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Decentralized Agricultural Planning in Kerala-Process and Determinants of Efficacy

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ABSTRACT

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The long-drawn process of institutionalization of decentralized planning in Kerala has impacted grass root level agricultural development in several ways. The regular interactions of officials and farmers in the process significantly have influenced service delivery to the public forming innovative solutions, fruitful experiences and institutional learnings. But there is an urgent need to scale up farmer participation in the process by enhancing efficacy of the process of institutionalisation. Delineation of the determinants of the efficacy of decentralised agricultural planning at grass root level in Kerala is of utmost importance to address various dimensions of the institutionalisation process lagging behind and to enhance efficacy. It was done based on a set of dimensions selected through literature review and expert rating. Among various steps, integration of projects, finalisation of annual plan by the local governments, formation of panchayath planning committee, consolidation of local plans to district plans and prioritisation and resource allocation by local bodies received low perceived efficacy scores. The factor analysis of the data delineated development-participation inter dependence, group decision making & performance, experience -accountability capabilities, and knowledge mediation as four factors explaining maximum variance in the perceived efficacy of institutionalization of decentralized planning in agriculture in Kerala.

Introduction

Kerala has successfully evolved a paradigm of decentralized and participatory development planning by utilizing the provisions of the 73rd and 74th amendments of the constitution. Initiated as the Peoples' Plan Campaign in the ninth five year plan led by the Local Self Government Institutions, this process has

undergone several changes during the last two decades. The conscientization phase of the campaign which was intended to educate the bureaucracy, political leadership and the people about the dynamics and structure of participatory planning gave way to institutionalization of the process during the 10th plan period, which rechristened the programme as 'Kerala Development Plan'

(KDP). Subsequently, during the 11th plan, the planning mechanism was further revamped to consolidate the institutionalization process. The approach of the 12th plan also envisaged some concrete steps to strengthen the institutions as well as the planning procedures based on previous experiences. The 13th plan adopted a watershed based approach to address problems related to agriculture, drinking water, and management of natural resources and formulation of district plans (GoK, 2017).

Institutionalisation and participation

The long-drawn process of institutionalization of decentralized planning has impacted grassroots level planning for agricultural development in the state in several ways. Heller *et al.*, (2007) observed that 'People's Plan Campaign' for decentralized planning in Kerala had increased the level of participation of people and had created a positive impact on development performance and on social inclusion, but that level of participation have declined in recent years. Vijayanand (2010) while analyzing the participatory planning experiences in Kerala pointed out the local passivity that had crept into the process and the need to revamp the procedures to make planning more participatory. He further observed that participation of the people would take place only when there were efficient democratic structures for facilitating participation.

The regular interactions of officials and farmers in the gramasabha significantly have influenced service delivery to the public and formed innovative solutions fruitful experiences and institutional learnings (Alex and Sulaja, 2012). But there are observations to strengthen the collective planning space at grass root level by debureaucratizing (Harilal, 2012). Many constraints limit participation and performance of agricultural working

group members in participatory planning (Jabbar and Sundaramari, 2014). Inherent methodological problems in the processes have to resolved for better coordination and peoples participation (Mohan and Prakash, 2016). Benefits of decentralization will be trickling down to lower sections of society only when the innovation platform gets institutionalized (Dominic and Gupta, 2019).

But many determinants like Social participation, extension participation and role performance can inculcate a favourable attitude towards panchayat raj institutions (Srivastava *et al.*, 2021).

Materials and Methods

Study area

The study was conducted in five agroclimatic zones of Kerala. Five districts selected for study were Thiruvananthapuram (Northern Kerala), Palakkad (central zone), Malappuram (Northern Kerala), Wayanad (High range zone) and Thrissur (Problem Area Zone). Forty panchayats were selected based on cropping intensity. A brief profile of the study area has been given in Table.1

Study sample

Stratified random sampling procedure was followed for the purpose of drawing sample for the study. One district each was randomly selected from each of the five agro climatic zones of Kerala.

From each district eight Panchayaths with high cropping intensity were selected. The sample of respondents comprised of 40 Agricultural Officers, 40 Grama Panchayat Presidents and 80 farmers who are members of the agricultural working group at Panchayat level constituted for participatory planning. The total sample size thus was 160.

