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Health, Education and Employment in a Forward-Backward Dichotomy Based on Standard of Living Index for the Tribes in Kerala

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Abstract
The Paper unfolds the paradox that exists in the tribal community with respect to the development indicators and hence tries to cull out the difference in the standard of living of the tribes in a dichotomous framework, forward and backward. Four variables have been considered for ascertaining the standard of living and socio-economic conditions of the tribes. The data for the study is obtained from a primary survey in the three tribal predominant districts of Wayanad, Idukki and Palakkad. Wayanad was selected for studying six tribal communities (Paniya, Adiya, Kuruma, Kurichya, Urali and Kattunaika), Idukki for two communities (Malayarayan and Muthuvan) and Palakkad for one community (Irula). 500 samples from 9 prominent tribal communities of Kerala have been collected according to multistage proportionate random sample framework. The analysis highlights the disproportionate nature of socio-economic indicators within the tribes in Kerala owing to the failure of governmental schemes and assistances meant for their empowerment. The socio-economic variables, such as education, health, and livelihood have been augmented with SLI based on correlation analysis gives interesting inference for policy options as high educated tribal communities are positively correlated with high SLI and livelihood. Further, each of the SLI variable is decomposed using Correlation and Correspondence analysis for understanding the relative standing of the nine tribal sub communities in the three dimensional framework of high, medium and low SLI levels. Tribes with good education and employment (Malayarayan, Kuruma and Kurichya) have a better living standard and hence they can generally be termed as forward tribes whereas those with a low or poor education, employment and living standard indicators (Paniya, Adiya, Urali, Kattunaika, Muthuvans and Irula) are categorized as backward tribes.
Keywords: tribes, health, education, livelihood, standard of living index, correspondence analysis

1. Introduction

The human development pattern within and across the sections in the society have been inflicting serious dent in the socio economic advancements made by the state. Development indicators like high literacy, better demographic traits, Government spending in service sector, remittance income, etc., which were pivotal in the "Kerala Model" have played only a limited role in the development of tribal communities. Irrespective of high social development and reform movements, inter-caste disparity is still prevalent in Kerala and scheduled tribes have been the most marginalized among all groups (CSSEIP, 2010). However, there exists disparity within the tribes regarding socio-economic development indicators as well as livelihood options and the resultant living standard. Once the nature and dimensions of the exact disparity is identified, it would be helpful for the policy makers to frame appropriate policies aimed at a more inclusive growth within tribal communities and across all sections in the state. Attributes like better standard of living, health, education and livelihood options are not only development goals, but human rights activities (UNDP, 2000). Hence, it is pertinent to demarcate the difference in health, education and living standard of tribes in Kerala.

The tribal community in Kerala is largely heterogeneous and each community has different traditions, social custom, beliefs, rules and practices. Census (2011) identifies 35 tribal communities in Kerala with 1.20 percent of the state's total population. Wayanad has the highest number of tribes with 37.36 percent, followed by Idukki and Palakkad (14 percent and 10.89 percent, respectively) which constitutes for more than 60 percent of STs in the State (KSPB, 2013). Among the notified tribal communities in the state, Paniya (22.40 percent), who mainly inhibit Wayanad district, is the dominant tribal community. It is one of the poorest and most deprived communities in the state. The second largest community is Kurichan of Wayanad and Malayarayan of Idukki and Kottayam each forming around 9 percent of the total tribal population. Irular form 6.5 percent of the total tribal population and prominently resides in the Attapady region of Palakkad. Kattunaika, the only primitive

community under study, form 4 percent of the entire tribal population in the state.
The study espouses with the Sens' measure of well-being and hence it is difficult to disentangle from the lifestyle of an individual (Sen and Hawthorn, 1988). It is highly determined by factors like education, health and employment choices. However, education is considered as the pivotal element in determining the socio-economic development (UNDP, 2000; Mithra and Singh, 2006) and it acts as a reinforcing factor in alleviating the high incidence of poverty as seen among the scheduled caste and scheduled tribe communities (Thorat, 2009). Health indicator too acts ubiquitously in creating an indentation in the socio-economic contour of the marginalised (Ravindran, 1996; Waggstaff, 2002; Marmot, 2005). Livelihood options still brew with primitive mode of production for subsistence (Thorat, 2009). The paper attempts to explore the socio-economic status of the tribes in an SLI framework.

