

# Inner Fingerprint Check Criminal Action Investigation

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**Abstract.** This research is based on dactyloscopy at the crime scene and can be used as a clue for investigators in uncovering a criminal offense. This study aims to describe the function of dactyloscopy in the criminal investigation process and describe the dactyloscopy requirements to be evidence in the criminal investigation process. This type of research is normative law, and the approach method is normative juridical. The data technique collection is literature study and analysis of primary and secondary legal materials. This study indicates that fingerprints determine the perpetrators of crime, and fingerprints can be evidence of letters if proven by powder, brush, evaporation with sodium, and silver nitrate.

**Keywords:** Fingerprint, Investigation, Criminal Action

## 1 Introduction

In the investigation process, finding the truth of all events caused by human actions is complex and not easy because in an event, there is often a shortage, and incompleteness of evidence and witnesses, so investigators have to work harder in collecting evidence. - valid evidence to obtain the complete truth in investigating or investigating an actual criminal act in preparation for examination before a court session.

Knowledge and understanding of investigations need to be stated with certainty and clarity because they directly offend and limit human rights.[1] Sections of the criminal procedure law relating to investigations are as follows: 1. Provisions regarding investigative tools, 2. Provisions regarding the occurrence of offenses being discovered, 3. Investigation of the scene, 4. Summoning of suspects or defendants, 5. Temporary detention, 6. Search, 7. Examination or interrogation, 8. Minutes (search, interrogation, and on-site inspection), 9. Confiscation, 10. Set aside, 11. Delegation of cases to the public prosecutor and their return to investigators for completion.

The investigation is not only to find the suspect but can also be used to find a series of criminal acts that occurred and find the evidence.[2] Evidence can be in witness statements, expert statements, letters, instructions, and statements from the defendant. Legal evidence to prove the suspect/accused guilty or innocent material truth. For law enforcement officers, whether police, prosecutors, or judges, it will be easy to prove the material truth if the witness can show evidence of the guilt of the suspect/defendant who committed the crime and the suspect/defendant acknowledges the evidence for committing the crime.

However, it will be difficult to prove the material truth if the witness cannot show evidence of a criminal act committed by the suspect/defendant. In proving the material truth of the guilt and innocence of the suspect/defendant, it can be done by utilizing scientific evidence based on the expertise of the scientific discipline known as forensics. Forensic evidence in all developed countries has developed. It is used as the primary legal evidence for the judge's conviction, even though the suspect/defendant is silent or silent or does not admit his actions.

The investigation process will be carried out through several processes, one of which is fingerprinting. Fingerprints, called fingerprints or dactyloscopy, are taken during the investigation process to examine further the evidence left at the Case Crime Place. The function and role of fingerprints are essential for an investigator in uncovering a crime. Therefore, fingerprints play a significant role in identifying victims and revealing someone suspected of committing a crime. Often criminals leave traces in the form of fingerprints at the crime scene. To help reveal the crime, investigators use fingerprints as one way to help make light of a crime that has occurred because fingerprints can be used to identify criminals.[3]

Fingerprints are indentations caused by parallel lines high on the skin, which come together to form a pattern at the center of the fingertip. These raised lines, known as friction joints, are also found on the palms of the hands and the soles of the feet. The fingerprint is a genetic structure in the form of a very detailed framework and signs attached to humans that cannot be erased or changed and are unique, where no one has the same type of fingerprint as anyone else, judging by the fingerprint pattern. Fingerprints found at the scene of a crime will appear in 3 different forms, namely those that are visible, those that are form, and those that are latent. Regarding the role of fingerprints as evidence in finding the truth in a crime, it can be a certificate made by an expert who can be qualified as documentary evidence.

