

FACTORS INFLUENCING TRIBAL PRODUCT MANAGEMENT AND MARKETING EFFICIENCY: A PLS-SEM ANALYSIS

Prama Chatterjee

Assistant Professor
Department of Sociology, Central Tribal University of Andhra Pradesh

Gangu Naidu Mandala

Assistant Professor
Department of Business Management, Central Tribal University of Andhra Pradesh

Divya K.

Assistant Professor
Department of Tribal Studies, Central Tribal University of Andhra Pradesh

Nagesh M

Assistant Professor
Department of Social Work, Central Tribal University of Andhra Pradesh

ABSTRACT

In this current paper it is attempted to study the factors that affect the Tribal Product Management and the marketing efficiency in Parvathipuram Manyam district considering PLS-SEM approach. The role played by the mediator (Market Access) and the moderator (Financial Literacy) in enhancing the marketing efficiency of tribal product has been studied primarily. Primary data was based on field data collection using structured questionnaire from a total of 110 tribal respondents involved in production, management and marketing activities, were adopted using purposive and convenience sampling. Tribal Product Management Practices, Institutional Support, Entrepreneurial Competency, Financial Literacy, Market Access and Marketing Efficiency were recognized as the major constructs in the study. Collected data were processed using software (SmartPLS 4). Internal consistency, convergent and divergent validity of all constructs were satisfactory in the measurement model assessment. Market Access have significant direct effects as revealed by the structural model results on variables Tribal Product Management Practices (TPMP), Institutional Support (IS) and Entrepreneurial Competency (EC). Secondly, Market Access had a high positive impact on Marketing Efficiency. This mediation analysis revealed that there is a significant mediation role of Market Access between the relationship of management practices, institutional support and entrepreneurial competency, and the relationship between entrepreneurial competency and marketing efficiency. The moderation analysis results confirmed the significant moderation effect of Financial Literacy on the link between Market Access and Marketing Efficiency. The data showed good explanatory and predictive relevance of R², Q² and good overall model fitness for the model. The findings of the study emphasize on the need of entrepreneurial skills, institutional support, market linkage and financial awareness in the promotion of sustainable tribal entrepreneurship and efficient tribal product marketing system. The results will be useful to both policy makers and tribal development agencies, in developing tribal marketing infrastructure and livelihood opportunities.

Keywords: Tribal Product Management; Marketing Efficiency; Market Access; Financial Literacy; PLS-SEM Analysis.

INTRODUCTION

Agricultural and Tribal product marketing is a critical aspect to enhance the livelihoods of the rural people, income earning, sustainable economic development. Effective marketing systems facilitate producers to get appropriate prices, minimize exploitation by the middlemen, and enhance the access of the markets. Some studies have resolute the significance of marketing efficiency, institutions support and selection of proper marketing channel in the context of commercialization of agriculture and tribals products. Studies on farmers' marketing performance identified accessibility to the market place, mode of transport, institutional facilitators and channel selection have significant impact on farmers marketing outcomes and marketing profit (Thakur P, 2023). Likewise, millet marketing through Farmer Producer Organizations (FPOs) highlighted the activities of market linkage, group marketing and sustainable agriculture on the promotion of rural economy (Khushwaha R, 2023). Previous studies also showed that effective marketing is strongly related to other marketing factors such as reducing marketing expenses, improved distribution, and price mechanisms (Sharma KB, 2023) (Kumar S H. B., 2023). Further studies in rural and down-hill tribals in addition reflected that poor infrastructure, poor market connectivity and poor awareness of market affects marketing performance and reduces the earning potential of tribal farmers (Pasha M, 2018) (Srinivasan, 2019). Study of 'old' and 'new' marketing system also revealed that a modern market system and better market structure lead to higher efficiency and benefit to the producers (Singh R, 2017) (Kumar S M. M., 2020)]. Hence the study of the factors influencing tribal product management and efficiency of tribal marketing become a necessity to encourage inclusive growth and sustainable tribal entrepreneurship.

