

## Understanding factors determining successful policy implementation in Indonesian context: an explanation from Critical Realist perspective

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### Abstract

*This paper started from the observation that in the Indonesian context, many of regulative policies are partially or totally not implemented. To understand the reality of policy implementation, the paper started with investigating the paradigmatic foundation of existing policy implementation research literature. It highlighted paradigmatic problems of positivism that led to the low explanation power of implementation research. The paper turned its attention to a new potential paradigm: critical realism. It emphasized the important distinction between basic research and applied research with retroduction and retrodiction as its major inference method respectively. It also concluded that the relatively large distance of theory-reality in the context of developing countries makes the theorem of contingent duality of discovery and application not hold. Empirical case study research, based on critical realism, was then carried out mainly using a qualitative approach on the implementation of industrial technology policy as promulgated in the Law No 3/2014. Following the retrodictive approach of critical realism, the research then utilized a conceptual framework from the existing literature. The research found that in the implementation attempts of the Law No 3/2014, there were indeed a number of problems. Particularly, commitments of high-rank policy makers and necessary capacities are lacking.*

**Keywords:** *policy implementation; determinant factors; theory-reality distance; critical realism; retroduction; retrodiction*

## 1. INTRODUCTION

Implementation consists of two stages: planning and start-up/fine-tuning (Schneider, 1982). The planning stage is where the agency and procedures or implementation mechanisms are planned until the completion of the establishment of the agency and procedures. The start-up/fine-tuning stage is the actual implementation stage where the agencies and procedures that were formed in the previous stages began to be applied. The delay in implementation, in this paper, is understood both as a slow process of planning and a delay in the start-up/fine-tuning stage.

This paper is a case study of the implementation of regulatory policies on industrial technology development contained in Law No 3/2014 concerning Industry. Recent developments in industrial policy show an increase in government attention to technology development and industrial innovation. Industrial technology and innovation are important things that need to be continuously developed as part of efforts to strengthen Indonesia's industrial structure. In Law No. 3/2014 concerning Industry, the government has shown a commitment to encourage technological development and innovation in the industry. Thus, science and technology has become an integral part of industrial development strategies.

Industrial technology development policies in the Law No. 3/2014 include four articles that mandate the creation of derivative policies in the form of Government Regulation (GR), Presidential Regulation (PR) and Ministerial Regulation (MR):

- (1) Article 38 mandates the establishment of a Ministerial Regulation (MR) concerning the procurement of Industrial Technology;
- (2) Article 39 mandates the establishment of a Presidential Regulation (PR) concerning the procurement of industrial technology through a turnkey project and a regulation governing the procedure for imposing administrative sanctions;
- (3) Article 40 mandates a Government Regulation (GR) concerning risk guarantee for the utilization of industrial technology; and
- (4) Article 41 mandates a Ministerial Regulation (MR) concerning industrial technology audits.

Currently, the government has been unable to finalize any of the above regulations. Therefore, research on how the reality of implementing technology policies in the Industrial Law needs to be carried out in order to bring into light the determining factors that impede the implementation.

The objective of the paper is to understand the reality of policy implementation by first investigating the paradigmatic foundation of existing policy implementation research literature. The investigation highlights paradigmatic problems of positivism that led to the low explanation power of implementation research. The paper turns its attention to a new potential paradigm: critical realism. This new paradigm emphasizes the important distinction between basic research and applied research with retrodiction and retrodiction as its major inference method. Critical realism also concludes that the relatively large distance between theory and reality in the context of developing countries, makes the theorem of contingent duality of discovery and application does not hold. Empirical case study research based on critical realism was then carried out, mainly using a qualitative approach, on the implementation of industrial technology policy promulgated in the Law No 3/2014.

## 2. PARADIGMATIC PROBLEM OF POLICY IMPLEMENTATION RESEARCH AND CRITICAL REALISM AS AN ALTERNATIVE PARADIGM

Since its early development in late 1970s, policy implementation research has been based on positivistic paradigm. Only in later development, some researchers proposed to take interpretative-constructivism as an alternative paradigm to further implementation research development. In the following, it will be shown that despite of this development, the implementation research has not been well-developed. It is suggested that critical realism may be a better alternative paradigm.