2. Materials and Methods

The study uses primary data from 500 households collected at the household level employing multistage proportionate random sample with the aid of a structured interview schedule and Participatory Rural Appraisal (PRA) method. In addition to this, discussions were also held with activists and Government officials working in tribal areas for ensuring socio-cultural peculiarities for further policy inference. Out of the 35 tribal communities in Kerala, 12 constitute around 90 percent of their population. The study was conducted among 9 of these 12 communities. The district from which settlement for each community was selected based on the criterion of 'maximum percentage of the tribal community as a percentage of the total population in the district'. Wayanad was selected for studying six tribal communities (Paniya, Adiya, Kuruma, Kurichya, Urali and Kattunaika), Idukki was selected for studying two communities (Malayarayan and Muthuvan) and Palakkad was selected for studying one community (Irula). The variables such as, education, health, livelihood and living standard are reduced to a three-point scale viz. high, medium and low level and this is examined further on the basis of Correspondence analysis, Correlation and Kruskal Wallis Test.

3. Results and Discussions

3.1 Educational Profile

The pattern of education is identified by recording the level of educational attainment of the tribes, based on which, the values are condensed into a three-point scale viz. high education, medium education and low level of education. The correspondence chart of tribe and education (Figure 1) shows that almost 50 percent of the communities like Kattunaika, Adiya, Irula, Paniya, Muthuvans and Uralies fall in low education category, where as the majority of Kuruma and Kurichya have only medium level of education. But, Malayarayans stand as a distinct tribal group with high level of educational attainment. The correspondence analysis shows that some tribes are behind others in educational attainment and this will have far reaching implications on their employability and livelihood. Lack of education reduces the socio-economic opportunities for inclusive development drives of the scheduled tribes. This will reiterate on the health perception and health attainment of the tribes and in a way the onset of a vicious network of poverty trap.

Figure 1 (about here)

3.2 Health Status

Health status is the central element in the socio-economic profile of the community. An individual can learn and work effectively and efficiently only if one is healthy. Intrinsic and instrumental values are attached with a healthy individual who is able to live long (Sen, 1998). It has been found that health status of tribal population is not robust as they are very much below the state average in terms of most of the health indicators of morbidity, mortality, infant mortality and other demographic features. This is because of their peculiar habits like drinking and use of tobacco (Kannan et. al, 1991).
Health pattern is inferred by compiling their perception of own health situation as well as data regarding the stage of visiting medical practitioner, stage of ill- health, loss of work-days due to illness and their ill health practices such as consumption of alcohol and tobacco.

Figure 2 (about here)

Even though majority of the tribes perceive their health status as good (about 55 percent), an inquiry into the health pattern of the tribal communities (Figure 2) shows that it is poles apart from reality. While the health profile of Urali and Kattunaika community is low, Kuruma, Irula, Malayarayan, Muthuvans, Adiya, Kurichiya and Paniya are closer to medium health level. Here, it is pertinent to mention that the forward community viz. Malayarayan is unable to transform the advantages of the high educational attainment to a better health situation. Data reveal that there is a situation of absolute healthcare deprivation prevailing among them which has a domino effect in the form of loss of work days due to illness (CSSEIP, 2010). Health condition of an individual is an important determinant of his employment and livelihood. Better health will make an individual employable

without any break in income/wages. Work days lost due to ill-health will adversely affect the per-capita income of the respondents as more work days lost will generally signify low income or wages.

Despite the Government efforts in the area of healthcare, tribal communities still lack awareness of and access/affordability to modern healthcare. A disturbingly high percentage of the tribal population reportedly indulges in ill-health behaviours like alcohol and tobacco abuse. The situation takes a huge toll on the health status of backward communities. The ignorance of the severity of many health conditions and the problem of in-affordability to modern medical facilities expose them to health risks and eventually to high morbidity and mortality situations.

3.3 Income and livelihood options

The income and livelihood situation of tribal communities in Kerala presents a mixed picture. While some communities like Kattunaika are still in hunter gatherer stage, other communities who have lost their land to settlers and encroachers work as agricultural or non agricultural labourers (Wayanad Initiative, 2006). The livelihood options of the majority of the tribal communities are dependent on the primary sector with very minimal dependence on other avenues of employment. Paddy cultivation was a major source of income for many Adivasi communities including some of the most backward communities like Paniya and Adiya who have later shifted to plantation crops like cardamom, pepper, ginger, coffee, etc. The major reason for the backward tribes' over dependence on agriculture sector for their livelihood is the lack of education and skill to move to other avenues. Only possible employment option for them is to work either as agricultural or as non-agricultural labourers with the former outnumbering the latter.