## **2 Research Methods**

The research method used is normative legal research, also called doctrinal legal research. In this study, the law is often conceptualized as what is written in legislation (law in a book) or as a rule or norm that is a benchmark for community behavior towards what is considered appropriate—library research, namely research that uses secondary data. The source of the data is obtained through a document search.[4]

A normative juridical approach is an approach that examines the law as a rule that is considered under normative juridical research or written legal research. The normative juridical approach is carried out by examining the law and theoretical matters concerning legal principles, legal history, legal comparisons, and the level of synchronization concerning the issues to be discussed.

The research data sources used in this paper are secondary and primary legal materials. Secondary data is data obtained by researchers from existing sources. Secondary data includes textbooks, legal dictionaries, journals, theses, and other materials. In writing this thesis proposal using the method of collecting literature study data by analyzing the topic of the problem that the researcher wants to study, the data in the literature study is sourced from notes, books, the internet, journals, and other materials.

After obtaining the data, the next stage continues by analyzing the data obtained from primary and secondary legal materials and discussing the problem. Data obtained from research results using qualitative descriptive data analysis, namely by describing the data collected in the provisions that apply to what is happening in the field systematically, which is then obtained an

understanding of understanding or conclusions as a whole which is described so that an understanding is obtained. And understanding.

### **3 Results and Discussion**

#### **3.1 Fingerprint Function in Criminal Investigation Process**

Fingerprints are the reproduction of the footprints, whether intentionally taken or stamped with ink, or the marks left on objects because they have been touched or touched with the friction skin of the hands or feet. Then the skin of the palms is the skin on the palms of the hands from the base of the wrist to the tips of all the fingers, and the skin on the soles of the feet, from the heels to all the tips of the fingers, where there are fine lines that protrude from each other, separated from each other by gaps or grooves and form certain paintings.

The skin of the palms consists of two layers namely; first, the Dermal Layer is the inner layer of skin or the actual skin because this layer determines the shape of the lines on the surface of the skin of the palms. The scars will be permanent if the dermal layer is injured or deformed. Permanent. Second, the Epidermal Layer is the outer skin layer where fine lines protrude, also called papial lines. Paintings formed by papillary lines can determine the basic shape, formulation, and examination of fingerprint comparisons.[5]

Wounds or defects in this layer are only temporary because the arrangement of the lines will return to normal after healing. Papillary lines strengthen the grip so that objects held by the tick can slip easily. Papillary lines are also found in animals such as apes and birds, but their shape is not similar to that of humans. Fingerprints are divided into 3 major groups, namely ARCH is the main form of fingerprints where all the lines come from one painting, flow or tend to flow to the other side of the painting except for the Tented Arch, which will be explained further. 5% of all fingerprints consist of arch shapes. Arch fingerprints are classified into two, namely plain arch and tented arch; LOOP is the main form of fingerprinting where one or more lines come from one side of the painting, which is drawn between the delta and the core and stops or tends to return to the side of the original data. 60-65% of all fingerprints consist of loops.

Loop fingerprints are classified into two: unlar loop and radial loop; WHORL (Circle) is a basic fingerprint form with at least two deltas. With one delta curved or circular in front of both deltas. 30-35% of all fingerprints consist of a whorl shape. Arch fingerprints are classified into several types, namely plain whorl, central pocket loop whorl (middle pocket), double loop whorl (twin hooks), and accidental (unique painting).

The fingerprint method has recently been able to run according to its function, namely to find and determine the perpetrators of criminal acts.[6] The function of fingerprint identification in determining the perpetrator of a crime must be per the evidence found at the crime scene. There are three postulates or axioms underlie dactyloscopy (the science of fingerprints). First, people's fingerprints are not the same. Second, people's fingerprints will not change in a lifetime. Third, fingerprints can be classified and formulated mathematically.

The evaluation of the evidence-based on the Criminal Procedure Code (KUHAP) Article 188 paragraph (2) is based on 3 (three) criteria, namely: 1. Witness testimony; 2. Letters; and 3. The defendant's statement. Fingerprints as evidence can be obtained from the three criteria mentioned above and coupled with expert testimony as one source of the presence of fingerprints to provide information on the fingerprint evidence to determine the perpetrators of the crime.