### *Stagnation of Policy Implementation Research*

The field of policy implementation research is perceived as not well developed. Hupe (2014, p. 167) cites a number of quotes from policy implementation researchers that indicate a stagnation in the field of implementation research:

'(Complex, without much cumulation or convergence (...)); '(y)et to reach conceptual clarity'; 'misery research';

'an intellectual dead end'; 'we know surprisingly little'; 'No general implementation theory has emerged (...). The implementation sub-discipline has been characterized by many different approaches representing different research strategies, evaluation standards, methodologies, concepts, and focal areas for research'. (...) 'The highly fragmented character of implementation research is not very conducive to theory accumulation'.

The study conducted by Saetren (2014) was in line with the statements above. A decade earlier, Saetren (2005) had conducted a comprehensive review of the literature and concluded that policy implementation research had developed rapidly and was in good condition: "... to be alive and well developed further into the 21st century in quantitative terms". In contrast to the general view at that time, which tended to view implementation research as not well developed, Saetren proved that quantitatively policy research had developed rapidly.

A decade later, Saetren (2014) reviewed 547 articles in leading journals in the fields of political science, public administration and public policy, and arrived at three conclusions: (1) policy implementation research has reached the mature stage. The maturity of this research field is based on the practice of implementation research that has shifted from an inductive method to a deductive method of hypothesis testing (Saetren, 2014:100) and known as a positivistic measures;(2) more progress made on aspects of methodology rather than aspects of theory where Saetren agrees with Winter that a general implementation theory is utopia (Winter, 2012: 265); and (3) implementation research has developed rapidly during the first two generations (around the 1970s and 1980s), but during the 1990s the development of research has slowed down and is incremental in nature.

Saetren (2014) concluded that this slowdown is caused by two things. First, third generation research sets a high scientific standard (according to the positivism perspective) in the form of rigorous research design (Goggin et.al, 1990) with the deductive method of hypothesis testing. In practice this standard is difficult for researchers to practice. Second, there is inherently duality in implementation research that is not easily reconciled: for example, between qualitative and quantitative as well as between single and comparative case studies. The ideal is that implementation research combines quantitative and qualitative methods. But in reality it is still very difficult to practice (Saetren, 2014: 92) who found that researchers in Europe were more likely to use qualitative methods, while researchers in America are very good at using quantitative methods with a variety of analytical techniques. In American journal articles, many implementation studies have been found using ANOVA as their analytical technique.

In the same tone, Pülzl and Treib (2007:102-103) concluded that there are at least three factors that have led to underdevelopment of policy research in general. First, policy research has not shown the cumulative knowledge, caused by the conflict between bottom-up and top-down approaches that has been reconciled, even though synthesis efforts have been carried out since the early 1990s. This statement is in accordance with Saetren (2014), as stated above. Second, the theoretical model put forward by researchers in the first, second and third generations consists of many explanatory variables. However, there is no agreement on, which variables are most important under different conditions.. Third, most implementation research is based on the ontology and epistemology of positivism, which ignores the important role of discourse, symbols and cultural patterns.

The three problems raised by Pülzl and Treib (2007) have been concluded by previous researchers. Firstly, with regard to the conflict between top-down and bottom-up, Fox (1990: 200) asserts that problems need to be resolved on an ontological and epistemological level: "The dispute between top-downers, bottom-uppers and synthesizers may be [a] better deeper dispute over the nature of knowledge and being [epistemology and ontology] ". Barret (2004) proposed to use structuration theory, developed by Antony Giddens, where top-down theory emphasizes power and bottom-up views emphasize negotiation and seen as a dialectic between structure and agency. The structure or rules of the game determine power relations in the implementation process, but because the structure is also a social construction, the structure can be changed by actors or agents through their interaction. Guy Peters (2014) proposed the concept of implementation structure as an institution (rule and resources) in reviewing policy implementation. Danil Kipo (2013) also proposed agency-structure analysis in policy implementation.

The second problem is that there is no agreement on which variables are most important under different conditions, is caused by the effect of variable-oriented positivism. Positivism understands causality as human causality represented by correlations between variables. Thus, positivism is a paradigm that is variable oriented, not process oriented. deLeon (1999, p. 323) quotes Ingram (xxx) as stating that

implementation research is too variable oriented: "The principal distinguishing feature of implementation analysis was the overarching concerns with policies that have consequences [variables] rather than structures or processes."

Public administration researchers such as Margaret Stout (2012), by reviewing human relations theory from Mary Parker Follet, have also shown that process-oriented ontologies are a more appropriate ontology for administrative research. In organizational theory, process-oriented ontologies have also begun to attract the attention of many researchers (Langley & Tsoukas. 2010). As will be shown later, these are in line with critical realism. Critical realism, with stratified ontologies and non-Humean causality<sup>1</sup>, strongly emphasizes the importance of uncovering the processes or mechanisms that cause events. For critical realism, what researchers must be concerned with are processes and relationships between entities, not variables.

