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Tourism and poverty in rural South Africa: A revisit

Debates about the value of pro-poor tourism indicated a need to revisit the links between the dynamics of tourism and hospitality enterprises and community poverty in rural South African towns. The numbers of tourism and hospitality enterprises in these towns are related to population numbers by a power law with a sub-linear exponent. The residents of smaller South African towns are more dependent on the tourism and hospitality sector than are the residents of larger towns. Measurement of the enterprise dependency indices (EDIs) of these towns provides a valid measurement of their wealth/poverty states. Their EDIs are directly and negatively associated with the strength of their tourism and hospitality sectors. Communities in towns with more tourist and hospitality enterprises are overall wealthier, and vice versa. This finding contrasts with a previous view about tourism and poverty reduction in South Africa. Debates about the benefits of pro-poor tourism should include information about the impact of tourism on community wealth/poverty. The EDI is a simple, yet powerful, measure to provide poverty information. Expressing the number of tourism and hospitality enterprises per 1000 residents of towns enables comparisons of towns of different population sizes. Based on ideas of the 'new geography of jobs', it is clear that tourism is part of what is called the traded sector and results in inflows of external money into local economies. Tourism is a driver of prosperity and a reducer of poverty in South African towns.

Significance:

- The application of different quantitative techniques demonstrates enterprise orderliness in the tourism and hospitality sector of towns in semi-arid South Africa.
- Smaller towns are particularly dependent on the tourism sector. Analyses indicate that tourism strength decreases overall community poverty.
- Leadership provided by individuals and location of towns can contribute to tourism success and poverty reduction.
- Community wealth/poverty should form part of the pro-poor tourism debate.

Introduction

Poverty and unemployment are two major perennial problems in South Africa.[1] Increased tourism is expected to contribute to the solution of these problems. For instance, the National Development Plan[2] frequently mentions tourism as an important component of economic growth and job creation, also for rural areas, and calls for the expansion of the tourism industry. Tourism is a major economic sector worldwide and is potentially important for pro-poor growth in poorer countries.[3]

Pro-poor tourism is defined as tourism that generates net benefits for the poor.[4] It is not a specific sector or product. Benefits may be economic, but they may also be social, environmental or cultural, and affect livelihoods in multiple indirect ways. Yet, paradoxically, the poor in South Africa are thought to benefit very little in the short term from additional tourism income.[5] This view, however, ignores impacts on community wealth/poverty and focuses on individual poverty.

Tourism gradually became a mass phenomenon during the post World War II period and by the new millennium it was one of the fastest growing industries in the world.[6] The direct gross value added in South Africa by tourism increased from about ZAR99 billion in 2015 to nearly ZAR114 billion in 2016.[7] The tourism sector directly employed 686 596 persons in 2016 – an increase of 17 945 employees compared to 2015. The share of tourism of the total employment in South Africa increased to 4.4% from 2015 to 2016. The number of employees in the tourism sector outnumbered the respective workforces of utilities (118 000 employees) and mining (444 000 employees).[7]

Since the 1990s, pro-poor tourism has been promoted as a means of alleviating poverty.[6,8] Tourism offers potential pro-poor economic development because it: highlights natural resources and culture; provides opportunities to diversify local economies possessing few other export and diversification options; enables opportunities for selling additional goods and services; offers labour-intensive and small-scale opportunities; and offers a high proportion of low-skill, domestic-type jobs that increase accessibility to the labour market for women.[9] A large part (29.33%) of tourist expenditure in China went directly or indirectly to local households.[10] Poor people, however, did not gain much of the benefit.

Despite its popularity, pro-poor tourism sparked a heated debate concerning its real capacity to combat poverty.[8,11] Hall[11] remarked:

> *In one sense, the focus on providing tourism employment to the presently unemployed is perhaps not far removed from the goals of any regional development programme. PPT* [pro-poor tourism] *advocates tend to suggest that there are qualitative differences with respect to its approach with respect to the poor …. However, some critics of PPT suggest that it is another form of neo-liberalism that fails to address the structural reasons for the north-south divide within developing countries.*

The quantitative dynamics and relationships of the tourism and hospitality (hereafter called T&H) enterprises with other enterprises were not considered.

The southern African tourism sector is large.[12] Consequently, tourism research in South Africa is multidimensional and extensive. This is illustrated by the papers selected for a recent geography-based theme collection of tourism contributions on southern Africa.[13] The collection addresses a diverse set of themes including greening and tourism, business tourism, visiting friends and relatives travel, second homes tourism and tourism development issues. The role of tourism in poverty reduction was not specifically considered.

In South Africa, conventional social investment approaches to poverty reduction (e.g. in education, health and targeted income support) have largely been unsuccessful.[4,14] Many southern Africans are poor.[4] Tourism has been promoted as a pro-poor strategy to promote community and sustainable development.[2,3,14-17] Nevertheless, poverty reduction is normally not at the heart of the tourism agenda.[4] Some small South African towns on the urban fringe have, however, benefitted from tourism development[17] and case studies of two towns (Utrecht and Still Bay) left no doubt that jobs had been created, people had been empowered and poverty had been alleviated[16]. Statements about the pro-poor benefits of tourism have, however, not been based on quantitative data about the wealth/poverty of communities but rather on perceived benefits to individuals. The extent to which tourism in South Africa impacts on community poverty, also in rural areas, needs to be reassessed.

