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Application of triangular neutrosophic relational map in bhil tribes

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Abstract

India has traditionally been the home of different cultures and people. Bhil tribe is the third most populous advasi group in India after the Gonds and the Santhals and inhabit a large area spread over the states of Rajasthan, Gujarat and Madhya Pradesh. This paper adopts a derivation of new fuzzy tool called Triangular Neutrosophic relational map (TrNRM) to find ranking using two concepts of problem which is further interlinked by NRM methods.

Introduction

Triangular Neutrosophic relational maps (TrNRM) are more pertinent when the data is an unrestricted one. TrNRM models denote the compilation of classes and contingent relations between the classes. It is a distinct and easy way of finding rank by interlinking with many concepts of problem. Let Trnc1, Trnc2….Trncn be the nodes of domain and trnd1, trnd2,…trndn be the nodes of range spaces. To define TrNRM concern space and a parameter space is needed which acts as luxate in the sense of perception. Additionally it is assumed that no transitional relations prevail within the domain and the range space. Let TrN(m) be the asservated adjacency matrix. The obscured pattern should be raised out while trnd1 is switched on. The statistics must pass through the relation matrix M, when input is inclined as the vector A1= (1,0….0) by multiplying Ai by the triangular matrix M. The weight of attributes is taken from linguistic values of the triangular fuzzy nodes to find the average, maximum weight proceeding with weight of attributes from the transpose of lexical values of triangular fuzzy nodes to check whether pure triangular NRM or impure triangular NRM.

An efficient method is always required to dilute a value of TrNRM as pure and impure. When it is evaluated TrNRM gives casual relation between domain and range . Thus the dynamical system ends with $A1TrN(m)max_{(weight)}=B1TrN(m)^t\ max_{(weight)}$. Otherwise dynamical system ends with $A1TrN(m)max_{(weight)}=A2\ TrN(m)max_{(weight)}$. When TrND 1 is in on state, it gives the limit cycle. Using a new fuzzy model Triangular NRM gives the ranking from domain to range

Diagrametical representation

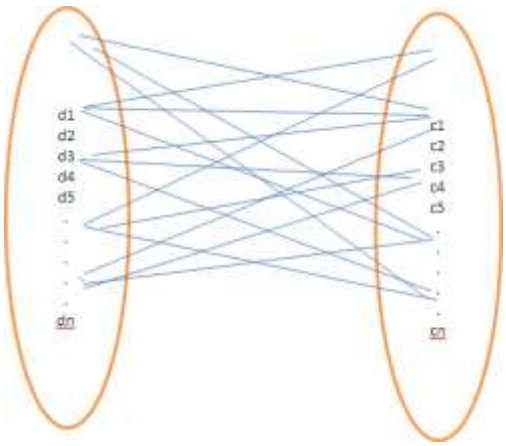

Fig 1 : Mapping of lexical average values of Triangular fuzzy nodes

Definitions:

1. A TrNRM represents casual relationship between spaces D and R as nodes and casualities in the form of destined graph from D to R called relations.

2. Let TrND1,…,TrNDn be the nodes of the domain space D of an TrNRM and TrNR1, …,TrNRm be the nodes of the range space R of an TrNRM. Let the matrix E be defined as: E = (eij) where eij is the accent of the destined edge DiRj (or RjDi), E is called the relational matrix of the TrNRM.

3. Let A = (a1,..,an), ai{0,1,I}. A is called the extantaneous position vector of the domain space.Similarly let B^t = (b1,…,bm), bi{0,1,I}. B is called the extantaneous position vector of the range space When ai= 0 or 1 or I, if ai is on or off or nebulous respectively, for i = 1,…,n. Similarly bi = 0 or 1or I if bi is on or off or amorphous respectively, for i = 1,..,m.

4. Let TrN(m) be the asservated adjacency matrix. The hidden pattern should be found out while trnd1 is switched on. The statics must pass through the relation matrix M, when input is inclined as the vector A1=(1,0….0) by multiplying Ai by the triangular matrix M.