The inference obtained from the data also throws light to this very fact that about 72 percent of the respondents engaged in agriculture/allied activities and plantation labour. Only 2.6 percent are engaged in government/semi-government jobs. Livelihood pattern is identified by fitting the levels of their monthly income, activity status and employment option and a correspondence analysis are carried out to evaluate the same. It can be identified from Figure 3 that Kattunaika and Adiya are the communities closer to the low livelihood, followed by Kuruma, Kurichiya, Muthuvans and Paniya who are more inclined to the medium livelihood. Malayarayan outperforms the other tribes in terms of income and livelihood options as they have high average monthly income (Figure 4) and also featured more in high livelihood category, which is also evident from Figure 3. Paradoxically Kuruma and Kurichiya also belong to the low income category, and this may be because of underreporting.

Almost one out of nine tribes (about 15 percent) has National Rural Employment Guarantee Scheme (NREGS) as their main source of employment which shows the popularity of this scheme among the tribal communities. However, this raises concern about the sustainability of the traditional livelihood options of tribes. Among the tribes who have reported NREGS as a main source of employment, the three forward tribes account for close to 60 percent. This shows the skewed nature of the income and employment generation schemes introduced by the Government also in favour of the forward tribes. A reason for less popularity of NREGS among backward tribes could be the 'duration mismatch' between the payment of remuneration which is quite often paid fortnightly or monthly and the payment for their requirements, which are quite often daily.

Figure 3 (about here)

Figure 4 (about here)

3.4 Evaluating the Tribal Communities Based on Standard of living Index (SLI)

A considerable difference in the living standards of the tribes was identified based on the inferences from field survey, *inter alia* interactive sessions with the officials and experts. A Standard of Living Index (SLI) is worked out so as to position the various tribes based on correspondence analysis. SLI encompasses ten different indicators of living standards of the tribal communities such as type of house, ownership, landholding, availability of toilets and drinking water, possession of different type of durable assets, fuel used for cooking, energy used for lighting, etc. to have an idea about their general living conditions. Each indicator has been given scores in the band of one to three, where 1 is given for minimum value or poor quality of living, 2 for medium value or medium quality of living and 3 for maximum value or best quality of living available in tribal region and thereby obtaining scores ranging from 10 to 30. These scores are further grouped into three categories, Low SLI, Medium SLI and High SLI. The results are then plotted on to a correspondence chart in Figure 5. Malayarayan community has higher or better standard of living compared to other tribal communities. Majority of Kurichya and Kuruma are in Medium SLI category, whereas Paniya, Adiya, Urali and Kattunaika have poor living conditions.

Figure 5 (about here)

It is imperative to identify the inter-dependence between the socio-economic indicators and various tribal communities under review and a correlation analysis is performed and the result is given in Table 1. It shows a significant positive correlation with 0.05 percent level. This implies that they are inter-dependent between and

among the three variables of education, employment and income in influencing the standard of living. However, no significant relation exists between health pattern of the tribes and the other socio-economic variables as the health pattern of the tribes is not influenced by some other exogenous factors.

Table 1 (about here)

Consecutively, to verify further any significant dependency relation between SLI, Education, Health, and livelihood with the tribal communities, the Kruskal-Wallis test is employed (Table 3). The results shows statistically significant difference between *SLI* (Chi-Square 150.751 with 8 degrees of freedom and 0.000 Significance level)*; Education* (Chi-Square 53.962 with 8 degrees of freedom and 0.000 Significance level; *and Livelihood* (Chi-Square 34.871 with 8 degrees of freedom and 0.000 Significance level) for the tribal communities. It can, therefore, be hypothesized that there are significant difference between the standard of living, educational attainment, and livelihood option of the tribal communities except for health pattern.

