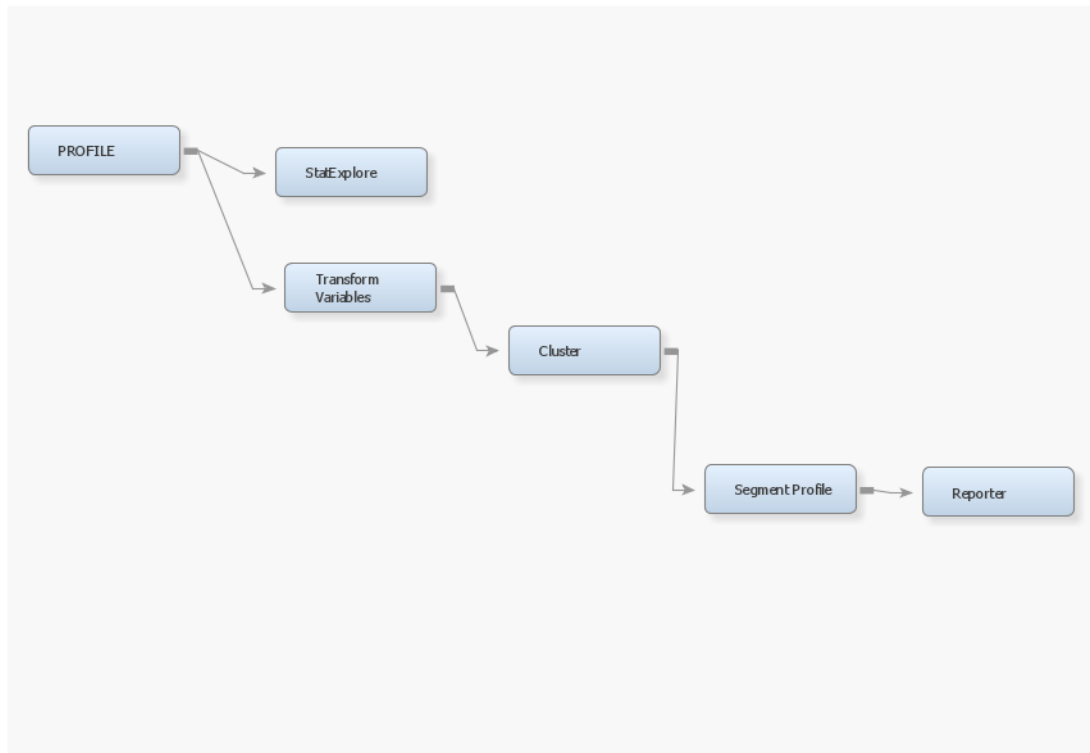# SAS Enterprise Miner Report

User   = u63340697
Date   = 08:03:08 07 September 2023
Project   = Case_study_bank_Seg
Diagram   = banking_segmentation

Start Node = Report
Node label = Reporter
Nodes   = PATH
Showall   = N

Format   = PDF
Style   = LISTING

SAS Enterprise Miner Report
Process Flow Diagram

SAS Enterprise Miner Report

Node=PROFILE
Summary

Node id = Ids
Node label = PROFILE
Meta path = Ids
Notes =

Node=PROFILE
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	DataSource		DsCreatedBy	u63340697		NBytes	5637120	.
ApplyIntervalLevelLowerLimit	Y		DsId	profile		NCols	6	.
ApplyMaxClassLevels	Y		DsModifiedBy	u63340697		NObs	100000	.
ApplyMaxPercentMissing	Y		DsModifyDate	2009690286.4		NewTable		
CMeta	WORK.M3O0S9E9		DsSampleName			NewVariableRole	REJECT	
ComputeStatistics	N		DsSampleSize			OutputType	VIEW	
DBPassThrough	Y		DsSampleSizeType			Role	RAW	TRAIN
Data	AAEM.PROFILE		DsScope	LOCAL		Sample	D	
DataSelection	DATASOURCE		IdentifyEmptyColumns	Y		SampleSizeObs	10000	
DataSource	profile		IntervalLowerLimit	20		SampleSizePercent	20	
DataSourceRole	RAW		Library	AAEM		SampleSizeType	PERCENT	
Description			MaxClassLevels	20		Scope	LOCAL	
DropMapVariables	Y		MaxPercentMissing	50		Segment		
DsCreateDate	2009690286.4		MetaAdvisor	BASIC		Table	PROFILE	