The third problem, about the need to overcome the weaknesses of positivism, has also been voiced by several policy implementation researchers. Fox (1990) through his writing entitled "Why and How to Transcend Positive Methodology" has also explained that logical positivism/empiricism (LP/E), which underlies policy implementation research, contains many weaknesses and then suggested policy implementation research should be complemented with an interpretative approach. deLeon (1999, p. 327) also suggests turning to post-positivism: "One does not have to go to epistemological extremes to appreciate and incorporate a post-positivist orientation to policy implementation." Alternatively, Mesaros and Balfour (1993) proposed critical realism combined with hermeneutics as a unifying paradigm for public administration research.

It can be concluded that the problem that causes stagnation of policy implementation research is the problem of ontology and epistemology. To enhance our understanding of implementation, Pülzl and Treib (2007: 103) concluded: implementation researchers need to learn from interpretive and constructivist approaches: "There is much to be learned from interpretive and constructive approaches, which argue that policy contents and objectives as well as implementation problems often cannot be interpreted on an objective basis". Second, to reduce the complexity of a implementation model, implementation researchers should take a contingency approach as proposed by Alexander (1985), Yanow (1990) and deLeon and deLeon (2002). In this approach, several factors such as the institutional nature of the implementation structure, policy types and specific cultural factors are seen as a framework of conditions that determine the implementation process and what sort of factors determine the success of implementation.

#### *Critical realism as an alternative paradigm*

Responding to the debate between positivism and constructivism, or between realism and anti-realism, some researchers are looking for a middle ground: critical realism. The founder of this paradigm is Roy Bhaskar. In his book 'The Possibility of Naturalism'; (1998), Bhaskar discusses the debate between naturalism and anti-naturalism. Naturalism is the belief that social research should be undertaken in the same way as natural science research. To discuss this debate, Bhaskar began with the question: "In order to allow the existence of social science as a science, what social reality must be like?" In other words, Bhaskar began a discussion of realism and anti-realism by departing from social ontology, not from epistemology. According to Bhaskar (1998), social reality must be something that is structured and has regularity of behaviour. If it does not have the nature of order, it is not possible to have social science. This order comes from the existence of a mechanism that causes the social reality. Thus, according to the understanding of critical realism, behind every social reality there are social structures and social mechanisms that cause the realization of a social reality.

Critical realism does not perceive order as a social law that applies regularly whenever and wherever (Covering Law), but this order comes from the existence of a social mechanism. The causal relationship is not in the form of "If A then B", because the existence of A does not necessarily cause B, if nothing triggers the mechanism that causes B. For example, the existence of an explosive grenade does not automatically cause an explosion if there is no mechanism that trigger the explosion. It is said that a grenade has the potential to explode, but for the grenade to explode a mechanism is needed (Danermark et.al, 2002); in this case the mechanism is pulling the grenade's trigger. Thus, social law cannot be said to be like natural law, social law can only be said as a tendency (Sayer, 2000).

The task of social science is to examine social reality to find social mechanisms and social structures

that give birth to this phenomenon. Although critical realism is based on realism as is positivism, but unlike positivism that adheres to naive realism, the realism embraced by critical realism is transcendental realism which believes that reality also consists of things that cannot be observed. Therefore, critical realism acknowledges the subjectivity of researchers in understanding reality. In this case, critical realism agrees with constructivism that the knowledge generated from research is influenced by the background knowledge of the researcher. The knowledge produced cannot be separated from the subjectivity of the researcher. However, critical realism disagrees with constructivist about relativism. Even though the knowledge produced is subjective, critical realism believes that there are ways to assess and evaluate the truth of that knowledge. In other words, unlike constructivism which recognizes judgmental relativity, critical realism believes in judgmental rationality. With this perspective, critical realism is not trapped in the relativism.

With regard to the structure of reality, critical realism believes that reality is stratified into three domains: empirical, actual and real (Bhaskar, 2008[1975]) as shown in the Figure 1. The domain empirical is part of the social reality that we experience empirically. Domain actual is part of the reality that we experience and/or which we do not experience. While the domain real is part of the reality in which lies the structure and mechanism that produces reality on the domain factual and empirical.