Table 2 (about here)

4. Conclusion

Tribes with good education and employment (Malayarayan, Kuruma and Kurichya) have a better living standard and hence they can generally be termed as forward whereas those with a low or poor education, employment and living standard indicators (Paniya, Adiya, Urali, Kattunaika, Muthuvans and Irula) are categorized as backward. However, a commonality is noticed with respect to the health indicators, irrespective of forward or backward there is congruency of poor health indicators and inasmuch as it is inferred that the health indicators play a limited role in determining the socio-economic profile or standard of living of tribal communities. However, better educational status and livelihood options have enabled the Malayarayan community in a better off position compared to the other tribes in Kerala. This shows the disproportionate nature of the socio-economic indicators within the tribes in Kerala. The reason behind this paradox is the failure of government schemes and assistances with the intention of empowering the tribes in Kerala are not reaching the needy. The reservation in government jobs are mostly benefitted by one single community, the Malayarayan and this is because of their high education and standard of living nexus. There is an urgent need to develop appropriate corrective measures to rectify this dissimilarity within the tribal community *inter alia* develop an action plan to remedy this malady for ensuring inclusive development within the socially excluded segments of the Kerala society.

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Table 1 Correlations – SLI*Education*Health*Livelihood

		SLI	Education	Health	Livelihood
SLI	Pearson Correlation	1	.383**	0.023	.095*
	Sig. (1-tailed)		0.000	0.309	0.032
Education	Pearson Correlation	.383**	1	0.021	.143**
	Sig. (1-tailed)	0.000		0.322	0.003
Health	Pearson Correlation	0.023	0.021	1	0.034
	Sig. (1-tailed)	0.309	0.322		0.258
Livelihood	Pearson Correlation	.095*	.143**	0.034	1
	Sig. (1-tailed)	0.032	0.003	0.258	

**. Correlation is significant at the 0.01 level (1-tailed);

*. Correlation is significant at the 0.05 level (1-tailed); n=500

Table 2 Kruskal Wallis Test

	SLI	Education	Health	Livelihood
Chi-Square	150.751	53.962	12.543	34.871
df	8	8	8	8
Asymp. Sig.	.000	.000	.129	.000