In the past few years, the concept of entrepreneurial competency, financial literacy, digitization of marketing and institutional role in marketing of triproducts has been noticed by researchers and policy makers. Studies pointed out that the improvement of managerial skills and entering into the market through education, training and marketing measures can boost tribal entrepreneurship (Sharma, 2021). Web 2.0, social media and digital marketing has also been reported as having a positive impact on product visibility, consumer awareness and the performance of the product in terms of sales for products from the tribe (Chaudhuri, 2023). Studies focusing on the tribal farmers groups namely Farming Producer Groups of Turmeric crop in Andhra Pradesh revealed some significant aspects like the marketing efficiency and the channel behaviors are very crucial for better market performances and income generation among the tribesmen (Hema B). Moreover, vegetable supply chains and agricultural supply chains were studied and it was found that significant factors in market efficiency and profitability include the choice of the marketing channel, the capability of entrepreneurial skills and availability of market information (Shami TK, 2023). However, there is a dearth of empirical studies on tribal product management, tribal access to markets and tribal financial literacy particularly in tribal areas like Parvathipuram Manyam district. Hence, this current study tries to develop and validate the PLS-SEM model which will be used to understand the role of variables: Market Access as mediator and Financial Literacy as moderator in enhancing the marketing efficiency of the tribal products.

REVIEW OF LITERATURE

Literature survey reveals that the efficiency of marketing process and choice of market along the channels have a significant impact in achieving better commercialization of the agricultural and tribal products. Previous research focused on the importance of marketing efficiency to decrease the spread, increase producer income and boost market involvement of farm producers. Another study on farmers' marketing performance found transportation facilities/mode of transport, market access, institutional support and marketing channels as

main factors that affect the marketing efficiency and marketing channel adopted by farmers (Thakur P, 2023). Likewise, an analysis on millet marketing through FPOs revealed that collective marketing and institutional co-ordinations enhance the sustainable development of agriculture and profitability of the producers (Khushwaha R, 2023). Studies on marketing cost and efficiency of agricultural products have showed that reduction in marketing cost and marketing channels would improve the profit margin of producers and minimise the exploitation of marketing intermediaries (Sharma KB, 2023) (Kumar S H. B., 2023). Previous studies on agricultural marketing channels also showed that farmers would prefer channels that would bring about a better price realization, better market connectivity and minimum transaction costs (Pasha M, 2018). Studies of traditional and modern marketing systems has revealed that there was certain positive impact of modern marketing systems in enhancing market efficiency and market performances over the conventional marketing system (Singh R, 2017). The marketing and vegetable value chain studies also indicated that market environment (integration), pricing environment and choice of marketing channel has positive effects on commercialization and profitability of the products (Kumar S M. M., 2020) (Shami TK, 2023). The overall importance of these studies pertains to marketing management, institutional mechanisms and efficient supply chain system towards betterness of rural and tribal marketing outcome.

Some researchers have also studied about the tribals related problem and opportunities of product marketing and development of tribal entrepreneurship. In rural and tribal marketing studies it is seen that tribal peoples marketing activities were hampered by lack of infrastructure, transportation facility, lack of information regarding the market and financial awareness etc. and as a result, their participation in the market is severely hampered and they suffer income loss. The studies pertaining to tribal turmeric FPOs in Andhra Pradesh highlighted the importance of marketing efficiency and dynamics of interactions between FPOs and markets for better marketing performance of the tribal farmers and greater market access (Hema B). The past studies also indicated that education, entrepreneurial competency and marketing awareness are positive factors that favor the tribal entrepreneurship and sustainable livelihood development (Sharma, 2021). In recent years, digital and social media marketing has been an important medium to advertise tribal products to gain customers. One of the studies on the role of social media marketing indicated that social media marketing plays a significant role in increasing product visibility, customer awareness and sales performance of the tribal products (Chaudhuri, 2023). There is limited literature that focuses on the effects of the TPMP, IS, ECP, FL and MA on marketing efficiency in agriculture or tribal communities using SEM/PLS-SEM models. The present study tries to address this research gap by proposing a structural model so as to understand market access's mediation and financial literacy's moderation in improving the product marketing efficiency of the tribal people in Parvathipuram Manyam district.