Node=PROFILE
Data Attributes

Attribute	Value	Attribute	Value	Attribute	Value
Data Name	PROFILE	Date Created	02 April 2012 18:02:36	Data Size	5637120
Data Type	DATA	Date Modified	02 April 2012 18:02:36	Role	RAW
Data Label		Number Rows	100000	Segment	
Engine	BASE	Number Columns	6	Data Library	AAEM

Node=PROFILE
Variables List

Name	Label	Role	Level	Type	Length	Format	Creator
CNT_ATM		INPUT	INTERVAL	N	8		
CNT_CSC		INPUT	INTERVAL	N	8		
CNT_POS		INPUT	INTERVAL	N	8		
CNT_TBM		INPUT	INTERVAL	N	8		
CNT_TOT		INPUT	INTERVAL	N	8		
ID		ID	NOMINAL	C	9		

SAS Enterprise Miner Report

Node=Transform Variables
Summary

Node id = Trans
Node label = Transform Variables
Meta path = Ids => Trans
Notes =

Node=Transform Variables
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Transform		EmSampleSize	DEFAULT		MissingValue	USEINSEARCH	
DefaultClassMethod	NONE		GroupCutoff	0.1		NumberofBins	VARIABLES	
DefaultClassTargetMethod	NONE		GroupMissing	N		Offset	1	
DefaultMethod	NONE		HideVariable	Y		RejectVariable	Y	
DefaultTargetMethod	NONE		MaxOptimalBins	4		SummaryStatistics	Y	
EmRandomSeed	12345		MinOffset	Y		SummaryVariables	TRANSFORMED	
EmSampleMethod	FIRSTN		MissingAsLevel	N		UseMetaTransform	Y	

Node=Transform Variables
Variable Summary

Role	Level	Frequency Count	Name
INPUT	INTERVAL	5	CNT_ATM CNT_CSC CNT_POS CNT_TBM CNT_TOT

Node=Transform Variables
Transformations Statistics

Source	Method	Variable Name	Formula	Number of Levels	Non Missing
Input	Original	CNT_ATM		.	100000
Input	Original	CNT_CSC		.	100000
Input	Original	CNT_POS		.	100000
Input	Original	CNT_TBM		.	100000
Input	Original	CNT_TOT		.	100000
Output	Formula	LGT_ATM	log(CNT_ATM/(CNT_TOT-CNT_ATM))	.	100000
Output	Formula	LGT_CSC	log(CNT_CSC/(CNT_TOT-CNT_CSC))	.	100000
Output	Formula	LGT_POS	log(CNT_POS/(CNT_TOT-CNT_POS))	.	100000
Output	Formula	LGT_TBM	log(CNT_TBM/(CNT_TOT-CNT_TBM))	.	100000

Missing	Minimum	Maximum	Mean	Standard Deviation	Skewness	Kurtosis	Label
0	3.0000	628.00	19.500	20.856	2.3573	15.33	
0	1.0000	607.00	6.684	12.129	6.2365	108.46	
0	2.0000	345.00	11.923	20.734	3.3438	15.44	
0	10.0000	14934.00	68.137	101.154	53.0522	5925.78	
0	17.0000	15225.00	106.244	113.370	39.2061	3976.09	
0	-7.9327	1.96	-1.705	1.147	-0.2646	0.00	
0	-7.9179	1.11	-3.220	1.097	0.2038	-0.37	
0	-8.9374	2.06	-2.688	1.144	0.1934	-0.33	
0	-3.4693	6.12	0.709	1.084	0.3507	-0.13	