5. If the stability state of this active system is an exclusive state vector, then it is called a fixed point. let us start this active system by switching on TrnD1 and assume that the TrNRM completes down with R1 and Rm on.

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6.. If the TrNRM completes down with a position vector perpetual in the form of A1→A2→…AiA1(or $B1^t$→$B2^t$→…$BiB1^t$) or A1→A2→…$AiB1^t$(or $B1^t$→$B2^t$→…$AiB1^t$) then this stability is called a restriction cycle.

Definitive methods of the hidden pattern of triangular neutrosophic relational maps (TrNRM)

Step1: Let TrND1,…TrNDn be the nodes of the domain space D of an TrNRM and TrNR1, …,TrNRm be the nodes of the range space R of an TrNRM Let TrN(m) be the associated adjacency matrix.

Step2: The hidden pattern should be found out while trnd1 is switched on. The statics must pass through the relation matrix M, when input is inclined as the vector A1=(1,0….0) by multiplying Ai by the triangular matrix M.

Step3: The first node is taken ON as Ai=(1,0….0) gets a weight of attributes of triangular matrix which is signified as AiTrN(m) weight

Step4: The medium of aspects AiTrN(m) average taken by adding the weight of attributes

Step5: The inception progress activity is marked by(↪) ie.,A1TrN(m)$max_{(weight)}$that is remake ai by 1 if ai is the maximal weight of the triangular node(ie.,ai= 1) on the other hand ai by 0 (ie.,ai= 0)

Step6: Thus A1TrN(m) $max_{(weight)}$ becomes ON state for the following calculation

Step7: Lexical values of the triangular fuzzy nodes are transposed to find the relation between domain and range.

Step8: A2TrN(m) $_{(weight)}$ is taken from the transpose of linguistic values of triangular fuzzy Nodes while A1TrN(m) $max_{(weight)}$ stays ON.

Step 9: Thus the average of A2TrN(m) average is calculated.

Step10: The brink operation is denoted by (↪) ie.,A2TrN(m)$max_{(weight)}$ that is replacing ai by 1 if ai is the maximal weight of the triangular node(ie.,ai= 1) on the other hand ai by 0 (ie.,ai= 0)

Step11: The weight of attribute is taken from Linguistic triangular fuzzy node to find the average; max weight proceeding with weight of attribute is taken from the transpose of lexical values of triangular fuzzy nodes finding average and max weight as ON state of previous vector.

Step12: Thus the dynamical system ends with A1TrN(m)$max_{(weight)}$ =B1TrN(m)^t $max_{(weight)}$ says A1=B1^t.(or if the dynamical system ends with A1TrN(m)$max_{(weight)}$ = A2TrN(m)$max_{(weight)}$ says A1=A2(or B1^t=B2^t). The stability state of this active system is called the hidden pattern.

Step13: This practice is redone till we get a restriction cycle or a fixed point.

Case study:

Application of Triangular Neutrosophic relational maps (TrNRM) concept is applied to the Bhil teenagers including both physically and mentally.

The teen is the greatest transition from childhood to adulthood which is always fraught with physical, emotional, mental and psychological changes. Teenage problems are now compounded by the challenges facing society today. The life experiences encountered between the ages of 12 and 20, burgeoning emotional entry into the society through individual and group affiliations, leave a lasting impression. Some of the difficulties facing teenagers have to do with drugs, (its availability and effects on development), violence and gang-related violence and depression. These have deep effects on the physical, emotional and cognitive development of teenagers. Teenagers generally expressed greater concern about becoming infected than the adults. Deeply concerned with tribal teens the obstacles faced in their life feels them unsecured often.

Considering the Bhil teens, they take their life period as both disorientation and discovery. This transitional period can bring up issues of independence and self-identity; which makes them face toughest choices regarding both social and family background. Even the psychological changes create

them in segregating opposite genders from the perspective of society. On the whole the problem faced by the bhill teens could be classified based on the emotion, decision, health issue, relationship, social recognition, violence and psychological fear.