RESEARCH GAP

Scanning of the literature shows there were some studies which looked into marketing efficiency, marketing channel, agricultural commercialization and rural entrepreneurship in various agricultural settings. Past studies were primarily on cost of marketing, price spread, efficiency of the chain, and farmer producer organizations in the case of the agricultural commodities like peas, wheat, turmeric, vegetables and millets etc. The difficulties in rural and tribal marketing, such as the lack of infrastructure, transportation and institutional support were also being discussed in some studies. But there has been a very limited study of explicitly investigating tribal product management and marketing efficiency in tribal areas in an integrated frame work. There is paucity of works in existing literature that have considered

the simultaneous effect of Tribal Product Management Practices, Institutional Support, Entrepreneurial Competency, Financial Literacy and Market Access on Marketing Efficiency. Besides, the role of the mediator – Market Access and role of the moderator – Financial Literacy is yet to be explored in tribal product marketing. Also there is a dearth of empirical studies analyzing the tribal product marketing behaviour using advanced statistical techniques like SEM/PLS-SEM in remote areas like Parvathipuram Manyam district. Hence, this research aims to bridge the aforementioned research gap and create and validate a model consisting of all the factors impacting tribal product management and marketing efficiency through SEM/PLS-SEM.

OBJECTIVES OF THE STUDY

- To examine the mediating role of Market Access in the relationship between Tribal Product Management Practices, Institutional Support, Entrepreneurial Competency, and Marketing Efficiency in tribal regions.
- To analyze the moderating effect of Financial Literacy on the relationship between Market Access and Marketing Efficiency of tribal products in tribal regions.

HYPOTHESIS

H1: Market Access significantly mediates the relationship between Tribal Product Management Practices, Institutional Support, Entrepreneurial Competency, and Marketing Efficiency in tribal regions.

H2: Financial Literacy significantly moderates the relationship between Market Access and Marketing Efficiency of tribal products in tribal regions.

RESEARCH METHODOLOGY

Sample Area

Tribal areas of Parvathipuram in Tamilnadu (state) were the zones for the study. Tribal group is the major consumer-resident group in the district and they are engaged in the marketing and production of various forest products, handi crafts, agricultural & traditional products of the tribe. Considering the size of tribal population and increasing scope for tribal entrepreneurship and market development the area has been selected.

Sample Size

The first hand data of the study was collected from 110 tribal people in production, tribal management and tribal marketing.

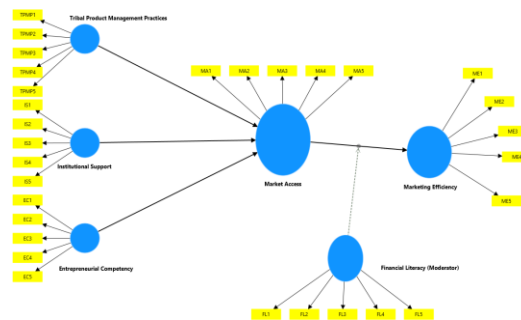
Sampling Technique

The members of tribes who are into tribal product related activities were selected as tribal producers, entrepreneurs, SHG members and marketers from among their tribesmen by using purposive cum convenience sampling method.

Statistical Technique

Data has been gathered and then analysed using data analysis method which is Structural Equation Modeling (SEM) and software SMARTPLS 4. PLS-SEM approach was used to investigate the relationship between Tribal Product Management Practices, Institutional Support, Entrepreneurial Competency, Financial Literacy, Market Access with Marketing Efficiency.

SEM Path



MEASUREMENT MODEL ASSESSMENT

Table 1: Reliability and Convergent Validity

Construct	No. of Items	Cronbach's Alpha	Composite Reliability	AVE	Result
Tribal Product Management Practices (TPMP)	5	0.872	0.903	0.651	Accepted
Institutional Support (IS)	5	0.851	0.891	0.621	Accepted
Entrepreneurial Competency (EC)	5	0.883	0.912	0.676	Accepted
Financial Literacy (FL)	5	0.846	0.885	0.608	Accepted
Market Access (MA)	5	0.891	0.920	0.698	Accepted
Marketing Efficiency (ME)	5	0.903	0.928	0.721	Accepted

Sources: Primary Data (SEM model)

