesses in the Pinnawala area contribute significantly to the economic development in this area. However, to sustain or expand this impact more attention needs to be paid to the existing visitor and business community concerns. Nevertheless as indicated here, such suggestions must be put in a wider context before decisions are made.

The Case of the Pinnawala Elephant Orphanage in Sri Lanka

1. Introduction

Local economic development (LED) is of major political importance in Sri Lanka. It became particularly so following the devolution of power to the provincial level in 1987 (Frenando, 1997). Although issues surrounding LED have attracted considerable policy attention (Lakshman, 1997; Lakshman and Tisdell, 2000), one neglected theme has been the role of tourism in LED, especially of small-scale nature/wildlife based tourism/recreation (NWBTR) facilities such as the Pinnawala Elephant Orphanage (PEO). Undoubtedly, Sri Lanka's diverse combination of tourism attractions, including world class historical sites, hospitable people, tropical climate and its relatively compact area make it is a destination well suited for promoting local tourism/recreation projects (UNDP, 1993). Despite this NWBTR rich environment in Sri Lanka, this sector remains markedly under represented both at the policy making and planning levels. However, a number of studies completed internationally on tourism and local development have found that, within the overall context of tourism, the NWBTR projects in less developed countries can contribute immensely to sustainable local development as a lead-sector (see for example, Sinclair 1998; Agarwal *et al.* 2000; Rogerson, 2002).

Lee (1997) points out that in the short run, the economic impact of the small scale NWBTR projects is usually less than the large-scale tourism developments such as ski resorts and golf courses. However, in the long run they provide more direct income to local residents with lower leakages than large-scale development, while minimising adverse ecological, social and cultural effects (Wanhill, 2000). From another stand point, Udding and Yan (2000) find that these positive outcomes of the local NWBTR projects are often linked intimately with the retail sector development in and around the tourism attraction. This because, when visitors spend money in the locality on retail purchasing of basic necessities, gift items and souvenirs this mostly creates the necessary backward linkages with the local and regional economies around the recreation site. From a case study of Highlands Meander in South Africa, Rogerson (2002) provides a useful empirical account of the nature of this relationship. Similarly, Kirsten and Rogerson (2002) discuss issues involved in tourism based small enterprise development in the LDC context. However, the situation in Sri Lanka in relation to NWBTR and LED has not yet been explored at all.

The purpose of this study is to present the results from a survey of a sample of shopkeepers/vendors engaged in various retail-type businesses in the vicinity of the PEO in Sri Lanka. This survey was conducted to elicit general information about these businesses, their dependency on the PEO, the nature of the backward linkages that they have established with local and regional economies, their ability to generate employment for locals, and also to canvass respondents' opinions/suggestions to improve the PEO. The paper first reviews the literature on tourism and local economic development focussing particularly on the experience of the developing world. Then the survey method and data collection procedures are outlined. Next follows an empirical analysis of results from the shopkeepers'/vendors' survey: first the fundamental characteristics of the businesses surveyed are presented; second, their dependency on the PEO is analysed; third, the backward linkages that these businesses have established with local and regional economies are explored; fourth their ability to generate employment in the Pinnawala area is examined; and fifth, the respondents' suggestions for improving the PEO are presented.

2. Tourism, small business sector and the local economic development in developing countries: a review of the literature

Tourism is one of the fastest growing industries globally and in the developing world (WTO, 1999). The importance of this industry in economic development is a subject that has received increasing attention over the past two decades (Sharpley, 2000). During this period, an extensive body of literature on issues surrounding the tourism industry in the developing countries has been built up assessing the contribution that this sector could make to economic development (Sinclair and Stabler, 1998; Harrison, 2001; Tisdell, 2001). Consequently, employment generation, foreign exchange and community welfare are the manifestations of tourism-induced development cited in most of the literature (Andriotis, 2002). However, the extent to which tourism can actually promote the small business sector in the developing world, particularly at the local level, has still not received much attention (Kirsten and Rogerson, 2002). Indeed, it is argued that the development of this sector's activities occupies only a minor position in the literature on tourism and most of the discussions are focused on the economic impact of large-scale or mass tourism (LST), economic diversification and growth-related activities.

Andriotis (2002) observes that the economic gains that could be obtained from the LST sector activities are often diminished due to exogenous domination of the tourism industry and regional inequalities. Furthermore, several other studies have shown that this sector produces regional imbalances (see for example, Tosun and Jenkins, 1996; and Tooman, 1997). This is because often the LST is confined only to attractive regions with salient features such as sandy beaches or fine infrastructure facilities while neglecting other less attractive and under developed regions (Oppermann and Chon, 1997). Moreover, it is also argued that most of the existing LST facilities in the less developing countries have increased these countries' overall dependency on multinational investments, imports and foreign economic control (Khan, 1997). Brohman (1996) claims that foreign domination and external dependency seriously reduce tourism's potential for generating broadly based growth and brings a net financial advantages to host developing economies. It is sometimes argued, the LST sector's activity weakens the inter-sectoral linkages in these economies and it is unable to play a leading role in the economic development particularly at the regional or local level (Tosun, 2001).

Wanhill (2000) points out that, with the increased attention to the negative aspects of the LST, the concept of alternative tourism has received considerable attention since the early 1980s among the policymakers and planners in the tourism industry. In the literature, alternative tourism has been used to describe almost anything that can be juxtaposed with conventional mass tourism or the LST (Brohman, 1996). Thus, its defining characteristics are often in direct contrast to those of mass tourism. For example, alternative tourism forms, such as ecotourism developments or wildlife/nature based recreation facilities, are stylised as small-scale and locally owned, with low leakages and higher proportion of profits remaining in the local economy (Reynolds and Braithwaite, 2001). Additionally, by promoting alternative tourism in general, it is also expected to foster greater community participation in the project activities, a more equitable distribution of benefits among the stakeholder groups, and more culturally appropriate and environmentally sustainable forms of tourism. Rogerson (2002) points out that, the architects of this alternative tourism also expected a high level of small, medium and micro-enterprise development in and around the tourism/recreation facility.