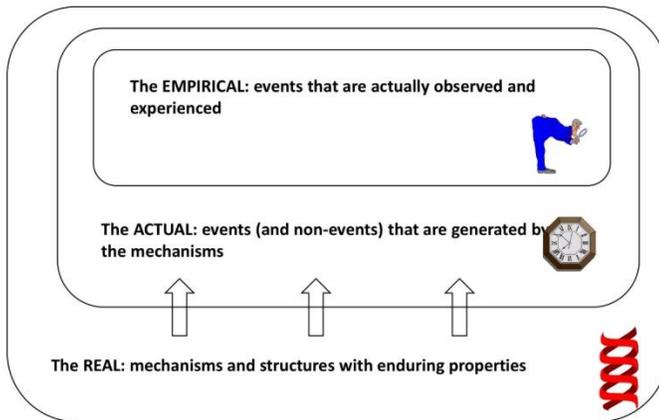


Figure 1. Three domains of Reality. Source: Mingers (2014)

From the critical realist point of view, positivism and constructivism conflate the domain empirical with domain actual and real. They conflate ontology into epistemology (ontological conflation), and hence they conduct an epistemic fallacy. The epistemological error in question is conflating different domains (empirical and real) in one domain: positivism seeks an explanation of the empirical domain of reality in the domain empirical only, while the explanation can only be found in the domain real.

The ontological belief in the existence of domain real beyond domain empirical leads critical realism to use retrodution as an inference method that are different from deduction or induction. According to critical realism, deductive and inductive methods are only concerned with the empirical domain, whereas the causes of social phenomena are in the real domain than can only be retroduted.

Based on the discussion above, critical realism comes to three main principles which are also often called the holy trinity of critical realism:

- (1) Objective ontology which is realism recognizing the reality out there to be studied which does not depend on our knowledge;
- (2) Relative epistemology, because our knowledge of reality is mediated by our knowledge, cognitive and experience background and can be wrong; and
- (3) Judgmental rationality: from a number of knowledge of realities, we are able to determine which is the most correct knowledge that represents reality, because basically reality is singular. So critical realism strongly disagrees with the notion of relativism in poststructuralism and postmodernism.

Now, we will able to see that matters that have led to the stagnation of policy implementation research as suggested by Pülzl and Treib (2007) and also Saetren (2014) can be overcome by the critical realism paradigm.

- (1) Conflict between top-down (structure) and bottom-up (agency). Offered solution: Critical realism has a tool for analyzing the interaction between structure and agency without having to contradict between the two.
- (2) Explanatory variables that are too many without the clarity of which variables are most important in what conditions. Offered solution: Critical realism is process-oriented in explaining causality, so it becomes clear how a variable plays a role in a particular context
- (3) Research implementation is based on the ontology and epistemology of positivism which ignores the important role of discourse, symbols and cultural patterns. Offered solution: Critical realism, which is a synthesis of positivism and constructivism, recognizes the role of and provides an analysis space for things that are ideational (discourse, symbols and cultural patterns)
- (4) Quantitative vs. Qualitative Contradictions. Offered solution: Critical Realism can combine quantitative and qualitative methods on a strong epistemological foundation
- (5) Case studies or comparative studies. Offered solution: Critical Realism can combine these two approaches on a strong epistemological foundation

#### *Retroduction and retrodiction as a major inference method*

Most researchers must have known the method of induction and deduction, but not many researchers know the method of retroduction and retrodiction which are inference methods that are often used in critical realist research. Retroduction and retrodiction are in fact adopted by social researchers in general even though they do not call it retroduction or retrodiction (McAvoy and Butler, 2018). Retroduction is the process of constructing hypotheses about causal mechanisms that cause events. According to Mingers (2014: 94) in retroduction "we take some unexplained hypothetical mechanisms and propositions that, if they existed, would cause or which is to be explained.". Or in other words, retroduction is an inference method where events are explained by submitting hypotheses about the mechanism that caused it.

Thus, retroduction is only needed if the observations cannot be explained by existing theories, and therefore there is a need to construct a (new) theory, which if this theory is true, then observations can be explained. According to Fleetwood and Hesketh (2013: 825 of 1193) "We are engaged in retroduction when we are relatively ignorant about mechanisms in operation that are causing the phenomenon under investigation.". Retroduction does not start from zero, but is built by utilizing related theories that already exist, so it is not a-theoretical: it always starts from the existing theory. Fleetwood calls retroduction a scientific imagination that is done not without a knowledge base, but is done using existing knowledge in the form of theory, observation or other knowledge. Often this knowledge comes from other disciplines.

