

# Dairy tourism model for enhancing farmers' income: a niche tourism product from the Trans-Gangetic Plains of India

Mahesh Bhimashankar Tengli<sup>1,\*</sup>, B. S. Meena<sup>2</sup>, Pampi Paul<sup>3</sup>, A. K. Dixit<sup>2</sup> and P. S. Sivakumar<sup>4</sup>

<sup>1</sup>College of Post Graduate Studies in Agricultural Sciences, Central Agricultural University (Imphal), Umiam 793 103, India

<sup>2</sup>ICAR-National Dairy Research Institute, Karnal 132 001, India

<sup>3</sup>ICAR Research Complex for North-Eastern Hill Region, Barapani 793 103, India

<sup>4</sup>ICAR-Central Tuber Crops Research Institute, Thiruvananthapuram 695 017, India

**This study aims to conceptualize dairy tourism as a niche tourism product. The main objective is to propose a dairy tourism (dairy tourist inclination) conceptual framework and empirically test the causal relationships of the same. The key contribution of the present study is the dairy tourism model. The findings of this study will help farmers and other stakeholders to plan and implement the concept effectively. The study also proposes dairy tourism as an additional income avenue for dairy farmers and a novel niche tourism product.**

**Keywords:** Conceptual framework, dairy tourism, farmers' income, model, niche tourism product.

THE agriculture sector of India has witnessed an annual growth of 3.9%, thereby contributing an 18.8% share in the gross value added during 2021–22 (ref. 1). Indian agriculture is the major source of employment for rural population. In 2019, it employed about 42.6% of the total workforce in India. Despite the good growth rate, the contribution of agriculture to the rural household income is decreasing. In 2019, only 52.7% of the average monthly income from agriculture was earned through crop production and farming of animals<sup>2</sup>. Contrary to agricultural growth, farmers are quitting farming. A Gaon Connection Survey conducted in 2019 revealed that 48% of farmers wanted their children to choose a career other than farming<sup>3</sup>. The unattractiveness of farming can be attributed to dwindling land, lack of access to technical advice, and other biotic and abiotic factors<sup>4</sup>. Moreover, disguised unemployment also prevails in the agriculture sector<sup>5</sup>.

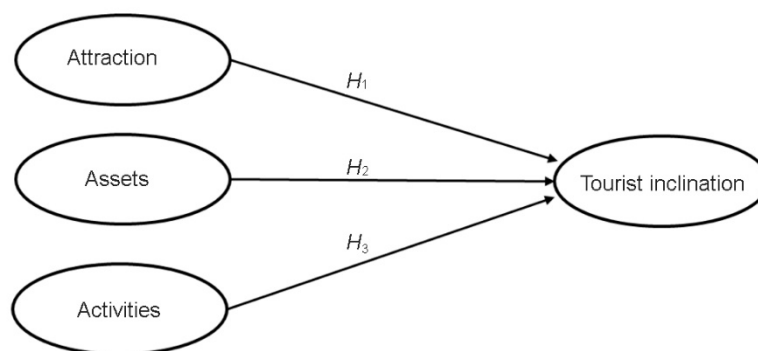
In agriculture and allied activities, livestock farming accounts for 15.5% of the average monthly income of agricultural households, thus aiding in the growth of the agriculture sector<sup>6</sup>. India stands first in global milk production (23% of the global milk produced), which contributes to 5.0% of the national economy. The dairy industry comprising dairy farming and milk processing, provides direct em-

ployment to over 80 million people in the country<sup>1</sup>. Despite the growth and contribution of the Indian dairy industry, farmers often struggle to earn profits through dairy farming mainly due to their poor socio-economic status and low productivity of milch animals<sup>7</sup>.

In this context, there is a need to address the concerns of the farmers by employing innovative approaches to make dairy farming remunerative and sustainable. Various think tanks and researchers have suggested strategies such as introducing farm diversification, venturing into non-agricultural rural activities<sup>8</sup> and adopting non-farming occupations<sup>9</sup>.

