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TECHNOLOGICAL INNOVATIONS IN THE GOLD JEWELLERY SECTOR AND ITS RAMIFICATION IN THE SOCIOECONOMICS AND PERCEPTION OF THE TRADITIONAL GOLDSMITHS IN KERALA

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ABSTRACT

The traditional goldsmith community in Kerala has come to a turnaround in their socio-economics from good to bad levels. This is primarily due to twin effects, the first of it is globalisation of the gems and jewellery sector in the beginning of the 1990s and the second and the most important is the technological innovation and mechanisation with heavy doses of capital investment. In this, the poor traditional goldsmith community faces the major brunt in their socio economics as they are unaware of the global cues in the sector inter alia their poor financial base to embrace the new changes in technology. All these make the situation vulnerable and therefore the community perceives to have an unfavourable future. The study is based on primary data amassed from 300 goldsmiths from the districts of Kasargod and Thrissur based on random sampling methods. Though, the study is more connected to the socio-economics of the community, it uses the conventional theoretical aspects of innovation as in the works of Lundvall (1992), Freeman (1995) and the product adaptation explanations of Rogers (2003). The result of the study shows that there are rampant downward shifts in their socio economics as the income earning from the avocation of the community is below the state average; hence the youngsters are unwilling to continue this traditional work. This is the reason for their weak perception for a sustainable livelihood from the sector.

Keywords: globalisation, inter-generational, jewellery sector, perception evaluation, traditional goldsmiths

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

1. INTRODUCTION

Kerala economy is moulded with a host of resource-based industries. Each of this resource-based sector is in, one form or another, a conduit of traditional skill-based people making their avocation and livelihood from generation to generation with low wages and long working hours mostly connected to their home and its surroundings. The sad situation of the traditional goldsmith community of Kerala is that they seldom know any work other than the jewellery making. The jewellery sector had been mainly rudimentary till the beginning of the globalisation of the sector in the beginning of the 1990s with the organisation of production mostly in the form of micro or small-scale. But mechanisation and technological innovation has led to high level of capitalistic intrusion in the later part of the 1990s with the growth of global demand and control of the sector owing to several socio, economic and cultural determinants. Hence, the traditional hand-made jewellery making gives the way for machine made jewellery making. The poor goldsmiths of Kerala do not have the wherewithal's to invest in the new technology. The resultant technology and labour process have made the traditional skill of the goldsmiths is of no use and hence they are thrown out of the alien. Here starts the beginning of the agony of the goldsmiths of Kerala.

The gems and jewellery sector are not implanted with domestic resources, but with imported inputs and hence the economics of this industry is entirely different and the capitalistic groups playing in the sector is really powerful business groups. They have good knowledge about the local production system and global demand and value of the products. Nonetheless, the gold jewellery sector is connected with a historically important artisan community known as goldsmith community and their art and artefacts are popular in global dimensions. Though, they are a few in number in Kerala they were important groups in the Kerala society in the earlier period because of their skill and nature of job and the interest for jewellery and ornaments from the rich and aristocratic groups. But the malady comes in the form of globalisation as the petty home-linked business of jewellery making becomes the arena for big investment for local as well as for export need with high level of technological change *inter alia* the beginning of gigantic production and retail showrooms.

Hence, the problem of the goldsmith community is all pervasive in India, but the problem is deep rooted in the Kerala economy as Kerala is a major user of the gold jewellery in India (Sumeetha, 2015). This shows how a rudimentary traditional sector of a particular community became a centre of attraction for the capitalistic forces for investment and profit making and thereby making the life of the dependent community in crisis and chaos. They not only become helpless in the sector in losing their employment and livelihood, but also becomes sad victims of the

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

capitalistic forces who are using technology-based machines and thereby losing their labour power. They have no options but to leave the sector in search of employment and livelihood.