SAS Enterprise Miner Report

Node=Cluster
Summary

Node id = Clus
Node label = Cluster
Meta path = Ids => Trans => Clus
Notes =

Node=Cluster
Properties

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Cluster		FinalMaxNum	20		MissingNominal	DEFAULT	
AutomaticMaxNum	50		HideVariable	Y		MissingOrdinal	DEFAULT	
AutomaticMethod	WARD		ImputationMethod	NONE		NominalEncoding	GLM	
AutomaticMinNum	2		Initial	DEFAULT		NumberClusterMethod	USER	AUTOMATIC
Bins	100		Learn	.		OrdinalEncoding	RANK	
CCCCutOff	3		LearnFinal	0.02		Radius	0	
ClusterGraphs	Y		LearnInitial	0.5		Stdize	NONE	STD
Clusvar	_SEGMENT_		LearnSteps	1000		Summary	N	
ClusvarLabel	Segment Variable		MaxC	5	10	TrainDefaults	Y	
ClusvarRole	SEGMENT		MaxIter	10		TreeProfile	Y	
DistancePlot	Y		MaxSteps	1200		XConv	0.0001	
Drift	N		MissingInterval	DEFAULT				

Node=Cluster
Variable Summary

Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	LGT_ATM LGT_CSC LGT_POS LGT_TBM
ID	NOMINAL	1	ID

Node=Cluster
Mean Statistics

Variable	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Clustering Criterion	0.66	0.66	0.66	0.66	0.66
Maximum Relative Change in Cluster Seeds	0.01	0.01	0.01	0.01	0.01
Improvement in Clustering Criterion	.	.	.	.	.
Frequency of Cluster	13157.00	25536.00	17839.00	14537.00	28931.00
Root-Mean-Square Standard Deviation	0.64	0.65	0.65	0.72	0.66
Maximum Distance from Cluster Seed	6.85	4.62	3.97	4.51	6.50
Nearest Cluster	2.00	1.00	5.00	5.00	3.00
Distance to Nearest Cluster	2.14	2.14	2.14	2.28	2.14
LGT_ATM	-3.53	-2.17	-0.22	-1.49	-1.49
LGT_CSC	-4.14	-3.37	-3.55	-3.97	-2.08
LGT_POS	-4.07	-3.27	-3.02	-0.98	-2.21
LGT_TBM	2.60	1.38	-0.18	-0.11	0.21

