

Regulatory Impact Assessment (RIA) Functional Food Policy in Indonesia

Parama Tirta Wulandari Wening Kusuma¹, Prakoso Bhairawa Putera^{1,3}, Renti Rosyalin Budiman¹, Amelya Gustina² and Wakhid Yuli Hastanto¹

¹*Indonesian Institute of Sciences, Sasana Widya Sarwono Lt. 6, Jln. Jend Gatot Subroto No 10, Jakarta Selatan 12710, Indonesia*

²*The Research and Development Center, Attorney General's Office of Indonesia, Jln Sultan Hasanuddin No.1 Kebayoran Baru, Jakarta Selatan, Indonesia*

³*Doctoral Programme of Administrative Sciences, Faculty of Social and Political Science, University of Padjadjaran, Jln. Bukit Dago Utara No. 25 Bandung, Indonesia*

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Abstract: Functional Food has been regulated by the Head of The National Agency of Drug and Food Control of Republic of Indonesia or NADFC/BPOM Number HK 00.05.52.0685 about Provisions on the Principal of Functional Food Supervision, then revoked with Regulation Number HK.03.1.23.11.11.09909 of 2011 concerning Claim Monitoring in Labels and Processed Food Ads. This regulation does not specifically explain Functional Food, but contains more macro arrangements in processed food. This regulation is the object of policy research with Regulatory Impact Assessment (RIA) approached. From several regulations, the problem and stakeholders needs will be reviewed, including revoking regulations that clearly provide arrangements in the functional food sector, cost benefit analysis (CBA using AHP Tools) of the policy. The results of the CBA/AHP analysis for the benefits and costs of the priority policy of Functional Food Regulation in Indonesia, is to Revoke the Regulation of the Head of BPOM No. 13/2016 with the largest Benefit/Cost (B/C) value is 1.15, that is, with this result the optimal scenario is due to $B / C > 1$.

1 INTRODUCTION

Indonesia has population that reaches more than 250 million per year with growth rate of 2% by 2017 included to rank of agricultural countries in the world which the most prominent sector is agriculture. Indonesia still focused on staple foods (Kumar, 2015 in Bustanul Arifin, 2016) with predominance of foods consumed from grains around 60% (Bappenas, 2016). Lacking in diversification of safe foods inflict in inadequate availability, access, and local foods intake.

Functional Food has been regulated by the Head of The National Agency of Drug and Food Control of Republic of Indonesia or NADFC/BPOM Number HK 00.05.52.0685 about Provisions on the Principal of Functional Food Supervision, then revoked with Regulation Number HK.03.1.23.11.11.09909 of 2011 about Claim Monitoring in Labels and Processed Food and Advertisements. The existence of latest

regulation does not specifically explain Functional Food, but it contains more macro arrangements in processed food (Putera, *et.al*, 2019; Gustina, *et.al*, 2020).

Today, functional food in Indonesia is insufficient discernible from processed food conditions which still contain hazardous substances, various products claim healthy and safe for consumption, however it is discarded with the written claims.

Regulatory Impact Analysis (RIA) is a tool or method that can be used to improve the quality of policies. This method became popular early 2000s, and widely used in developed countries. RIA consists of two methods, firstly, analyzing policies or impact of the existing policies, secondly, to establish new government regulations. RIA ensures that the regulations issued have a good motivation and systematically adequate to appraise negative and positive effect of regulations that being proposed or currently running, to evaluate policies in decision making process and appraising effects from

government actions also to convey information to decision makers. Furthermore, RIA provides a good solution for benefits and costs issue that possibly caused by the regulations.

This research aims to study issues and needs for a regulation in reinforcing food sector, particularly functional food, to numerate its benefits and costs and providing alternative solutions of the policy.

2 RESEARCH METHOD

The research method using qualitative approach with Regulatory Impact Assessment (RIA). RIA is an analytical tool that helps government to decide whether a regulation is needed, advantages and disadvantages of it, and the alternative solutions of the regulation. RIA can be used as a policy evaluation tool, a method to assess systematically its negative and positive effects of regulations that being proposed on going progress. In this study, researchers used the Analytical Hierarchy Process (AHP) to analyze costs and benefits or Cost Benefit Analysis (CBA) as a stages of RIA.