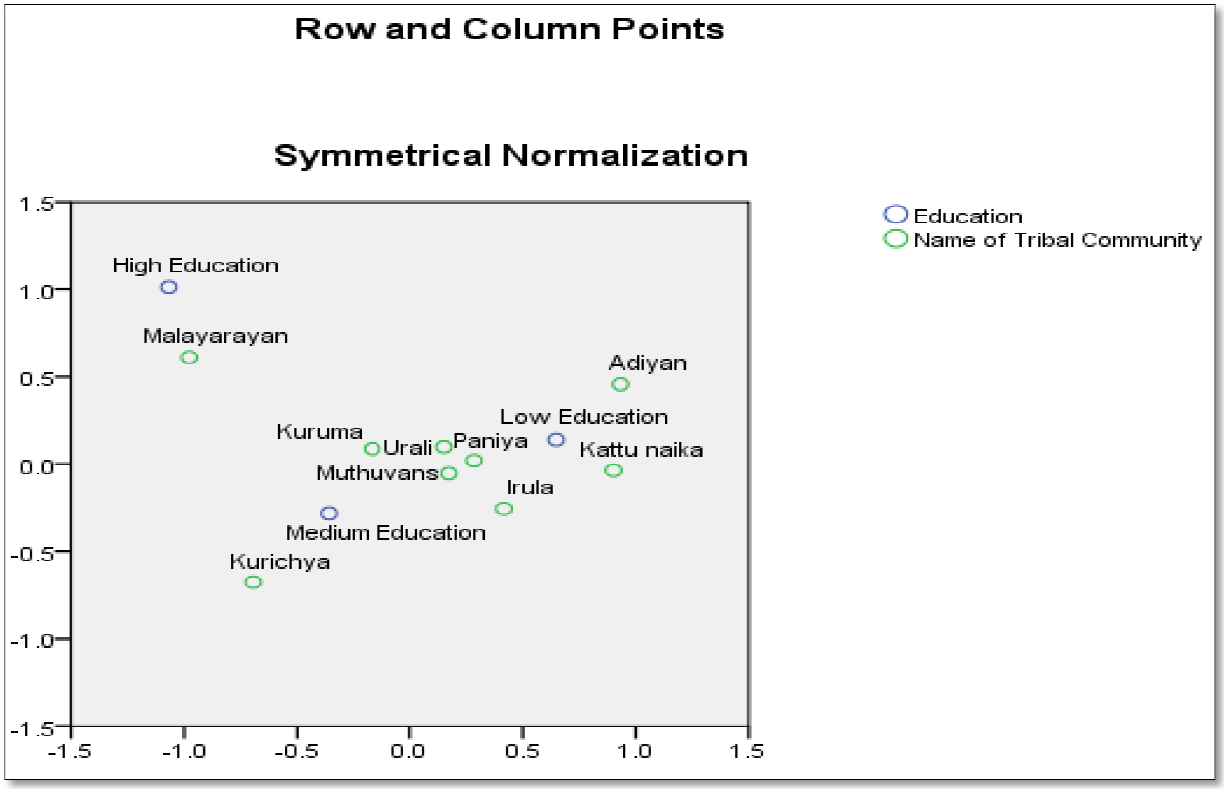

Figure 1 Correspondence chart – Education and Tribe

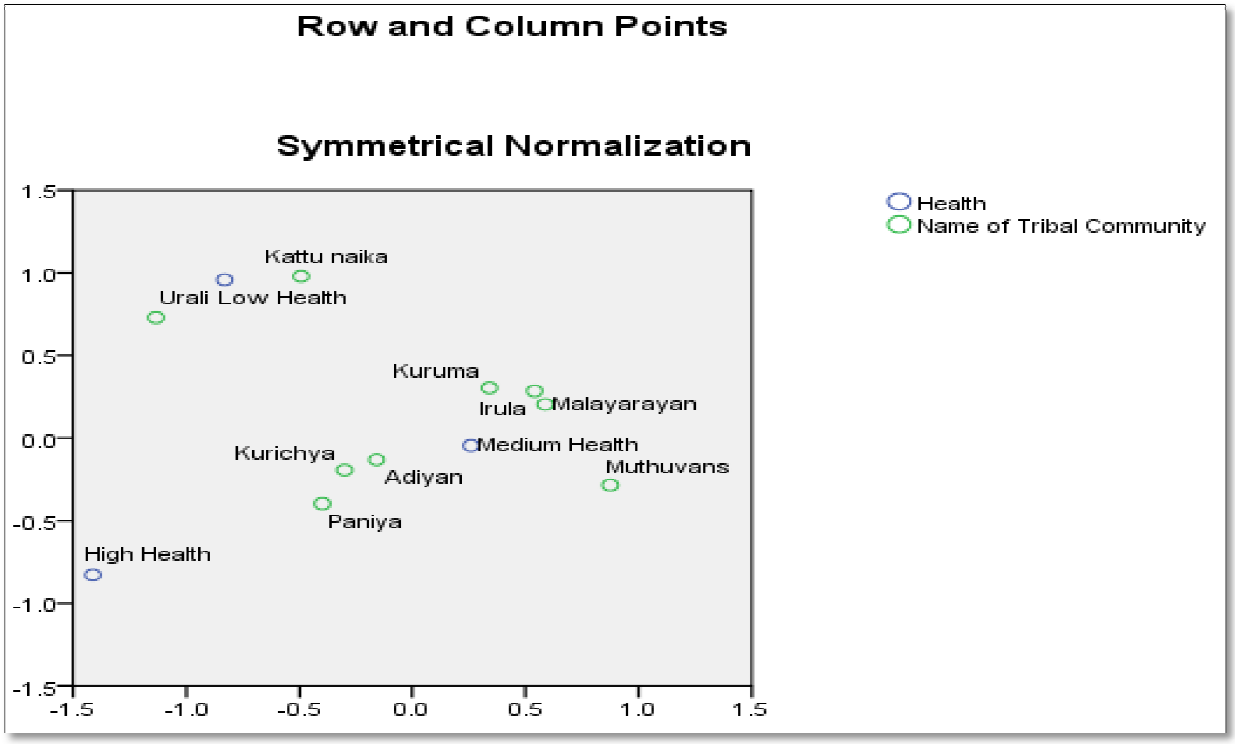