Shackely (1996), taking safari tourism in Rajasthan India as an example, provides useful insight into the economic rationale of promoting the development of the small- and medium-scale business sectors using alternative tourism as a leading instrument. This theme is

developed further by Kirsten and Rogerson (2002) who discuss the advantages of tourism based businesses in relation to business linkages. These authors stress that developing linkages between large, established tourism enterprises and small, local enterprises by means of outsourcing, subcontracting or other arrangements, is important as a means of upgrading local and regional tourism businesses, including informal enterprises. From another viewpoint, Ashley and Roe (2002) by reviewing six southern African pro-poor tourism case studies discuss the possible contribution that tourism-based businesses could make in alleviating rural poverty in developing countries. They believe such contribution is significant for at least two reasons: First, the potential for tourism in the developing countries is comparatively large and the majority of the people in these countries are poor. Secondly, certain types of tourism can be more conducive to pro-poor growth than other service industries or the manufacturing sector. Tourism can be labour intensive, based on natural resources and assets of the poor; and suitable for poor rural areas with few other growth options.

3. The case study

3.1. Study site and the sample

The data presented in this paper were collected between 20 March and 10 April, 2003 from a sample of 120 shopkeepers/vendors operating various businesses in the vicinity of the PEO. This sample covers a little over two thirds of the current population of retail type businesses in the PEO area (the area in a radius of approximately 10 kms of the PEO).

The PEO is a captive elephant-based outdoor recreation facility that was initially established in 1975 by the Department of Wildlife Conservation. It covers an area of nine hectares of a former coconut plantation in the Kegalle District, some 90km northeast of Colombo. At present the PEO is managed by the Department of National Zoological Gardens (DNZG). The initial objective of establishing the PEO included provision of refuge and care for the elephants that were injured, orphaned, abandoned or separated from their families/herds in the wild. Although this was started with five such animals, at present the PEO provides shelter for 69 captive elephants. With the increase in elephant population inside the orphanage, the PEO has become a major outdoor attraction for both local and foreign visitors. At present, over 35,000 visitors (both local and foreign) visit the PEO per month on average. Tisdell and Bandara (2003) discuss visitors' reactions to the PEO.

The shopkeepers/vendors in the sample were chosen from the major categories of business identified by our preliminary visits to the PEO prior to this study. In these visits we also compiled a list of businesses operating within a 10km radius of the PEO. We found that 184 businesses are operated in this area; they include fruit and vegetable stalls, furniture and hardware stores, gift and toyshops, hotels and guesthouses, jewellery shops, grocery and variety shops, auto repairs, spice gardens and plant nurseries, restaurants and snack bars, and mobile vendors. Selection of establishments for the sample from each of these business categories was determined by the relative frequency of the population of businesses in this area so as to provide a stratified sample. Levine *et al.* (2002) provide useful insight into stratified sample procedure with several illustrative examples.

Different types of businesses may have a different potential to create employment locally and use locally available resources. According to Kirsten and Rogerson (2002) appropriate classification of businesses is important in this regard. Udding and Yan (2000) also point out that classifying businesses could also be useful in identifying their specific backward and forward linkages with local and regional economies. We have undertaken some classification by products sold of businesses with such differences in mind.

3.2. Questionnaire and data collection procedure

Deriving accurate information from field surveys is highly dependent upon the survey methods employed, particularly in relation to nature tourism activities (Herath, 2002) because often they involve conflicting objectives, such as nature conservation and economic development (Tisdell, 2001).

Lee and Han (2002) point out that the direct face-to-face interview is the most commonly adopted survey method at recreation sites such as the PEO. It was used in the present study. FAO (2000) describes the value of this method compared to the mailed and self-administered questionnaire formats in the developing country context. Mail surveys yield a low response rate and self-administered questionnaires suffer from self-selection biases. Further, face-to-face surveys have the advantage that trained interviewers can actually interact with respondents, and can clarify respondents' doubts thereby minimising non-response rates. They also have the added advantage that trained interviewers may judge the sincerity of respondents. On the other hand, they have the disadvantages that questions must be short and uncomplicated if the understanding and attention of the respondents is to be sustained.

In the present study, a questionnaire was designed with both structured and open ended questions to guide the interviews with the respondents (shopkeepers/vendors) in the sample. These questions were designed to gather information about: 1) the fundamental characteristics of the businesses in the PEO area, 2) the nature of backward linkages that they have established with local and regional economies, 3) the degree of dependency of these businesses on the presence of the PEO, 4) their ability to create employment opportunities for the local labour force, and 5) the respondents' opinions/suggestions for improving the PEO. To gather this information, a draft questionnaire was designed keeping in mind that it needed to be clear, concise and unambiguous. The questionnaire comprised nine questions, two of which were structured, another two were open ended, and the remaining questions were designed so as to combine these two formats together i.e. a structured question with a follow-up open ended one.

Six graduate research students from the University of Kalaniya were used as interviewers to administer the questionnaires. Interviews were conducted both in *Sinhala* and English. The supplementary information, particularly about existing facilities available in the PEO for visitors and historical data in relation to the establishment of the PEO, tourist arrivals and other information were obtained from the unpublished official documents in the DNZG and informal interviews held with the officials at both of PEO and DNZG. We also undertook a number of informal interviews with few local adults around the PEO area to gather the information about historical development of the businesses in the Pinnawala area and the impact on the local economy the livelihoods of the local people.

4. Fundamental characteristics of the businesses surveyed in the PEO area

The economic role of the PEO is clearly significant. Most businesses in the locality came into existence because of its presence and depend heavily on its ability to attract tourists. However, as we shall see, their degree of dependence varies depending on the type of business involved. In our interviews, we asked those in charge of businesses in the vicinity of the PEO to state the main commodities sold by them. We used this to create a classification of these businesses. Table 1 presents the classification of businesses in the sample on the basis of the main items sold.