In order to do so, it is necessary to pay attention to quantitative data about the enterprise dynamics of the T&H sector because this is where tourism-related jobs are created. However, South African reviews such as the Tourism Satellite Accounts of the tourism sector[7] supply no specific information about the kinds and location of tourism-related enterprises, despite the fact that thousands are surveyed. However, quantitative research of the demographic–socioeconomic–entrepreneurial nexus of urban settlements provides a way to revisit the issue of the pro-poor benefits of tourism in South Africa.

The demographic–socioeconomic–entrepreneurial nexus of urban settlements

In the early 2000s, the analogy between biological network systems and urban and corporate structures led researchers at the Santa Fe Institute in the USA to investigate if the same kind of analyses used to understand biological network systems, could be used for studying cities and companies.[18] This research group obtained empirical evidence that indicated that the processes relating urbanisation to economic development and knowledge creation are: very general; shared by all cities belonging to the same urban system; and, sustained across different nations and times.[19-21] Cities are complex systems whose infrastructural, economic and social components are strongly interrelated.[18] Quantitative information about human settlements is important and should be considered. In fact, Bettencourt and West[22] suggest that a new quantitative understanding of cities may well be the difference between creating a 'planet of slums' or finally achieving a sustainable, creative, prosperous, urbanised world expressing the best of the human spirit.

Power laws (i.e. log-log mathematical expressions) are central to the unravelling of the relationships of the demographic–socioeconomic–entrepreneurial nexus of urban settlements. The power laws reveal that many properties of cities scale with population size. Their scaling exponents fall in distinct universality classes: sub-linear, linear and super-linear (terms used by West[18]). Measures of the physical extent of urban infrastructure increase more slowly than city population size, thus exhibiting economies of scale. They scale sub-linearly (their exponents are <1). Regardless of where a city is located and regardless of the specific metric used, only about 85% more material infrastructure is needed for every doubling of city populations.[20] On the other hand, various socioeconomic outputs increase faster than population size and thus exhibit increasing returns to scale. They scale super-linearly (exponents are >1), which is typical of open-ended complex systems.[23] Large cities are environments in which there are more sustained social interactions per unit time. These generic dynamics, in turn, are the basis for expanding economic and political organisation, such as the division and coordination of labour, the specialisation of knowledge, and the development of political and civic institutions.[24] Cities are, therefore, approximately scaled versions of one another.[20] The extraordinary regularities observed open a window on underlying mechanisms, dynamics and structures common to all cities.[22] Enterprise regularities observed in urban settlements pave the way to derive a deeper understanding of enterprise dynamics.

The demographic–socioeconomic–entrepreneurial nexus of South African towns

South African towns and local authorities also have strong enterprise regularities enabling predictability about enterprise dynamics and some socioeconomic characteristics. The regularities include linear relationships between population and enterprise numbers of South African towns[25-27] and power law relationships between total enterprise numbers and the number of enterprise types (i.e. enterprise richness)[28,29]. Regional studies included towns of the Eastern Cape Karoo[25,30,31], towns and municipalities of the Free State[32,33] and population and enterprise distribution in three South African regions[34]. Importantly, the T&H sector of South African towns also exhibits enterprise regularities, e.g. for towns in arid South Africa[35] and Karoo towns in the area where shale gas development might potentially occur[36,37]. In addition, examination of the demographic–socioeconomic–entrepreneurial nexus of South African towns successfully quantified the impact of poverty on the demographic–entrepreneurial relationship in some South African towns.[38] These studies provided information and methods to investigate if tourism has pro-poor benefits in rural South Africa. First, one must consider the issue of poverty.

Why are some regions poor and others wealthy?

Hausmann and colleagues[39] concluded that the levels of productive knowledge (i.e. the specific and tacit knowledge of how to produce specific products or deliver specific services) of countries determine their levels of wealth or poverty. More prosperous countries have more productive knowledge than poor countries, and vice versa. Toerien[31,38] argues that if the level of the productive knowledge of countries determines their economic fates, the same should be true for local economies and populations of towns. The productive knowledge embedded in South African towns could, therefore, influence success in the T&H sector and its influence must be examined.

Can the productive knowledge embedded in towns be measured?

Toerien and Seaman[28] coined the term 'enterprise richness' for the total number of different enterprise types present in a town and developed a method to quantify it. Enterprise richness enumerates the number of times businesses of types that have not been present before have been successfully founded in a town. It is thought to serve as a proxy for the level of productive knowledge.[31,38]

Can one differentiate between wealthy and poor towns?

The enterprise dependency index (EDI) (i.e. the population number/total number of enterprises), has been successfully used as a measure of the wealth/poverty states of communities in towns.[25,31,38] It measures the number of people 'carrying' the average enterprise (defined as the population divided by the total number of enterprises) of each town. The EDI provides a simple and effective means to assess the wealth/poverty status of communities in South African towns[25,31,38] and is used as such in this contribution.