Figure 2 Correspondence chart – Health pattern and Tribe

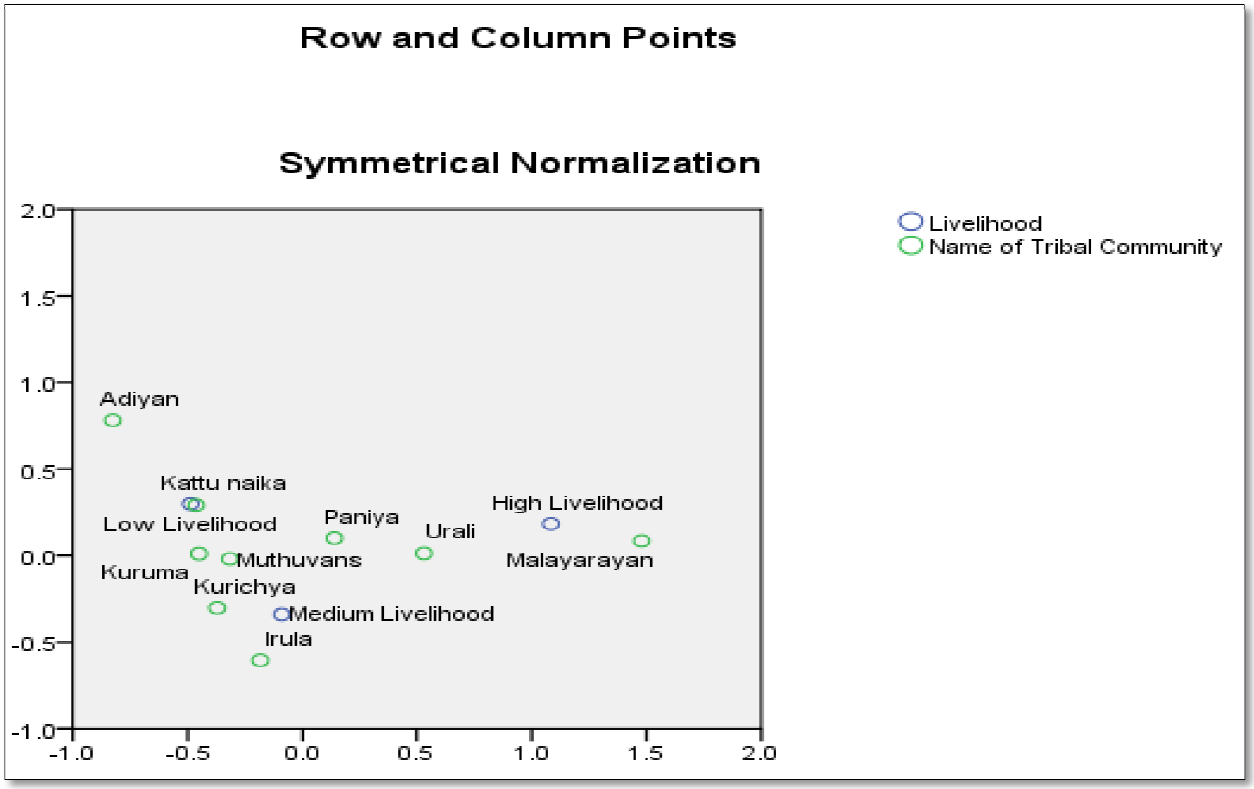

Figure 3 Correspondence chart –Livelihood and Tribe