Table 1**The classification used of businesses in the vicinity of the PEO (n=120)**

GFTS	Gifts and toys shops	27 (22.5)
SNAB	Snack bars (Cafés)	20 (16.7)
FVST	Fruit and vegetable stalls	19 (15.8)
RESN	Restaurants	18 (15.0)
GRVS	Grocery and variety shops	9 (7.5)
HGHU	Hotels and guest houses	8 (6.7)
FUHS	Furniture and hardware stores	5 (4.2)
JVSH	Gem and jewellery shops	5 (4.2)
SGPN	Spice gardens and plant nurseries	5 (4.2)
ATOR	Auto repairers	2 (1.7)
MVEN	Mobile vendors	2 (1.7)
Total		120 (100.0)

Note: Values in parentheses are percentages of total number of establishments in the sample

Our informal discussion with locals in our initial visits to the study area revealed that most of these businesses in the Pinnawala area came into existence after the PEO was established. However, to start interviews we asked: *Has your business been operating for several years?* Respondents' responses were recorded as 'yes' or 'no'. Our analysis of the responses to this question reveals that about 90% of the businesses have been operating for several years. Although we did not collect the actual number of years of operation, informal discussion with vendors reveals that more than two thirds of the business activities in this area had started during the last ten years. From these discussions, it was also revealed that most of the guest houses, gift shops and large restaurants particularly in the close vicinity of the Orphanage, started during the last five years. Moreover, we also noticed that a number of buildings are under construction particularly along the Colombo-Kandy main road junction to the PEO. Thus these constructions would further increase the number of business ventures in the Pinnawala area. Nonetheless, altogether this information provides some indication that there has been a steady expansion of business activities in the Pinnawala area since the presence of the Orphanage.

In identifying the ownership patterns of the businesses in the study sample, respondents were presented with a structured question (i.e. *how do you describe the ownership of your business?*) along with three possible answers, owned by me, my family or other. This question was designed not only to identify the existing distribution of the ownership structure of the

businesses but also to examine whether ownership correlates with the nature of the business and the number of persons employed by each business. Table 2 presents the distribution of businesses in the sample in relation to their ownership structure.

Table 2
The distribution of the business ventures in the sample
in relation to their ownership structure (n =120)

Business category	Number of business		
	Sole owner	Family owned	Other
SNAB	17 (85.0)	3 (15.0)	-
JVSH	-	1 (20.0)	4(80.0)
FVST	16 (84.2)	3 (15.8)	-
GRVS	8 (88.8)	1 (11.2)	-
RESN	5 (27.8)	2 (11.1)	11 (61.1)
GFTS	5 (18.5)	3 (11.1)	19 (70.3)
FUHS	4 (80.0)	1 (20.0)	-
MVEN	2 (100.0)	-	-
SGPN	2 (40.0)	2 (40.0)	1 (20.0)
HGHU	2 (25.0)	1 (12.5)	5 (62.5)
ATOR	2 (100.0)	-	-
Total	63 (52.5)	17(14.2)	40 (33.3)

Note: Values in parentheses are percentages of total number of establishments in the sample/each category of business.

As indicated in Table 2, the majority of businesses in the sample are owned by individuals. These businesses consist mostly of fruit and vegetable stalls, snack bars, furniture and hardware stores, and grocery and variety shops. Probably most of these businesses require relatively low investment compare to the other businesses in the sample such as gift shops, restaurants and jewellery shops, and are quite labour intensive compared with other type of businesses in the neighborhood of PEO.

We find that most of the businesses owned by individuals correlate (with the average value of $r = + 0.81$) with the businesses that employ fewer than three persons (i.e. size category 1). On the other hand, 'other' ownership structures correlate (with the average value of $r = + 0.92$) with businesses such as gift shops, restaurants and guest houses that employ more than 10 persons (i.e. size category 4 and 5). Figure 1 presents the distribution of the businesses in the sample in relation to their relative size measured in terms of the number of persons employed. It can be seen that over a 75% businesses employ fewer than 5 people.

Figure 1

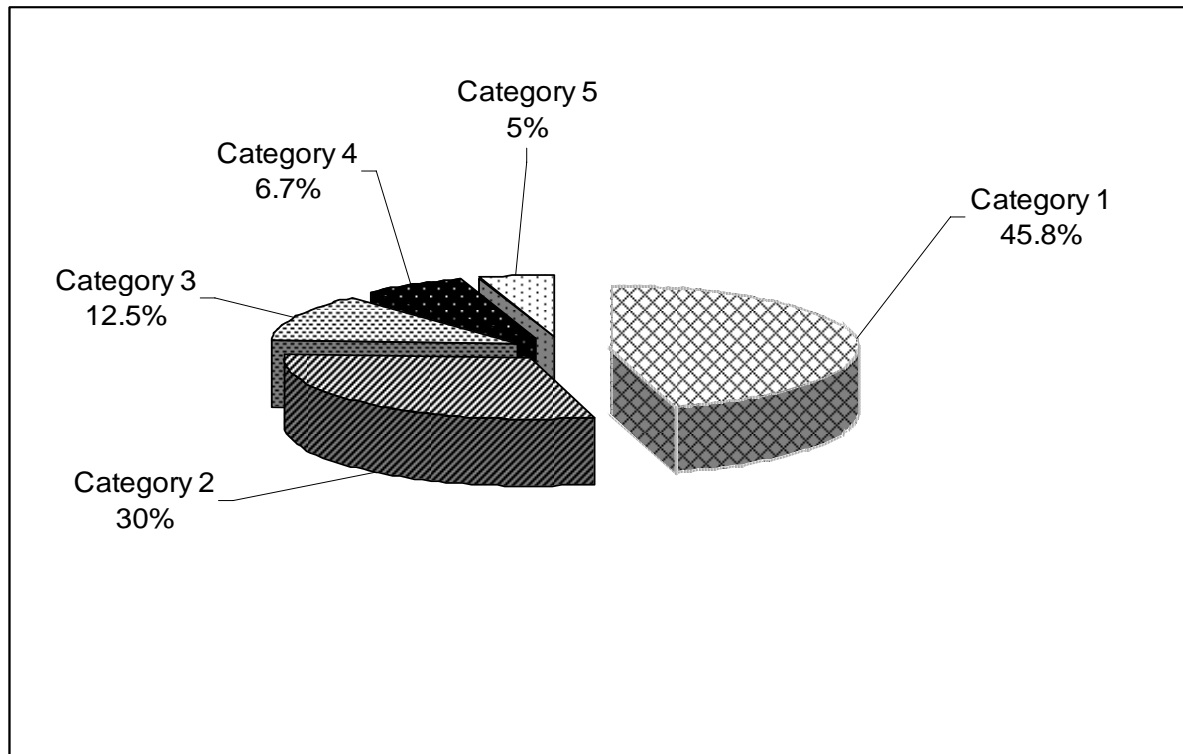


Figure 1: The distribution of businesses in the sample by number of persons employed

5. Respondents' perception of current dependency of their businesses on the PEO

It is widely acknowledged in the tourism literature (see for example Unning and Yan, 2000, Kirsten and Rogerson, 2002) that the establishment of any recreation facility with novel excitement attracts retail and service businesses. The PEO is no exception. As mentioned, at present there are 184 retail type businesses established within the 10 km radius of the PEO. Certainly more businesses can be expected in this area in the future for at least four reasons: 1) increasing popularity of the PEO as outdoor recreation, 2) non- existence of any legal or institutional barriers to the establishment of new businesses, 3) proposed zoological garden in the vicinity of the PEO, and 4) relatively low start-up investment.