Purpose of this study

The purpose of this contribution is to demonstrate that tourism success does reduce community poverty in rural South African communities. A case study approach is used in the analysis. Firstly, a group of towns is selected. Secondly, to confirm the presence of orderliness in the enterprise structures of the selected towns, the enterprise richness of all selected towns is determined and related to their enterprise numbers. Thirdly, the EDIs of the towns are calculated and used to examine the T&H strengths of two groups of towns: a richer group and a poorer

group. Finally, the impacts of geographical location, national roads and tourist routes on the T&H strengths of towns are examined.

Methods

Selection of case study towns

Route tourism refers to initiatives to bring together a variety of activities and attractions under a unified theme and thus stimulate entrepreneurial opportunity through the development of ancillary products and services.[40] The clustering of activities and attractions, and the development of rural tourism routes, stimulates cooperation and partnerships between local areas.[41] When the pro-poor benefits of rural tourism are to be analysed, it is sensible to examine towns of recognised tourism routes. For this contribution, towns of Route 62 in the Little Karoo and of the N1 and N9 national roads were selected. Karoo towns potentially associated with shale gas development and of which the T&H enterprises have previously been quantified[36,37] were also included. This procedure limited the analysis to enterprise and demographic data of the 2015/2016 period. A total of 38 towns formed part of the case study (Figure 1 and Table 1).

Demographic–entrepreneurial relationships

The enterprises in 2015/2016 of the 38 towns were identified, classified and enumerated by the methods of Toerien and Seaman[26]. The East London telephone directory for 2015/2016[42] and the Port Elizabeth and Eastern Cape directory for 2015/2016[43] were used to identify the enterprises associated with the towns. The enterprises were classified into 19 different business sectors[26] (Table 2) and enumerated.

The population numbers in 2015/2016 of the towns were extracted from the German website 'Citypopulation' (undated).[44] This website's information is based on official South African census data for 2001 and 2011. The 2011 census population number for each town was extended to 2015 by its annual population growth rate between 2001 and 2011. Normalisation of data enables comparisons of towns of different sizes. The T&H sector strengths of towns were identified by expressing their T&H enterprise numbers per 1000 residents. Higher values indicate greater dependencies on the T&H sector, and vice versa.

Linear per capita indicators are generally used to characterise and rank cities. However, these indicators implicitly ignore the fundamental role of non-linear agglomeration in the life history of cities.[45] To ensure that non-linear population agglomeration impacts (i.e. scaling impacts) are not ignored, the power law relationships between population numbers and (1) total enterprise numbers and (2) the number of T&H sector enterprises were determined. Microsoft Excel software was used.

Table 1: The selected towns and their estimated 2015 population sizes

Town	Population	Town	Population	Town	Population
Aberdeen	7524	Somerset East	20 056	Barrydale	4873
Burgersdorp	17 368	Steynsburg	7509	Beaufort West	35 918
Cradock	39 682	Steytlerville	4177	Calitzdorp	4684
Fort Beaufort	27 592	Willowmore	8112	De Rust	3833
Graaff-Reinet	37 047	Carnarvon	7249	Ladismith	7725
Hofmeyr	3948	Colesberg	18 862	Laingsburg	6433
Jansenville	5919	Fraserburg	3319	Merweville	1814
Klipplaat	2997	Loxton	1189	Montagu	14481
Lady Frere	5391	Noupoort	8284	Murraysburg	5426
Middelburg	21 098	Richmond	5576	Oudtshoorn	63 076
Nieu-Bethesda	1823	Sutherland	3260	Prince Albert	7724
Pearston	4772	Victoria West	9528	Uniondale	4663
Queenstown	105 605	Williston	3544		

Impact of productive knowledge

The enterprise richness of each town was determined by counting the number of different enterprise types according to Toerien and Seaman[28]. A database of more than 600 different enterprise types encountered in South African towns was used. Power law (log-log) analyses between enterprise richness and total enterprise numbers as well as enterprise richness and population numbers were carried out. Microsoft Excel software was used.