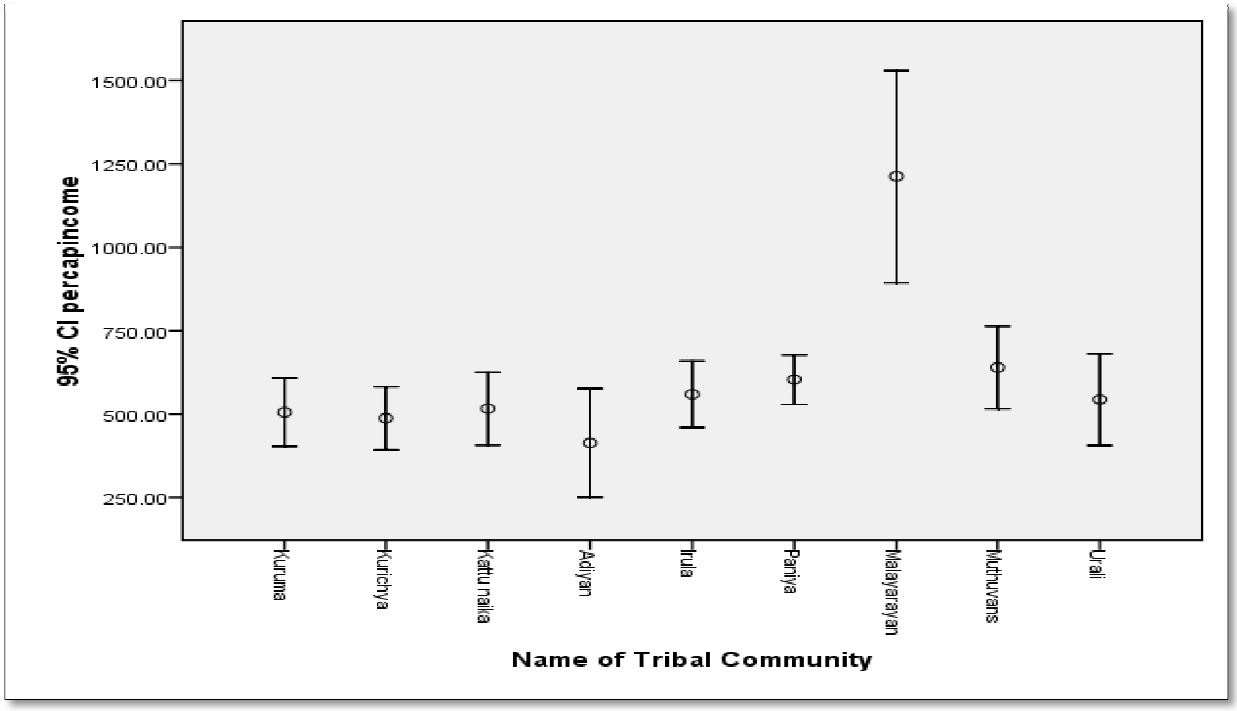

Figure 4 Average monthly income of tribes

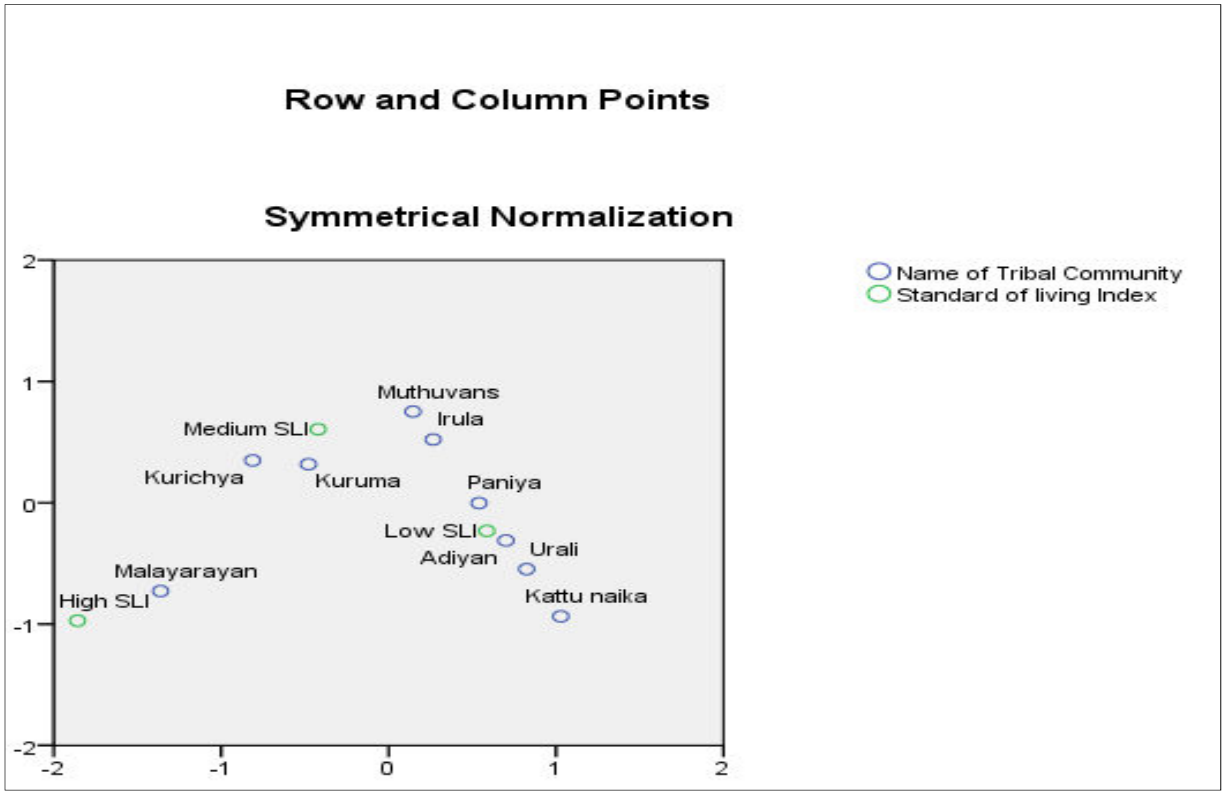

Figure 5 Correspondence analysis – SLI and Tribe