3 RESULTS AND DISCUSSION

3.1 Review of Existing Regulation

Table 1: Roadmap of Functional Food Regulations Changes.

Regulation	Main Goal(s)
Regulation of the Head of BPOM HK. 00.05.52.0685 (2005)	Provisions on the Principal of Functional Food Supervision
Regulation of the Head of BPOM HK. 03.1.23.11.11.09909 (2011)	Claim Monitoring in Labels and Food Advertisements
Regulation of the Head of BPOM 13 (2016)	Claim Monitoring in Labels and Processed Food Advertisements
Regulation of the Head of BPOM 1 (2018)	Processed Food Monitoring for Particular Nutrition Purposes.

One of the stages in RIA analysis is to disclose ten principle of RIA questions and conduct RIA analysis systematically. These questions are not to improve

the management process but expected as a policy instrument to reach level of regulation quality that adequate in accommodating stakeholders.

Table 2: Results of Field Data Collection (expert judgment).

Question	Answer (Tentative Conclusion)
Is the problem correctly defined?	According to the contents of road map on Table 2 regulation amendment of the Head of BPOM
Is the government action apposite?	According to stakeholders, regulations amendment are less apposite because it has become biased between functional food, claimed food, and food for particular nutritional needs.
Are the existing regulations is the best step for the government?	According to the regulator it's the best alternative. Yet to stakeholders, it's in apposite or inappropriate.
Is there a legal basis for a regulation?	Yes, because it's motivated with health constitution.
What are the levels of government bureaucracy that are involved in coordinating this regulation?	Ministry of Health and BPOM (interviews with BPOM).
Are the regulations useful, compared to its costs?	Not yet concluded (data analysis is a must)
Is distribution of the effect would be transparent among the community?	It must be, so that the implementation can be ruled, monitored and controlled by its implementation.
Are the rules clear, consistent, understood and accessed by users?	It is clear and must be accessible to all Indonesians.
Are all parties that Interested in having the same opportunity to express their views?	All parties (stakeholders) have the same opportunity to express their opinions. But not yet stated in this regulation.
How compliance with regulations can be achieved?	Gradually, the process of transition is meticulous in its application related to the possible impacts.

The process of RIA in analyzing and communicating the impact of new regulations are as follow:

1) Problems Framework

Problems framework are expected to be resolved with Regulation of the Head of BPOM Number 13 year

2016 about Claim Monitoring in Labels and Processed Food Advertisements, includes:

- a. Are all supporting facilities to implement Regulation of the Head of BPOM No. 13 year 2016 ready?
- b. Could Regulation of the Head of BPOM No. 13 year 2016 protect and counterpoise the interests of all stakeholders (community, academics, industry (large and small industries / UMKM) and the government?
- c. Is through the Regulation of the Head of BPOM No. 13 year 2016, government can guarantee to improve quality of functional food, protect consumers over food safety, quality and nutrition and create business competitiveness?

2) Identification of Purpose

The purposes achieved by Regulation of the Head of BPOM Number 13 year 2016 are to guarantee the quality of functional/claimed food, protect consumers over food safety, quality and nutrition and create business competitiveness.

3) Alternatives of Problem Solution

Alternative solutions to overcome the problem are as follow:

- a. Continuing the Regulation of the Head of BPOM Number 13 Year 2016.
- b. Revising the Regulation of the Head of BPOM Number 13 Year 2016 (with addition of certain articles).
- c. Revoking the Regulation of the Head of BPOM Number 13 Year 2016.

4) Benefits and Costs Analysis

Cost Benefit Analysis or CBA is an approach for policy recommendations which allows analysts to compare how much loss or costs incurred, advantages or benefits derived from policy implementation.

3.2 Regulation Analytic Hierarchy Process (AHP) with Cost Benefit Analysis (CBA) Model

Analytic Hierarchy Process (AHP) designed to comprehend expert perceptions with certain problems through procedures which devised to reach preference level among various alternative sets, so that this method considered as objective - multi criteria model (Permadi, 1992).