In this study, we assessed the respondents' perceptions of the current dependency of their businesses on the Orphanage by presenting the following open ended question: *What percentage of your business depends, in your view, on the presence of the PEO?* Table 3 presents summaries of the respondents' responses to this question.

Table 3
Distribution of the businesses in the sample in relation
to their dependency on the presence of the PEO

Business category	Degree of dependency/ Number of businesses				Mean dependency ratio
	Less than 25%	26-50%	51-75%	More than 75%	
MVEN	-	-	-	2	100.0
JVSH	-	-	-	5	100.0
GFTS	-	-	2	24	96.11
SNAB	-	3	3	14	93.35
SGPN	-	-	2	3	91.23
RESN	2	5	4	7	72.75
HGHU	1	4	1	2	65.60
FVST	1	6	7	5	63.13
GRVS	4	3	1	-	54.0
ATOR	-	2	-	-	47.5
FUHS	2	3	-	-	35.4
Total	10 (8.3)	28 (23.3)	20 (16.7)	62 (51.7)	79.6

Note: Values in parentheses are the percentages of total number of businesses in the sample

As shown in Table 3, the dependency of the individual businesses in the sample on the PEO varies according to the activities they are involved in or the category of their business. All type of businesses in the sample except those involved in furniture and hardware selling and motor repairers depend for more than half their businesses on the PEO. Businesses such as gift and toy shops, spice gardens and plant nurseries, snack bars, mobile vendors, and jewellery shops depend heavily on the PEO. It accounts for more than 90% of their businesses. Overall the estimated mean economic dependency ratio on the PEO for all the businesses in the sample is about 80%. In the Pinnawala area, the Orphanage is the only tourist attraction and hence most businesses in this area have to be depend on the arrivals of its visitors. High economic dependency ratios of local businesses on the PEO are indicative both of the wider economic impact of the PEO and the sensitivity of local business to the fortunes of the PEO. Businesses with a high economic dependency ratio on the PEO have a major stake in its operations because of the symbiotic relationship present. Vice versa, the PEO's fortunes may also be impacted on by operation of supporting businesses.

6. Use of locally/regionally produced or supplied products and materials by the businesses in the sample

Page *et al.* (1999) point out that it is quite important to encourage the development of small business sector activities when establishing an outdoor tourism/recreation facility because it immediately provides a market for local/regional supplies. Balaguer and Jorda, (2002) suggest that this linkage accelerates long-term economic development both locally and nationally and analysis of Ashley and Roe (2002) shows how this can reduce rural poverty.

Recognising the significance of use of the locally/regionally supplied products and materials by the businesses in the sample, the respondents were asked three interconnected questions. First, they were asked to list the main items sold in their businesses. Then, they were asked: *Are any of these items produced and supplied locally or regionally (from up to 40 km away from the PEO)?* Responses were recorded as ‘yes’ or ‘no’. The respondents who responded positively were presented with a third question. They were asked to list these items and the percentage of the total supply obtained in relation to the main town or area from which they were supplied.

Table 4
Frequency of sourcing some supplies from local/region
by businesses surveyed in the PEO area.

Business category	Response	
	Yes	No
SNAB	20 (100.0)	-
FVST	19 (100.0)	-
RESN	18 (100.0)	-
GRVS	9 (100.0)	-
SGPN	5 (100.0)	-
FUHS	5 (100.0)	-
ATOR	2 (100.0)	-
MVEN	2 (100.0)	-
HGHU	25 (92.6)	2 (7.4)
GFTS	5 (62.5)	3 (37.5)
JVSH	2 (40.0)	3 (60.0)
Total	112 (93.3)	8 (6.7)

Note: Values in parentheses are percentages of total number of establishments in the sample/each category of business

Table 4 presents the summary of the respondents' responses to the second question. As shown in this Table 93.3% of the respondents in the aggregate sample indicated that they use locally/regionally produced or supplied products and materials in their businesses. This was 100% for most business categories. Exceptions included establishments involved in selling hardware and furniture, gifts and toys, and jewellery. We examined this claim, further analyzing information that we gathered from the third question. In this process, first we regrouped the list of items provided by the respondents at each business category level, for example, items found in the 'grocery and variety shop category' such as rice, lentils, and other local grain varieties were categorised as 'grain products'. Similarly, every single product found in the lists of items given by respondents in respective business categories was regrouped along with the percentages supplied. These values were used to estimate the mean percentage of items produced/supplied by areas/towns within 40km of the PEO at the individual business category level.

Subsequently, by presenting another question, the respondents were asked: *Are there any other items (in addition to the above list) supplied mainly from outside of the Colombo District?* The respondents who positively responded to this question were to list those items with the percentage of total supply, and the main town or area from which they were supplied. A similar procedure to that outlined above was used to analyse the information gathered from this question. Table 5 presents a comprehensive summary of the results of the analyses undertaken based on the information gathered from this question and the previous one presented in relation to local/regional supply sources.