Degrees of the lexical values of triangular fuzzy numbers are

Equally important -(1, 1, 1), Intervening 1(low) - (1,2,3), Moderately important -(2,3,4), Intervening 2 (medium) - (3,4,5), Important -(4,5,6), Intervening 3 (high) - (5,6,7),Very important-(6,7,8), Intervening 4 (very high) - (7,8,9), Absolutely important- (9,9,9).

Intervening fuzzy linguistic values

Intervening 1(low) - (1,2,3)
Intervening 2(medium) - (3,4,5)
Intervening 3(high) - (5,6,7)
Intervening 4(very high) - (7,8,9)

INTENTIONAL TRIANGULAR NEUTROSOPHIC RELATIONAL MAPS (TrNRMs).

TrNRM models denote the accumulation of classes and casual connection between the classes. It is a distinct and easy way of finding hierarchy by interlinking with many concepts of problem. The weight of ascribe is taken from lexical values of the triangular fuzzy nodes to find the average, maximal accent proceeding with accent of attributes from the transpose of lexical values of triangular fuzzy nodes to

check whether pure triangular NRM or impure triangular NRM. In TrNcM we could find the hierarchy for attributes according to the individual experts but this new model TrNRM helps to find the hierarchy and relation between domain and range.

CONCEPT OF THE PROBLEM

Here domain taken as nine concepts of male{ TrND1,TrND2,…,TrND9} and codomain as same nine concepts of female {TrNC1,TrNC2 ....,TrNC9} to find hierarchy by interlinking with two concepts of problem using lexical enclosure.

TrND1- Lacking sound finance	TrNC1- Physical illness
TrND2-Egoistic community	TrNC2-Lacking health guidance
TrND3- Emotional out thurst	TrNC3- Psycho maniac
TrND4- Domestic violence	TrNC4- Difficulties with relationship
TrND5-Aimless	TrNC5- Sedentary life
TrND6- Self esteem	TrNC6-Maid servant
TrND7- Molestation	TrNC7- Lacking nutrients
TrND8- Lack of individual recognition	TrNC8- Insomnia
TrND9-world looks colourless	TrNC9- Isolation from friends and family

TrND1- Lacking sound finance

Lacking sound finance, the very common problem among Bhils is the complete insufficiency, shortage, or absence of something required for living.

TrND2-Egoistic community

Egoistic community is being centred in or preoccupied with oneself and the gratification of one's own desires and their traditions.

TrND3- Emotional out thrust
Emotional outthrust is a negative emotional reaction includes fear, anger, anxiety, and suffering endured by the victim of a tort.

TrND4- Domestic violence
Domestic violence is the unlawful, violent behavior within a household which may be the spouse or any domestic partners.

TrND5-Aimless
The next problem among Bhils is aimless in which Lacking direction or purpose in life which has become very common, as there is no rapport with family members.

TrND6- Self esteem
Self-esteem reflects a person's overall subjective emotional evaluation of his or her own worth. It is a judgment of oneself as well as an attitude toward the self.

TrND7- Molestation
Molestation, is forcing undesired sexual behaviour by one person upon another. When that force is immediate, of short duration, or infrequent, it is called sexual assault.

TrND8- Lack of individual recognition
Lack of individual recognition is simple but the most denial, as most Bhil tribal never been recognised on their works as well as life.

TrND9- World Looks Colourless
The context of the mortal nature of an individual existing pleasure and pain becomes unreal and the real never ceases to exist. On the whole the world around them becomes colourless.

TrNC1- Physical Illness
A physical illness is an enduring health problem that will have a greater risk of developing anxiety and/or depression.

TrNC2-Lacking Health Guidance
Lacking health guidance makes an individual to backslide in their health and confident in life which is being the major factor among Bhils.