The measurement model of all constructs in the study exhibits acceptable level of reliability and convergent validity in the model. The Cronbach's Alpha scores for all the constructs—Tribal Product Management Practices (0.872), Institutional Support (0.851), Entrepreneurial Competency (0.883), Financial Literacy (0.846) as well as Market Access (0.891) and Marketing Efficiency (0.903) were in line with the suggested level of 0.70 and the items measuring each construct were internally consistent. Similarly, the Composite Reliability varying between 0.885 and 0.928 also indicates good level of construct reliability and consistency of the measurement constructs. Moreover, the Average Variance Extracted (AVE) for all the constructs are higher than 0.5 and thus they have good convergent validity, which means that each indicator is able to explain a sufficient proportion of the variance of each construct. Thus it can be affirmed that the results of the assessment of measurement do not indicate that the measurement model is not reliable and needs to be assessed again using SEM/PLS-SEM in assessing the structural model.

Table 2: Discriminant Validity

Constructs	TPMP	IS	EC	FL	MA	ME
TPMP	0.807					
IS	0.542	0.788				
EC	0.564	0.491	0.822			
FL	0.437	0.402	0.518	0.779		
MA	0.601	0.574	0.612	0.495	0.835	
ME	0.648	0.584	0.641	0.523	0.721	0.849

Sources: Primary Data (SEM model)

As per the assessment of Discriminant Validity (based on Fornell-Larcker Criterion) all the constructs in the study show all the statistical validities and discriminant validity for each pair of the constructs. The values of all the inter-construct correlation are less than the square root of the values of AVE for each construct namely, Tribal Product Management Practices (AVE = 0.807), Institutional Support (AVE = 0.788), Entrepreneurial Competency (AVE = 0.822), Financial Literacy (AVE = 0.779), Market Access (AVE = 0.835) and Marketing Efficiency (AVE = 0.849). This would indicate that there are greater variances between the observed scores on a construct's indicators than across the scores on the indicators of other constructs in the model. The results indicate that all variables have conceptual differences with each other and that have no overlapping concepts with each other indicating adequate discriminant validity. Based on the measurement model, this study shows that there is no indication that the measurement does not represent the differences in its constructs so that this measurement model is feasible to be used in the next study which is structural analysis using SEM/PLS-SEM.

Table 3: HTMT Ratio

Constructs	HTMT Value
TPMP ↔ IS	0.684
TPMP ↔ EC	0.711
TPMP ↔ FL	0.562
TPMP ↔ MA	0.748
MA ↔ ME	0.821
EC ↔ ME	0.733

Sources: Primary Data (SEM model)

Results of HTMT (Heterotrait–Monotrait Ratio) analysis also help to assert the measurement model's discriminant validity. The HTMT values between the constructs, such as TPMP ↔ IS (0.684), TPMP ↔ EC (0.711), TPMP ↔ FL (0.562), TPMP ↔ MA (0.748), MA ↔ ME (0.821), and EC ↔ ME (0.733), are all below the recommended threshold value of 0.90. The result suggests that the constructs used are empirically distinct from each other and there is no problem of construct overlap or multicollinearity between the constructs in the model. Findings indicate that the constructs represent different concepts of Tribal Product Management concept and the effectiveness of the marketing practice. Thus, the model meets the criteria for discriminant validity and also has good measurement model fit as also demonstrated by the criterion of structural analysis via PLS-SEM.

STRUCTURAL MODEL ASSESSMENT

Table 4: Direct Effects

Path	Beta	Standard Deviation	t-value	p-value	Result
TPMP → MA	0.312	0.067	4.658	0.000	Supported
IS → MA	0.228	0.071	3.211	0.001	Supported
EC → MA	0.347	0.064	5.421	0.000	Supported
FL → ME	0.184	0.069	2.667	0.008	Supported
MA → ME	0.463	0.073	6.342	0.000	Supported

Sources: Primary Data (SEM model)