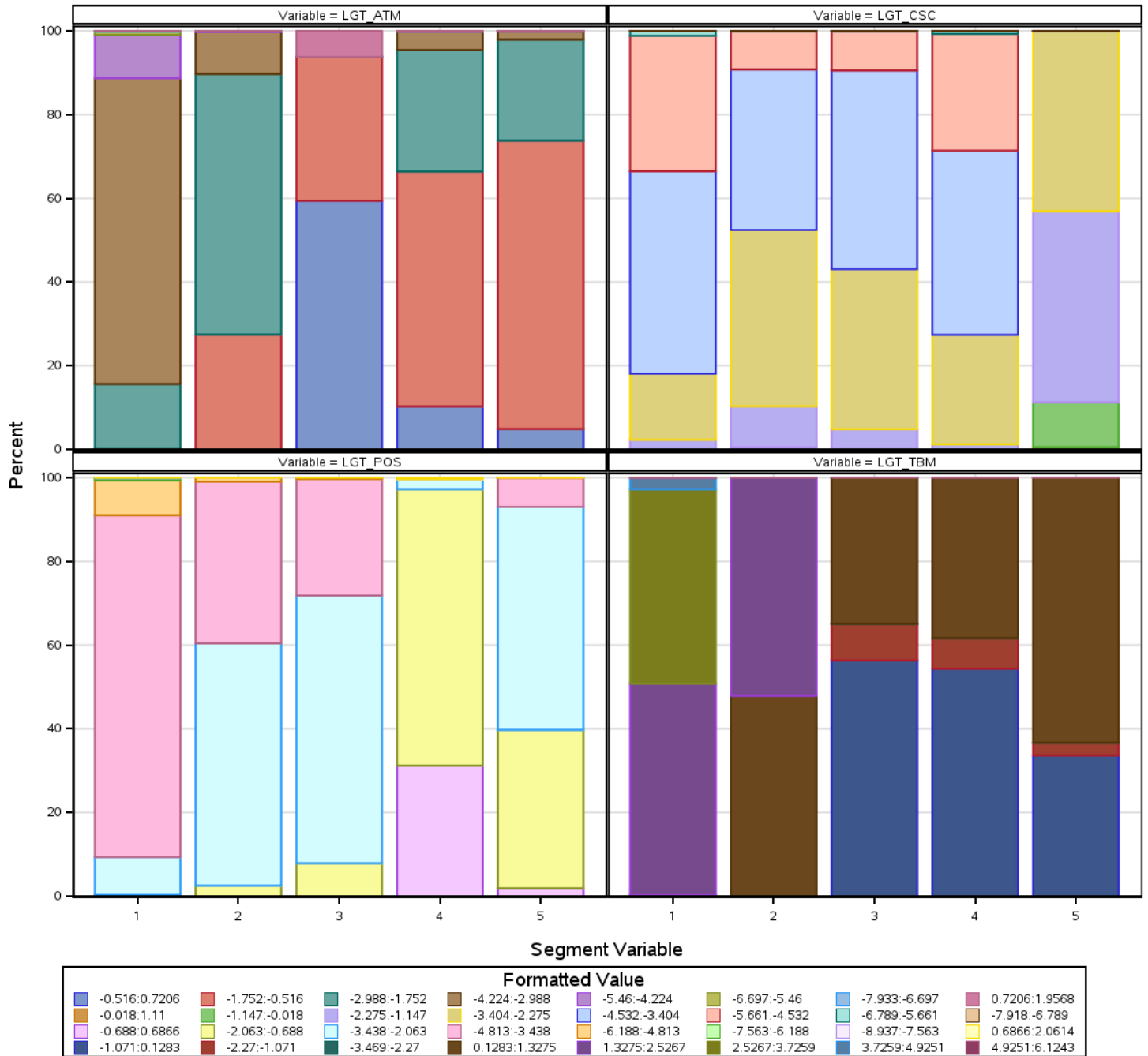# SAS Enterprise Miner Report
Node=Cluster
Segment Size
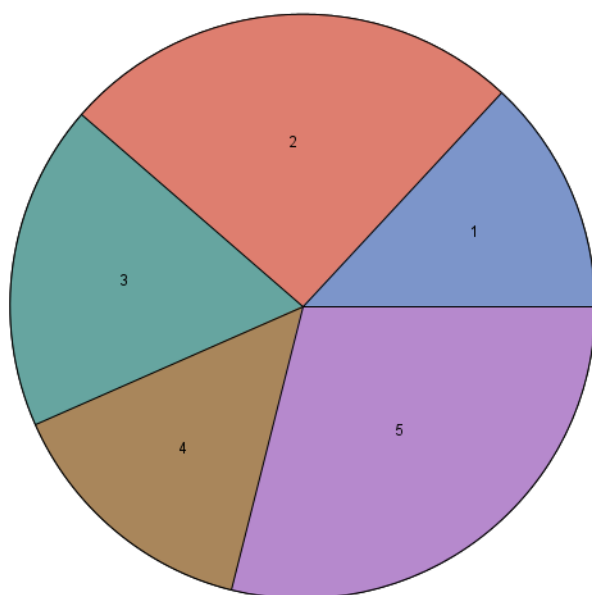
SAS Enterprise Miner Report
Node=Cluster
Tree Diagram
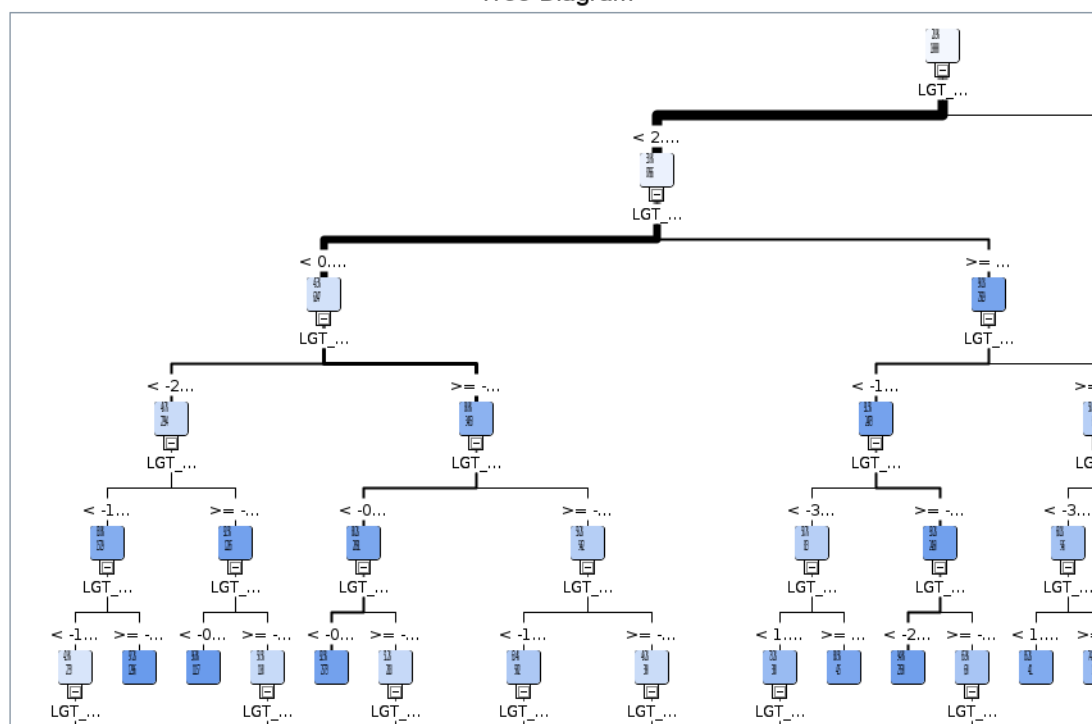
SAS Enterprise Miner Report
Node=Cluster
Segment Plot