2. THEORETICAL FRAMEWORK AND METHODOLOGY

The study embraces the theoretical base of innovation and innovation as explained in the works of Lundvall (1992) and Freeman (1995). The method of diffusion of innovation is a process by which an idea or product diffuses through a specific population which ultimately results in adoption of a new product or technology by the people (Rogers, 2003). The jewellery sector in Kerala underwent changes as part of the liberalisation of the sector during the 1990s in the form of annulling of the Gold Control Act, the introduction of provisions relating to gold in the Foreign Exchange Regulation Act, 1973. These changes had impacted the jewellery sector of Kerala as well. The traditional goldsmiths and certified traders lost their exclusive rights as this attracted big business houses and traders into the gold and jewellery sector especially in the form of retail outlets. While the traditional goldsmiths were relatively poor and did not have the financial backing to impart innovative methods, majority of them were reluctant to follow the same. The outsiders and big investors grabbed the opportunity and became early adopters of technological development. The end result was that the traditional goldsmiths could not capitalise on the development opportunities, the outsiders and big investors used the situation and ultimately became the most powerful players in the jewellery sector. Though technology and innovation induced growth in the gems and jewellery sector has not benefitted the traditional goldsmith community in Kerala, a few could manage to get employment in the big jewellery business houses. The majority of the traditional goldsmith community has not been able to adopt the new innovations in the sector owing to the paucity of capital. The migration of cheap workers in the jewellery sector from Bengal and other states has also badly hit the traditional goldsmiths to get employment in the jewellery manufacturing units (Sumeetha, 2014). The traditional activity could no longer provide livelihood to them and the only option left for them is to shift to other sectors. All these impacts negatively their livelihood situation and also their socio economics.

The data for the study is amassed from 300 traditional goldsmiths who are working in the sector in the districts of Kasargod and Thrissur using random sampling techniques with equal sample from the two districts. These two districts have about 3000 traditional goldsmith's workers. The data collected from the traditional goldsmith community have been put to statistical scrutiny for identifying their socio economics and their perception of the sector about their livelihood and sustainability of the sector owing to the changes that are happening in the sector with technological development and globalisation of the sector. In this respect the study uses analytical and test statistical methods like Likert Scale, Factor Analysis etc.

ISSN: 2455-8834

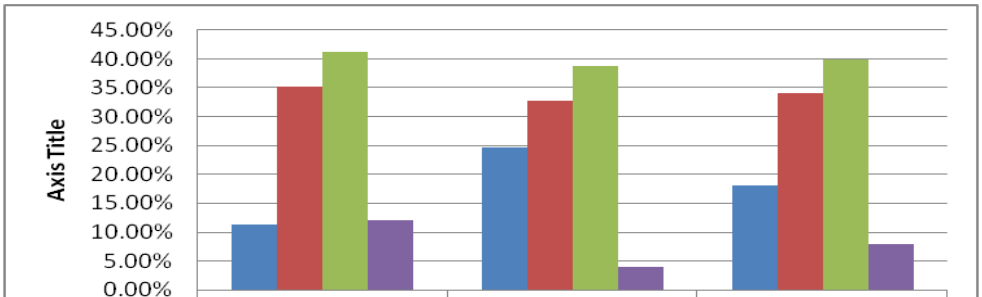
Volume:03, Issue:11 "November 2018"

3. RESULTS AND DISCUSSIONS

The study tries to focus on some of the basic socio-economic indicators which are considered to be important in analysing the socio economics and perception of the community like the age factor to discuss about the view of the youngsters of the community about their traditional avocation. Moreover, it also tries to identify the role of education of the present generation of the community and their attitudinal differences about this traditional community-based activity as a factor of discussion and analysis. Along with this it is equally pertinent to consider the income factor for retaining the young generation in the sector and their perception for the possibility of sustainable income generation. It is also focussed to analyse the problems faced by the goldsmith community and their inter-generational activity status as matters of moot points for discussions.

3.1 Age

The age of the sample respondent is vital in this respect as it helps to know how long the gems and jewellery workersare active in the sector. The average age of the respondent is 48 and district-wise this is 45 years in the case of workers in Thrissur and 50 in Kasargod. About 40 percent of the workers are between 51-60 and 34 percent between 41-50 years. Senior citizens (above 60 years) constitute 8 percent of the total sample. District-wise, the difference is evident in age group of respondents. Only 11.3 percent in Kasargod are below 40 years, whereas 24.7 percent are in this age category in Thrissur. Senior citizens constitute 12 percent of the total respondents in Kasargod. The results are depicted in Figure 1. It is clear that the youngsters show disinterest in the sector as the lesser the age the lesser the interest of the goldsmith community to work as goldsmith.