Measurement of efficacy of decentralized agricultural planning and determinants

The decentralised Agricultural Planning through Local Self Government Institutions LSGIs of Kerala has been institutionalised through a process involving 15 stages. 15 stages were further categorised in to three distinct phases - Participatory Need assessment phase, Plan formulation and resource allocation phase and Plan appraisal, Integration and implementation phase. After close scrutiny of various guidelines and orders of the LSGI and State Planning Board, perusing the past research studies and relevant literature in the area of participatory planning and by discussing with the agricultural scientists 120 parameters determining the efficacy of various stages were arrived at. These parameters were subjected to expert rating and a final 60 parameters were selected under 15 dimensions with four parameters under each dimension. Each parameter was judged based on the degree of efficacy of that parameter against a five-point continuum of mostly adopted, often adopted, occasionally adopted, rarely adopted and not adopted with scores 5, 4, 3, 2 and 1 respectively. Pretesting was done in a non-sampling area among 30 randomly selected respondents. The selected items were combined in to a scale. Then it was subjected content validity method through judges rating for the questionnaire validity. The reliability was found out using Cronbach's Alpha statistics and the value of 0.819 showed high reliability acceptable enough to be used in data collection. Other independent variables were measured adopting methodologies already standardised.

Analysis of data

Data collected was subjected to factor analysis to delineate factors determining perceived efficacy of decentralized agricultural planning process. Analysis was conducted using SPSS

software for windows version 9.2. Using Principal component analysis, dimensionality of data was reduced to a few variables. Descriptive statistics like frequency and percentages were used to study the profiles of the respondents.

Results and Discussion

Profile characteristics of the working group members

The distribution of the working group members with respect to various profile characteristics selected for the study have been given in Table.2. Efficacy of decentralized planning was the dependent variable of the study.

From the table it is clear that majority of working groups belonged to the medium category with respect to mass media exposure, leadership quality, social participation, sharing of responsibility, attitude towards Panchayati raj, leadership propensity, attitude towards Participatory Planning, extension Agency Contact, accountability in planning and implementation, transparency within the group, sense of empowerment, participation in working group and efficacy of decentralized planning. With regard to age 51.66 % belonged the middle age group (35-50), 32.5% (young) and 15.83% in the old age group.

With regard to farming experience, 44.16% had 6-10 years, 33.33 % 11-25 years and 22.5 % above 25 years. While 59.16 belonged to marginal farmers category of land possession, 22.5% belonged to the category of small farmers, 16.66% to medium farmers and only 1.69 % to big farmers category.

While 34.17% of the members belonged to college and above category, 33.33.% had higher secondary education and 32.5% high school education.

Perceived Efficacy of Working group members on Decentralized Agricultural Planning through Local Self Government Institutions LSGIs

As already discussed in the methodology chapter, the perceived efficacy of the institutionalisation of participatory planning was analysed in five agro climatic zones of Kerala. The respondents were classified in to three categories viz. low, medium and high based on their PEDP values. The results are depicted in Table.2 and Fig.2.

It could be observed from the Table No.3. and Figure.2. that 75 per cent of the working group members were found to have medium level of

perceived efficacy followed by low (17.5%) and high (7.5%). Hence majority of the respondents were found to have medium level of PEDP.

Perceived Efficacy of Dimensions of Decentralized Planning through LSGI

Perceived efficacy of the institutionalisation process, analysed by the actors of the process was the dependent variable of the study. The decentralised planning process at grass root level was conceived as a 15-stage process stipulated in the guidelines of the Government of Kerala which were further categorised in to three distinct phases as discussed in Table.4.

Table.1 Profile of the study area five districts – an overview

Parameter	Thiruvananthapuram	Thrissur	Palakkad	Malappuram	Wayanad
Area (sq Km)	2192	3032	4480	3550	2131
Forest Cover (sq. Km)	1304	1159	2084	1981	1580
Population 2011 (in Lakh)	33.01	31.21	28.1	41.13	8.17
Density	1508	1031	627	1157	384
SC population as % of Total Population	11.3	10.4	14.4	7.5	4.0
ST population as % of Total Population	0.8	0.3	1.7	0.6	18.5
Production of Rice in Kerala (2019-20) in Tonnes (Wetland)	4541	76556	248199.0	28214	19513
Net Area Irrigated (2019-20) in ha	7842	62227	86026	29528	12186
No. of Registered SSI/MSME 2019-20	1363	1594	1694	1177	264
No of Grama Panchayaths	73	86	88	94	23