SAS Enterprise Miner Report
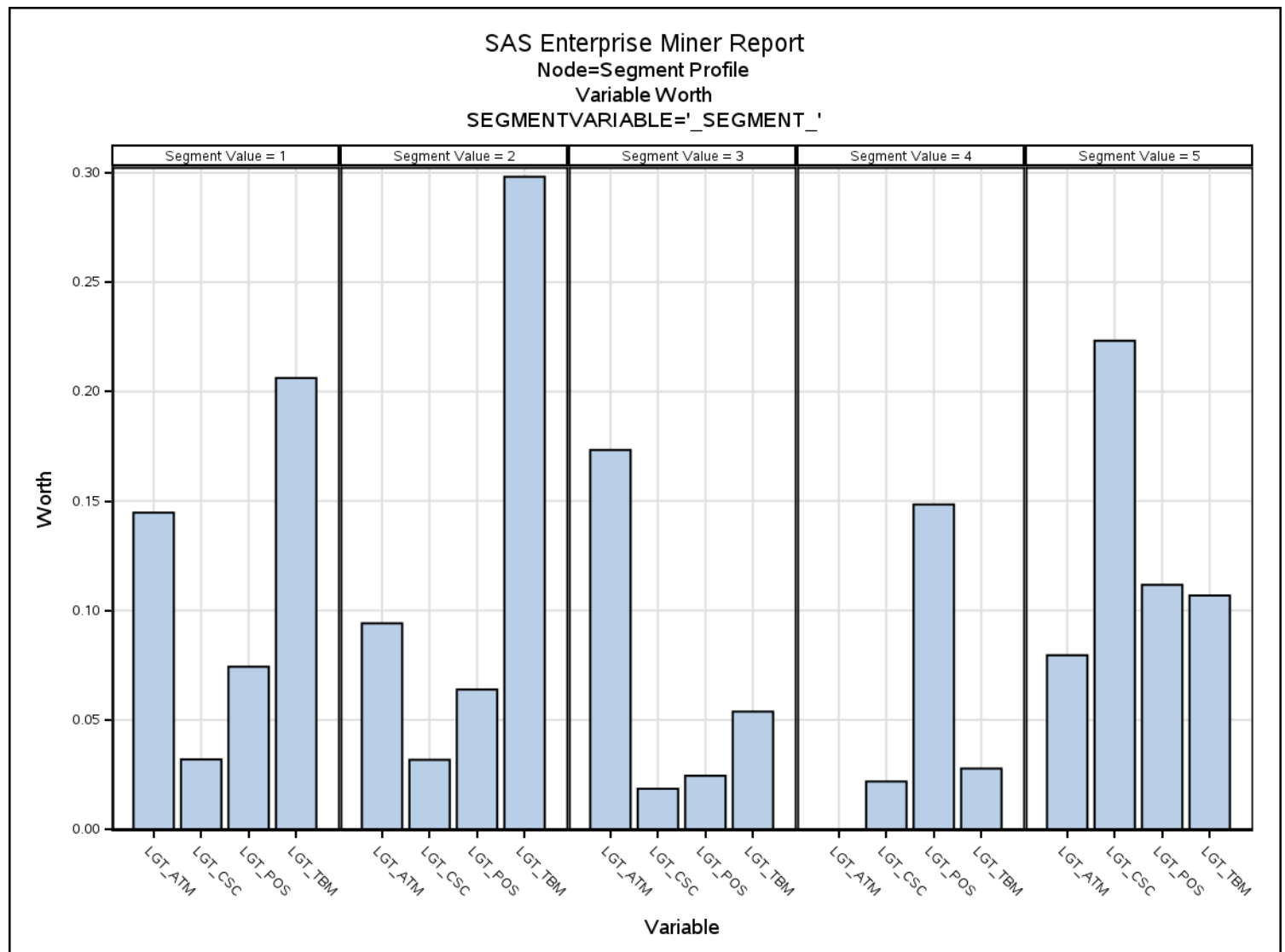
**Node=Segment Profile
Summary**