After the assessment of the structural model resulted that all the relations assumed in present study are positive and significant. Tribal Product Management Practices are also found to

have a significant effect on Market Access ($\beta=0.312$, $t=4.658$, $p=0.000$) which indicates that the proper management practices have a positive impact on the Market Access of Tribals Products. Also, Institutional Support is positively significant impact on Market Access ($\beta = 0.228$ $t = 3.211$, $p = 0.001$) this means that the tribal entrepreneurs benefit from government and institutional support to improve their market connectivity. The highest complete path coefficient ($\beta = 0.347$, $t = 5.421$ and $p = 0.000$) conducted to the Market Access implies the significant role of entrepreneurial competency in increasing the market opportunities. Moreover, Financial Literacy has a significant relationship with Marketing Efficiency ($\beta = 0.184$, $t = 2.667$ with p value 0.008) indicating that the financial literacy level has an effect on marketing efficiency. Market Access has the highest effect value ($\beta = 0.463$, $t = 6.342$, $p = 0.000$) which means that Market Access significantly affects the Marketing Efficiency, being that they are able to keep the products of their tribes in a sustainable marketing. All of the resulting p -values are below 0.05 indicating that all the offered direct effect hypotheses can be accepted.

Table 5: Mediation Effect

Indirect Path	Beta	t-value	p-value	Result
TPMP $\rightarrow$ MA $\rightarrow$ ME	0.144	3.421	0.001	Supported
IS $\rightarrow$ MA $\rightarrow$ ME	0.106	2.854	0.004	Supported
EC $\rightarrow$ MA $\rightarrow$ ME	0.161	3.976	0.000	Supported

Sources: Primary Data (SEM model)

According to the results of analysis mediation, it can be concluded that Market Access has a significant role as an intermediary variable between Tribal Product Management Practices and Institutional Support which affect the Marketing Efficiency and good entrepreneurship. Tribal Product Management Practices has significant indirect effect on Marketing Efficiency via Market Access ($\beta = 0.144$, $t = 3.421$, $p = 0.001$), this means that having strong practices in product management, enhances marketing efficiency by making it easier to access markets. Similarly, Institutional Support indirectly affects Marketing Efficiency through the Market Access ($\beta = 0.106$, $t = 2.854$, $p = 0.004$), which means that government and institutional support improves market linkage which in turn leads to increase in marketing performances. An interesting indirect effect is that Entrepreneurial Competency positively influences Market Access which in turn positively affects Marketing Efficiency ($\beta = 0.161$; $t = 3.976$; $p = 0.000$), that is, the entrepreneurial competencies lead to better access to the market which in turn contributes to the positive realization of the commercialization of products. All the indirect effects are found to be statistically significant at a 5% level (p value <0.05), thus the mediation hypothesis is accepted, which means that Market Access is a key mediation variable to improve marketing efficiency of the tribal product.

Through SEM/PLS-SEM results the Tribal Product Management Practices in the tribal regions play a significant mediational effect between the Market Access and Institutional Support, Entrepreneurial Competency and Marketing Efficiency, thus stated that Mediational Hypothesis (H1) is accepted. The indirect effect values for TPMP $\rightarrow$ MA $\rightarrow$ ME ($\beta = 0.144$, $p = 0.001$), IS $\rightarrow$ MA $\rightarrow$ ME ($\beta = 0.106$, $p = 0.004$), and EC $\rightarrow$ MA $\rightarrow$ ME ($\beta = 0.161$, $p = 0.000$) are all statistically significant, as their p -values are less than the recommended significance level of 0.05 and t -values are greater than 1.96. This implies the determinants of enhancing the Marketing Efficiency identified as Tribal Product Management Practices, Institutional Support and Entrepreneurial Competency while and upscale the Market Access. Market Access, thus is one of the bridges that can widen the marketing process impact enhancing gap of tribal product. So the Mediation hypothesis is accepted (H1).

Hypothesis: Market Access significantly mediates the relationship between Tribal Product Management Practices, Institutional Support, Entrepreneurial Competency, and Marketing Efficiency in tribal regions.