Agritourism is emerging as a business-focused farm diversification activity, which is increasingly attracting the attention of entrepreneurs and policymakers. By converting farms as a destination for providing diverse and real-life experiences to tourists in producing and consuming culturally embodied versions of foods, agritourism has transformed traditional farming into a potential business venture. Recent surveys estimated the worldwide agritourism market size as US\$ 69.24 billion in 2019, which is on the rise with a CAGR of 7.42% (ref. 10). The Indian market is projected to exhibit a growth rate (compound annual growth rate (CAGR)) of 19.9% during 2023–28 (ref. 11). The evolution of agritourism from providing 'farmhouse accommodation' to skiers in Western Europe and Japan during the 1800s to offering integrated farm and food-based cultural experience, indicates commoditization of the diverse services to meet the emerging consumer needs<sup>12</sup>. These trends offer ample opportunities for the farmers to diversify their businesses to offer 'value-added tourism experiences' to the customers. Developing a new tourism product through dairy farming is the key to diversifying the dairy business and enhancing farm household income. Development of a tourism product for a specific destination is a complex process as it involves diverse elements such as physical structures, multiple services, hospitality arrangements, tourist preferences and their involvement in such experiences<sup>13</sup>. Dairy tourism is essentially a 'niche tourism' product customized to meet the needs of a particular market segment<sup>14</sup>. There are various regional perspectives on defining dairy tourism products.

\*For correspondence. (e-mail: agmbt20@gmail.com)



**Figure 1.** Hypothesized model.

A study conducted in Spain proposed dairy tourism as ‘a niche tourism product focused on the interest of visitors towards all the resources associated with production and consumption of milk products’<sup>15</sup>. An Indonesian perspective focused on offering tourism activities associated with dairy farming and dairy products activities<sup>16</sup>. Though dairy tourism is yet to take roots, a Japanese dairy farm network, viz. educational dairy farms (EDFs), has initiated awareness programmes on dairy farming and is also offering educational services to visitors<sup>17</sup>. Developing a new tourism product requires understanding the tourists’ expectations about the experiences they want to gain by connecting with the characteristics of specific destinations<sup>13</sup>. Since the tourism products are essentially the ‘users’ experiences’, our understanding of their choice and the aspects that determine their satisfaction are keys to developing a viable dairy tourism product<sup>18</sup>. Past studies focusing on key dimensions of dairy tourism products are scarce in India, with many describing the tourist product at the conceptual level<sup>19</sup>. Based on the literature review, expert opinion and peer discussions conducted at the initial stages of the present study, we propose that ‘Tourists will be inclined towards dairy tourism if it serves the key expected elements that are dairy-centric, i.e. it has dairy-related assets, dairying activities and dairy-based attractions’. Using this proposition, the tourist inclination towards dairy tourism is defined as the social, emotional and temporal tendency or readiness of the tourists to consume (visit and experience) dairy tourism as a niche tourism product. This study defines tourists’ expectations as ‘pre-visit anticipations of the respondents with regard to assets, activities and attractions at a dairy tourism destination’. Assets are defined as all the physical resources at a dairy farm that can be utilized in dairy tourism. Activities refers to everything that a tourist do on a dairy tourism destination (for instance milking a cattle). Attraction refers to all those events of dairy tourism that kindle interest in tourists just by seeing them. The proposed research hypotheses are as follows:

$H_1$ : There is a positive and direct relationship between the expected attraction score and tourist inclination score.

$H_2$ : There is a positive and direct relationship between the expected assets score and tourist inclination score.

$H_3$ : There is a positive and direct relationship between the expected activities score and tourist inclination score.

Figure 1 depicts the relationship between the constructs as a dairy tourist inclination model (dairy tourism model). Further, these hypotheses were subjected to empirical testing.

In this study, we develop a niche tourism product, i.e. dairy tourism, for the Indian context. The main objective is to propose a dairy tourist inclination (dairy tourism) conceptual framework and empirically test the causal relationships of the same.