	Kasargod	Thrissur	Total
Below 40	11.30%	24.70%	18.00%
41 - 50	35.30%	32.70%	34.00%
51 - 60	41.30%	38.70%	40.00%
Above 60	12.00%	4.00%	8.00%

Figure 1: District and Age

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

3.2 Education

The educational profile of the traditional goldsmiths is shown in Figure 2. Though, the illiterates constitute only 3 percent, it is evident that the post-graduates and holders of professional degree are less than 5 percent (1 percent post-graduates and 4 percent professionals). UG qualified persons constitute 13 percent of the total sample respondents. 35 percent have educational qualification of secondary levels. The results show that the illiteracy is low among the workers, the highly qualified workers i.e. graduate and above have 14 percent. However, less regional difference is evident with more respondents have qualification of UG and above in Thrissur district. Compared to the education pattern of the social class of the Kerala society in a community angle the traditional goldsmith community is educationally backward and hence have less possibility for an immediate beneficial alteration in the livelihood pattern.

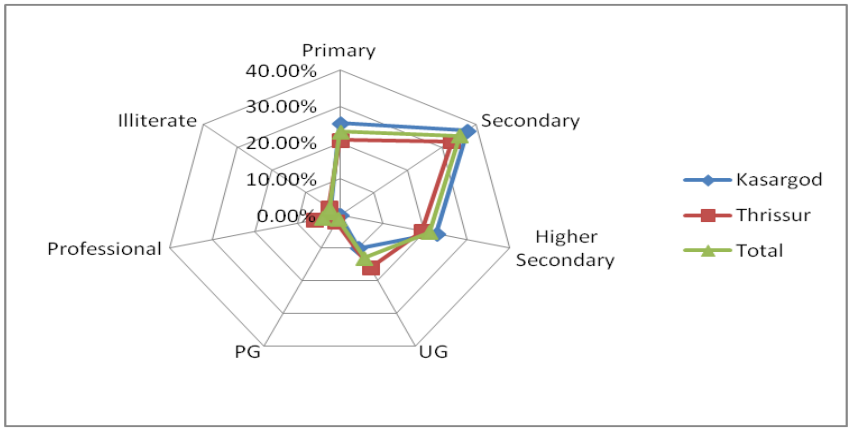


Figure 2: District and Education

3.3 Income

The district-wise results for income category are shown in Figure 3. Overall, 50 percent have an earning between Rs. 400-600 per day. Those with a daily income of above Rs. 800 are only 14 percent in the total sample. About 11 percent earn below Rs. 400. An inter-district comparison gives the picture that the difference in earning pattern based on district. In Thrissur, 49.3 percent of the workers earn more than Rs. 600 per day. The percentage of workers in the same category is 28.7 in Kasargod. In Thrissur those in this low-income group workers are 7.3 percent, which is comparatively less. The difference in income is locational advantage as Thrissur is the hub of gold and jewellery making in Kerala. Hence, the workers have better job prospects and earnings compared to the goldsmiths in Kasargod district. However, this is only a relative position as the field inferences have shown that workers, especially belonging to the higher age groups have raised concerns regarding the work availability and earnings since liberalisation. Even though in

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

money terms earnings have improved, the work prospect has come down and this will have severe implications in their daily earnings. Again comparing the earning pattern of workers in other traditional sectors of Kerala and also in the case of casual workers the earning pattern of the goldsmith community is not impressive even in the gems and jewellery hubs of Thrissur.