Table.2 Profile characteristics of Agriculture Working Group Members of LSGIs in Decentralised Planning N=120

Sl.No.	Variable	Number	Percentage	Mean	Standard deviation
1	Age				
	Young up to 35	39	32.5		
	Middle 35-50	62	51.66	1.83	0.678
	Old 50 and above	19	15.83		
2	Experience in farming				
	up to 5 years	0	0		
	6-10 years	53	44.16	2.78	0.791
	11-25 years	40	33.33		
	Above 25 years	27	22.5		
3	Land size				
	Marginal farmers Up to 2.50 acres	71	59.16		
	Small farmers 2.51 – 5.00 acres	27	22.5	1.61	0.823
	Medium farmers 5.01 – 10.00 acres	20	16.66		
	Big farmers More than 10.00 acres	2	1.69		
4	Formal education				
	Literate	0	0		
	Primary	0	0		
	High School	39	32.5	4.02	0.820
	Higher secondary	40	33.33		
	College and above	41	34.17		
5	mass media exposure				
	low	20	16.66		
	Medium	83	69.16	14.48	1.861
	high	17	14.16		
6	Leadership quality				
	low	8	6.66		
	Medium	103	85.83	11.33	2.039
	high	9	7.5		
7	social participation				
	low	23	19.16		
	Medium	73	60.83	26.19	3.776
	high	24	20		
8	Sharing of responsibility				
	Low	13	10.83		
	Medium	101	84.16	15.23	1.891
	high	6	5		
9	Innovativeness				

	low	13	10.83		
	medium	104	86.66	20.10	2.364
	high	3	2.5		
10	Attitude towards Panchayathiraj				
	low	15	12.50		
	medium	95	79.16	48.77	5.83
	high	10	8.33		
11	Leadership propensity				
	low	12	10		
	medium	93	77.5	10.55	1.60
	high	15	12.50		
12	Attitude towards Participatory Planning				
	low	16	13.30		
	medium	96	80	59.01	7.11
	high	8	6.66		
13	Extension Agency Contact				
	low	21	17.50		
	medium	79	65.83	27.93	3.839
	high	20	16.66		
14	Accountability in planning and implementation				
	low	28	23.33		
	medium	79	65.83	7.39	1.17
	high	13	10.83		
15	Transparency within the group				
	low	18	15		
	medium	86	71.67	6.52	1.01
	high	16	13.33		
16	Sense of empowerment				
	low	15	12.5		
	medium	89	74.16	61.58	8.38
	high	16	13.33		
17	Participation in working group				
	low	27	22.50		
	medium	76	63.30	73.85	11.03
	high	17	14.16		
18	Efficacy of decentralised planning				
	low	21	17.50		
	medium	90	75.0	67.49	6.92
	high	9	7.50		

Table.3 Distribution of Working Group members according to their overall Perceived Efficacy Index (n=120)

SI No	Categories of OPEI	Number	Percentage	Mean	Standard deviation
1	Low	21	17.50	67.49	6.92
2	Medium	90	75.0		
3	High	9	7.50		
	Total	120	100		

Table.4 Efficacy dimensions at different stages of Decentralised planning in agriculture

Phases	Stages involved	Efficacy score received	Average efficacy of the phase	Total Perception score	Maximum Score
Participatory Need assessment	1.Need identification	14.63	14.17	70.88	100
	2.Formation of working group	14.96			
	3.Formation of Panchayath planning committee PPC	11.73			
	4. Holding of pre Gramasabha consultations with stakeholders	14.40			
	5. Holding of Gramasabha	15.16			
Plan formulation and resource allocation phase	1.Preparation of draft plan proposals by the working group	15.20	13.78	68.92	100
	2.Discussion of draft plan in development seminar	15.12			
	3.Prioritization and resource allocation by the local governments	12.36			
	4. Preparation of detailed projects by the working group	15.16			
	5. Finalization of annual plan by the local government	11.08			
Plan appraisal, Integration and implementation phase	1.Vetting of plan and technical approval	14.28	13.15	65.77	100
	2.Approval of plans by the DPC and issue of proceedings	16.49			
	3. Consolidation of local body plans to a district plan by the DPC	11.62			
	4. Plan implementation	14.34			
	5. Integration of projects	9.04			