## Materials and methods

The survey research design was adopted in this study. Data were collected by surveying the tourists visiting 16 tourist destinations in the Trans-Gangetic Plains (TGP) of India. This region was selected for study as it has a large number of commercial dairy farms and diverse tourist attractions. The target population was tourists above 18 years of age who preferred to visit agritourism destinations. The survey was conducted through structured interviews after seeking verbal consent from the respondents. Out of 160 interviews, 150 valid responses were considered for the final analysis.

A structured interview schedule was developed to assess three types of tourist expectations: expected assets (AST), expected activities (ACT) and expected attractions (ATT). The interview schedule was pilot-tested, reviewed by academic experts and language instructors, and refined based on their feedback.

Data analysis was done in three stages. The first stage involved using descriptive statistics to analyse the demographic data. In the second stage, the importance of tourists’ expectations (AST, ACT and ATT) was analysed using the relative importance index (RII)<sup>20</sup>. In the third stage, the hypotheses were tested using a ‘partial least square-structural equation model (PLS-SEM)’ employing Smart PLS 3.0

**Table 1.** Demographic profile of the respondents (tourists)

Variable	Category	Frequency ( <i>n</i> )	Percentage
Age (years)	Young (15–35)	78	52.00
	Middle-aged (36–50)	56	37.33
	Elderly (>51)	16	10.67
Gender	Female	64	42.67
	Male	86	57.33
Nationality	Indian	127	84.67
	Foreigner	23	15.33
Level of education	Secondary classes (IX–X)	15	10.00
	Senior secondary classes (XI–XII)	49	32.67
	Graduation	71	47.33
	Post-graduation	15	10.00
Annual income (₹)	100,001–300,000	7	4.67
	300,001–500,000	74	49.33
	500,001–800,000	45	30.00
	800,0001 and above	24	16.00

**Table 2.** Relative importance index (RII) of expectations

	RII	Rank
Expected assets (AST)		
AST 1: Green landscape (lawn, fodder cafeteria, flowers, creepers, shade trees)	0.771	IV
AST 2: Traditional lodging (thatched huts, tents, mud houses)	0.761	VI
AST 3: Water pond (for tourist to swim with animals of the dairy farm)	0.776	III
AST 4: Traditional kitchen (local cuisine, dairy products, cookery utensils)	0.776	III
AST 5: Cafeteria of dairy animals on farm (cow, buffalo, goat, camel)	0.791	II
AST 6: Animals on farm driven implements (water pump, bullock cart, cane crusher, power generator)	0.825	I
AST 7: Visitors' gallery (orientation, interaction, resting and dining)	0.767	V
Expected activities (ACT)		
ACT1: Playing with young animals (feeding bottle, fodder, creasing, cleaning)	0.773	IV
ACT2: Tug of war with animals on the farm	0.745	VII
ACT3: Cow cuddling (hugging, creasing, brushing, lying down with a cow or a calf)	0.807	I
ACT4: Learning to make dairy products	0.760	V
ACT5: Goat yoga (a wellness activity of performing yoga in the presence of goats)	0.787	III
ACT6: Milking animals on farm	0.755	VI
ACT7: Farm animals rides (buffalos/bull/camel)	0.793	II
Expected attractions (ATT)		
ATT1: Cattle/goat swayamwar (marriage)	0.759	III
ATT2: Calf cradle	0.772	II
ATT3: Dancing goat	0.753	IV
ATT4: Gou tulabharam	0.780	I
ATT5: Music milking	0.748	V

software<sup>21</sup>. The model development was conducted in three sub-stages, which included testing the measurement quality of the instrument, formative measurement model evaluation and structural model evaluation<sup>22</sup>.

## Results

### *Respondents' characteristics*

Table 1 illustrates the demographic characteristics of the respondents. Nearly 52% of the respondents were young, 57.33% were male, and 42.67% were female. Also, 84.67% were Indian nationals. About 49.33% of the respondents were graduates. About 49.33% had annual income between Rs 300,001 and 500,000.