If retroduction is only needed in situations when there is no theory that can explain the phenomenon, what if the theory is available? Is retroduction still needed? Because theory is a generalization in the domain real, it can be applied to a variety of different empirical situations that has similar characteristics. If it is believed that there is a theory that can explain the phenomenon of concern, then it is not necessary to do the retroduction. In this case, researchers can use existing theories that are produced from retroduction by previous researchers. This situation applies to the theory or model of implementation. Various implementation models have been retroduced from previous researches and therefore there are enough models (theories) about the process of implementing the policy. In a situation like this, to understand a reality of policy implementation, a researcher can use existing models.

The inference method that can be used is the retrodiction method. Retrodiction is an attempt to find out what happened in the past. Based on the available knowledge and/or previous experience in other places, we often know enough about what mechanisms are supposed to cause a phenomenon that we are studying, and therefore we do not need to do scientific imagination: retroduction (Fleetwood, 2005). In situations like this, we can use theory, observation, claims and other existing knowledge to retrodict; namely making claims about how the mechanisms mentioned in all sources of knowledge causing the phenomena we examine.

The method of retroduction and retrodiction can be seen as two interrelated methods: retroduction produces a model of mechanism and retrodiction analyzing how these mechanisms interact causing phenomena. If retroduction is understood as an inference method to produce a theoretical explanation by building a model or theory which is then tested empirically, retrodiction can be understood as a method to produce practical explanations by analyzing how the mechanism (that was retroduced by previous research) can explain the observed phenomenon by tracing back (retrodiction) how those mechanisms might operate

to produce the observed phenomena. Basically these two methods are often used by many researchers even though it is not stated that what they do is retrodution and retrodiction (McAvoy and Butler, 2018). A number of researchers also conducted both methods simultaneously and called it a retroductive method (Carlsson, 2003).

*Important distinction between basic research and applied research*

Bhaskar (2014) distinguishes explicitly two types of scientific explanations related to two different types of research. First, basic research is an attempt to find a theoretical explanation. Basic research is especially needed when knowledge or theory about phenomena is not yet, partially or fully, available. Second, applied research seeks to find applicative explanations using existing theoretical frameworks. Applied research always departs from the theory that has been developed previously. The two types of research use different inference methods: basic research uses the retrodution method, applied research uses the retrodiction method.

In line with what Bhaskar (2014), Fleetwood and Hesketh (2013) who carried out research in the field of human resource management, concluded that basic research and applied research use different inference methods. In the view of Fleetwood and Hesketh, we need to look for a theoretical explanation when we do not know enough about the mechanism that causes the phenomenon of concern. Theoretical explanation is obtained by retroduting causal mechanisms that most likely cause phenomena and test them empirically. Meanwhile when we know enough about the existing theories and knowledge about causal mechanisms that have the potential to cause phenomena, what we need is to find an applicative explanation by retrodicting empirically how these mechanisms play a role in causing phenomena.

Even though Bhaskar (2014) links basic research with discovery and applied research with application and argues that these two types of research often take place simultaneously, and are often difficult to distinguish analytically. Consequently, in social research there is a contingent duality theorem linking discovery and application, and therefore retrodution coincides with retrodiction. This is what causes research to always be creative: even if the applicative explanations are sought, it will always have the potential to discover new knowledge.

However, in the context of developing countries, the contingent duality theorem of discovery and application needs to be treated cautiously. That applied research also has the potential to find theoretical knowledge is very much determined by the proximity of the distance between theory and reality that is presented by the theory (the theory-reality distance). In the context of developed countries, what happens in the world of reality is close to theory. In fact, theory is conceptualized from the reality. Therefore, the theory-reality distance is relatively small. While in the context of developing countries, oftentimes reality is still far from theory: the theory-reality distance is quite large.

In the context of developing countries, the large theory-reality distance has minimized the chances of finding new theories from the results of empirical research. In that context applicative empirical research only produces knowledge about reality and knowledge about how to improve the state of reality by using the existing theoretical framework without any theoretical contribution to the existing body of theories. Theory more often functions as an analytical tool to improve the situation, because indeed reality is still far from the theory and therefore demands improvement of the situation as suggested by the theory.

Therefore, in the context of developing countries, generally the research that needs to be done is applied research that produces systematic knowledge of reality from one or more theoretical perspectives, and then produces knowledge about how to improve the situation. Often, the knowledge generated cannot suggest new knowledge that can contribute to improve existing theory. This being the case in the context of developing countries, the lack of new knowledge can be understood if most of the research are applied and do not provide much theoretical contribution to existing theories.