Table 5**Supply sources of main items sold by the businesses in the PEO area (n = 120)**

Business category	Mean % supplied by the areas up to 40 km	Frequently stated Area/town by the respondents surveyed	Mean % supplied by areas outside Colombo district¹	Frequently stated Area/town by the respondents surveyed
MVEN	100	Pinnawala	-	-
ATOR	100	Kanday Pinnawella, Rabukkana	-	-
SGPN	100	Pinnawala, Mawanalla, Kagalla	-	-
		Kandy, Matale, Kurunagala		
SNAB	95	Pinnawala, Rambukana	5	Kadawatha
RESN	82	Pinnawala, Kagalla, Rambukana, Kandy.	18	Negambo, Gampha Dhamulla
FVST	80	Pinnawella, Kagalla, Rabukkana, Kanday Kurunagala.	20	Matale, Dhamulla, Anurathpura
GRVS	78	Pinnawella, Kagalla, Rabukkana,	22	Matale, Dabulla
HGHU	66	Pinnawella, Kagalla Rabukkana	20	Nigambo, Gampha
FUHS	34	Kagalla, Rabukkana	22	Nittambuwa, Gampha Kadawatha
GFTS	26	Kagalla, Rabukkana, Kanday	64	Galle, Dhambulla, Bandaragama, Ammbalumgoda, Gampha.
JVSH	10	Kagalla, Devalegama	22.5	Ratnapura, Galla

Note: 1. But not within 40 km radius of the PEO

As indicated in this table, except for business categories such as hardware and furniture, hotels and guest houses, and gem and jewellery outlets, all other businesses in the sample use products and materials either locally/regionally produced / supplied or those supplied from outside the Colombo District. However, the relative importance of the use of products/materials supplied by the local/regional sources is much higher than from other regions outside Colombo district. Business linkages appear to be mostly concentrated on the local region extending in approximately a 40km radius to the PEO. This situation is further examined by analyzing the use of locally/regionally produced/supplied products and materials

by the businesses in the sample in relation to their relative size. Figure 2 presents the summary of the findings of this analysis. As shown in this figure, for except some businesses in category 2 and 3, all the business in the sample, regardless of the number of persons employed, seem to depend heavily on local and regional sources around the PEO. The exceptions exist again because these two categories include businesses such as hardware, and furniture, gem, and jewellery shops which obtain supplies from outside the Colombo District.

Figure 2

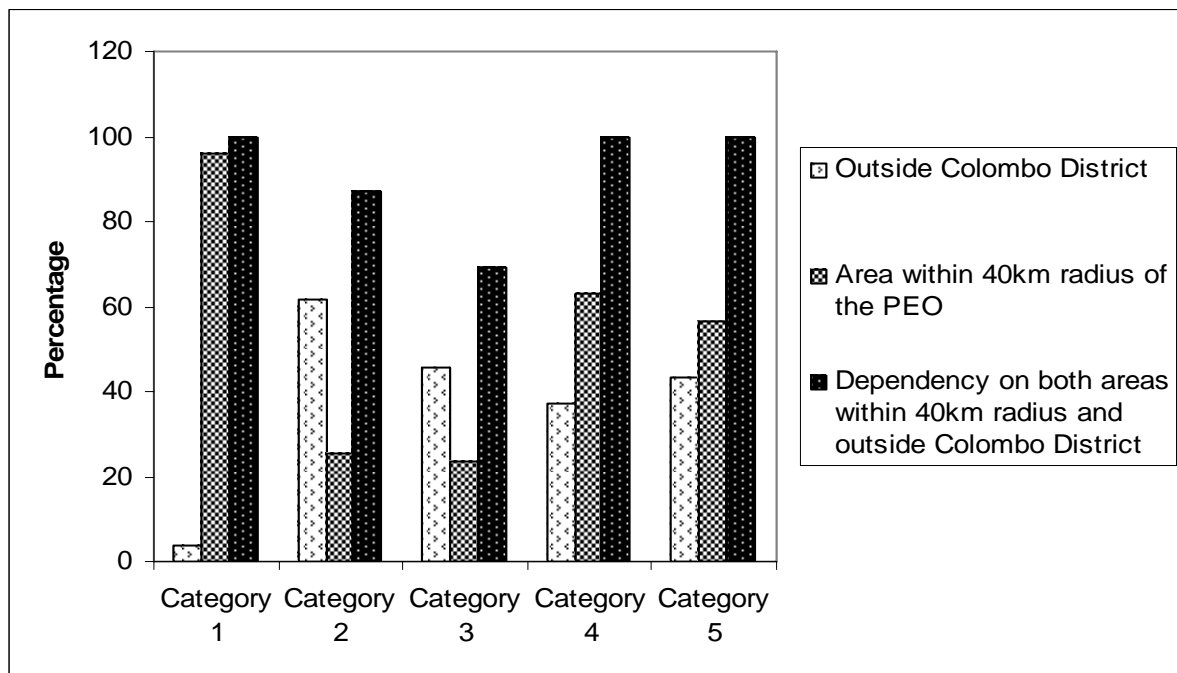


Figure 2: Supply sources of main items sold by the businesses in the sample in relation to the number of persons employed

7. The generation of employment

It is often held view that tourism is in general as a labour-intensive industry and is capable of providing employment opportunities for a large number of poorly educated or unskilled workers, a characteristic that applies to many rural areas in the developing countries (see Frederick, 1993; Tooman, 1997). Rogerson (2002) believes that the tourism attractions which are located in the rural areas provide relatively more opportunities of employment for rural youth than does the tourism sector established in urban areas. This is because, along with the development of the tourism sector in these areas, a large number of indirect employment opportunities are generated particularly in the construction, hospitality and retail business sectors. Thus the development of the rural tourism sector also helps to reduce income

inequality and rural poverty (Ashley and Roe, 2002). Moreover, it also enhances the quality of life and community living of the rural poor (Tse, 2001). However, it should be noted that these positive outcomes often depend particularly on the type of tourism and the nature of the backward linkages that could be established with the local/regional economies. Among others, Britton (1982), Sathiendrakumar and Tisdell, (1989), Brohman (1996), and Tisdell (2000) have discussed these issues and other possible socio-economic, political and cultural constraints that could be hindering the progress of the tourism industry in developing countries.

Nevertheless, given the significance of employment generation, two open ended questions yielded information in relation to employment. One question was designed to estimate total number of job generated by the business surveyed in the PEO area; the other was to understand their gender distribution. Table 6 presents the distribution of number of employees by individual business categories in the sample. Most businesses are quite small and employ two persons or less.