TrNC3- Psycho maniac
Psycho maniac is a mixture of auditory hallucinations and a high level of empathy resulting in some kind of cracked psychotic depression.

TrNC4- Difficulties with Relationship
Difficulties in relationship becomes bipolar, which may complicate things, but sometimes it gets so down that an individual begin to think about the things that are not good throughout life.

TrNC5- Sedentary Life
A sedentary life is a type of life with no or irregular *physical* or mental activity because of environmental issues.

TrNC6-Maid Servant
A maid, or housemaid or maidservant, is a female person employed in domestic service which is very common work among Bhil women.

TrNC7- Lacking Nutrients
The most widespread nutritional deficiency worldwide is the common factor. Bhils has much more nutrients lack which leads to innumerable diseases.

TrNC8- Insomnia
Insomnia is a sleep disorder. People with insomnia have trouble sleeping: difficulty falling asleep, or staying asleep as long as desired.

TrNC9- Isolation from Friends and Family
Isolation is the process or fact of isolating or being isolated from own community based on various beliefs.

LEXICAL VARIABLES FOR THE TRIANGULAR FUZZY NODES

	TrNC1	TrNC2	TrNC3	TrNC4	TrNC5	TrNC6	TrNC7	TrNC8	TrNC9
TrND1	***I***	***IM2***	***IM3***	***IM2***	***IM1***	***VI***	***VI***	***IM2***	***IM3***
TrND2	***IM1***	***IM1***	***VI***	***IM2***	***IM2***	***IM1***	***EI***	***IM1***	***MI***
TrND3	***IM2***	***IM1***	***I***	***IM3***	***IM3***	***EI***	***EI***	***AI***	***AI***
TrND4	***IM3***	***IM1***	***IM3***	***IM2***	***I***	***IM1***	***EI***	***IM1***	***VI***
TrND5	***EI***	***EI***	***IM2***	***EI***	***VI***	***EI***	***EI***	***EI***	***I***
TrND6	***IM2***	***IM2***	***VI***	***VI***	***IM2***	***IM1***	***EI***	***EI***	***I***
TrND7	***EI***	***I***	***VI***	***AI***	***IM2***	***EI***	***EI***	***IM1***	***AI***
TrND8	***AI***	***IM2***	***IM2***	***VI***	***IM3***	***EI***	***EI***	***IM2***	***I***
TrND9	***IM2***	***EI***	***IM2***	***EI***	***VI***	***IM1***	***EI***	***AI***	***AI***

Lexical Values of the Triangular Fuzzy Nodes

	TrNC1	TrNC2	TrNC3	TrNC4	TrNC5	TrNC6	TrNC7	TrNC8	TrNC9
TrND1	**(4,5,6)**	**(3,4,5)**	**(5,6,7)**	**(3,4,5)**	**(1,2,3)**	**(6,7,8)**	**(6,7,8)**	**(3,4,5)**	**(5,6,7)**
TrND2	**(1,2,3)**	**(1,2,3)**	**(6,7,8)**	**(3,4,5)**	**(3,4,5)**	**(1,2,3)**	**(1,1,1)**	**(1,2,3)**	**(2,3,4)**
TrND3	**(3,4,5)**	**(1,2,3)**	**(4,5,6)**	**(5,6,7)**	**(5,6,7)**	**(1,1,1)**	**(1,1,1)**	**(9,9,9)**	**(9,9,9)**
TrND4	**(5,6,7)**	**(1,2,3)**	**(5,6,7)**	**(3,4,5)**	**(4,5,6)**	**(1,2,3)**	**(1,1,1)**	**(1,2,3)**	**(6,7,8)**
TrND5	**(1,1,1)**	**(1,1,1)**	**(3,4,5)**	**(1,1,1)**	**(6,7,8)**	**(1,1,1)**	**(1,1,1)**	**(1,1,1)**	**(4,5,6)**
TrND6	**(3,4,5)**	**(3,4,5)**	**(6,7,8)**	**(6,7,8)**	**(3,4,5)**	**(1,2,3)**	**(1,1,1)**	**(1,1,1)**	**(4,5,6)**
TrND7	**(1,1,1)**	**(4,5,6)**	**(6,7,8)**	**(9,9,9)**	**(3,4,5)**	**(1,1,1)**	**(1,1,1)**	**(1,2,3)**	**(9,9,9)**
TrND8	**(9,9,9)**	**(3,4,5)**	**(3,4,5)**	**(6,7,8)**	**(5,6,7)**	**(1,1,1)**	**(1,1,1)**	**(3,4,5)**	**(4,5,6)**
TrND9	**(3,4,5)**	**(1,1,1)**	**(3,4,5)**	**(1,1,1)**	**(6,7,8)**	**(1,2,3)**	**(1,1,1)**	**(9,9,9)**	**(9,9,9)**