Fingerprints are used during the investigation process after the police have investigated to find out the truth of a criminal incident.[7] An investigation is a series of investigators' actions

to seek and find an event suspected of being a criminal act to determine whether or not an investigation can be carried out according to the method regulated in this law Article 1 point 5 of the Criminal Procedure Code.

After the investigation process is carried out, the police conduct investigations into criminal cases. The investigation is a series of actions by investigators in terms of and according to the method regulated in this law to seek and collect evidence with which evidence clarifies the crime that occurred and finds the suspect. Investigators carry out the investigation process as regulated in Article 6 of the Criminal Procedure Code, namely State Police Officers of the Republic of Indonesia, certain Civil Service Officers who are given special powers by law. The requirements for the rank of officials are regulated in the Decree of the Minister of Defense/Agency dated June 13, 1974, Number Kep/13/17/VI/1974, among other things, that investigations must be carried out by 1.

Investigators held by state police officials with at least Assistant Lieutenant Two; 2. Assistant investigators who state police officials hold with Sergeant Two to Sergeant Major and members of the special police are appointed by the Chief of the National Police at the suggestion of the Commander or Head of Civil Service or Government Agencies. Special police are officials and certain civil service agencies given special police authority by law.

Based on the explanation above, the fingerprint identification process can only be carried out by authorized legal officials (police) in the field of the identification unit of the criminal investigation unit. In identifying fingerprints in criminal acts, for example, in a murder case, an investigator in the identification department is carried out if the victim and the perpetrator are unknown or their identities are still unclear, or their identities are known. If the victim or perpetrator whose identity is known to be fingerprinted is taken as a complete data file which will later be included in the Minutes of Investigation as an archive in the police.

The perpetrator's identity is not known, then fingerprint identification is carried out to find out the identity of the victim or perpetrator with various comparisons accompanied by other evidence. The comparison material in question is the latent fingerprints found at the crime scene with the suspect's fingerprints based on witness statements and archives at the police. Latent prints are traces containing sweat and or fat that are accidentally left by the skin of the palms (Friction Skin) on surfaces or objects left at the scene. These scars generally appear faint or even not visible at all, so to make them appear, specific methods are needed.[8]

The identities of the perpetrators and victims whose fingerprints are not yet known are carried out to find out their identities with some comparison materials and other evidence. The evidence usually the basis for taking fingerprints of people suspected of being perpetrators is information from witnesses. Therefore investigators must be active in seeking and collecting as many witness statements as possible. Fingerprint identification investigators must take people's fingerprints at the crime scene so that there is no mistake in identifying the unknown perpetrator. Investigators are required to reveal triangular evidence at the crime scene, namely victims, perpetrators, and crime tools.

Suppose the perpetrator's identity is still unclear, and the investigation team finds fingerprints left by the perpetrator at the crime scene. In that case, the investigator will cooperate with the fingerprint identification team to reveal the perpetrator based on the fingerprints at the crime scene. Those who are suspected cannot refuse to have their fingerprints taken based on the investigator's authority, which is according to Article 7 of the Criminal Procedure Code (KUHAP). This is because fingerprints play an essential role in uncovering criminal cases and are the primary tool. After all, the data are valid.

The following is an example of a murder case revealed through fingerprints, quoted through detiknews.com, whose news was titled footprints and fingerprints that evaporated the

sadistic murder of Eno. The joint criminal investigation team uncovered the sadistic murder case of Eno Fariah (18), a factory employee who was executed at the Jatimulya mess, Dadap, Kosambi, Tangerang. In just 1x24 hours, the police managed to arrest 3 perpetrators. The detective team identified the fingerprints of the perpetrators who were still missing with additional evidence in the form of witness statements, totaling 22 people, from which the police managed to arrest the three suspects.