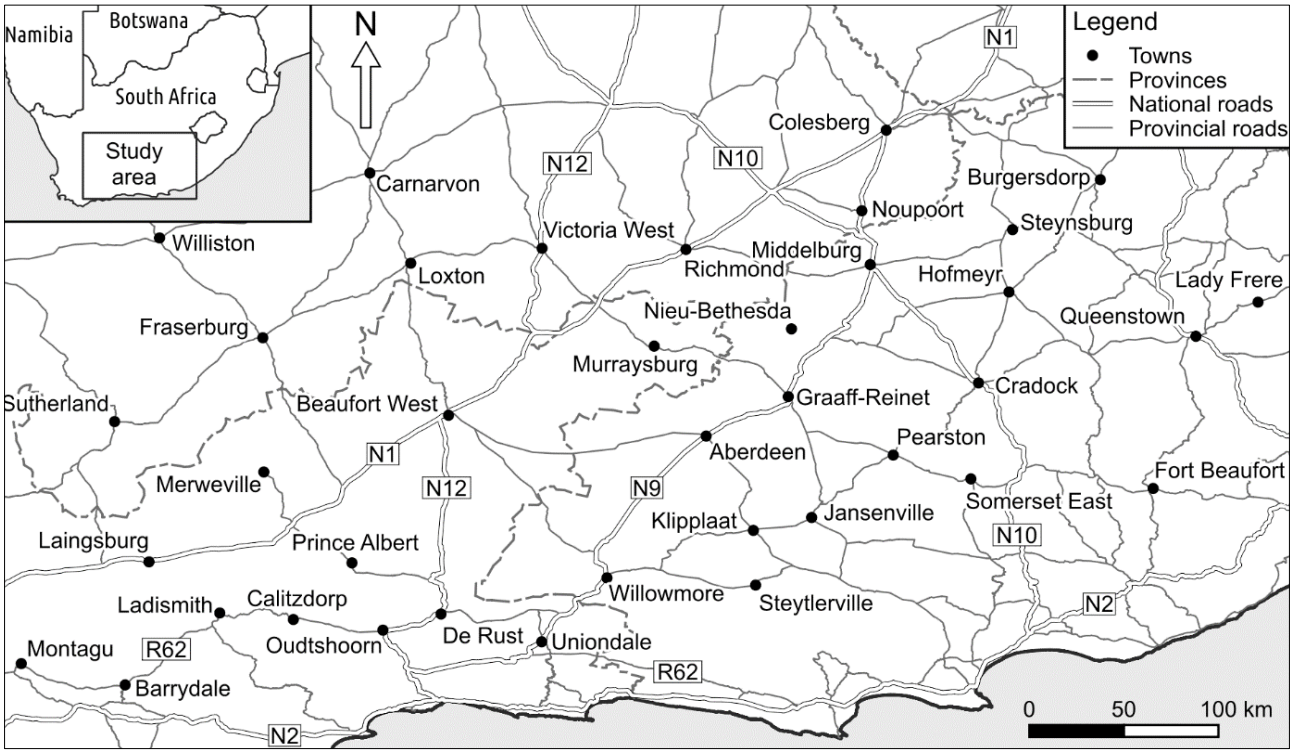

Figure 1: Map showing the towns selected for this analysis.

Tourism and the wealth/poverty of the selected towns

The EDIs of towns were simply calculated by dividing the number of people of each town by the number of its enterprises. To examine the impact of poverty on entrepreneurial development, Toerien[38]: (1) ranked towns on the basis of their EDIs, and (2) binned them into different EDI groups. The power law between the enterprise richness and population numbers of each of the binned groups was then determined and the results were graphically and numerically compared. This method was also used here on two groups of towns, those with: (1) EDIs less than 100 and (2) EDIs more than 100.

The enterprise strengths of the T&H sector (the percentage of T&H enterprises, termed tourism%) and the EDIs of the selected towns were used to assess the relationship between tourism and community wealth/poverty.

Influences of geographical location, roads and tourist routes

The impact of the locations of towns (e.g. on a tourist route or on or close to a national road or in a specific region) on their tourism–poverty profiles was tested in three ways. Firstly, the tourism strength and EDIs of the towns of Route 62 were compared with those of towns on the N9 national road and that of Nieu-Bethesda on the Owl Route. Secondly, a comparison was made of the profiles of Eastern Cape towns. Thirdly, the same profiles for towns on or adjacent to the N1 national road and towns in the western part of the study area were compared.

Results

Selected towns, their demographics and entrepreneurial relationships

Correlations between characteristics form a central part of the results presented here. Pearl and Mackenzie[46] remark: '[T]he mantra "Correlation does not imply causation" should give way to "Some correlations do imply causation"'. The results presented here, are viewed in this way.

The population sizes of the selected towns (Table 1) range from about 1200 (Loxton in the Northern Cape) to nearly 106 000 in Queenstown (Eastern Cape). The total enterprise numbers vary from 17 (Loxton) to 1000 (Oudtshoorn) (Table 2).

Table 2: The enterprise numbers and the enterprise richness of the selected towns

Town	Enterprises	Enterprise richness*	Town	Enterprises	Enterprise richness*
Aberdeen	44	26	Merweville	13	11
Barrydale	82	30	Middelburg	174	70
Beaufort West	489	104	Montagu	269	94
Burgersdorp	94	50	Murraysburg	26	14
Calitzdorp	72	33	Nieu-Bethesda	58	21
Carnarvon	78	36	Noupoort	38	23
Colesberg	154	55	Oudtshoorn	1000	206
Cradock	289	98	Pearston	17	11
De Rust	54	24	Prince Albert	155	59
Fort Beaufort	108	53	Queenstown	882	186
Fraserburg	35	21	Richmond	44	17
Graaff-Reinet	396	118	Somerset East	200	81
Hofmeyr	21	14	Steynsburg	42	23
Jansenville	75	28	Steytlerville	43	24
Klipplaat	14	7	Sutherland	52	22
Ladismith	124	55	Uniondale	61	35
Lady Frere	35	20	Victoria West	88	43
Laingsburg	67	36	Williston	32	21
Loxton	17	8	Willowmore	90	36

**Enterprise richness = number of different enterprise types in town*

Enterprise richness varies from 8 (Loxton) to 206 (Oudtshoorn). T&H enterprises range from just over 79% of total enterprises in Nieu-Bethesda to just over 7% in Klipplaat (Table 2). The variation in population and enterprise numbers enables examination of the pro-poor value of tourism in the selected group of towns.