### *Tourists' expectations from dairy tourism*

Tourists' expectations (AST, ACT and ATT) were analysed by computing RII and rank-ordered according to the RII values (Table 2). RII value for all the tourists' expectations was found to be greater than 0.700. Animal-driven implements were ranked first among all the expected assets, with the highest RII value of 0.825.

Among all the expected activities, cow cuddling ranked first, with highest RII value of 0.807. Similarly, among the expected attractions, Gou tulabharam (a practice of weighing a cow in a balance and paying in equal weight of sugar, jaggery, fruits, fodder and offering it to the cow and its caretaker – expressing care and concern for the farm animals) ranked first rank (RII value of 0.780).

**Table 3.** Reflective measurement model evaluation

Tourist inclination (INC)	Loadings	Reliability		
		$\alpha$	CR	Validity AVE
INC1: Dairy tourism will be a new experience	0.914	0.891	0.932	0.822
INC2: To know about dairying, one must visit a dairy tourism destination	0.878			
INC3: Spending time with family in between animal on farm will be amazing	0.927			

INC was assessed with a five-point rating scale ranging from ‘Strongly disagree’ (1) to ‘strongly agree’ (5);  $\alpha$ , Cronbach’s alpha; CR, Composite reliability; AVE, Average variance explained.

**Table 4.** Formative measurement model evaluation

Indicators	Indicator loadings	<i>t</i> statistics	<i>P</i> value	VIF
AST1 -> AST	0.841	2.851	0.004***	2.733
AST2 -> AST	0.883	3.373	0.001***	2.924
AST3 -> AST	0.820	3.658	0.000***	2.241
AST4 -> AST	0.796	2.985	0.003***	2.217
AST5 -> AST	0.705	3.321	0.001***	1.690
AST6 -> AST	0.678	2.274	0.023**	1.670
AST7 -> AST	0.774	2.969	0.003***	2.043
ACT1 ->ACT	0.728	3.425	0.001***	2.105
ACT2 -> ACT	0.687	4.095	0.000***	1.654
ACT3 -> ACT	0.780	6.990	0.000***	1.542
ACT4 -> ACT	0.732	2.818	0.005***	1.890
ACT5 -> ACT	0.710	4.022	0.000***	1.629
ACT6 -> ACT	0.751	5.163	0.000***	1.612
ACT7 -> ACT	0.617	2.532	0.011**	1.554
ATT1 -> ATT	0.907	5.106	0.000***	2.899
ATT2 -> ATT	0.816	3.049	0.002***	2.294
ATT3 -> ATT	0.719	3.145	0.002***	1.628
ATT4 -> ATT	0.798	3.145	0.002***	1.987
ATT5 -> ATT	0.883	4.369	0.000***	2.626

VIF, Variance inflation factor; \*\*\*Significance at the 0.01 level, \*\*Significance at the 0.05 level.

*Dairy tourism model*

In the first substage of hypothesis testing, the reliability and validity of tourists’ inclination measures were assessed (Table 3). Indicator reliability was evaluated by examining standardized indicator loadings, which were above the critical value of  $\geq 0.70$  (refs 22, 23). Cronbach’s alpha ( $\alpha$ ) and composite reliability (CR) were examined to assess internal consistency reliability. Both coefficients were above the critical value 0.70 (refs 23, 24). The average variance extracted (AVE) was used to assess the validity of the measure; it was greater than 0.5 (ref. 23). Therefore, the measure established reliability and validity.

Tourist expectations (AST, ACT and ATT) were conceptualized as formative constructs in the measurement model (Figure 1). Table 4 provides a summary of the formative measurement model analysis. The indicator loadings were above the critical value of  $\geq 0.70$  (ref. 25) and significant, as indicated by *t*-statistics and *P* value<sup>26</sup>. Furthermore, the variance inflation factor (VIF) a measure of multicollinearity, the analysis resulted values below the critical value of 3 (ref. 27), hence confirms there is no issue of multicollinearity in the model.

