The Cause and Effect Relationship Study of the Police's Approval Rating Survey Tactics with DEMATEL Approach - A Case Study of Kaohsiung City Police Department

Tien-Chin Wang¹, Bi-Chao Lee¹, ², *

¹Department of International Business, National Kaohsiung University of Science and Technology, Kaohsiung, Taiwan
²Kaohsiung City Police Department, Kaohsiung, Taiwan

Email address:
tcwang@kuas.edu.tw (Tien-Chin Wang), 1103405113@gm.kuas.edu.tw (Bi-Chao Lee)
*Corresponding author

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Abstract: Since 2004, the National Police Agency, the Ministry of the interior, Taiwan, has been conducting the survey on citizens’ satisfaction with public safety. Every Police Department has been very concerned about this probe, and has exhausted all possible ways and tactics to raise people’s approval rate on the police. After many years’ efforts, pretty good results have been achieved. This paper uses DEMATEL as an evaluation method to understand the causal relationship between the criteria adopted in the polling and the polling results that have been achieved. First of all, the implementation tactics used by all precincts of the Kaohsiung City Police Department (KCPD) were classified into 3 criteria for promotion, 4 criteria for implementation, and 2 criteria for management, totaling 9 criteria that constituted 3 facets. Based on the Expert Survey Method (Delphi), questionnaires were handed out to officers who were responsible for the survey at all precincts of the KCPD to obtain their ideas, which were simplified into 2 criteria for promotion, 2 criteria for implementation, and 1 criterion for management, totaling 5 evaluation criteria. Then especially designed questionnaires based on the DEMATEL were used. Phone calls were made randomly to deputy directors of precincts, chiefs of administration, traffic and secretary sections, and 29 completed questionnaires were returned. A diagram of causal relationship was made through the calculation based on the DEMATEL. The analysis of the prominence, causal degree and arrow direction indicted that 2 criteria referred to as social media and PR activity which raised the prominence of the polling were important in elevating people’s approval rate on the police. These two criteria were “affected criteria”. Traffic safety, solving criminal cases, and improved serving attitude are criteria with lower correlation level but they are classified as causal criteria, which are the foundation of police work. The conclusion is that police departments should actually perform well in the “causing criteria”, and then use social media and PR activity to make the public aware of their good performance, which will effectively raise people’s satisfaction with the police performance.

Keywords: DEMATEL, Delphi, The Relation of Cause and Effect, Prominence

1. Introduction

Since 2004, the National Police Agency, the Ministry of the interior, Taiwan, has been conducting the survey on citizens’ satisfaction with public safety. Every Police Department has been very concerned about this probe, and has exhausted all possible ways and tactics to raise people’s approval rate on the police. After many years’ efforts, pretty good results have been achieved. The survey was based on the questionnaires designed by Mr. Yinglong Yo of Taiwanese Public Opinion Foundation, and was carried out by Shun-shui Focus Survey Research Company which was responsible for random telephone interviews. The survey was conducted on 17-18 April 2017. The survey was conducted on people who were over 20 years old throughout the country with 1,082 effective samples whose error margin was 5% and confidence level was 2.98%. A survey was carried out on 7 kinds of public servants’ approval rates, in which police were
given 74.1%, followed by tax officers 55.8%, military officers 55.6%, general administrative officials 44.4%, prosecutors 43.6%, investigation bureau officers 38.5% and judges 24.5% at the bottom.

1.1. The Tactics Adopted by the Precincts of the KCPD

The various precincts of the KCPD had done a lot to boost people’s satisfaction and, for that purpose, they had put forth implementation tactics. This paper collected the implementation tactics of various precincts and classified them into 3 criteria for promotion, 4 criteria for implementation, and 2 criteria for management, which constitute 3 facets and 9 criteria. (Table 1)