This might explain why in international journals, in the field of public administration, very few articles from developing countries contribute to theoretical understanding. Most theories come from developed countries (Welch and Wong, 1998: 42) "... these theoretical models are little informed by non-Western experiences and are thus poorly applicable to non-Western theorists and practitioners."

### 3. METHODOLOGICAL IMPLICATIONS OF CRITICAL REALISM

The main purpose of critical realism research is to look for an explanation of how phenomena occur by looking for structures and mechanisms that can conclusively explain the phenomenon. Ackroyd and Karlsson (2014) emphasize that in general, the purpose of critical realism research is to synthesize data and ideas (theories) into explanations of social processes and mechanisms that cause phenomena of concern. For critical realism researchers, the function of the research method is basically to link the world of ideas with phenomena in the empirical world to arrive at the explanation of why the phenomenon is as we observe.

Wynn et al. (2012) propose five methodological principles that can be referred to by researchers in conducting research with critical realism paradigms (Figure 2): (i) Exploration of events from phenomena of concern; (ii) Explanation of structure and context; (iii) Retrodution/Retrodiction; (iv) Empirical confirmation; and (v) Triangulation/ multi-methodology.

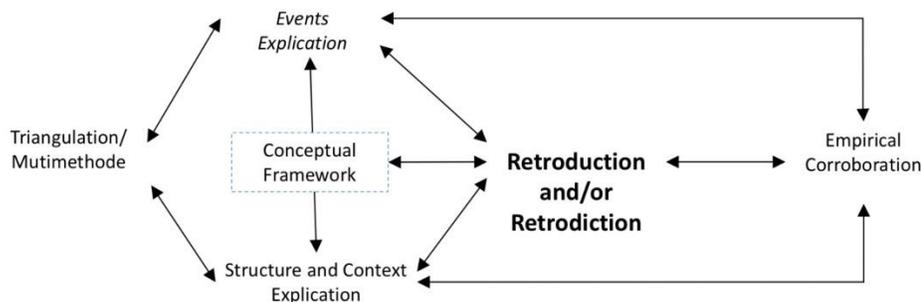


Figure 2. Methodological Principles of Critical Realism; adapted from Wynn et.al (2012)

- (1) Explanation of events (Abduction): as a basis for causal analysis, this principle emphasizes the need to identify in detail the various aspects of the event that are of concern to the study, usually through abstraction of observed events. The abstract of the event can be done by describing the details of the event to get an idea of high level factors, by reinterpreting the structural elements and causal factors, or by framing events with existing theoretical lenses. This process is a retrodution process of inference. The purpose of explication is to look for the order and patterns found in the series of events of concern. Detailed explanations are very important to be able to obtain an overview of the elements of social or physical structure, agency and contextual environment that are relevant to the occurrence of events. The description of the event includes the actions and consequences caused and related structural elements. The chronological sequence of events is an indication of the chain of causality that caused the event. So, detailed descriptions are sources for identifying structural elements and the context and mechanisms that cause events.
- (2) Explanation of structure and context. After getting a detailed description, the next methodological principle is to explain the structure and context relevant to the event. Structures can include social, physical, artefact or symbolic entities (Fleetwood, 2005). As things that exist in the real domain, as with mechanisms, entities cannot be directly observed. But it can be seen by looking at the impact it has on the empirical domain. Thus, our knowledge of entities is a transitive dimension mediated by experience, values, social structures and existing theories. To be able to identify the causes of events, structures need to be described as actors, rules and relations between actors. In this effort, which is accompanied by the method of retrodution or retrodiction, researchers can use a conceptual framework constructed from the knowledge and theory in the literature.
- (3) Retrodution and Retrodiction as explained previously.
- (4) Empirical corroboration. After retrodution produces a structure and mechanism hypothesis, then empirical confirmation is carried out. By looking at detailed empirical data, it is analyzed to confirm whether the hypothesis about structure and mechanism can adequately explain empirical reality.
- (5) Triangulation/multi-methodology. The triangulation principle emphasizes the importance of using various approaches and data sources in supporting causal analysis. Based on the epistemological principle of mediated knowledge, the invisibility of the mechanism and the diversity of mechanisms, researchers need to examine phenomena from a variety of perspectives to reduce perceptual limitations. Triangulation

can be in the form of triangulation of data sources, theories and methods. It can also be in the form of researcher triangulation, meaning that some researchers triangulated their views on the object of research.