Lexical Transpose Values of the Triangular Fuzzy Nodes

	TrND1	TrND2	TrND3	TrND4	TrND5	TrND6	TrND7	TrND8	TrND9
TrNC1	**(4,5,6)**	**(1,2,3)**	**(3,4,5)**	**(5,6,7)**	**(1,1,1)**	**(3,4,5)**	**(1,1,1)**	**(9,9,9)**	**(3,4,5)**
TrNC2	**(3,4,5)**	**(1,2,3)**	**(1,2,3)**	**(1,2,3)**	**(1,1,1)**	**(3,4,5)**	**(4,5,6)**	**(3,4,5)**	**(1,1,1)**
TrNC3	**(5,6,7)**	**(6,7,8)**	**(4,5,6)**	**(5,6,7)**	**(3,4,5)**	**(6,7,8)**	**(6,7,8)**	**(3,4,5)**	**(3,4,5)**
TrNC4	**(3,4,5)**	**(3,4,5)**	**(5,6,7)**	**(3,4,5)**	**(1,1,1)**	**(6,7,8)**	**(9,9,9)**	**(6,7,8)**	**(1,1,1)**
TrNC5	**(1,2,3)**	**(3,4,5)**	**(5,6,7)**	**(4,5,6)**	**(6,7,8)**	**(3,4,5)**	**(3,4,5)**	**(5,6,7)**	**(6,7,8)**
TrNC6	**(6,7,8)**	**(1,2,3)**	**(1,1,1)**	**(1,2,3)**	**(1,1,1)**	**(1,2,3)**	**(1,1,1)**	**(1,1,1)**	**(1,2,3)**
TrNC7	**(6,7,8)**	**(1,1,1)**	**(1,1,1)**	**(1,1,1)**	**(1,1,1)**	**(1,1,1)**	**(1,1,1)**	**(1,1,1)**	**(1,1,1)**
TrNC8	**(3,4,5)**	**(1,2,3)**	**(9,9,9)**	**(1,2,3)**	**(1,1,1)**	**(1,1,1)**	**(1,2,3)**	**(3,4,5)**	**(9,9,9)**
TrNC9	**(5,6,7)**	**(2,3,4)**	**(9,9,9)**	**(6,7,8)**	**(4,5,6)**	**(4,5,6)**	**(9,9,9)**	**(4,5,6)**	**(9,9,9)**

STEP-1:

Attribute TrND1 is ON: $A^{(1)}$= (1 0 0 0 0 0 0 0 0)
$A^{(1)}$TrN(M)Weight =((4,5,6),(3,4,5),(5,6,7),(3,4,5),(1,2,3),(6,7,8),(6,7,8),(3,4,5),(5,6,7))
$A^{(1)}$TrN(M)Average =(5,4,6,4,2,7,7,4,6)
$A^{(1)}$TrN(M)Max(Weight)= (0 0 0 0 0 1 1 0 0)=$A_1^{(1)}$
$A_1^{(1)}$ TrN(M)Weight(1)=((6,7,8),(1,2,3),(1,1,1),(1,2,3),(1,1,1)(1,2,3),(1,1,1),(1,1,1),(1,2,3))
$A_1^{(1)}$ TrN(M)Weight(2)=((6,7,8),(1,1,1),(1,1,1),(1,1,1),(1,1,1),(1,1,1),(1,1,1),(1,1,1),(1,1,1))
$A_1^{(1)}$ TrN(M) Average=(343,49,49,49,49,49,49,49,49)
$A_1^{(1)}$ TrN(M) Max(Weight)=(1 0 0 0 0 0 0 0 0)=$B_1^{(t)}$
$A^{(1)}$= $B_1^{(t)}$
(Pure Triangular NRM)