### Table 1. Table of Analyzed Tactics Adopted by all Precincts of the KCPD to Boost their Approval Ratings.

| Facets             | Criteria                               | Criteria contents                                                                 |
|--------------------|----------------------------------------|-----------------------------------------------------------------------------------|
| Promotion facet    | Social media                           | Facebook, line etc., micro-movies (U-Tube)                                      |
|                    | Conventional means                     | Promotion of police work by LED subtitles, enhancement of good deeds, crime prevention promotion in campus, survey promotion conducted with local involvement. organizing citizens’ tours of precincts, holding parents-children activities, policemen cycling at tourist destinations, mobile police stations, activities jointly held by the police and citizens, utilisation of community radio broadcast, and combining social charitable activities. |
|                    | PR activity                            |                                                                                  |
| Implementation facets | to protect the old, women, children traffic safety | project for the protection of children, project for the protection of the old, project for increased patrol and watch at midnight, project for making building safe, and project for household visits traffic safety promotion, traffic posts, crackdown on violation through persuasion, traffic accident prevention |
|                    | Crime prevention action                | police teams that quickly respond to crime scenes, patrol and watch at criminal hot spots |
|                    | Solving criminal cases                |                                                                                  |
|                    | Innovative police work                |                                                                                  |
| Management facet   | Improved serving attitude             |                                                                                  |

1.2. Selection Criteria by Delphi

This paper used DEMATEL (Decision Making Trial and Evaluation Laboratory) to explore the causal relationship between all criteria and the rise of approval ratings. Based on the opinions of some scholars on the number of criteria to be used, this DEMATEL adopted 4-7 criteria in principle. 9 criteria were too many and should be simplified. As a result, 2 criteria were used for promotion, 2 criteria were used for implementation and 1 criterion was used for management. In principle, there were 5 criteria totally. Using the DEMATEL, 20 questionnaires were handed out to officers whose rank was above the commissioned rank of the second grade, 20 questionnaires were handed out to officers whose rank was the commissioned rank of the third grade, and 10 questionnaires were handed out to officers whose rank was below the commissioned rank of the fourth grade. The questionnaires used Satty’s nine point scale as the following Table 2.

### Table 2. 9-point scale questionnaires.

| What is the score that you will give to the tactics called the promotion of police work through social media that is used to elevate people’s satisfaction with the police? |
|---------------------------------------------------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Note: The score ranges from 1-9. Each number is round. When the number is small, the satisfaction is low; while the number is big, the satisfaction is high.

The returned effective questionnaires: there were 13 questionnaires returned by officers with a rank above the commissioned rank of grade 2 with an overall response rate of 65%; 13 questionnaires were returned by officers with a commissioned rank of grade 3 with an overall response rate of 65%; and 6 questionnaires were returned by officers with a commissioned rank of grade 4 with an overall response rate of 60%. After being averaged, the average score of all facets’ criteria are as shown in table 3.

### Table 3. The table of the average score of all facets’ criteria given by experts.

| Facets             | Criteria                               | Average Score |
|--------------------|----------------------------------------|----------------|
| Promotion facet    | social media                           | 6.596          |
|                    | conventional means                     | 4.198          |
|                    | PR activity                            | 5.008          |
|                    | protection offered to the old, women, children | 5.044          |
|                    | traffic safety                         | 5.787          |
|                    | prevention against threats to public safety | 5.398          |
|                    | clearance rates of criminal cases      | 5.822          |
| Implementation facet | innovative police work                | 4.811          |
|                    | improved serving attitude              | 5.563          |

| Management facet   |                                                                 |                |
|--------------------|-----------------------------------------------------------------|----------------|
Based on the scores given by experts, the promotion facet adopts social media and PR activity criteria, implementation facet adopts traffic safety and clearance rates of criminal cases criteria, and the management facet adopts improved serving attitude criterion. Totally, there are 5 criteria used by this paper for analysis and the DEMETALE is used by this paper for study.

2. Study methods

2.1. The DEMATEL (Decision Making Trial and Evaluation Laboratory)

The DEMATEL method was built by the Geneva Research Centre of the Battelle Memorial Institute. It is especially practical and useful for visualizing the structure of complicated causal relationships with matrix or digraphs.[1] From 1972 to 1979, DEMATEL could be used to resolve complex and difficult problems globally, and had been widely used as one of the best tools to solve the cause and effect relationship of various evaluation factors. (Hsiang-Chuan Liu, et. al., 2016). [2]

It can effectively obtain the causal relationship between criteria and the influence intensity by matrix operation, and establish a similar Structure Equation Modeling (SEM) of Network Relationship Map (NRM) (Liou, et. al., 2008). [3] The DEMATEL is to combine expert knowledge to explore the causal correlation between variables. [4] It can transform the complex system criterion into a clear structure model and the relationship between the cause group and the result Group is analyzed (Hsiao-Ming Chen, et. al., 2016). [5] It can handle internal dependencies of multiple criteria (Hori & Shimizu, 1999). [6] It can find the relationship between criteria and dependency degree (Tamura, Akazawa, 2005). [7] The core DEMATEL method comprises five calculation steps: (1) define the scale; (2) build a direct-relation matrix; (3) calculate a normalized matrix; (4) calculate a direct/indirect relationship matrix T. (Hsieh, Yi-Fang. et. al. 2016) [8] (5) draw causal relationship chart and give an explanation.