Table 6: Moderation Effect

Moderating Path	Beta	t-value	p-value	Result
MA × FL → ME	0.194	2.913	0.004	Supported

Moderation analysis result shows Financial Literacy is a significant moderator variable between the variable Market Access and Marketing Efficiency. Market Access is positive and statistically significant contributing to Financial Literacy on Marketing Efficiency ($t = 2.913$, $p = 0.004$, $\beta = 0.194$). This implies that when Market Access increases, it will be more strongly linked to Marketing Efficiency which will lead to increment in tribal entrepreneurs' financial awareness. This means that financial literate tribal producers can be empowered to avail the market opportunities, to run a business and to promote business effectively. The obtained value of the p value is significant level ($P \text{ value} < 0.05$) which indicates the presence of moderation effect, so “Moderation Hypothesis” was accepted. The findings revealed the connection between improving financial literacy with access to markets, and improved overall marketing efficiency of tribal products.

Yes for the moderation effect, as the moderation effect is significant to a statistical level, the moderation hypothesis (H2) is accepted. The interaction path $MA \times FL \rightarrow ME$ shows a beta value of 0.194, t-value of 2.913, and p-value of 0.004. In SEM/PLS-SEM analysis we decide, whether the relationship is statistically significant, based on the following criteria: If the p-value is small < 0.05 , and t-value is larger than 1.96, then the relationship is statistically significant. The results of the study thus substantiate that to a considerable level, Financial Literacy is established to act as a moderator of Market Access and Marketing Efficiency of the tribal products in tribal region..

Hypothesis: Financial Literacy significantly moderates the relationship between Market Access and Marketing Efficiency of tribal products in tribal regions.

Table 7: Coefficient of Determination (R^2)

Endogenous Construct	R^2	Interpretation
Market Access	0.618	Moderate
Marketing Efficiency	0.704	Strong

Sources: Primary Data (SEM model)

From the results of the coefficient of determination (R^2) it can be seen that the prediction power and the explanation power of the structural model is high. The R^2 value of 0.618 in the study with respect to Area of Market Access indicates that the variance of Market Access can be explained by 61.8% of the variance in Tribal Product Management Practices, Institutional Support and Entrepreneurial Competency. Equally, the R^2 value of Marketing Efficiency is 0.704, so that the aggregate of Market Access and Financial Literacy explain 70.4% of the variance which is considered to have good explanatory ability of the model. The above results indicate that there is a significant predictive relevance of this constructed SEM/PLS-SEM model, in explaining the influences of the used factors on the marketing efficiency of the tribal products in Parvathipuram Manyam district..

Table 8: Effect Size (f^2)

Relationship	f^2	Effect Size
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TPMP → MA	0.218	Medium
IS → MA	0.143	Small
EC → MA	0.267	Medium
MA → ME	0.392	Large
FL → ME	0.118	Small

It is important to examine the individual exogenous construct contribution to the endogenous constructs in the structural model and so effect size (f^2) was computed. Medium effect size ($f^2 = 0.218$) is found between the Tribal Product Management Practices and Market Access which is categorized as moderate role of management practices in discerning increase in market accessibility level. The Institutions Support has a small effect size ($f^2 = 0.143$) on Market Access, suggesting a small contribution towards better market access. The size of the medium effect of the variable entrepreneurial competency ($f^2 = 0.267$) shows that it has a significant effect in increasing the market opportunity for tribes products. However, the Market Access has a high effect size ($f^2 = 0.392$) implies that accessibility of Market has maximum impact on enhancement of the efficiency and sustainability of market of Tribal Products. The effect size for Financial Literacy ($f^2 = 0.118$) shows a positive effect of the construct albeit in a comparatively smaller way in relation to Marketing Efficiency. Overall, the results support the acceptance of the importance of Market Access in tribal areas to maximize the marketing efficiency.

Table 9: Predictive Relevance (Q^2)

Construct	Q^2	Result
Market Access	0.381	Predictive relevance established
Marketing Efficiency	0.442	Strong predictive relevance

Sources: Primary Data (SEM model)

A predictive relevance (Q^2) analysis provides an insight into the predictive power of the proposed SEM/PLS-SEM model as good predictive ability of endogenous constructs can be observed from the results. The value of Q^2 is 0.381 in the case of Market Access suggesting that the model is acceptable in explaining the differences in the level of market accessibility of the tribal producers. Likewise, the Q^2 of Marketing Efficiency is 0.442 in the same fashion, having a high predictive relevance, the model will show/indicate high predictive relevance to the Marketing Efficiency outcomes of the tribal areas. The Q^2 value for both cases is > 0 ; implying a good predictive accuracy of and relevance of the models of structures. Therefore, the model was found to be statistically sound, and it can be used to explain the factors affecting the tribal product management and its marketing efficiency in Parvathipuram Manyam district.