Regularities occur in the enterprise dynamics of the towns. Their enterprise numbers scale sub-linearly with population numbers. The power law relationship between these entities is:

$$\text{Enterprise numbers} = 0.049(\text{population numbers})^{0.7275} \quad \text{Equation 1}$$

with $r=0.91$, $n=38$, $p<0.01$. The exponent indicates a strong sub-linear scaling of enterprise numbers relative to increases/decreases of population numbers. Larger towns with larger populations have disproportionately fewer enterprises than smaller towns with smaller populations.

A weaker power law:

$$\text{T\&H enterprise numbers} = 0.0328(\text{population numbers})^{0.7119} \quad \text{Equation 2}$$

$r=0.61$, $p=0.05$, $n=38$ describes the relationship between population size and T&H enterprises. Only 37% of the variation is explained.

These analyses show that orderliness is also present in the demographic–enterprise dynamics of the T&H sector of the selected towns. T&H enterprises scale in a similar fashion with population to that of the total enterprises. Smaller towns have disproportionately more T&H enterprises than larger towns. In other words, they have a greater economic dependence on the T&H sector.

Impact of productive knowledge

Enterprise richness serves as a proxy for productive knowledge. The power law between enterprise richness and the number of enterprises in the selected towns is statistically highly significant ($p<0.01$), and explains virtually all the variation and indicates strong super-linear scaling of enterprises relative to increases/decreases of enterprise richness (Figure 2). Towns with more productive knowledge have disproportionately more enterprises, and vice versa.

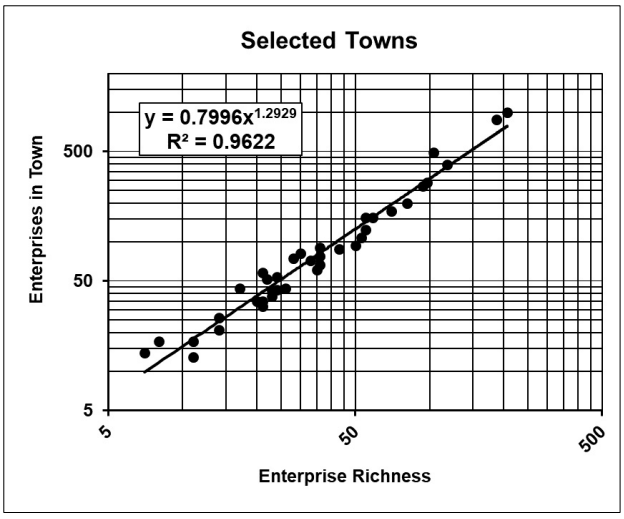

Figure 2: The power law (log-log) relationship between enterprise richness and the number of enterprises in the towns selected for this investigation.

The power law between enterprise richness and population numbers is also statistically significant ($p<0.01$) (Figure 3). Towns with higher enterprise richness are more populous. The spread of datapoints around the regression line in Figure 3 is more diverse (compare with Figure 2) and only some 81% of the variation (compared to 96% in Figure 2) is explained. Does poverty play a role in this phenomenon?

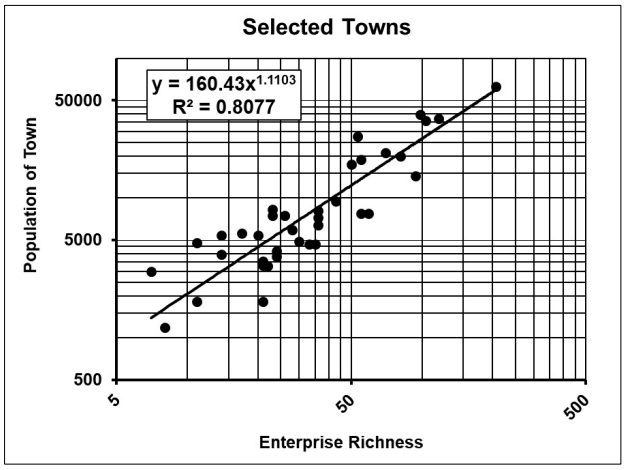

Figure 3: The power law (log-log) relationship between enterprise richness and the population numbers of enterprises in the towns selected for this investigation.

Enterprises and community wealth/poverty

The influence of poverty is examined in Figure 4. Separation of the towns into two groups on the basis of their wealth/poverty states results in two different power laws: one for the richer towns and another for the poorer towns. The exponents of the two power laws are super-linear and very similar. However, the constants of the power laws differ substantially (i.e. 64.4 versus 225.9). Increased poverty moves the regression line (see Figure 4) upwards and results in a numerically higher constant. For the same enterprise richness, a poorer town needs more people to support the same number of enterprises. Wealth/poverty plays a role in enterprise dynamics. But does it also impact upon the T&H sector?