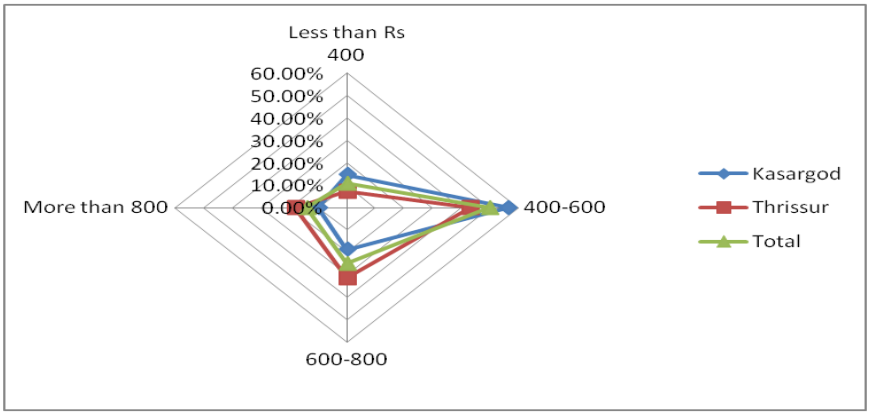


Figure 3: District and Income Category

3.4 Problems faced by the Goldsmiths

The major problems faced by the gold workers are wage issues, lack of orders, competition and lack of capital. The issues faced by the gold workers are shown in Figure 4. The district-wise results for the problems of the traditional goldsmiths show that, except for the fact that the raw gold is available in plenty in the market compared to the pre-liberalisation period, the goldsmiths are facing severe problems in terms of competition (93 percent), wage issues (80 percent), lack of orders (70 percent) and lack of capital (65 percent).

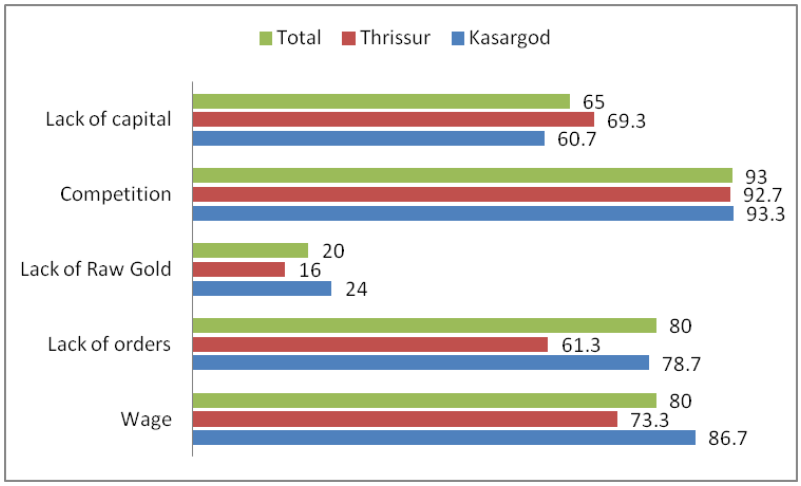


Figure 4: Problems Faced by the Gold Workers

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

Date show that low or inadequate wages is one of the major issues (80 percent) faced by the gold workers. District-wise comparison of the gold workers perception shows a difference with 86.7 percent of the respondents in Kasargod citing this as a major issue compared to 73.3 percent in Thrissur district. However, further evaluation and field inference shows that those using modern equipment have not cited this as a concern.

The major reason cited by the goldsmiths for the low earnings is the lack of orders. Since the growth of retail jewellery sector, the work orders for the traditional goldsmiths have come down. Based on district, the workers in Kasargod face more issues (78.7 percent) compared to Thrissur workers (61.3 percent). As mentioned earlier those who have used modern equipments have better livelihood options, the workers who are using modern tools also face issues of lack of orders. But the problem is not so severe.

During the pre-liberalisation era, the supply of gold was limited. The major source for the goldsmiths was scrap and old ornaments which they used to convert into new ornaments for sale. After liberalisation, gold is available in plenty. However, in terms of district, 24 percent in Kasargod face this issue of gold supply compared to 16 percent in Thrissur. This is understood to be financial rather than supply issues in most of the cases.

Responses with regard to competition, it shows that majority (93 percent) face fierce competition from the large and medium jewellers in terms of demand for their products and from outside state workers in terms of provision of their services to jewellers and manufacturers. The outside labour is relatively cheap compared to the traditional goldsmiths in Kerala and hence medium and large jewelleries choose cheap outside workers. Inter- district difference in this respect is minimal.