Table.5 Total Variance explained in factor analysis of variables of working group members with Perceived Efficacy of Decentralised planning

Component	Initial Eigen values			Rotation Sums of Squared Loadings		
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %
1	8.549	50.289	50.289	7.658	45.049	45.049
2	1.870	11.002	61.291	2.148	12.633	57.681
3	1.594	9.377	70.668	1.720	10.118	67.800
4	1.114	6.552	77.220	1.601	9.421	77.220
5	.959	5.638	82.859			
6	.733	4.311	87.169			
7	.537	3.158	90.327			
8	.460	2.705	93.032			
9	.287	1.688	94.720			
10	.256	1.507	96.227			
11	.179	1.050	97.277			
12	.137	.805	98.082			
13	.099	.583	98.665			
14	.090	.529	99.194			
15	.072	.422	99.616			
16	.041	.242	99.858			
17	.024	.142	100.000			

Extraction Method: Principal Component Analysis

Table.6 Factor loadings of items in perceived efficacy of Decentralised planning in Panchayats (n= 120)

Factor No	Items	Items extracted under factors	Factor loadings	Factor label
Factor 1	1	Attitude towards Panchayati Raj	0.915	Development- Participation Inter dependence
	2	Sharing of responsibility	0.904	
	3	Extent of Participation in Working Groups	0.904	
	4	Social Participation	0.875	
	5	Attitude towards Participatory Planning	0.856	
	6	Innovativeness	0.847	
	7	Sense of Empowerment	0.822	
	8	Extension agency contact	0.821	
	9	Leadership Quality	0.792	
	10	Mass media Exposure	0.729	
Factor 2		Transparency within the group	0.726	Group Decision making & performance
		Land Size	-0.677	
Factor 3		Age	0.880	Experience - Accountability capabilities
		Accountability in Planning and Implementation	0.655	
		Experience in farming	0.565	
Factor 4		Education	0.853	Knowledge mediation
		Leadership Propensity	0.558	

Fig.1 Stages of Decentralized Agricultural Planning Through Local Self Government Institutions LSGIs