Node id = Prof
Node label = Segment Profile
Meta path = Ids => Trans => Clus => Prof
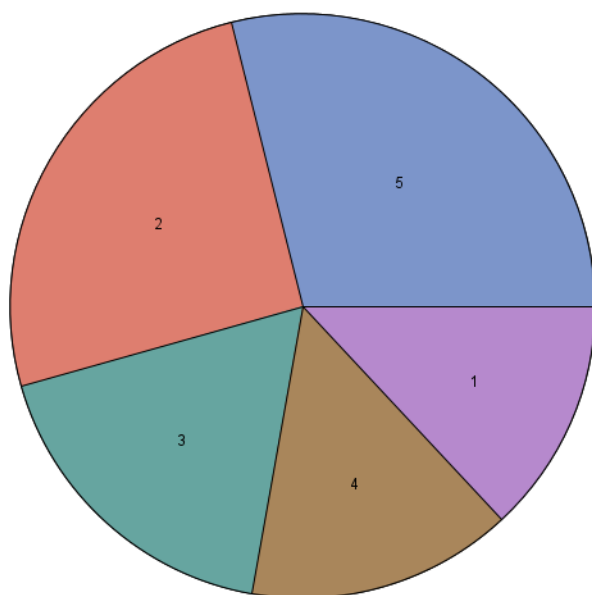Notes =

**Node=Segment Profile
Properties**

Property	Value	Default	Property	Value	Default	Property	Value	Default
Component	Profile		MinWorth	0.01		ProfileAll	N	
MaxDepth	1		NumHistBars	8		TargetRole	NONE	
MaxNumInput	10		OtherPercentCutOff	95		UseReportVars	Y	
MaxNumReport	10		PrintWorth	Y				

**Node=Segment Profile
Variable Summary**

Role	Level	Frequency Count	Name
INPUT	INTERVAL	4	LGT_ATM LGT_CSC LGT_POS LGT_TBM

SAS Enterprise Miner Report
Node=Segment Profile
Variable Worth
SEGMENTVARIABLE='_SEGMENT_'

SAS Enterprise Miner Report
Node=Segment Profile
Segment Size

End of Report