STEP-2:

Attribute TrND2 is ON: $A^{(2)}$= (0 1 0 0 0 0 0 0 0)
$A^{(2)}$TrN(M)Weight =((1,2,3),(1,2,3),(6,7,8),(3,4,5),(3,4,5),(1,2,3),(1,1,1),(1,2,3),(2,3,4))
$A^{(2)}$TrN(M)Average =(2,2,7,4,4,2,1,2,3)
$A^{(2)}$TrN(M)Max(Weight)= (0 0 1 0 0 0 0 0 0)=$A_1^{(2)}$
$A_1^{(2)}$ TrN(M) Average=(294,343,245,294,196,343,343,196,196)
$A_1^{(2)}$ TrN(M) Max(Weight)=(0 1 0 0 0 1 1 0 0)=$B_1^{(2)t}$
$B_1^{(2)t}$ TrN(M) Average =(800.34, 1257.67 , 2401, 2286.67, 1372, 571.67, 343, 571.67, 1943.67)
$B_1^{(2)t}$ TrN(M) Max(Weight)=(0 0 1 0 0 0 0 0 0)= $A_2^{(2)}$
$A_1^{(2)}$)= $A_2^{(2)}$
(Impure Triangular NRM)

STEP-3:

Attribute TrND3 is ON: $A^{(3)}$= (0 0 1 0 0 0 0 0 0)
$A^{(3)}$TrN(M)Weight =((3,4,5),(1,2,3),(4,5,6),(5,6,7),(5,6,7),(1,1,1),(1,1,1),(9,9,9),(9,9,9))
$A^{(3)}$TrN(M)Average =(4,2,5,6,6,1,1,9,9)
$A^{(3)}$TrN(M)Max(Weight)=(0 0 0 0 0 0 0 1 1)= $A_1^{(3)}$
$A_1^{(3)}$ TrN(M) Average=(405,202.5,729,364.5,243,243,445.5,364.5,729)
$A_1^{(3)}$ TrN(M) Max(Weight)=(0 0 1 0 0 0 0 0 1)= $B_1^{(3)t}$
$B_1^{(3)t}$ TrN(M)Average =(2916,1093.5,3280.5,2551.5,4738.5,1093.5,729,6561,6561)
$B_1^{(3)t}$ TrN(M) Max(Weight)=(0 0 0 0 0 0 0 1 1)= $A_2^{(3)}$
$A_1^{(3)}$ = $A_2^{(3)}$
(Impure Triangular NRM)

STEP-4:

Attribute TrND4 is ON: $A^{(4)}$= (0 0 0 1 0 0 0 0 0)
$A^{(4)}$TrN(M)Weight =((5,6,7),(1,2,3),(5,6,7),(3,4,5),(4,5,6)(1,2,3),(1,1,1),(1,2,3),(6,7,8))
$A^{(4)}$TrN(M)Average =(6,2,6,4,5,2.1,2,7)
$A^{(4)}$TrN(M)Max(Weight)=(0 0 0 0 0 0 0 0 1)= $A_1^{(4)}$
$A_1^{(4)}$ TrN(M) Average=(294,147,441,343,245,245,441,245,441)
$A_1^{(4)}$ TrN(M) Max(Weight)=(0 0 1 0 0 0 1 0 1)= $B_1^{(4)t}$
$B_1^{(4)t}$ TrN(M)Average =(1323,1176,2352,2352,2499,588,441,2940,3969)
$B_1^{(4)t}$ TrN(M) Max(Weight)=(0 0 0 0 0 0 0 0 1)= $A_2^{(4)}$
$A_1^{(4)} = A_2^{(4)}$
(Impure Triangular NRM)