*Structural model evaluation*

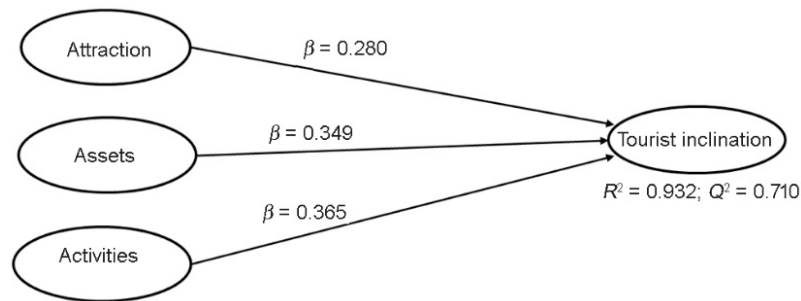
PLS-SEM was used to test the hypotheses. To obtain the path coefficients, the PLS algorithm was used, and for testing the significance of the path bootstrapping procedure with 5000 iterations was adopted (Table 5 and Figure 2). As hypothesized, our results indicate that ACT ( $\beta = 0.365$ , *P*-value  $< 0.05$ ), AST ( $\beta = 0.349$ , *P*-value  $< 0.05$ ) and ATT ( $\beta = 0.280$ , *P*-value  $< 0.05$ ) significantly, directly and positively influence tourist inclination (INC). Together they explain 93.2% variance of INC, thus supporting our hypotheses. Sometimes  $R^2$  value is high, indicating the model overfitting the data. Another measure of the predictive accuracy of the PLS path model is  $Q^2$  (The  $Q^2$  also known as Stone-Geisser’s  $Q^2$  value which represents an evaluation criterion for the cross-validated predictive relevance of the PLS path model.). The blindfolding analysis resulted in a  $Q^2$  value of 0.710 indicating a larger predictive relevance of the proposed PLS path model, a  $Q^2$  value greater than 0.50 indicates larger predictive accuracy of the PLS-path model<sup>28</sup>.

The results of the present study demonstrate two facts. First, the characteristic components of dairy tourism can be explored through tourist expectations. Secondly, the findings

**Table 5.** Structural model evaluation

Hypothesis	Path	$\beta$	<i>t</i> Statistics	<i>P</i> -value	Supported?	<i>f</i> <sup>2</sup>	Endogenous variable	<i>R</i> <sup>2</sup> adjusted	<i>Q</i> <sup>2</sup>
<i>H</i> <sub>1</sub>	ACT -> INC	0.365	6.662	<0.05***	Yes	0.259			
<i>H</i> <sub>2</sub>	AST -> INC	0.349	5.318	<0.05***	Yes	0.199	INC	0.932	0.710
<i>H</i> <sub>3</sub>	ATT -> INC	0.280	4.905	<0.05***	Yes	0.160			

$\beta$ , Standardized path coefficient; *f*<sup>2</sup>, Effect size; *Q*<sup>2</sup>, Stone-Geisser's criteria (predictive relevance); \*\*\*Significance at the 0.01 level, \*\*Significance at the 0.05 level.

**Figure 2.** Results of the structural model.

of the study statically support the proposed hypotheses in the dairy tourism model (Figure 1).

## Discussion

In this study, we have developed a dairy tourism model (tourist inclination model) for the TGP of India. The relative importance of tourists' expectations was more than 70.00%. This implies that for the tourists, all of their identified expectations are important. Further, one can infer that the animal-related aspects are given primary importance, followed by other amenities and activities. These findings are supported by those of previous studies<sup>29,30</sup>. Thus, it can be inferred that tourists give more importance to dairy-animal components in dairy tourism. The findings of the tourists' expectations are unique since this study identifies pre-visit expectations in the context of dairy tourism and reports the specific aspects of a niche tourism product (dairy tourism). Further, the predictive accuracy of the proposed model exhibits larger explanatory power. The findings imply tourists' expectation variables are potential predictors of tourists' inclination towards dairy tourism. Furthermore, the significant and positive influence of tourists' expectation variables on their inclination towards dairy tourism implies that the respondent tourist conceive dairy tourism as a destination with some dairy related assets, activities and attractions and have a tendency to experience it as a niche tourism product.