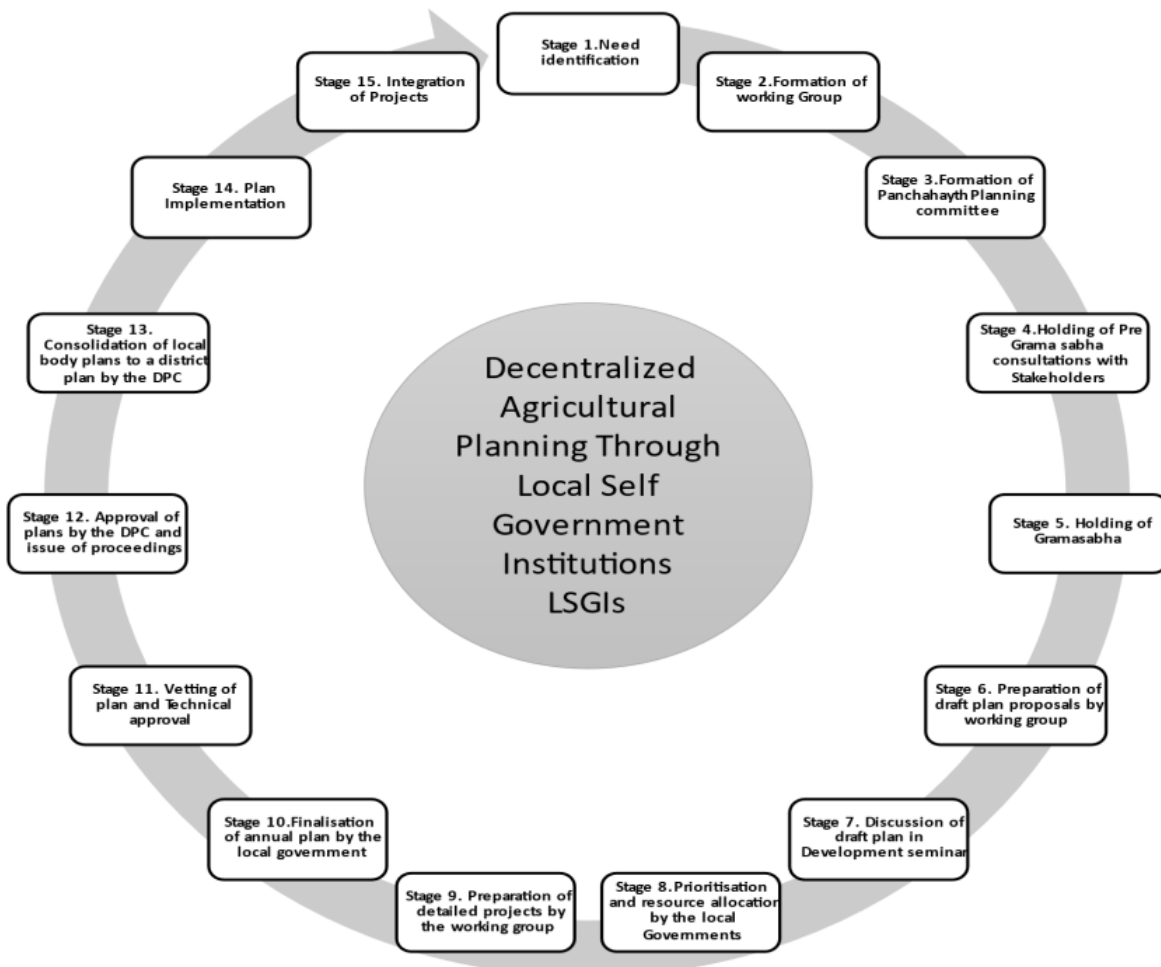


Fig.2 Distribution of Respondents according to their PEDP



Fig.3 Factor scree plot of determinants of perceived efficacy of working group members in decentralized planning in LSGIs of Kerala

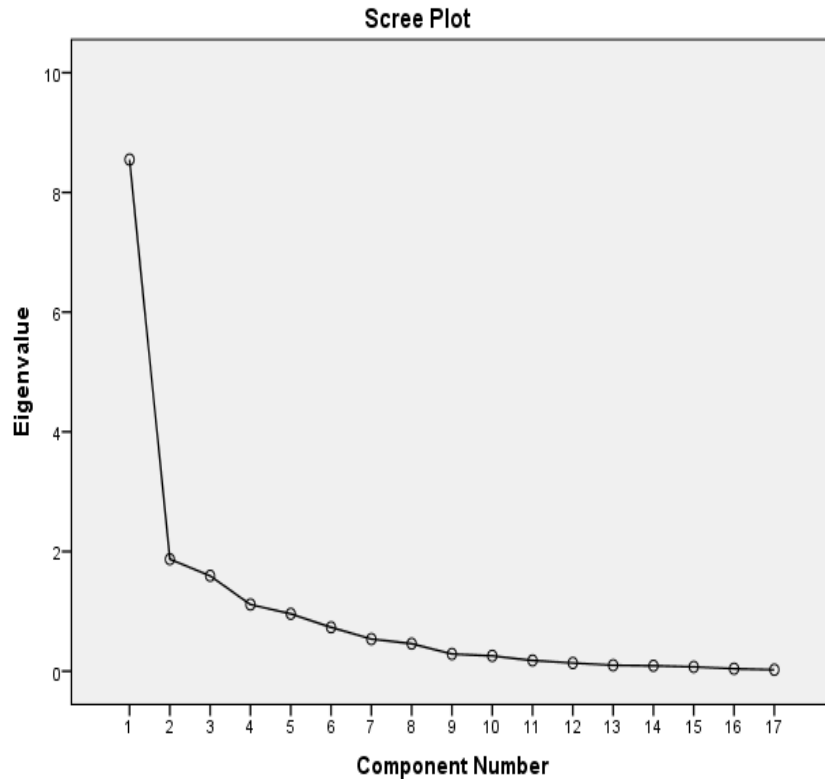
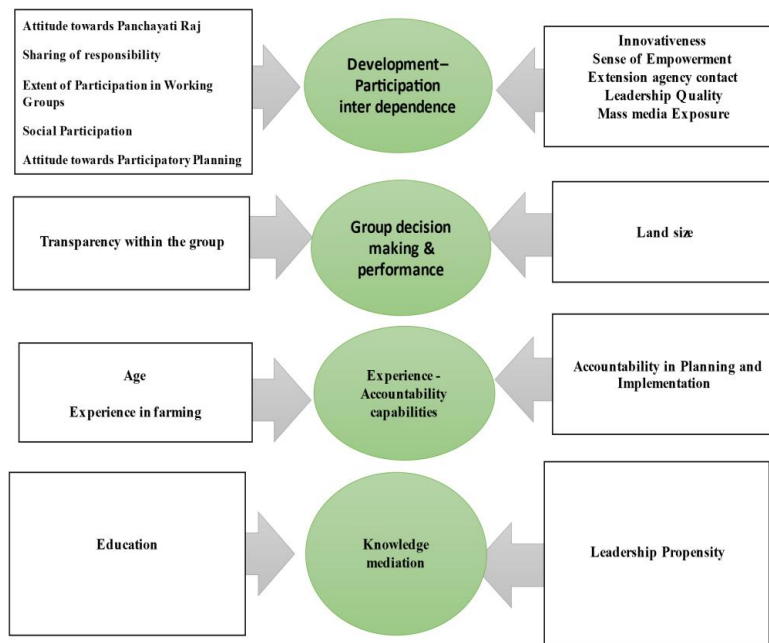