The principle of AHP is grading each aspect, criteria of aspect indicator, indicators with comparison between factors, as well as policy or

alternatives to be taken. Afterward, those aspects will be compared which of the highest benefits received, whether economic, social or environmental aspects. Finally, comprehending the policy that will be chosen, whether continuing the Regulation of the Head of BPOM Number 13 year 2016 concerning Claim Monitoring in Labels and Processed Food Advertisements. The following is a list of policy choices.

Table 3: Criteria of Policy Selection from Result B / C Ratio.

B/C Ratio	< 1	<i>Status quo</i> , continuing the Regulation of the Head of BPOM No. 13/2016
B/C Ratio	= 1	Revise the Regulation of the Head of BPOM No. 13/2016
B/C Ratio	> 1	Revoke the Regulation of the Head of BPOM No. 13/2016

1. Status quo, continuing the Regulation of the Head of BPOM No. 13/2016: Policy Alternative 1
Experts argued that certain rules regarding to functional food in Indonesia is unrequired. It has been ruled by the existing Food Claims regulation, because its social benefits will be less than costs that may be incurred (cost > benefit).
2. Revise the Regulation of the Head of BPOM No. 13/2016: Policy Alternative 2
Similar to Status quo, nevertheless given improvements from existing regulations. Experts argued that it is quite necessary to have particular rules regarding to functional food in Indonesia by appending certain clause on the existing Food Claims regulation, because its social benefits will be equal to costs that may be incurred (cost = benefit).
3. Revoke the Regulation of the Head of BPOM No. 13/2016: Policy Alternative 3
Experts argued that it is absolutely necessary to have particular rules related to functional food in Indonesia. Functional food must be clearly regulated, so it should revoke the Regulation of the Head of BPOM No. 13/2016 and replace it with a more macro regulation towards Functional Food, because the social benefits will be greater than its costs that may be incurred (cost < benefit).

Aspect framework and aspect indicator or criteria which used in this compilation of benefits and costs hierarchy that will be obtained from regulation of functional food policy in Indonesia which going to be developed based on Focus Group Discussion (FGD) and depth interviews with all stakeholders involved. The following is hierarchy schemes in AHP (variables in this hierarchy have been adjusted to the

result of FGD and information of related parties). Some experts are liaison unit of:

1. Nutrition and Health Programme, Faculty of Public Health and Nursing, UGM
2. Department of Agricultural Product Technology, Faculty of Agricultural Technology, UGM
3. Faculty of Agriculture, UGM
4. Department of Nutrition, Faculty of Human Ecology, IPB
5. Department of Food Technology, Faculty of Agricultural Technology, IPB
6. Department of Agricultural Product Technology, Faculty of Agricultural Technology, Brawijaya University
7. Nutrition and Public Health Study, Faculty of Medicine, UNDIP
8. Faculty of Agriculture and Animal Husbandry, UNDIP
9. National Standardization Agency (BSN)
10. Indonesian Association of Food and Beverage Entrepreneurs (GAPMMI)
11. Food Researchers at the Indonesian Institute of Sciences
12. Indonesian Functional and Nutraceutical Food Activist Association (P3FNI)

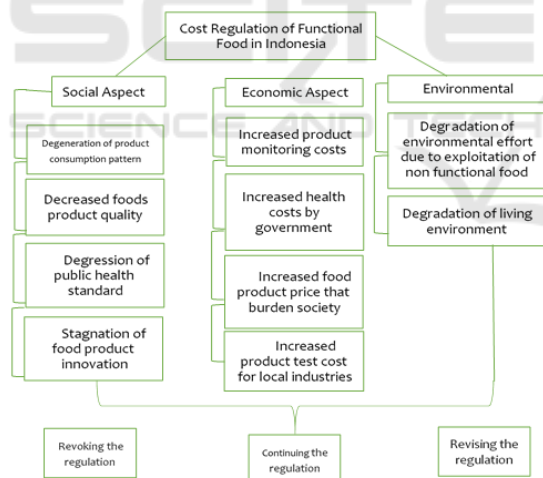


Figure 1: Hierarchy of Social Costs Incurred.