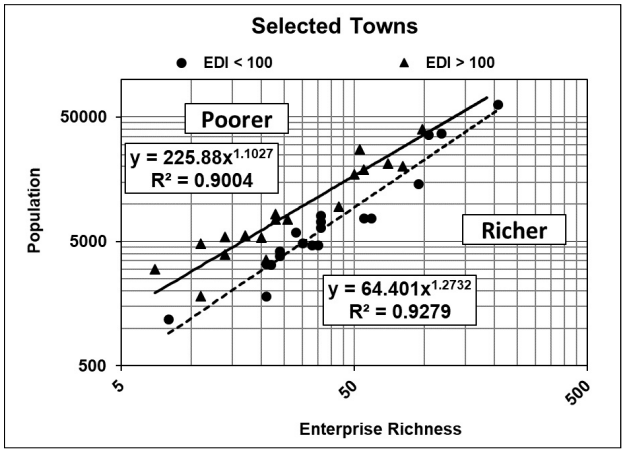

Figure 4: The enterprise richness–population numbers power law of a group of richer (EDI < 100) towns versus that of a group of poorer (EDI > 100) towns.

Tourism enterprises and community wealth/poverty

The share of the T&H enterprises of the total enterprises (tourism%) in the towns (Table 2) is negatively correlated with their EDIs:

$$EDI = 180.7 - 2.04\ (tourism\%) \qquad \text{Equation 3}$$

with $r = -0.56$, $n = 38$, $p < 0.01$. Trend lines fitted to the two characteristics (Figure 5) show clearly their contrary behaviour: as the tourism% increases, the EDI (poverty) decreases, or vice versa. In general, strength in the T&H sector in towns is associated with a reduction of poverty in their communities.

The large fluctuations in EDI and enterprise richness in Figure 5 indicated a need to examine if enterprise richness influences or is influenced by the EDI–tourism% relationship. Towns with reasonably similar enterprise richness values in Table 2 were identified and grouped (see groups in Table 3). Three groups were identified and each group was examined. The first group have enterprise richness values ranging from 20 to 30. Its enterprise numbers and enterprise richness remained reasonably constant, but as its tourism% declined, poverty (measured as EDI) increased (Figure 6 illustrates this relation). Similar trends were also observed for two additional groups: those with enterprise richness values between 33 and 36, and those with enterprise richness values between 50 and 59. In each case, enterprise richness (productive knowledge) did not influence the relationship between tourism% and EDI. This makes sense because an increase in the number of T&H enterprises is unlikely to increase the number of enterprise types (i.e. productive knowledge).

Table 3: Towns with similar enterprise richness values. Tourism% indicates the share of the enterprises of the tourism and hospitality sector of the total enterprises in the towns.

Town	Enterprises	Enterprise richness	Population	Enterprise dependency index	Tourism%
Lady Frere	35	20	5391	154.0	8.6
Nieu-Bethesda	58	21	1823	31.4	79.3
Williston	32	21	3544	110.8	31.3
Fraserburg	35	21	3319	94.8	8.6
Sutherland	52	22	3260	62.7	59.6
Noupoort	38	23	8284	218.0	21.1
Steynsburg	42	23	7509	178.8	14.3
De Rust	54	24	3833	71.0	59.3
Steytlerville	43	24	4177	97.1	32.6
Aberdeen	44	26	7524	171.0	20.5
Jansenville	75	28	5919	78.9	30.7
Barrydale	82	30	4873	59.4	65.9
Calitzdorp	72	33	4684	65.1	45.8
Uniondale	61	35	4663	76.4	31.1
Laingsburg	67	36	6433	96.0	37.3
Willowmore	90	36	8112	90.1	36.7
Carnarvon	78	36	7249	92.9	29.5
Victoria West	88	43	9528	108.3	26.1
Burgersdorp	94	50	17 368	184.8	18.1
Fort Beaufort	108	53	27 592	255.5	8.3
Colesberg	154	55	18 862	122.5	29.2
Ladismith	124	55	7725	62.3	25.8
Prince Albert	155	59	7724	49.8	52.9

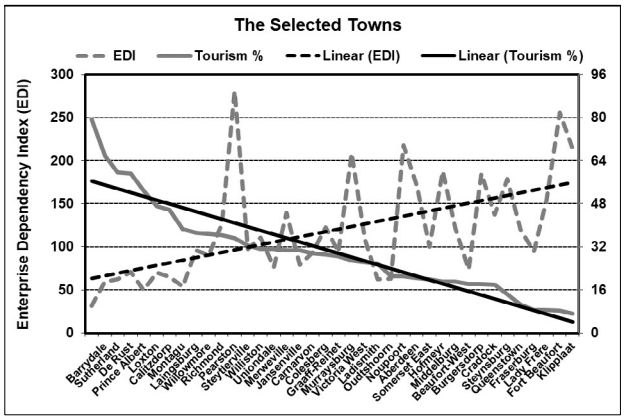

Figure 5: The share of the tourism and hospitality sector as a percentage of the total enterprises (tourism%) of the 38 selected towns in relation to the enterprise dependency indices of the towns. Trend lines were fitted for both characteristics.

Influences of geographical location, roads and tourist routes

The strength of T&H sectors and wealth/poverty levels of towns on different routes in the study area differs widely (Figure 7). Nieu-Bethesda on the Owl Route has an exceptionally strong T&H sector, based primarily on the art of Helen Martins and the reputation of the author Athol Fugard.[47,48] Its community poverty (EDI) is relatively low.