#### 4. CONCEPTUAL FRAMEWORK TO RETRODICT THE REALITY OF IMPLEMENTATION: THE 5C MODEL

Briefly, by way of demonstration, the following sections attempt to show how the explanation of failure (or success) of implementation can be sought through retrodiction. As discussed before, understanding of reality can be retrodicted using conceptual framework that was retroduced by previous researches. For this purpose, this empirical research utilizes a model of policy implementation from previous researches: the 5C models of Najam (1995).

After conducting a review of the policy implementation literature and identifying 31 researchers from the first to the third generation, Najam (1995) concluded that there are five factors or aspects which many researchers concluded as key factors that influenced the success or failure of implementation. The five factors are Content, Capacity, Commitment, Context and Clients & Coalitions. First, to understand the implementation process, policy content needs to be understood: what policy objectives to achieve, how the policy defines the problem and what causal theories are contained in the policy, as well as what method the policy wants to solve the problem. Second, commitment from the implementer is also an important factor: the extent to which the implementer is committed to policy objectives, the causal theory contained in the policies and methods of achieving policy objectives. Third factor that will greatly influence the implementation process is the administrative capacity of the organization of the implementer.

The fourth factor that needs to be considered is the organizational and institutional context that surrounds the implementer organization. This context functions as a boundary or corridor that limits the implementer. In an effort to implement, the implementer will be faced with limited authority and resources. Finally, the policy response from clients and coalitions will greatly influence the implementation process. It concerns with what is done by clients and coalitions whose interests are hampered or fostered by policies. Responses by client and coalitions will affect the implementation process.

#### 5. RESULTS AND DISCUSSION

Using the 5C model and retrodiction method through interviews and focus group discussion the empirical research lead to the facts that the implementation failure can be attributed to the problems in each 'C' of the 5C model.

##### *Institutional context*

Regarding institutional context, sectoral ego amongst government organizations play significant role in impeding implementation. Almost all the informants stated that each institution has its own sectoral ego that inhibits the implementation of Law No. 3/2014. This was seen during the discussion process in formulating regulations derived from that Law, which involved many relevant stakeholders, but it was difficult to reach an agreement among them. For example, between the Ministry of Industry and the Ministry of Finance, which often experience a deadlock in discussing the financial design of the national industrial development program. At present, Law No. 3 /2014 is considered only 'owned' of the Ministry of Industry, not the interests of other institutions nationally.

The institutional context is also related to how institutions such as the Ministry of Law and Human Rights and the State Secretariat tend to make regulations that are simple and not causing an additional burden on their daily tasks and functions.

In a broader context, industrial society does not view Law No. 3/2014 as an Act that will result in an improvement in the industrial performance and environment. For example, according to one of the informants from the provincial Chamber of Commerce, the central Chamber of Commerce asked the provincial Chamber of Commerce and Industry to discuss the Draft Law on Industry. Then the provincial Chamber of Commerce gathered all members consisting of entrepreneurs. However, in the meeting, most of the members were not interested in discussing the thick draft law put forward to them. There is a perception that the law is usually too general without a clear direction of implementation. A number of normative matters which actually do not need to be contained in the law are contained in the draft law. This led to a perception among industry players that the draft law was not a matter of Chamber of Commerce. The focus of

the board and members of provincial Chamber of Commerce is how to work to maintain the business. In the end, the meeting in provincial Chamber of Commerce, which was originally scheduled to discuss the Industrial Bill, did not discuss the bill at all.

Likewise, industrial policy is perceived as not too 'influential' for industry and entrepreneurs. The entrepreneurs need more implementable programs that can eliminate the problems they are facing. One industrial informant pointed out that to bring in foreign workers related to factory installation activities that use equipment from abroad, the process is very long so that it hampers the project commencement and results in financial losses. Though the foreign workers do not intend to work on the project, but only install the equipment they sell, they have to go through a long process.

#### *Weak coalition*

The implementation process that require the involvement of a number of ministries face the challenge of coalition forming. Interdependency amongst a number of ministries in achieving policy goals has created the problems of communication and coordination that in turn may inhibit the formation of policy coalition. As an example, on the one hand there is the interest of the Ministry of Industry that believes that turnkey projects should be funded by the Government, but on the other hand the Ministry of Finance is very careful in issuing Government funds and tends to minimize Government expenditure. Likewise, in the matter of technology audit, the Agency for the Assessment and Application of Technology (BPPT) has a different perspective and interests from the Ministry of Industry.