STEP-5:

Attribute TrND5 is ON: $A^{(5)}$= (0 0 0 0 1 0 0 0 0)
$A^{(5)}$TrN(M)Weight =((1,1,1),(1,1,1),(3,4,5),(1,1,1),(6,7,8),(1,1,1),(1,1,1),(1,1,1),(4,5,6))
$A^{(5)}$TrN(M)Average =(1,1,4,1,7,1,1,1,5)
$A^{(5)}$TrN(M)Max(Weight)=(0 0 0 0 1 0 0 0 0)= $A_1^{(5)}$
$A^{(5)}= A_1^{(5)}$
(Impure Triangular NRM)

STEP-6:

Attribute TrND6 is ON: $A^{(6)}$= (0 0 0 0 0 1 0 0 0)
$A^{(6)}$TrN(M)Weight =((3,4,5),(3,4,5),(6,7,8),(6,7,8),(3,4,5),(1,2,3),(1,1,1),(1,1,1,),(4,5,6))
$A^{(6)}$TrN(M)Average =(4,4,7,7,4,2,1,1,5)
$A^{(6)}$TrN(M)Max(Weight)=(0 0 1 1 0 0 0 0 0)= $A_1^{(6)}$
$A_1^{(6)}$ TrN(M)Average =(245,269.5,269.5,245,122.5,343,392,269.5,122.5)
$A_1^{(6)}$ TrN(M) Max(Weight)=(0 0 0 0 0 0 1 0 0)= $B_1^{(6)t}$

$B_1^{(6)t}$ TrN(M)Average =(392,1960,2744,3528,1568.392,392,784,3528)
$B_1^{(6)t}$ TrN(M) Max(Weight)=(0 0 0 1 0 0 0 0 1)= $A_2^{(6)}$
$A_2^{(6)}$ TrN(M)Average =(17640,12348,26460,19404,10584,21168,31752,21168,17640)
$A_2^{(6)}$ TrN(M) Max(Weight)=(0 0 0 0 0 0 1 0 0) =$B_2^{(6)t}$

$B_1^{(6)t}=B_2^{(6)t}$
(Impure Triangular NRM)

STEP-7:

Attribute TrND7 is ON: $A^{(7)}$= (0 0 0 0 0 0 1 0 0)
$A^{(7)}$TrN(M)Weight =((1,1,1),(4,5,6),(6,7,8),(9,9,9),(3,4,5),(1,1,1),(1,1,1),(1,2,3),(9,9,9))
$A^{(7)}$TrN(M)Average =(1,5,7,9,4,1,1,2,9)
$A^{(7)}$TrN(M)Max(Weight)=(0 0 0 1 0 0 0 0 1)= $A_1^{(7)}$
$A_1^{(7)}$ TrN(M)Average =(405,283.5,607.5,445.5,243,486,729,486,405)
$A_1^{(7)}$ TrN(M) Max(Weight)=(0 0 0 0 0 0 1 0 0) = $B_1^{(7)t}$
$A^{(7)}= B_1^{(7)t}$
(Pure Triangular NRM)

STEP-8:

Attribute TrND8 is ON: $A^{(8)}$= (0 0 0 0 0 0 1 0 0)
$A^{(8)}$TrN(M)Weight =((9,9,9),(3,4,5),(3,4,5),(6,7,8),(5,6,7),(1,1,1),(1,1,1),(3,4,5),(4,5,6))
$A^{(8)}$TrN(M)Average =(9,4,4,7,6,1,1,4,5)
$A^{(8)}$TrN(M)Max(Weight)=(1 0 0 0 0 0 0 0 0)= $A_1^{(8)}$
$A_1^{(8)}$ TrN(M)Average =(405,162,324,486,81,324,81,729,324)