Lack of capital is yet another problem faced by the traditional goldsmiths. The workers in Thrissur district are more prone to financial crisis, but the result does not show any significant difference. However, the reason for thesmall difference is that the workers in Kasargod do not even perceive the need for an upgradation and requirement for finance due to cultural barriers, skill issues, etc.

3.5 Inter-generational Aspects and Decline in Workers

The traditional goldsmith or ‘Thattan’ community in Kerala has been involved in jewellery/ornament making and designing ornaments from time immemorial for the royal family and other affluent sections of the societyand also for the common people. The monopoly situation up to the pre-liberalisation period was changed with the removal of import restrictions on gold. This has resulted in livelihood problems and loss of their positions in the society. The major impact of this was happened in the form of worker strength in their unit/workshop before

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

and after liberalisation. Another issue is inter-generational decline in goldsmiths. It is a fact that the earlier generation goldsmiths had more gold workers in the family compared to the present generation. The perception with regard to the gold workers in terms of activity in which their present, previous and next generation (themselves as well as their generation which includes siblings, their parent's generation and their children) are engaged in is recorded. The job status of the three generations of the traditional goldsmiths is presented in Figure 5. In the 1st generation or the generation of their parent, 61 percent worked in their traditional sector. The government employees were only 12.1 percent and 26.9 percent worked in the private sector. Only 36.1 percent in the second generation or the present generation work as goldsmiths or in the traditional sector. Present generation is working in the government sector (21.1 percent), 42.7 percent work in the private sector. The youngest generation i.e. 3rd generation data show that those who work as goldsmiths are only 4 percent, 30.4 percent work in the government sector and 65.6 percent in the private sector.

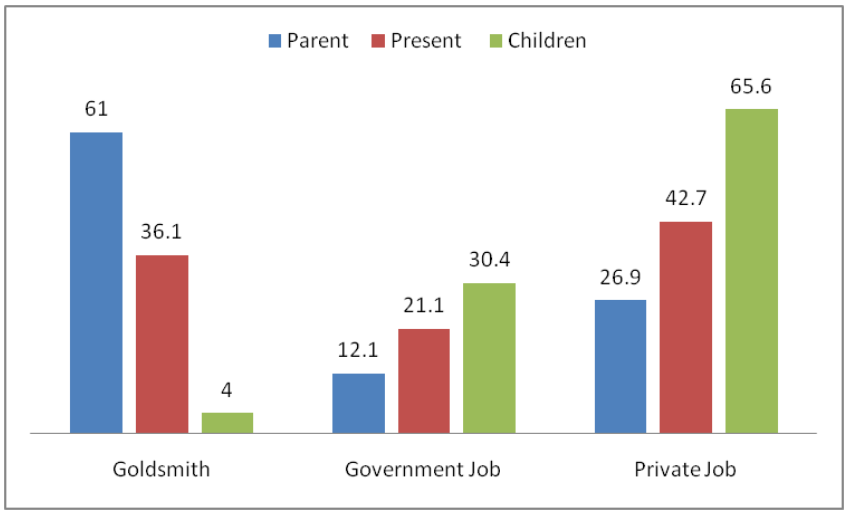


Figure 5: Inter-Generational Employment

3.6 Perception on Problems of Traditional Goldsmiths

The problems of the traditional workers viz. lack of livelihood, low living standards, capital issues, health problems, etc. which were identified during sample surveywere recorded on a five-point scale to identify the intensity of these issues with 1 being the lowest and 5 highest. The results have been evaluated in this section with the aid of Factor Analysis to identify pertinent factors and thereby identifying the key problems of the traditional goldsmiths.

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

Kaiser-Meyer-Olkin test is used to measure the sample adequacy. The value of 0.842 is well above the accepted minimum value. Similarly, Bartlett's Test of Sphericity has also attained significant value.

Table 1: Total Variance Explained: Problems in the Jewellery Sector

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Var	Cumulative %	Total	% of Var	Cumulative %	Total	% of Var	Cumulative %
1	4.357	36.311	36.311	4.357	36.311	36.311	3.189	26.571	26.571
2	1.391	11.588	47.900	1.391	11.588	47.900	2.450	20.421	46.992
3	1.291	10.759	58.659	1.291	10.759	58.659	1.400	11.667	58.659
4	.841	7.007	65.666						
5	.736	6.136	71.802						
6	.683	5.695	77.497						
7	.627	5.222	82.720						
8	.600	5.003	87.722						
9	.460	3.836	91.559						
10	.413	3.439	94.997						
11	.361	3.012	98.010						
12	.239	1.990	100.000						

Extraction Method: Principal Component Analysis.