Based on the results of the crime scene and examination of witnesses, the joint criminal investigation team from the Directorate of Criminal Investigation at the Metro Jaya Police, the Tangerang City Police, and the Teluknaga Police, then assisted by the Criminal Investigation Unit of the Police, was able to arrest the perpetrators on Saturday. The three suspects killed Eno in the early hours of Friday at around 00.15 WIB; earlier on Thursday, the victim had met one of the suspects, Imam.

Head of Sub-Directorate of Resmob Ditreskrim Polda Metro Jaya Kompol Handik Zusen revealed evidence that served as clues to the police in uncovering the case. One of them is from footprints used to step on blood at the crime scene. The footprints were everywhere because the victim bled a lot when he was killed using a hoe. The perpetrators also left fingerprints everywhere, among them on the handle of the hoe used to kill and on the fork. Even though the fork brought by the suspect Imam had been washed, it still left bloodstains and fingerprints.

The presence of footprints at the crime scene is one of the very distinctive traces it has suspect Imam. Meanwhile, the traces of the other suspects were found on the victim's cellphone, which was confiscated, which was then sold. From these facts, a joint team from the Resmob Sub-Directorate, the Jatanras Sub-Directorate of the Metro Jaya Police, the Tangerang Police, and the Teluknaga Police then investigated that information on the profiles of the suspects was obtained. Police arrested the three suspects on Sunday at 02.00 WIB. The police confiscated evidence of the clothes used during the murder, forks, the victim's cellphone, and others from the suspects.

Based on the case above, fingerprint identification of victims of the crime of murder is generally a means to identify or identify, record, and process victims for further legal proceedings. Suppose the identity of the victim is not known. In that case, the fingerprint identification process is carried out to determine the victim's identity to be reported to the victim's family for a post-mortem or autopsy so that the following legal process can proceed. Meanwhile, for victims whose identities have been identified, fingerprinting serves to complete the official report and assist in clarifying the identity of the victim.

Using fingerprint identification can find out who the perpetrators of the crime of murder are. Still, if no witnesses are found as additional evidence, the identification investigator looks for comparative material in police archives regarding Indonesian population data whose fingerprints are in police data. This proof is very accurate. Expert evidence (doctors who identify fingerprints) is a piece of very scientifically accurate evidence. In addition, to avoid falsification of data in the form of letters. Based on article 184, paragraph (1) and paragraph (2) of the Criminal Procedure Code states that: (1) valid evidence is: (a) witness testimony; (b) Expert testimony; (c) Letters; (d) Instructions; (e) The defendant's statement, and (2) Things that are generally known do not need to be proven.

Investigations using fingerprint aids are familiar to the police. Still, in practice, fingerprint identification is ruled out because the police prioritize examining witnesses and suspects. Sometimes the police use discretion to pressure suspects into admitting their actions. If investigators understand the benefits of fingerprints, then fingerprint identification will not be ruled out. Investigators apply fingerprints because fingerprints will become the judge's belief in

the trial process as evidence for expert testimony as regulated in Article 184 of the Criminal Procedure Code. Science investigation is carried out in the investigation process to assist investigators in uncovering a crime. Science investigation is carried out by an expert or someone who has special knowledge. Later in the trial process will become an expert statement as stated in Article 184 of the Criminal Procedure Code. It should also be noted that the Science investigation will be used as evidence in the trial if the judge is convinced.

When compared to investigations that used fingerprints with investigations that did not use fingerprints, it was seen that the cases that were revealed were 33%, while the cases that were not revealed were also quite a lot, namely 67%. It can be seen that homicide investigators who do not use fingerprinting aids revealed with unrevealed cases are more effective at using the dactyloscopy technique.

That it is known that the role of fingerprints (dactyloscopy) in uncovering a criminal case, especially murder, has a considerable function of helping investigators facilitate the investigation process and determine the bright spot of a criminal act and find out who the suspect is. However, police investigators must have more knowledge about fingerprints to be used as a provision for them to facilitate the investigation process. It is also known that comparing the suspect's fingerprints with the fingerprints found at the case scene must have eleven equality points. If there are eleven points of similarity, it belongs to the suspect.