$A_1^{(8)}$ TrN(M) Max(Weight)=(0 0 0 0 0 0 0 1 0) = $B_1^{(8)t}$
$A^{(8)}= B_1^{(8)t}$
(Pure Triangular NRM)

STEP-9:

Attribute TrND9 is ON: $A^{(9)}$= (0 0 0 0 0 0 0 0 1)
$A^{(9)}$TrN(M)Weight =((3,4,5),(1,1,1),(3,4,5),(1,1,1,),(6,7,8),(1,2,3),(1,1,1),(9,9,9),(9,9,9))
$A^{(9)}$TrN(M)Average =(4,1,4,1,7,2,1,9,9)
$A^{(9)}$TrN(M)Max(Weight)=(0 0 0 0 0 0 0 1 1)= $A_1^{(9)}$
$A_1^{(9)}$ TrN(M)Average =(405,202.5,729,364.5,243,243,445.5,364.5,729)
$A_1^{(9)}$ TrN(M) Max(Weight)=(0 0 1 0 0 0 0 0 1)= $B_1^{(9)t}$
$B_1^{(9)t}$ TrN(M)Average =(2916,1093.5,3280.5,2551.5,4738.5,1093.5,729,6561,6561)
$B_1^{(9)t}$ TrN(M) Max(Weight)=(0 0 0 0 0 0 0 1 1)= $A_2^{(9)}$
$A_1^{(9)} = A_2^{(9)}$
(Impure Triangular NRM)

Weightage of the attributes

	TrNC1	TrNC2	TrNC3	TrNC4	TrNC5	TrNC6	TrNC7	TrNC8	TrNC9
100000000	**343**	**49**	**49**	**49**	**49**	**49**	**49**	**49**	**49**
010000000	**800.34**	**1257.67**	**2401**	**2286.67**	**1372**	**571.67**	**343**	**571.67**	**1943.67**
001000000	**2916**	**1093.5**	**3280.5**	**2551.5**	**4738.5**	**1093.5**	**729**	**6561**	**6561**
000100000	**1323**	**1176**	**2352**	**2352**	**2499**	**588**	**441**	**2940**	**3969**
000010000	**1**	**1**	**4**	**1**	**7**	**1**	**1**	**1**	**5**
000001000	**17640**	**12348**	**26460**	**19404**	**10584**	**21168**	**31752**	**21168**	**17640**
000000100	**405**	**283.5**	**607.5**	**445.5**	**243**	**486**	**729**	**486**	**405**
000000010	**405**	**162**	**324**	**486**	**81**	**324**	**81**	**729**	**324**
000000001	**2916**	**1093.5**	**3280.5**	**2551.5**	**4738.5**	**1093.5**	**729**	**6561**	**6561**
Total Weight	**26749.34**	**17463.17**	**38758.5**	**30127.17**	**24312**	**25374.67**	**34854**	**39066.67**	**37457.67**
Total average weight	**2972.14**	**1940.35**	**4306.5**	**3347.46**	**2701.33**	**2819.40**	**3872.66**	**4340.74**	**4161.96**

Conclusion:

We are concluding the new model Triangular Neutrosophic relational maps (TrNRM) as we have many advantages. In TrNcM we could find the ranking for attributes according to the individual experts but this new model TrNRM helps to find the ranking and relation between domain and range.In our case study we derived the ranking attributes are Lack of individual recognition, world looks colourless,We can apply this model in the field of social problems, biomedical, decision making problem, assignment problem. This is the fairness of Triangular Neutrosophic relational maps (TrNRM).

Advantages:

1. Here we don‘t get no affect value in linguistic table of the Triangular Neutrosophic relational maps as per diagonal elements will not be zero and gives accurate result.
2. Reducing obscurity

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