2.2. DEMATEL’s Five Analysis Steps

2.2.1. Step 1. Define the Scale and Criteria

Criteria are established in an organizational system for evaluating objectives and defining their definitions. The criteria organized can be formed through discussing, reviewing, brainstorming or questionnaires, etc.

2.2.2. Step 2. to Build a Direct-Relation Matrix X

Experts generating the direct-relation matrix create sets of the pairwise comparisons in terms of influence and direction between criteria. The initial data can be obtained as the direct-relation matrix that is a \( n \times n \) matrix \( X \), in which \( x_{ij} \) is denoted as the degree to which the criterion \( i \) affects the criterion \( j \). Assuming that there are 3 criteria to be evaluated, it can establish a direct-relationship matrix

2.2.3. Step 3. Calculate a Normalized Matrix D

The direct-relation matrix is normalized according to [step 2]. In vector D, the principle of the entire matrix \( x \) is multiplied by \( s \), and the formula is shown below.

2.2.4. Step4. to Calculate a Direct/Indirect Relationship Matrix T

After normalizing direct-relation Matrix D, the direct/indirect relationship matrix \( T \) is calculated, and the formula is:

2.2.5. Step 5. Draw Causal Relationship Chart and Explain

The \( \{x_{ij}\}_{n \times n} \) is the criteria in \( T \), and the sum of each row and the sum of each column are expressed in \( r_i \) and \( c_j \) respectively, deriving the following formula:

The sum of rows is \( R = r_{n \times 1} = \sum_{i=1}^{n} x_{ij} \)

The sum of columns is \( C = c_{1 \times n} = \sum_{i=1}^{n} x_{ij} \)

\( r_i \) : The sum of the other criterion that is influenced (including direct and indirect effects) by criterion i.

\( c_j \) : The sum of the affected other criterion is the result of criterion j.

| Measuring scale | influence levels | Measuring symbol | Influence direction |
|-----------------|-----------------|------------------|---------------------|
| 0               | no influence    | +                | Positive influence  |
| 1               | low influence   | −                | Negative influence  |
| 2               | some influence  |                  |                     |
| 3               | high influence  |                  |                     |
The sum of rows and the sum of columns are separately denoted as vector D and vector R in the following equations. The horizontal axis vector \((D + R)\) named “Prominence” is made by adding D to R, which reveals how much importance the criterion has. Similarly, the vertical axis \((D - R)\) named “Relation” is made by subtracting D from R, which may group criteria into a cause group. Or, if the \((D - R)\) is negative, the criterion is grouped into the effect group. Therefore, the causal diagram can be acquired by mapping the dataset of the \((D + R, D - R)\), providing valuable insight for making decisions. (Ching-Lan Tsai, 2015) [11]

### Table 5. Explanation of the criteria used to elevate the approval ratings given to police departments.

| Facets            | Criteria                  | Criteria contents                                                                                                                                 |
|-------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Promotion facet   | Social media              | Face book, line etc., micro-movies (U-TUBE)                                                                                                      |
| PR activity       | Traffic safety            | organizing citizens’ tours of precincts, holding parents-children activities, policemen cycling at tourist destinations, mobile police stations, activities jointly held by the police and citizens, traffic safety promotion, traffic posts, crackdown on violation through persuasion, and traffic accident prevention |
| Implementation facet | Solving criminal cases | to increase the clearance rate of serious crime such as theft and drug offences, to innovate police work and to do things beneficial to the public |
| Management facet  | Improving serving attitude | to make phone calls to ensure safety, to randomly make phone calls to police departments to see if police answer the calls politely, to send out greeting cards to the public to maintain contact |

![Diagram of tactics evaluation criterion.](image-url)