The T&H sectors of the Route 62 towns (Montagu, Barrydale, Ladismith, Calitzdorp, Oudtshoorn, De Rust, Prince Albert, Uniondale), located in the Gouritz Cluster Biosphere Reserve[49], are clearly stronger and their EDIs are lower than those of towns of the N9 national road (Willowmore, Aberdeen, Graaff-Reinet, Middelburg, Noupoort, Colesberg) (Figure 7).

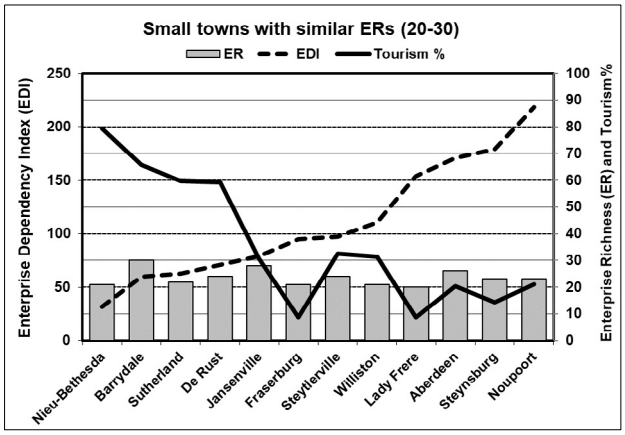

Figure 6: The share of the tourism and hospitality sector of the total enterprises (tourism%) and the wealth/poverty states (EDI) of towns with enterprise richness (ER) values between 20 and 30.

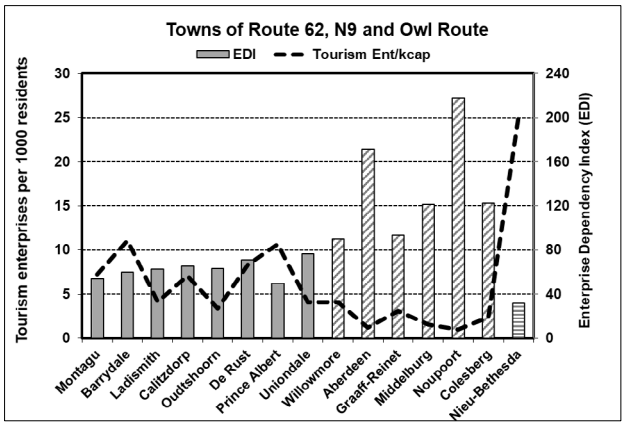

Figure 7: Comparison of the tourism sector strength (tourism enterprises per 1000 residents and abbreviated as Tourism Ent/kcap) and enterprise dependency indices (EDI) of the towns of Route 62 (even coloured), of the N9 national road (diagonal stripes) and the Owl Route (Nieu-Bethesda, horizontal stripes).

The tourism strength of the R62 towns resulted from sustained efforts of two persons, Gert Lubbe, owner of a hotel in Montagu, and Jeanetta Marais, a former CEO of the Breede River Valley District Council. They initiated the efforts to develop Route 62 into an internationally known tourist destination.[49] Surprisingly, Graaff-Reinet, which is generally touted as an important tourist destination in the Eastern Cape Karoo, has a weaker T&H sector than the Route 62 towns (Figure 7). As a larger town, it has probably developed strength in enterprise sectors other than T&H.

The T&H sector strengths of Willowmore, Steytlerville and Jansenville (Figure 8) are generally lower than those of the Route 62 towns (compare Figures 7 and 8), but are stronger than those of other towns of the Eastern Cape (Figure 8). The aforementioned three towns have lower EDIs (less poverty) and form part of the 'Small Town Paradox', i.e. small towns that paradoxically fare economically much better than their peers.[31] Visionary leadership by a mayor in the case of Willowmore and Steytlerville, and a civic leader in the case of Jansenville, that strengthened their T&H sectors, contributed to their success.[31] Other Eastern Cape towns (i.e. Burgersdorp, Queenstown, Steynsburg, Lady Frere, Klipplaat and Fort Beaufort) have low T&H strengths and high community poverty rates (high EDIs).

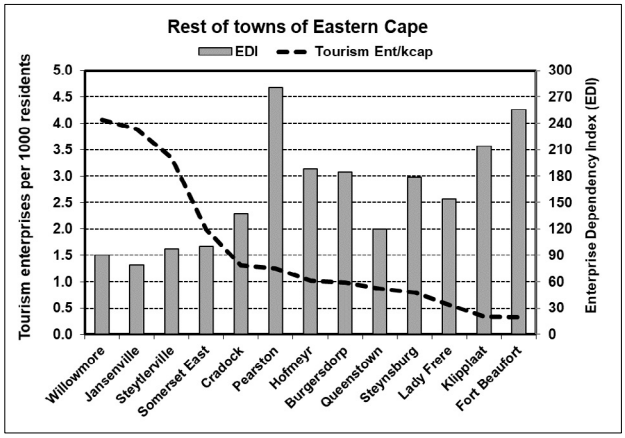

Figure 8: Comparison of the tourism and hospitality sector strength (tourism enterprises/1000 capita and expressed as Tourism Ent/kcap) and the enterprise dependency indices (EDIs) of other towns in the Eastern Cape.