At present, the coalition is still difficult to form by the Ministry of Industry and other agencies. Law No 3/2014 is still seen as belonging to only the Ministry of Industry because during the formation of the law other related government organizations did not involve in its development. This problem becomes increasingly complex particularly in the situation where what is desired by the Ministry of Industry turns out to reduce the authority of other organizations.

#### *High commitment that gradually slackens*

Since the enactment of the Industrial Law in early 2014, the Ministry of Industry has been working hard to complete the preparation of derivative regulations in the form of government regulation, presidential regulation and ministerial regulation that are mandated by the Act. Throughout 2014, under the leadership of the Secretary General, a number of work units are assigned the responsibility for settling regulations in accordance with their respective fields. The Legal Bureau has the responsibility to coordinate the preparation of derivative regulations from the Law. The hard work to complete the derivative regulation was illustrated by the instruction of the Secretary General at that time so that the Legal Bureau staff allocated three working days a week to coordinate the completion of derivative regulations. To support the activities, a considerable amount of the budget was allocated in the budget document of the Legal Bureau and related Work Units.

Thus it can be said that the commitment to implement Law No. 3/2014 in the first year is very high. But unfortunately, over time and changes in officials, the commitment to implement Law No. 3/2014 which was originally very high became somewhat slack. The commitments that are not as high as initially were also reflected in the reduction of the budget for the preparation of the regulatory framework, or when there was a reduction in the ministerial budget, the budget for the preparation of the regulatory framework will be the first priority to be cut.

#### *Capacity that needs to be improved*

Related to the development of industrial technology, one of the Agencies under the Ministry of Industry, namely the Agency for the Assessment of Policy, Climate and Industrial Quality (BPKIMI) has the responsibility for drafting a regulatory framework which later became the task of one of the Research Centers: Research Center for Industrial Technology and Intellectual Property (the TIKI Research Center). The TIKI Research Center allocated substantial activity funds throughout 2014-2015. The assigned team at the TIKI Research Center consisted of echelon III and IV who hold structural officials and senior functional officials.

The formation of a team like this has implications for the level of team capacity that still needs to be improved to carry out the task of policy analysis. The task of analysis requires adequate substantive knowledge and adequate policy analysis capabilities. Both of these are not shared by team members. Although substantive knowledge can be obtained from experts, the team still needs time to digest and understand it. Meanwhile, most team members still have to carry out routine tasks that are quite numerous and time-consuming.

On the other hand, the Ministry of Industry does not have a special unit consisting of researchers and policy analysts. In developed countries like the United States and European countries, each ministry has a policy analysis unit that can assist each division within the ministry in conducting research and policy analysis. It may be time for the Indonesian Government to more seriously build policy capacity in ministries by equipping each ministry with a special unit consisting of researchers and policy analysts.

## **6. CONCLUSIONS**

Foregoing discussions has shown that a number of factors determine the failure of the implementation of industrial technology development policy contained in the Law No. 3/2014 on Industry.

The institutional context surrounding the implementer agency has put constraints on its capacity to coordinate implementation and to form a strong coalition. Until now, there has been no strong coalition amongst related government organizations to foster the implementation. Neither strong coalition with industrial society has been formed.

Meanwhile, the commitment for implementation of high-ranked officer that was initially strong in the early years, has become weak. Particularly, as the implementation budget has decreased through the years. Weak commitment of high-ranked officer has also caused difficulty in coordinating effort with other ministries that oftentimes require high-level communication and negotiation.

Furthermore, due to the way the implementer team has been formed, there has been the lack of policy analytical capacity. In addition, due to routine work burdens on the implementer team, they cannot do the task of implementation.

From the methodological point of view, it can be concluded that critical realism paradigm lays new philosophical ground for research practice. It emphasizes the important distinction between basic research and applied research with different inference method of retrodiction and retrodiction respectively. It also points to the conclusion that the proximity of theory-reality distance influences the possibility of a research producing new knowledge. If the theory-reality distance is quiet large, as is the case of Indonesia, then the possibility of research producing new knowledge is quiet low. This is the reason why research in developing countries, where the distance between theory-reality is oftentimes large, has not contributed much to new knowledge. Most theories of public administration are produced by researchers in developed countries.

Note

1. The Humean causality principle was initiated by David Hume. In his view, causality is identified with the constant conjunction of events that occurs at the empirical level. Thus, causality is reduced to a combination of events that are patterned that keep repeating. According to Hume, causality does not need to be understood by looking for mechanisms or process that cause the patterned events. As a result, science only produces knowledge of the correlation between variables without an explanation of how precisely the event occurs.

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