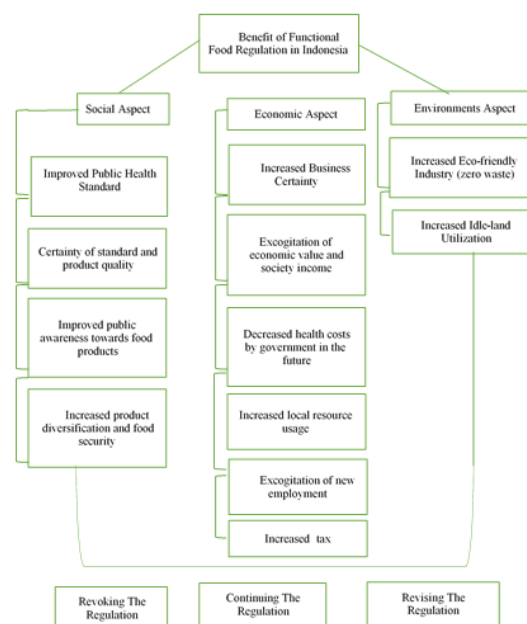


Figure 2: Hierarchy of Social Benefit Obtained.

3.3 Result of AHP Analysis with CBA Model

Based on data and experts, the result shows the main aspect from cost of functional food regulation is environments by 0.467. Furthermore, it is also the most important aspect in terms of benefits of functional food regulation by 0.5781. Hence, the outcome of regulation for functional food policies in Indonesia will cause greatest costs toward environments aspect compared to social and economic aspects.

Table 4: Result of AHP Analysis with CBA Model Aspect Determination.

Aspect	Benefit	Cost	B/C Ratio
Social	0,1319	0,141	0,9
Economic	0,2900	0,392	0,7
Environments	0,5781	0,467	1,2

Table 4 shows that the greatest social and benefit cost are environmental aspect, followed by economic and social. Therefore, it has become a reason for regulation of functional food policies in Indonesia.

Based on table 5, it can be analyzed that according to expert in terms of costs and benefits of priority for alternative policy is alternative policy 3, that is to revoke the Regulation of the Head of BPOM No. 13/2016.

Table 5: Recapitulation of calculation for Social Benefit and Cost.

	Social Cost	Prio- rity	Social Benefit	Prio- rity
Policy Alternative 1	0,335	2	0,309	2
Policy Alternative 2	0,210	3	0,165	3
Policy Alternative 3	0,454	1	0,525	1

Table 6: Result of AHP Analysis with CBA Model in determining Policy alternative of Functional Food Regulation in Indonesia.

Policy Priority	B/C Ratio
Revoke the Regulation of the Head of BPOM No. 13/2016	1,15
Revise the Regulation of the Head of BPOM No. 13/2016	0,785
Status quo, continuing the Regulation of the Head of BPOM No. 13/2016	0,923

From Table 6, the most likely policy priority is revoke the Regulation of the Head of BPOM No. 13/2016 that result to optimal scenario wherefore $B/C > 1$ by 1.15. Whereas second priority alternative is revise BPOM Head Regulation No. 13/2016 gives small benefit value with a B / C ratio by 0.785, this second alternative is not a priority because $B / C < 1$. Likewise third priority alternative Status quo, continuing BPOM Head Regulation No. 13/2016 gives the smallest benefit value with a B / C ratio by 0.923, and because $B / C < 1$ this alternative is also not a priority.

4 CONCLUSIONS

We hope you find the information in this template useful in the preparation of your submission. Based on results of AHP analysis for benefits and costs, the most likely policy priority is revoke the Regulation of the Head of BPOM No. 13/2016 that result to optimal scenario wherefore $B/C > 1$ by 1.15. Whereas second priority alternative is revise BPOM Head Regulation No. 13/2016 gives small benefit value with a B / C ratio by 0.785, this second alternative is not a priority because $B / C < 1$. Likewise third priority alternative Status quo, continuing BPOM Head Regulation No. 13/2016 gives the smallest benefit value with a B / C ratio by 0.923, and because $B / C < 1$ this alternative is also not a priority.

Revoking regulation of the Head of BPOM No. 13/2016 indicates that interviewees or resource persons eager to restored Regulation of the Head of BPOM HK. 00.05.52.0685 Year 2005 about the Basic Provisions for Functional Food Supervision.

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