The T&H sector strengths of the towns on the N1 national road (Figure 1) are somewhat lower than those of Route 62 towns but are higher than those of the towns of the N9 national road (Figure 9). The strengths of the T&H sector of the towns close to the Square Kilometre Array (SKA) development (i.e. Carnarvon and Williston) are somewhat higher than those of the N1 towns. Sutherland seems to be benefiting much from its astronomy attractions and Loxton from its association with Deon Meyer, a well-known Afrikaans crime novelist. These towns have relatively low community poverty (EDIs).

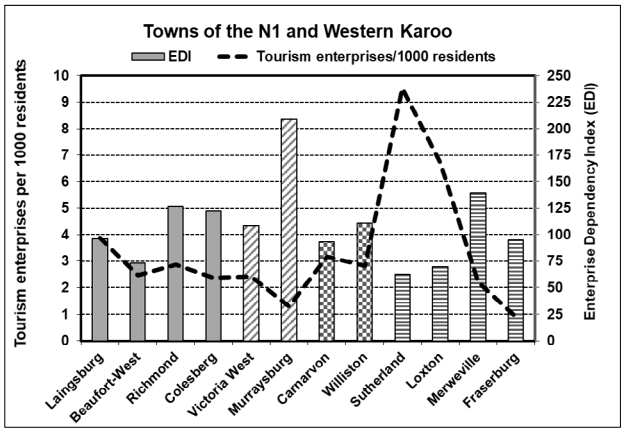

Figure 9: Comparison of the tourism sector strength (tourism enterprises per 1000 residents) and enterprise dependency indices (EDI) of towns on the N1 national road (even coloured) or closely linked to it (diagonal stripes) as well as towns close to the Square Kilometre Array development (square blocks) and other towns in the western part of the study area (horizontal stripes).

Infrastructure (the N1 national road, i.e. the main road between Cape Town and Gauteng, astronomy observatories in the case of Sutherland, the SKA development in the case of Carnarvon and Williston) and the influence of individuals (Deon Meyer in the case of Loxton) contribute to T&H sector strength and the reduction of community poverty.

Discussion and conclusions

Enterprise orderliness prevails in the T&H sectors of the selected towns. A power law (Equation 2) indicates that T&H enterprise numbers are disproportionately higher in smaller than larger towns. The residents of smaller South African towns are more dependent on the T&H sector than the residents of larger towns. The sub-linear coefficient of this relationship is similar to sub-linear exponents of power laws describing the relationships between the infrastructure needs of cities and their populations.[18,22,45]

In the selected towns, EDIs, and thus their wealth/poverty states, are directly and negatively associated with the strengths of their T&H sectors (Equation 3 and Figure 5). Communities of towns with more T&H enterprises are wealthier, and vice versa. This trend was observed in a number of different analyses and is not impacted by the enterprise richness (productive knowledge) of the towns (Figure 5, Table 2).

The debate about the capacity of tourism to reduce poverty[8,11] has focused more on benefits for poor individuals rather than the wealth/poverty states of whole communities. For instance, Saayman et al.[5] stated: 'The main finding [of their study] is that the poor [in South Africa] benefit very little in the short term from additional tourism income.' In contrast, this contribution shows that in the selected group of towns, the communities of towns with stronger T&H sectors are overall wealthier, and vice versa. Debates about the benefits of pro-poor tourism should include information about the impact of tourism on community wealth/poverty and not just focus on individual poverty. The EDI is a simple yet powerful measure to provide community-based poverty information (Figures 4 to 9).

T&H strength (T&H enterprises per 1000 residents) proved to be a very useful normalisation that enabled evaluation of the tourism scenes of the selected towns (Figures 7 to 9). This measure also helped to illuminate the impact of location on tourism success, e.g. being located on the N1, Route 62 or in areas close to astronomical observatories (e.g. Sutherland, Figure 9).

Why is tourism important to rural South African towns? It helps to reduce poverty but the 'new geography of jobs' should also be considered. Moretti[50] explained:

> [T]*he vast majority of jobs in a modern society are in local services. People who work as waiters, plumbers, nurses, teachers, real estate agents, hairdressers, and personal trainers offer services that are produced and consumed locally. This sector exists only to serve the needs of a region's residents.*
>
> *By contrast, most jobs in the innovative industries belong to the traded sector, together with jobs in traditional manufacturing, some services – parts of finance, advertising, publishing – and agricultural and extractive industries such as oil, gas, and timber. These jobs, which account for about a third of all jobs, are very different because they produce a good or service that is mostly sold outside the region…*
>
> *The paradox is that while the vast majority of jobs are in the non-traded sector, this sector is not the driver of our prosperity. Instead our prosperity mainly depends on the traded sector.*

It is necessary to add to Moretti's views that the T&H sector also belongs in the traded sector. Tourists are primarily from elsewhere. What they spend in a local economy represents an inflow of external money. In this sense, tourism is a driver of prosperity and a reducer of poverty in South African towns and should be strongly supported.

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