#### 3.2. Questionnaire Design and Probe

##### 3.2.1. Questionnaire Design

Performance evaluation is a decision-making issue of multiple criteria. It is hoped that this research can find critical criteria that can elevate people’s satisfaction in polling which can be aided by experienced officers who are in charge of surveys in their police departments and offer their professional judgment and experience. As a result, it can ascertain the causal relationship between criteria. This research uses DEMATRL to measure the relationship between criteria and adopts the comparison scale that is divided into four levels: 0 (no influence), 1 (low influence), 2 (influence), and 3 (high influence). A positive number has a positive influence and a negative number has a negative influence. In the beginning of the survey, the callers who conduct the survey will tell the person surveyed about the means used to determine the comparison scale. In order to meet the spirit of a genuinely professional polling, the surveyed people have an education above a two year college with a police rank above a commissioned rank of grade 2 who is a deputy director, a chief of the administrative or inspector sections and a chief secretary of the secretary office with over 16 years of seniority. Based on the criteria, questions are asked to determine their influence degree and direction. (Table 6)

![Diagram of tactics evaluation criterion.](image-url)

##### Table 6. The influence of the criteria used in the questionnaire.

| Criteria          | PR activity(B) | Traffic safety(C) | Clearance of criminal cases(D) | Improved serving attitude(E) |
|-------------------|----------------|-------------------|-------------------------------|-----------------------------|
| Social media(A)   | 0 (no influence) | 1 (low influence) | 2 (some influence)            | 3 (high influence)          |

**Table 6.** The influence of the criteria used in the questionnaire.

| Criteria          | PR activity(B) | Traffic safety(C) | Clearance of criminal cases(D) | Improved serving attitude(E) |
|-------------------|----------------|-------------------|-------------------------------|-----------------------------|
| Social media(A)   | 0 (no influence) | 1 (low influence) | 2 (some influence)            | 3 (high influence)          |

**Table 6.** The influence of the criteria used in the questionnaire.

1. The way the questionnaire is conducted: This research uses random phone calls to conduct the polling through
questionnaires transmitted by fax.

2. The time used to conduct the polling: 29 questionnaires were sent out on 29-30 November 2017.

3. The officers who responded to the questionnaires: The deputy directors, the chiefs of the administrative and inspector sections and the chief secretaries of the secretary offices of all precincts of the KCPA, who were in charge of conducting pollings with at least a 2-year college degree and 16 years of seniority, were asked questions in the questionnaire.

4. The number of questionnaires issued: This research totally issued 29 questionnaires (see index 1), and they were all effective (see Table 7). (Li-Hsing Hooa, et al. 2012). [12]

Table 7. Basic personal information of the respondents to the questionnaire.

| Sex       | Male | Female |
|-----------|------|--------|
| Education level | 2-year college | University |
| Age       | 36-45 years old | 46-55 years old |
| Seniority | 10-15 years | 16-20 Years |
| Position  | 7 deputy directors, 22 chiefs and chief secretaries, totally 29 respondents |

3.3. Data Processing and Analysis

According to the above-mentioned research framework and calculation steps of the DEMATEL, the criteria of the 29 returned effective questionnaires were calculated and the calculation steps are explained as follows:

3.3.1. Step 2: Build a Direct-Relation Matrix X

29 effective questionnaires (H1~H29) have their criteria’s direct-relation matrix (X1~X29) displayed as follows: (Table 8)

\[
X = \begin{bmatrix}
0 & 1.6897 & 1.6207 & 1.3448 & 1.5172 \\
1.5172 & 0 & 1.2069 & 0.9655 & 1.1724 \\
1.5172 & 1.2759 & 0 & 0.48 & 1.1034 \\
1.6897 & 0.8621 & 0.4138 & 0 & 0.9310 \\
1.5862 & 1.5172 & 0.9310 & 0.7241 & 0
\end{bmatrix}
\]

3.3.2. Step 3: Calculate a Normalized Matrix D

X \times S to build the normalized direct-relation matrix (D) as Table 9.

\[ S = \frac{1}{\text{the maximum of rows}(6.1724)} \]

Table 8. The direct-relation matrix X.

| Criteria | A     | B     | C     | D     | E     | S=     |
|----------|-------|-------|-------|-------|-------|-------|
| A        | 0.0000| 1.6897| 1.6207| 1.3448| 1.5172| 6.1724|
| B        | 1.4483| 0.0000| 1.2069| 0.9655| 1.1724| 4.7931|
| C        | 1.5172| 1.2759| 0.0000| 0.4828| 1.1034| 4.3793|
| D        | 1.6897| 0.8621| 0.4138| 0.0000| 0.9310| 3.8966|
| E        | 1.5862| 1.5172| 0.9310| 0.7241| 0.0000| 4.7586|

A: Social media; B: PR activity; C: Traffic safety; D: Clearance of criminal cases; E: Improved serving attitude