Table 6
Distribution of the businesses in the PEO sample in relation
to number of persons employed in a typical week (n =120)

Business category	Number of persons employed				
	Less than 3	3-5	6-10	11-15	More than 16
FUHS	-	4	1	-	-
HGHU	-	3	4	1	-
JVSH	-	3	2	-	-
SGPN	1	1	-	3	-
ATOR	2	-	-	-	-
MVEN	2	-	-	-	-
RESN	4	6	2	2	4
GRVS	7	1	1	-	-
GFTS	7	11	5	2	2
FVST	15	4	-	-	-
SNAB	17	3	-	-	-
Total	55 (45.8)	36 (30.0)	15 (12.5)	8 (6.7)	6 (5.0)

Note: Values in parentheses are percentages of total number of businesses in the sample

We find that the 120 businesses surveyed provide 641 full-time employment opportunities, of which about 60% are generated from two business categories, the gift shops and restaurants.

Moreover, these sectors also provide relatively higher average number of jobs per establishment compared to other sectors such as fruit and vegetable, grocery and variety shops, and snack bars (see Table 7). Another important finding was the very low number of females employed. Some businesses in the sample do not have any female employees at all. From a study of tourism in India and India's economic development, Roy and Tisdell (1998) describe this situation as quite common in the tourism sector in many developing countries. However, our analysis of the total employment in relation to size of the businesses surveyed found that the job opportunities generated for females increase with the size of the establishment (see figure 3 for details).

Table 7
The distribution of total/average employment by gender (n = 120)

	Total jobs generated		Male jobs generated		Female job generated	
	Total	Average	Total	Average	Total	Average
RESN	246 (38.4)	13.7	214.2 (40.5)	11.9	31.8 (28.4)	1.8
GFTS	144 (22.5)	5.3	105.3 (19.9)	3.9	38.7 (34.6)	1.4
HGHU	57 (8.9)	7.1	44.8 (8.5)	5.6	12.2 (10.9)	1.5
SGPN	55 (8.5)	11.0	49.0 (9.3)	9.8	6.0 (5.4)	1.2
SNAB	38 (6.0)	1.9	30.0 (5.7)	1.5	8.0 (7.1)	0.4
FVST	37 (5.7)	1.8	30.4 (5.7)	1.6	6.6 (5.9)	0.2
JVSH	22 (3.4)	4.4	19.5 (3.7)	3.9	2.5 (2.2)	0.5
FUHS	20 (3.1)	4.0	16.5 (3.1)	3.3	3.5 (3.1)	0.7
GRVS	17 (2.6)	1.9	14.4 (2.7)	1.6	2.6 (2.3)	0.3
MVEN	3 (0.50)	1.5	3.0 (0.6)	1.5	0.0 (0.0)	0.0
ATOR	2 (0.3)	1.0	2.0 (0.4)	1.0	0.0 (0.0)	0.0
Total	641 (100)	4.68	529.1 (82.5)	4.14	111.9 (17.5)	0.54

Note: Values in parentheses are percentages of total number of jobs generated

Figure 3

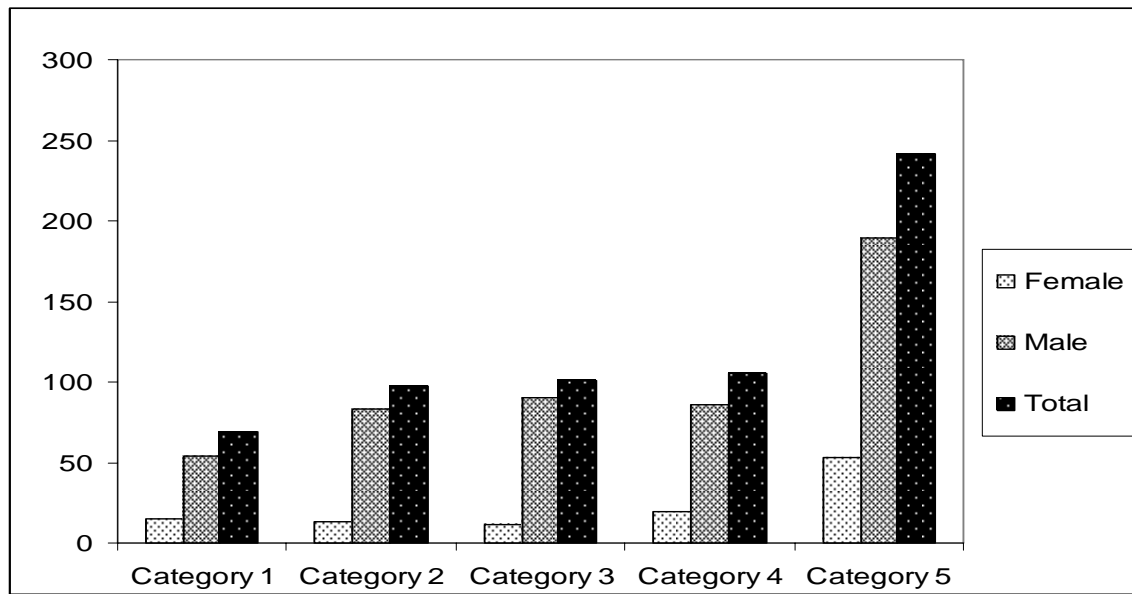


Figure 3: Distribution of total employment by gender for all categories of business in the sample

Not all employment in business establishment in the PEO area can be attributed to the PEO. Therefore, we made an estimate using a linearity assumption. As an approximation we assumed that employment in enterprise attributable to the presence of the PEO would be in proportion to the proportion of its business due to the PEO. We therefore multiplied the total employment for each enterprise by this proportion and added those values to estimate total employment due to the presence of PEO. The results are reported in Table 8. This table indicates that 524 full-time jobs were generated alone our sample of businesses in this study. Moreover, our analysis of the relationship between size of businesses and total employment due to the PEO reveals that employment tends to be concentrated in larger establishments was significantly higher than the smaller ones in the sample (see Figure 4).