In the Total Variance Explained (Table 1), it is clear that three factors with an eigen value of more than 1 are extracted. In total, the three factors explain 58.659 percent of the total variance. In the initial solution, the variance explained by the first factor is 36.311 percent, second factor is 11.588 percent and third factor is 10.759 percent. In the rotated solution the first factor explains 26.57 percent of the total variance, whereas the second and third factor explains 20.421 percent and 11.667 percent, respectively.

The Rotated Component Matrix is shown in Tables 2. The rotated solution is worked out as the Component Matrix is inconclusive in exploring the major factors. In the rotated solution, the first factor has six statements, the second four and the third two statements are related to the problems. The first factor explainsthe financial issues of the goldsmiths like lack of income and factors leading to the lack of income. The second factor's four statements explain further reasons behind the low income and other statements of the first factor. The third factor shows the health problems and disinterest from the youngsters to take up the activity.

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

Table 2: Rotated Component Matrix[a]: Problems in the Jewellery Sector

	Component		
	1	2	3
Reduction in orders due to change in consumer preference	.765	.259	-.004
Lack of sufficient income for a sustainable living	.786	.272	-.034
Lack of co-operative movement	.325	.718	-.054
Health issues due to present occupation	.055	-.060	.832
Lack of interest from younger generation to take up the business	.062	.197	.779
Competition from medium/large jewellers	.707	.032	.089
Dependence on informal credit sources for financial needs	.565	.202	.105
Sticking on with traditional beliefs	.216	.763	.116
Lack of investment capital for expansion	.576	.155	-.006
Lack of welfare schemes by the government	.080	.653	.222
Lack of orders compared to earlier times	.773	.183	.075
Lack of technical knowledge	.265	.802	-.098

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 5 iterations.

They feel that the present activity does not yield sufficient income for a sustainable living. This is mainly due to the lack of orders which, in turn, is due to customer preferences towards branded and hallmarked ornaments. They still face competition from the large jewellers who lure customers with attractive offers, discounts and also with hallmarking and branding. One of the solutions to overcome this is expansion of business or upgrading the tools and these are not possible due to lack of capital. The overall outcome of the livelihood issue is the dependence on the private money lenders for financial needs. The traditional goldsmiths lack technical knowledge and cultural and traditional barriers are stopping them from changing their traditional tools and also preventing them from learning new techniques. Two of the major reasons cited for the crisis are lack of cooperative activities and government assistance/schemes. Most of the traditional sectors, be it coir, fisheries, handloom, cashew, beedi, etc. have thrived by reducing the ill effects of globalisation owing to cooperation in the respective sectors, which stood as a supportive element for the workers in the sector to overcome the impacts of globalisation. Such an organised movement is missing in the sector and the workers have actually understood the need for the same. Any effort of this kind should be backed with government assistance and schemes to rejuvenate the sector and the goldsmiths in general feel that such an activity is totally missing. Even though these statements feature as the second factor in problems, this could be cited as one of the major ways by which the workers would survive in the future. Work related health problems feature as a statement in the third factor and the last statement in the third factor is disinterest by the younger generation to take up the business.

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

It is well understood from the results that the traditional goldsmith community is facing a crisis and this will lead to a reduction in the number of people from the traditional goldsmith community working in the traditional activity. The major suggestions in this regard from the community point of view are given in Figure 6. Some have suggested for real adaptation to the technical know-how available in the sector with a shift to the big jewellers and manufacturers. The major and the unanimous suggestion is relating to the setting up of cooperative sector in the gold sector for safeguarding the traditional goldsmith workers with prolific help from the government and government schemes and assistance. This will have multiple impacts and the end result will be an overall improvement in their present situation. Another solution is skill development which will help them to upgrade and stay in the production and marketing.