Fig.4 Diagrammatic representation of delineated factors affecting perceived efficacy of decentralized planning by working group members of LSGIs



Out of the three phases, plan appraisal, integration and implementation phase had the least perceived efficacy, followed by the plan formulation and resource allocation phase. Among the stages, integration of projects had the lowest efficacy perception score followed by finalization of annual plan by the local government, consolidation of local body plans to a district plan by the DPC and formation of Panchayath planning committee PPC, explaining that the efficacy of these dimensions needs to be improved. Dimensions having high scores were approval of plans by the DPC, preparation of detailed projects by the working group, holding of Gramasabha, preparation of draft plan proposals and discussion in the development seminar.

Determinants of Perceived Efficacy by Working group members

Factor analysis through PCA thus helped to reduce the influence of variables to a few variables. The result of the factor analysis has been discussed in Table.5.

It can be seen from the above table that out of the 14 variables, four factors could explain 77% variance in the perceived efficacy. Components with Eigen values greater than one were only selected.

Rotation maximized the loading of the variable on one of the extracted factors while minimizing the loading in other factors. Scree plot depicting the delineated factors on the X axis and the corresponding Eigen values on the Y axis was used to extract the major determining factors (Figure.3).

The extracted graph flattened off after the break of the inflexion and the four factors before the point were selected as the major determining factors. The major factors together explained 77.22 per cent of total variance. The results of the rotated factor

matrix for the items covered under each factor have been presented in Table.6.

Factor analysis delineated four factors that affected the efficacy perception of the working group members of selected Panchayats. It was observed that these factors had significant influence on the perception of the efficacy and are independent of each other. Each factor was derived from a weighted linear combination of variables that accounted for the largest total variation in the data.

These factors are given in the order of importance with respect to the proportion of the variance accounted by each factor. These four factors together explained a total variance of 77.22 per cent which implied high significance of the selected variables in the efficacy of institutionalization of decentralized planning in agriculture in Village Panchayats of Kerala.

The results showed that Factor 1 comprised of 10 items with factor loadings ranging from 0.729 to 0.915. It also showed that Factor 2 had two factors with factor loadings ranging from 0.67 to 0.73, while Factor 3 had three items with factor loadings ranging of 0.880 to 0.655. Factor 4 had two items with factor loadings of 0.85 and 0.56. The uniformly high values of factor loadings indicated the significance of these variables in the delineated factors and the overall efficacy perception. Based on the items loaded under each factor, appropriate nomenclature was assigned and has been depicted as major factors in Fig.4.

Accordingly, the major factors that have close relationship with the efficacy perception were identified as Development-Participation Inter dependence, Group Decision making & performance, Experience - Accountability capabilities, and Knowledge mediation. The Development-Participation Inter dependence

factor alone could explain 45.05 % total variance.

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