The findings of this study are important for dairy tourism training institutions, dairy entrepreneurs and dairy tourism managers. Here it is important to note that the assets unique to dairy farming need to be given primary importance

along with other basic amenities with a rural touch. Similarly, activities imply the physical and mental involvement of tourists, which is an important dimension in creating experiences<sup>31</sup>. Trainers are required to focus on organizing dairy tourism activities identified in this study. A dairy tourism destination should organize activities in order to create a memorable experience for the tourists. Dairy tourism destinations may plan to have one or two attractions identified in this study to differentiate from other dairy tourism destinations, as they will increase the attractiveness of the dairy farm. For farmers, dairy tourism will be a novel means of earning additional income. Socially dairy tourism will enable farmers to exhibit and conserve their culture and, more specifically, indigenous breeds and dairy products. For tourists, dairy tourism will be a unique and appealing niche tourism product with the potential to create new and differentiated value experiences.

## Conclusion

This study has explored and identified the characteristic components of dairy tourism through tourists' expectations. We have proposed a dairy tourism model and confirmed its validity. The identified tourists' expectations (assets, activities and attractions) in this study must be integral to a dairy tourism destination to attract tourists. This study has some limitations. Nevertheless, it will prove useful for further research in dairy tourism. The most apparent limitation is the small sample size of the respondent tourists; though statistically adequate, generalizability is limited. Different aspects of dairy tourism can be identified by replicating this study in other dairy farming regions of India. Future

## RESEARCH ARTICLES

research can include tourists' attitude towards the use of dairy animals as a moderating variable between expected activities and tourist inclination variables in the model.

*Conflict of interest:* The authors declare that they have no conflict of interest.