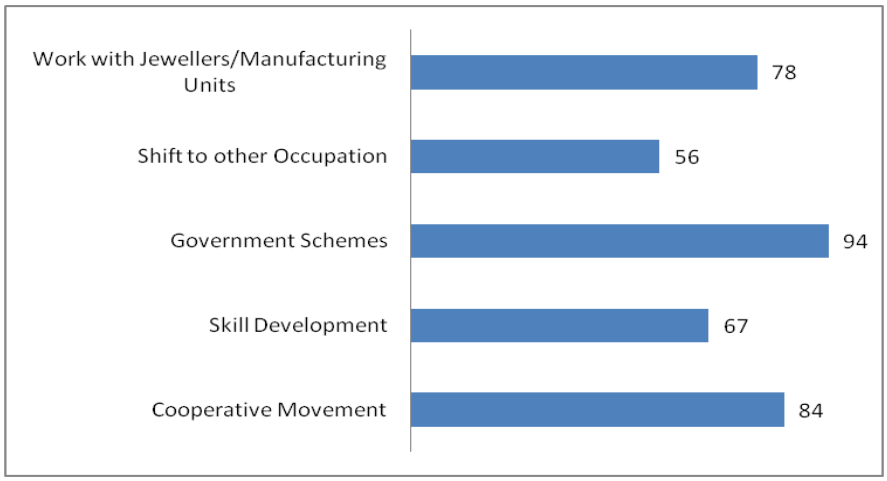


Figure 6: Methods to solve the Crisis

The indications in terms of inter-generational aspects show that across the three generations, the percentage working in their traditional occupation is less and this will further reduce in the next generation as well. Though, better education and skill are helping the younger generation to explore other employment avenues, the fact remains blurred. Hence, the possible way out is to upgrade their skill and break the shackles of their traditional beliefs, which in turn would help many to continue in the sector and also save a community and its traditional skill for social, historical and cultural reasons. In this way it is possible to convert the growth potential of the sector into a growth potential of the traditional community.

4. CONCLUSION

The article explains clearly their socio-economic and perceptions of the community for a sustainable livelihood in tandem with other social groupsin Kerala. Though, the sector unfolds a unique and visible growth dynamics, it is not engendering a growth path to the traditional

ISSN: 2455-8834

Volume:03, Issue:11 "November 2018"

goldsmith community. Instead, it becomes global and hence grows into an avenue for new investors with new mode of production and marketing network with changing consumer perception for gems and jewellery products. The inferences pertaining to the socio economics of the traditional goldsmith communities shows a bleak scenario and survival problem. The sector *per se* is moving around with global cues and this in fact is beneficial to a sector with technology infused modern machines in design and production process and this is not depending on the craftmanship of the traditional goldsmith community, but is based on computer aided designs and machine-made productions done by the big investors in the retail gems and jewellery business groups. This is in a speed track now as the market for gems and jewelleryis expected to grow both in the domestic and international levels. The pertinent issue is the livelihood threat of a traditional community and how it is solved is a herculean task to the policy makers and the protectors of the traditional skills and avocations. Livelihood and income impacts of the community in the recent period do not engender sustainable by a historically driven traditional community and hence feels many survival problems as per their perceptions. This is the reason for the weak perception of the community about their survival and sustainability. With concerted policy it is possible to generate a perpetual livelihood and thereby developing a positive perception provided the traditionally crafted jewellery is promoted and popularised in various parts of the globe, which are in high demand as it is a niche product.

REFERENCES

Freeman, C. (1995), “The National System of Innovation in Historical Perspective”, Cambridge Journal of Economics, No. 19, pp. 5-24.

Lundvall, B. A. (ed.) (1992), “National Innovation Systems: Towards a Theory of Innovation and Interactive Learning”, Pinter, London.

Rogers, E. M. (2003), “Diffusion of Innovations”, Free Press, New York.

Sumeetha, M (2014), “Skill in a Globalized World: Migrant Workers in the Gold Jewellery-Making Industry in Kerala, India”, WorkingUSA, 17(3), 323-338.

Sumeetha, M (2015), “Precarious Livelihoods: Social Security of Migrant Workers in The Gold Jewellery Making Industry in Kerala”, 2015 (2) Elen. L R.