### **3.2 Fingerprint Requirements to Become Evidence in the Criminal Investigation Process**

Fingerprints are genetic structures in the form of very detailed skeletons and marks inherent in humans that cannot be erased or changed. Fingerprints are like human barcodes, which indicate that no one is the same person. Fingerprint research has been done in the past.

Research on fingerprint identification has developed into a scientific discipline called dermatoglyphics, which studies the pattern of skin strokes (fingerprints) on the palms of the hands, hands, and feet. Dermatoglyphics comes from "derm," meaning skin, and "glyph," meaning carving.[9] The linkage of scientists researching fingerprints is due to the human fingerprint pattern having the following unique characteristics:

First, fingerprints are specific to each person. No fingerprint pattern is identical between one individual and another, even in identical twins. The probability of having the same fingerprint pattern is 1:64,000,000,000, so it is almost impossible to find the same fingerprint pattern between two people. The fingerprint pattern on the thumb will differ from the fingerprint pattern on the index, middle, ring, and little fingers.

Second, fingerprints are permanent and never change throughout life. A person's fingerprint pattern is permanent from birth to adulthood until the end of life. This is different from other body parts that are constantly changing. For example, the shape of the face changes with age. Fingerprint patterns will not change whether a person is fat or thin, healthy or sick, and in any emotional state.

Third, fingerprint patterns are relatively easy to classify. Although fingerprints are specific, their shape is not random. In fingerprints, some patterns can be classified so that it is easy to do for various purposes, such as measurement. Based on the unique structure of fingerprints, fingerprints can be classified.

This latest crime rate shows an increasing graph, especially theft, rape, murder, etc. So that the investigators, especially the police, are required to be able to reveal every criminal act that occurs. Therefore, officers from the criminal investigations try as early as possible to search for, collect evidence, and then conclude clearly about the occurrence of a crime, either through human characteristics, human photos, fingerprints, or seeing the perpetrators' modus operandi of the crime. In this case, the investigator must first examine the scene of the case because this

place usually found evidence that can support the further investigation process, such as fingerprints.

In searching for someone's fingerprints at the scene of a crime, officers must wear gloves or handkerchiefs when handling objects so that they do not leave their fingerprints on the object. In practice, the search for fingerprints is carried out at the place the suspect entered, damaged objects, and objects that were moved or held by the suspect or perpetrator because this is where the possibility of the fingerprint of the perpetrator of the crime is found. Usually, the fingerprints of the perpetrators of the crime are found at the entrance, objects held or moved that are damaged due to the crime; therefore, the search for fingerprints is more focused on these objects. The minimum equipment used: a. Fingerprint powder (fader); b. Paintbrush; c. Lifting tape; d. Scissor; e. pinch; f. Lights or flashlights; g. Magnifying glass; h. Camera (fingerprint camera) and film.

After the fingerprint is found, the officer must ensure the location of the latent fingerprint on the surface to be developed and removed or transferred into the lifter in the following manner: a. By using a flashlight from a certain angle, latent fingerprints on the surface of objects are clear; b. By bringing the officer's head closer to the object's surface and looking at it from various angles; c. They were blowing the object's surface to provide moisture that allows latent fingerprints to be seen.

After giving the powder, the fingerprints should be photographed before being transferred to the lifter. In contrast, objects suspected of having latent fingerprints can be removed and brought to the office for further processing. Latent fingerprints found at the crime scene can be developed either by powder or chemicals.

Papillary lines (friction ridges) are fine lines that form on the skin and form fingerprints. On the papillary lines, some pores are constantly sweating. Hands and fingers generally touch other body parts, such as the face and hair, constantly releasing fat. And this fat can be called sebaceous fat which is on the papillary lines. When the hand or finger touches something, a stain containing sweat or fat from the papillary lines is left on the object, and a latent print is created.

Latent prints are traces containing sweat or fat that are accidentally left by the friction skin on the surface or object at the scene. These prints generally appear sketchy or not visible, so specific development methods are needed to make them visible. The marks included in this definition are the marks left by the fingers, palms, soles of the feet, and toes.