1. GoI, Economic Survey 2021–22. Economic Division, Ministry of Finance, Government of India, 2022.
2. Statista, India: Distribution of the workforce across economic sectors from 2009 to 2019, 2020; <https://www.statista.com> (retrieved on 9 June 2022).
3. Shukla, A., Gaon Connection Survey, 2019; <https://www.gaon-connection.com> (retrieved on 5 April 2023).
4. National Statistical Office, Situation Assessment of Agricultural Households and Land and Livestock Holdings of Households in Rural India, 2019. National Sample Survey 77th Round, Report No. 587, Ministry of Statistics and Programme Implementation, Government of India, New Delhi, 2021.
5. Shilpa and Laxmi, Relevance and scope of agro-tourism in India. *Int. J. Multidiscip. Res. Rev.*, 2017, **27**, 186–190.
6. Sirohi, S., Sridhar, V., Srivastava, A. K., Kalamkar, S. S., Sharma, D. and Boya, V., Ration balancing: promising option for doubling Income from dairying. *Agric. Econ. Res. Rev.*, 2017, **30**, 193–203.
7. Mallik, J., Gokhale, A. J., Patel, A. M. and Pinto, S., Successful dairy farming: fabricating the pillars of Indian dairy industry. In *Indian dairy sector @ 75: from self-reliance to the verge of becoming world leader*. SMC College of Dairy Science, Kamdhenu University, Anand, 2022, pp. 89–94.
8. Cannarella, C., Processes of marginalization of agriculture: the role of non-agricultural sectors to support economic and social growth in rural areas. *J. Central Eur. Agric.*, 2002, **3**, 205–216.
9. Chand, R., A policy paper on doubling farmer's income, rationale, strategy, prospects and action plan. National Institution for Transforming India, New Delhi, 2017, p. 8.
10. Fortune Business Insights, Agritourism market size, Share and COVID 19 impact analysis by type and regional forecast 2020–2027. Market Research Report by Fortune Business Insights, Pune, 2020; <https://www.fortunebusinessinsights.com/agritourism-market-103297> (accessed on 2 April 2023).
11. IMARC, Agritourism market in India – size, share, growth rate analysis, business opportunity 2023–2028, 2023; <https://www.imarcgroup.com/india-agritourism-market/requests/sample> (accessed on 2 April 2023).
12. Ohe, Y. and Ciani, A., Evaluation of agritourism activity in Italy: facility based or local culture based? *Tour. Econ.*, 2011, **17**, 581–601.
13. Benur, A. M. and Bramwell, B., Tourism product development and product diversification in destinations. *Tour. Manage.*, 2015, **50**, 213–224.
14. Robinson, M. and Novelli, M., Niche tourism: an introduction. In *Niche tourism: Contemporary Issues, Trends and Cases* (ed. Novelli, M.), Butterworth-Heinemann Ltd, Oxford, UK, 2005, pp. 1–9.
15. Fusté-Forné, F., Dairy tourism: a local marketing perspective. *Dairy*, 2021, **2**, 14–24.
16. Ramadanti, A. and Oktariani, A., Does local dairy agritourism business model in Indonesia concern animal health? Lesson learned from Cibugary. *Adv. Health Sci. Res.*, 2019, **19**, 14–17.
17. Ohe, Y., Educational tourism in agriculture and identity of farm successors. *Tour. Econ.*, 2017, **24**, 167–184.
18. Xu, J., Perceptions of tourism products. *Tour. Manage.*, 2010, **31**, 607–610.
19. Gopal, R., Varma, S. and Gopinathan, R., Rural tourism development: constraints and possibilities with a special reference to agri tourism. In *Conference on Tourism in India – Challenges Ahead*, Indian Institute of Management, Kozhikode, 2008.
20. Aziz, N., Zain, Z., Mafuzi, R. M. Z. R., Mustapa, A. M., Najib, N. H. M. and Lah, N. F. N., Relative importance index (RII) in ranking of procrastination factors among university students. In *AIP Conference Proceedings*, 2016, **1761**, 020022-1–020022-4.
21. Ringle, C. M., Wende, S. and Becker, J.-M., *SmartPLS 3*, SmartPLS, Bönningstedt, 2015.
22. Rigdon, E. E., Sarstedt, M. and Ringle, C. M., On comparing results from CB-SEM and PLS-SEM. Five perspectives and five recommendations. *Marketing*, 2017, **39**, 4–16.
23. Hair, J. F., Risher, J. J., Sarstedt, M. and Ringle, C. M., When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.*, 2019, **31**, 2–24.
24. Fornell, C. G. and Larcker, D. F., Evaluating structural equation models with unobservable variables and measurement error. *J. Market. Res.*, 1981, **18**, 39–50.
25. Cronbach, L. J., Internal consistency of tests: analyses old and new. *Psychometrika*, 1998, **53**, 63–70.
26. Hair, J. F., Ringle, C. M. and Sarstedt, M., Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Plann.*, 2013, **46**, 1–12.
27. Henseler, J., Ringle, C. M. and Sinkovics, R. R., The use of partial least squares path modeling in international marketing. In *Advances in International Marketing* (eds Sinkovics, R. R. and Ghauri, P. N.), Emerald, Bingley, UK, 2009, pp. 277–320.
28. Mason, C. H. and Perreault, W. D., Collinearity, power, and interpretation of multiple regression analysis. *J. Market. Res.*, 1991, **28**, 268–280.
29. Jęczmyk, A., Uglis, J. and Steppa, R., Can animals be the key to the development of tourism: a case study of livestock in agritourism. *Animals (Basel)*, 2021, **11**, 2357.
30. Karri, G. N., Soam, S. K. and Rasheed Sulaiman, V., Scope of agritourism in India (with reference to development, challenges, extension and advisory services). Report submitted to National Academy of Agricultural Research Management, Hyderabad, 2016.
31. Ritchie, J. R. B. and Crouch, G. I., *The Competitive Destination: A Sustainable Tourism Perspective*, CABI Publishing, Wallingford, United Kingdom, 2003, pp. 62–68.

Received 6 December 2022; accepted 10 April 2023

doi: 10.18520/cs/v125/i4/401-406