Table 9. The normalized direct-relation matrix (D).

| Criteria | A     | B     | C     | D     | E     |
|----------|-------|-------|-------|-------|-------|
| A        | 0.0000| 0.2737| 0.2626| 0.2179| 0.2458|
| B        | 0.2346| 0.0000| 0.1955| 0.1564| 0.1889|
| C        | 0.2548| 0.2067| 0.0000| 0.0782| 0.1788|
| D        | 0.2737| 0.1397| 0.0670| 0.0000| 0.1508|
| E        | 0.2570| 0.2458| 0.1508| 0.1173| 0.0000|

A: Social media; B: PR activity; C: Traffic safety; D: Clearance of criminal cases; E: Improved serving attitude

3.3.3. Step 4: Calculate a Direct/Indirect Relationship Matrix T

\[
T = \frac{D}{1 - D} = [t_{ij}]_{n \times n}, i, j = 1,2,\ldots,n, (T = D \times (I - D)^{-1})
\]

Build a unit matrix as table 10, calculate the I-D value as table 11, and obtain T as table 12.

Table 10. I means unit matrix.

| Criteria | A     | B     | C     | D     | E     |
|----------|-------|-------|-------|-------|-------|
| A        | 1     | 0     | 0     | 0     | 0     |
| B        | 0     | 1     | 0     | 0     | 0     |
| C        | 0     | 0     | 1     | 0     | 0     |
| D        | 0     | 0     | 0     | 1     | 0     |
| E        | 0     | 0     | 0     | 0     | 1     |

A: Social media; B: PR activity; C: Traffic safety; D: Clearance of criminal cases; E: Improved serving attitude

Table 11. I-D value.

| Criteria | A     | B     | C     | D     | E     |
|----------|-------|-------|-------|-------|-------|
| A        | 1.0000| -0.2737| -0.2626| -0.2179| -0.2458|
| B        | -0.2346| 1.0000| -0.1955| -0.1564| -0.1899|
| C        | -0.2458| -0.2067| 1.0000| -0.0782| -0.1788|
| D        | -0.2737| -0.1397| -0.0670| 1.0000| -0.1508|
| E        | -0.2570| -0.2458| -0.1508| -0.1173| 1.0000|

A: Social media; B: PR activity; C: Traffic safety; D: Clearance of criminal cases; E: Improved serving attitude

Table 12. The total-relation matrix (T).

| Criteria | A     | B     | C     | D     | E     | Avg. |
|----------|-------|-------|-------|-------|-------|------|
| A        | 0.9250| 1.0554| 0.9067| 0.7670| 0.9514| 0.7588|
| B        | 0.9487| 0.6909| 0.7390| 0.6205| 0.7801|      |
| C        | 0.9099| 0.8249| 0.5473| 0.5348| 0.7376|      |
| D        | 0.8663| 0.7154| 0.5629| 0.4226| 0.6640|      |
| E        | 0.9668| 0.8952| 0.7141| 0.5972| 0.6254|      |

A: Social media; B: PR activity; C: Traffic safety; D: Clearance of criminal cases; E: Improved serving attitude

3.3.4. Step 5: Draw Causal Relationship Chart and Give an Explanation

In order to present prominent causal relationships, scholars tend to set a threshold to control the numerical value that can affect the total influence of T Matrix. They delete the numerical value that is below the threshold and replace it with “0”, that presents a more prominent causal relationships (influence direction), in which the threshold is set by using the quartile deviation (Chih-Hsien Fan, et. al., 2009). [13] That affects the total relationship matrix, expert decision
making (Gwo-Tsuen Jou, et. al. 2014) [14], or that is the arithmetical average number (Ching-Lan Tsai, 2015). [11] The matrix average that takes the mean and standard deviation (Chunguang Bai, Joseph Sarkis, 2013) [15], in which the numbers that are below the standard value are deleted from the matrix (liker Goluck, Adil Bavkasoglu 2016)[4]. This research’s threshold is based on arithmetical average numbers whose value is 0.7588, by which the virtual simplified matrix is obtain as table 13. To add together all rows and columns of the virtual simplified matrix T, which is taken from the total influence relation matrix, it will be able to obtain the total sum of all columns (value R) and the total sum of all rows (value C).

Calculate the value of \((r+c)\) as table 14. Based on the numerical value on table 13, use \((r+c)\) as the horizontal axis \(x\) and \((r-c)\) as the vertical axis \(y\), select matrix 5’s criteria preserved numerical value and draw arrow symbols and influence directions on the coordinate according to its figures, which maybe either one-way influence or two-way influence as shown in (Figure 2).