Table 8

The distribution of total/average employment by gender due to the PEO

Business category	Total jobs generated		Male jobs generated		Female jobs generated	
	Total	Average	Total	Average	Total	Average
RESN	187 (35.7)	10.4	162 (37.9)	9.0	25 (25.8)	1.4
GFTS	144 (29.9)	5.3	105 (24.6)	3.9	39 (40.2)	1.4
SGPN	51 (9.8)	10.2	40 (9.4)	8.0	11 (11.3)	1.1
HGHU	39 (7.5)	4.9	30 (7.0)	3.8	9 (9.2)	1.1
SNAB	35 (6.8)	1.8	28 (6.6)	1.4	7 (7.2)	0.4
FVST	24 (4.7)	1.3	23 (5.4)	1.2	1 (1.0)	0.1
JVSH	22 (4.2)	4.4	20 (4.7)	3.9	2 (2.1)	0.5
FUHS	7 (1.3)	1.4	6 (1.4)	1.2	1 (1.0)	0.2
MVEN	3 (0.6)	1.5	3 (0.7)	1.5	0 (0.0)	0.0
GRVS	11 (2.4)	1.2	9 (2.1)	1.0	2 (2.1)	0.2
ATOR	0.9 (0.18)	0.4	0.9 (0.2)	0.4	0 (0.0)	0.0
Total	524 (100)	3.9	427 (81.5)	3.4	97 (18.5)	0.5

Note: Values in parentheses are percentage of total number of employment generated

Figure 4

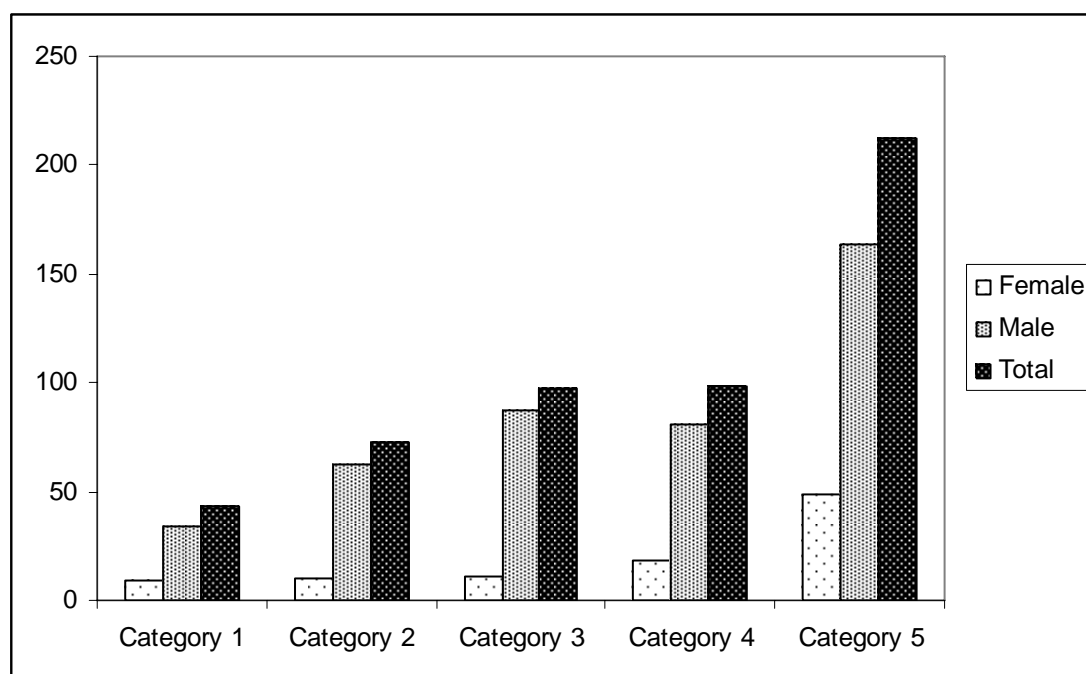


Figure 4: Distribution of total employment due to PEO by gender for all categories of business in the sample

Nonetheless, these estimates of the total employment due to the PEO would be much higher if we took into account the entire population of businesses in this area and other direct and indirect employment opportunities that are linked with the activities of the PEO. For example, the Orphanage itself provides employment for 65 persons and if we add these workers and people who work for the contract suppliers of fodder for the elephants this number would increase by at least by another 25%. Our estimate reveals that about 10 times as many jobs are created in retail businesses in the neighbourhood of the PEO as within the PEO itself due to presence of the PEO. When all retail businesses in neighbourhood are taken into account around 700 such jobs are likely to be created.

8. Suggestions for improving the PEO: Shopkeepers'/vendors' perceptions

We asked the respondents for their opinions/suggestions for improving the facilities of the PEO. The respondents were presented with two questions: the first was: *Do you have any suggestions for improving the PEO?* The respondents who answered this question positively were asked to specify their suggestions. Interestingly, analysis of responses received for the close ended question reveals that 90% of respondents at the aggregate sample level were willing to give suggestions for improving the PEO. This indicates the enthusiasm that the business community has for improving the Orphanage environment and facilities.

Table 9 indicates the frequency with which suggestions were made by respondents for improving the PEO. The most frequent suggestion was to widen roads in the vicinity of the PEO. The need for better regulation of traffic and for a public car park were also frequently raised. Therefore, vendors in the area see traffic congestion as a major problem. It is likely to become more serious as the number of visitors to the PEO increase and could eventually become a constraint on the numbers visiting.

Table 9
Suggestions for improving the PEO by the shopkeepers/vendors
surveyed in the vicinity of the PEO

Suggestion	Frequency
Construct wider roads	64
Begin elephant- based extra activities inside the park such as elephant dance and race.	51
Introduce regular system to collect garbage	44
The local authority take an active role in the management of the PEO	39
Amalgamate other public entertainment activities such as carnivals, fairs and exhibitions with the orphanage	27
Allocate more state owned land to expand the size of PEO and commercial activities in the area	24
Regulate the local traffic and improve the transport facilities	21
Construct a public car park	19
Construct low cost accommodation facilities for local visitors.	16
Improve the public facilities inside the park	15
Convert the orphanage into a zoological garden	13
Construct proper sign boards both on the entrance of the Colombo - Kandy main road junction, and the Rambukkan-Polghawela main road junction	11
Provide more publicity about the PEO and its activities through the media both locally and internationally	10
Establish information counter at the Orphanage.	10
Employ professional guides and public relations officer	8
Build a separate exit gate	7
Introduce proper public security system to prevent visitor harassment	4
Construct an auditorium to conduct conferences and workshops on the elephant inside the PEO	4
Other suggestions ^a	22

Note: a. Other suggestions include: establishment of a permanent exhibition center and sales outlet to promote local handicrafts and cottage industry product, contraction of a reservoir dam across the *Maha Oya* near the Orphanage to both provide more water for the elephants and to extend the tourist facilities e.g. boating, regulating the activities of the business people along the road to the orphanage , and Establishment of a running water facility in the Pinnawala area etc.