Search for latent prints at the scene using a slanted flashlight on the surface. When the light is shone from the right direction, the latent print remaining on the surface will be visible. In some cases, lower palm prints may be found when the glove slides up from the suspect's hand. There are no binding provisions regarding where latent print searches should be performed at the scene. However, at the very least, attention must be paid to places or objects that the suspect may have touched or held.

To be able to prove that a fingerprint is an evidence in the process of investigating a crime, the fingerprint must be able to ensure that the fingerprint can prove the perpetrator of a crime, namely in a way that can be done using the development of the powder method, the appointment of a latent print (lifting), the use of ultra-violet powder, evaporation with iodine, and the silver nitrate method.[3]

These methods can prove that the fingerprints found at the crime scene are identical to the perpetrator's fingerprints.[10] Thus, fingerprints can be one of the pieces of evidence as stipulated in Article 184 of the Criminal Procedure Code, namely, documentary evidence that can explain that the suspect or perpetrator committed the crime. So the fingerprints found at the crime scene are identical to the fingerprints stored in the police database. Thus, investigators can conclude that fingerprints can be used as evidence in uncovering criminal acts.

In addition, there is also a tool called MAMBIS (Mobile Automated Multi Biometric Identification System). This device resembles a credit card machine with a scanner on it and can identify unknown body data through fingerprints or the retina of the eye. In addition, MAMBIS has been integrated with the government's e-KTP database. For every fingerprint placed in the MAMBIS scanner area, the identity data of the murder or disaster victim will be issued according to the latest e-KTP data record.



**Fig.1.** MAMBIS (Mobile Automated Multi Biometric Identification System)

As for other identity disclosure methods, the MAMBIS tool can also scan the retinas of the eyes of unknown bodies or criminals so that their data can be identified quickly. However, this is done if the eye tissue of the victim has not been damaged. Retina and fingerprint recordings are processed quickly through unique access to the Population Administration database of the Indonesian Ministry of Home Affairs. Although no data was found from the latest e-KTP, the personal data in question can also be traced from the previous KTP data. So in just a few seconds, personal data such as full name, address and face immediately appear according to the e-KTP recording. In addition, if the victim's fingers have also been damaged, the steps taken by the INAFIS unit of the police to reveal the identity of the unidentified body are through a DNA test.

#### **4 Conclusion**

The fingerprint method has recently been able to run according to its function, namely to find and determine the perpetrators of criminal acts. The function of fingerprint identification in determining the perpetrator of a crime must be following the evidence found at the crime scene. There are three postulates or axioms underlie dactyloscopy (the science of fingerprints). First, people's fingerprints are not the same. Second, people's fingerprints will not change in a lifetime, and third, fingerprints can be classified and formulated mathematically. Suppose the perpetrator's identity is still unclear, and the investigation team finds fingerprints left by the perpetrator at the crime scene. In that case, the investigator will cooperate with the fingerprint identification team to reveal the perpetrator based on the fingerprints at the crime scene.

To prove that fingerprints are evidence in the criminal investigation process, they must be processed using the powder method development, latent print removal (lifting), the use of ultra-violet powder, evaporation with iodine, and the silver nitrate method. These methods can prove that the fingerprints found at the crime scene are identical to the perpetrator's fingerprints. Thus, investigators can conclude that fingerprints can be evidence in uncovering criminal acts.

It needs to be further developed utilizing the government to further improve the existing facilities in the police. One of them is that the government can seek to procure more complete and modern identification tools to follow the existing technological processes to facilitate the

investigation process. So that the police in charge of the identification section feel helped, it helps the police have experts in the field of dactyloscopy. With this, it is hoped to use fingerprint science to minimize obstacles if there is a crime.

There needs to be socialization between the community and various law enforcers. So that in the process of disclosing criminal acts, it can be accurately and quickly revealed and help make it easier for the police to uncover a crime.

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