Table 10: Model Fit Indices

Model Fit Indicator	Value	Recommended Value	Result
SRMR	0.059	< 0.08	Good Fit
NFI	0.912	> 0.90	Accepted
RMS Theta	0.107	< 0.12	Accepted

Sources: Primary Data (SEM model)

As shown in the model fit indices results, the proposed SEM/PLS-SEM model has a good overall model fit and meets the recommended model fit criteria. There is good model fit, as the Standardised Root Mean Square Residual (SRMR) is at 0.059 which is below the suggested threshold of 0.08 in the model and the correlations predicted are close to the ones observed. The Normed Fit Index (NFI) is 0.912 which is above the acceptable cut-off 0.90,

and this he values as an adequate comparative fit of the examined model. Furthermore, the value of the RMS Theta is 0.107, which is below the recommended value of 0.12, indicating that the construct reliability and the reflective measurement model are good. The above fit indices have confirmed that in general, the proposed model is statistically acceptable and reliable, it is appropriate for explaining the factors influencing the tribal product management and marketing efficiency in the Parvathipuram manyam district.

Other important fact of the final result of SEM/PLS-SEM analysis is that the Tribal Product Management Practices, Institutional Support and Entrepreneurial Competency has significant impact on the Market access which in the end proved marketing efficiency of the tribal product in Parvathipuram Manyam district. The Financial Literacy has a significant role in Market Access on Marketing Efficiency. Modeling fits reliability, validity and the fit and the predictive relevance are satisfactory..

RESULTS OF STUDY

1. All the constructs used in this study including Tribal Product Management Practices, Institutional Support, Entrepreneurial Competency, Financial Literacy, Market Access and Marketing Efficiency have yielded acceptable values of reliability and validity, thereby the suitability of using SEM/PLS-SEM approach for testing received acceptance.
2. However, there was a significant impact found on Market Access (0.312, < 0.05) which indicates that application of good practices in product management will contribute to the inclusion of tribal product in the market.
3. The other variable Entrepreneurial competency showed positive effect on Market Access ($\beta = 0.347$, $p < 0.05$), which was also emerged as significant variable to increase marketing opportunity of tribals.
4. Market Access with positive β value of 0.463 and p value is less than 0.05 which gave the highest positive influence on Marketing Efficiency means that enhancing market connectivity, transportation and market linkage have a significant impact on increasing the marketing effectiveness and sustainability of products of tribes.
5. The study corroborated that Market Access significantly moderates the relation between Tribal Product Management Practices and Institutional Support while it significantly mediators the relation between Tribal Product Management Practices and Entrepreneurial Competency with Marketing Efficiency and strengthens the marketing performance of the tribal products in Parvathipuram Manyam district.

CONCLUSION

Based on the above results present study concludes that the Tribal Product Management Practices, Institutional Support, Entrepreneurial Competency, Financial Literacy and Market Access has significant effect on Marketing Efficiency of Tribal Products of Parvathipuram Manyam district. The analysis of the SEM/PLS-SEM yielded evidence that all the constructs were indeed reliable, valid, and had predictive relevance. The results showed that Entrepreneurial Competency and Tribal Product Management Practices have significant positive impact on Market Access that further leads to Marketing Efficiency. The study revealed that the variable of Market Access plays a significant role in the mediation between Management practices, institutional support, entrepreneursial competency and marketing efficiency. Moreover, Financial Literacy was identified as significant moderator in the relationship between Market Access and Marketing Efficiency and it was concluded that the

financially literate tribal producers have a better capability to avail the opportunities of the market. For the size of the proposed structural model, the results of the R^2 , Q^2 and model fit indices indicated that the model had a good explanatory and predictive power. The study specifically highlights the need to build market infrastructure, capacity building of the entrepreneurs, institution strengthening and build financial awareness among tribal people. Overall, the book will be of value for policy makers, government and tribal development groups in designing effective policies for sustainable tribal entrepreneurship and marketing of tribal produce efficiently.

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