The second most frequent suggestion was that the PEO should expand its elephant-based activities inside the park, for example, by having dancing elephants and races involving elephants, and an associated frequent suggestion was to stage public entertainment activities, such as carnivals, fairs and exhibitions at the orphanage including elephants. Presumably, the vendors thought that this would increase the number of visitors to the area and thereby bring them more business.

The third most frequently made suggestion was to introduce a regular garbage collection system. Apparently, there are problems with garbage collection.

The fourth most frequent suggestion was that the local authority be allowed an active role in the management of the PEO. Presumably, responding vendors believe that this would result in better management and development of the PEO from their point of view.

There were also many suggestions that more state-owned land be allocated to expand the size of the PEO and commercial activities in the area. Details of other suggestions can be found in Table 9.

It might be observed some of the environmental problems in the surroundings of the PEO will worsen if the establishment of a relatively open zoological gardens in this area proceeds as planned. For example, traffic congestion is liable to become an even bigger problem, unless counter measures are adopted. Further development in the area could result in the loss of its semi-rural character unless it is carefully planned – the area may become relatively urbanised and congested which could detract from its appeal to some visitors. It is also possible that greater use of elephants for dancing, racing and performing at this site would break the impression that some visitors have that it is a peaceful refuge for elephants that have faced misfortune in the wild. Appropriate visitor surveys should be completed before embarking on such a programme. In our survey of visitors to the PEO, we did not find that such a suggestion was raised. Most visitors it seems want more information about the conservation role of the PEO and aspects of elephant conservation and ecology (Tisdell and Bandara, 2003). This, however, is judging from an open-ended question asked visitors.

9. Concluding remarks

This paper presents the results from a survey of a sample of shopkeepers/vendors operating various retail-type businesses in the vicinity of the PEO. This survey was conducted to obtain information about these businesses, their dependency on the PEO, the nature of their economic linkages with local and regional economies, the ability of the PEO to generate employment in the local area, and also to canvass respondents' opinions/suggestions about how to improve the PEO.

We found that apart from providing an excellent outdoor recreational opportunity to the general public and promoting their elephant conservation consciousness, the presence of the PEO significantly strengthened the local economic base for businesses and employment in the Pinnawala area. Most of the retail businesses that benefit from the presence of the PEO are relatively small.

Most of the PEO dependent businesses have established significant economic linkages with the local and regional economies. Except for businesses selling hardware and furniture, toys and gift items, and gem and jewellery, all other businesses in the sample use products and materials either locally/regionally produced/supplied or supplied from outside the Colombo District. However, the relative importance of the use of products/materials supplied from local/regional sources is much higher than from other regions outside the Colombo district.

The assessment of the respondents' perceptions of the current dependency of their businesses on the Orphanage reveals that about 80% of their business depends on the PEO. Indeed, some are entirely dependent on it for their business. However, this high dependency on the PEO can have a negative impact on the long-term economic stability of these businesses. This is because the PEO, as with any other outdoor recreation facility, may lose its popularity over time unless its existing structure and offerings are continuously revitalised. Visitors to any such facility always search for high quality services and products that correspond to the changing life styles and tastes.

At the moment, the PEO is the only visitor entertainment facility available in the area; thus most visitors to it come only to stay for a few hours. Often international visitors come as part of a package tour and for domestic visitors it is just one of the places that they visit during a tour of a few days. Thus, it is important not only to attract more visitors but also to encourage them to remain longer in the Pinnawala area, if the businesses in this area were to maintain or increase their economic prospects. This certainly requires more attention to be paid to both existing visitor and business community concerns.

This case study of the PEO demonstrates the significant ability of suitable outdoor recreational activities based on wildlife as an attraction to contribute to local economic development, promote local employment and economic decentralisation. In our sample, we found that about 524 jobs were created directly in small retail type businesses within a 10km

radius of the PEO. But since our sample is only about two-thirds of the relevant population, local employment generated in the local retail type trade will be higher. It seems to be about 10 times the amount of employment involved in managing the orphanage itself. This does not take full account of secondary employment and employment in transport services. It is clear however, that secondary effects show a local regional bias.

It should be noted that there is considerable scope to extend this analysis. For example, we were not able to determine the extent that those employed in the vicinity of the PEO were from the local region. Casual observation indicates, however, that the proportion is high. If so, this contrasts with some types of decentralised tourist/outdoor recreational developments in which “outsiders” are mostly employed (Sathiendrakumar and Tisdell, 1989). More detailed analysis would also be able to improve estimates of economic linkages associated with the presence of the PEO.

Retail business people who depend highly on the presence of the PEO, want better infrastructure and amenity in and around the PEO, plus additional attractions at the PEO. Their ulterior motive seems to be to expand their business. While many worthwhile suggestions have been made by businesses in the area, care needs to be taken with expansion in order not to destroy the characteristics that may make the site attractive to visitors. There may be an optimal size to outdoor attractions at this site, and undoubtedly the establishment of an ‘open’ zoological garden nearby will further increase visitors to this area adding to congestion. Its development will add to the environmental problems mentioned by business people unless appropriate counter measures are adopted.

The question should also be considered of just how much economic development at the site should be stimulated by expansion of wildlife-based recreational facilities here as a result of government initiatives. If demand to use such facilities continues to grow then, after a point, it is likely to become desirable to develop other sites to relieve growing pressure on the Pinnawala area. Development of wildlife-based recreational facilities at Pinnawala should not be viewed in isolation but seen as part of a geographically wider plan to develop such facilities. No national mechanisms seem to be in place to promote the overall pattern of development of such facilities in an optimal manner.

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