4. Analysis

A system designer evaluates the relationship between sets of paired screens in terms of frequency and direction of mutual movements. \(r+c\) represents the prominence. A high correlated relationship among criteria indicates that it is important in the process of elevating approval ratings. The \(r+c\) value of social media and PR activity criteria is higher than the average \(r+c\) value 4.4880, indicating that those two criteria have more influence on the polling prominence than other criteria. Traffic safety, criminal case clearance and improved serving attitude criteria are on the left hand side of

| Table 13. Virtual simplified matrix T. |
|----------------------------------------|
| A | B      | C | D | E     |
|---|--------|---|---|-------|
| A | 0.9250 | 1.0554 | 0.9067 | 0.767 | 0.9514 |
| B | 0.9487 | 0     | 0 | 0 | 0.7801 |
| C | 0.9099 | 0.8249 | 0 | 0 | 0 |
| D | 0.8663 | 0     | 0 | 0.4226 | 0 |
| E | 0.9668 | 0.8952 | 0 | 0 | 0 |

A: online community; B: Do the activities to close the People; C: traffic safety; D: Detected criminal cases; E: Improve the attitude of the service

| Table 14. The degree of prominence and net cause/effect of barriers for experts. |
|---------------------------------|
| R     | C     | \(r+c\) | \(r-c\) |
| A     | 4.6055 | 4.6167 | 9.2222 | -0.0112 |
| B     | 1.7288 | 2.7755 | 4.5043 | -1.0467 |
| C     | 1.7348 | 0.9067 | 2.6415 | 0.8281 |
| D     | 1.2889 | 1.1896 | 2.4785 | 0.0993 |
| E     | 1.8620 | 1.7315 | 3.5935 | 0.1305 |
| Avg.  | 4.4880 | 4.4880 | |

A: online community; B: Do the activities to close the People; C: traffic safety; D: Detected criminal cases; E: Improve the attitude of the service

Figure 2. Overall DEMATEL prominence-causal relationship diagram.
the average value, indicating that their influence on the polling prominence is smaller.

If the r-c is the degree of causal relationship and it is negative, the effect in the causal relationship shifts towards net effects. This type of criteria tends to be influenced by other critypes of criteria. Any attempt to boost or elevate the polling prominence must focus on the origins that influence those criteria. If social media and PR activity criteria are negative, they are influenced by other three criteria. If r-c is positive, this type of criteria is net causes, which is the cause in the causal relationship. As to the elevation of the polling result, this type of criteria has more room to be adjusted and traffic safety, criminal case clearance and improved serving attitude criteria belong to this type of criteria.

5. Conclusion

Based on the analysis derived from the above-mentioned information, which ones of the 5 criteria used to elevate polling results should be chosen or dumped in order to understand the core evaluation value? High criteria prominence indicates that it is important in the process of elevating polling results, and these criteria must be given more consideration, so it should do more on social media and PR activity criteria.

In addition, based on causal degree r-c, it may conclude that among those five criteria, social media and PR activity criteria belong to the affected criteria and they are respectively influenced by traffic safety, criminal case clearance and improved serving attitude criteria. Those three criteria have lower prominence in raising polling results, but they are tactics that belong to net causes. This means that these three tactics act as the foundation for the promotion of the preceding two tactics. However, it should be concluded that only when the foundation is well laid, the promotion effect can be achieved and a good polling result can be obtained.

Besides doing analysis through prominence and causal degrees, the arrows in the causal diagram also contain important management ideas. From the causal diagram of the five criteria, it finds the effect resulting from the interaction between social media criterion and other criteria. Criminal case clearance criterion has a one-way impact on PR activity criterion and may increase the topics and items of organized activities. PR activity criterion and improved serving attitude criterion may also interact with each other. Social media criterion and criminal case clearance criterion may have an impact on themselves.

To sum up the prominence, causal degrees, and arrow directions in the causal diagram, it would like to say that social media and PR activity criteria are important influence factors in raising the prominence of polling results. However, these two criteria belong to the affected criteria. Traffic safety, criminal case clearance and improved serving attitude tactics are three caused effects. These three tactics serve as the foundation of police work. Police departments should practically lay the foundation well and then use social media and PR activity tactics to make the public aware of their good performance. That will be the best way to elevate people’s satisfaction with police work.

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