Implications of Pearl, Gold, Silver (PGS) Craft Industrial Cluster towards Settlements Region in Karang Pule Village, Sekarbela District of Mataram City

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Abstract. The existence of industry clusters in Mataram City gave effect to the surrounding residential areas [1]. In accordance Spatial Plan of Mataram City in 2011-2031 PGS industry cluster in the village of Karang Pule, Sekarbela district established as shopping tourism area. Distribution of industrial locations were in four of seven environments in Karang Pule. Distribution of PGS industry is divided into three (3) groups: craftsmen, craftsmen who is also a seller, and the seller (merchant). The location of the craftsmen, craftsmen who are also businessmen and entrepreneurs are also used as a dwelling house or workshop and store. So most of the people living in settlements around clusters of industry that there is a link between industry cluster and settlements. This study aims to determine the implications or the impact of the presence of PGS industry clusters the surrounding residential areas. The method used in this research is descriptive qualitative with the collection of primary data through direct observation and questionnaires. Based on direct observation on the shopping tourism area there are inequality between the conditions of industry clusters and settlements area by the presence of slums. The results showed that the PGS industry cluster impact on social, economic and environment near settlements area. Impacts that occur are: 1) the social aspect, there is a significant change in the level of education, social welfare and social disparities but less significant to the formation of institutions, particularly in community participation, 2) the economic aspect of the change status of community work, and increased revenue and 3) the environmental aspects of the change to the condition of the building, the quality of public housing, the presence of slums, changes in infrastructure and the environmental pollution.

1. Introduction
Mataram city is a city that has a lot of potentions, one of those is the potential industry. The existence of this industry has a very important role in economic development and growth of a region because it can increase revenue and provide jobs for the local community. The existence of the industry itself can provide a wide range of effects both positive and negative impacts.

Karang Pule Village, Sekarbela district of Mataram City established as a small industry cluster featured to craft Pearl, Gold and Silver (PGS). [2] Sekarbela district included in the development of settlements area while Karang Pule village established as shopping and tourism area of small business development.

Beside those potentions, the presence of issues such as environmental, economic and social. Settlements region can be used as industry activities lead to the presence of slums. The slums can cause
the inequality between environmental, economic and social aspects that exist in the PGS industry cluster of Karang Pule village. This research was conducted in order to determine the implications of PGS industrial clusters on the settlements region.

According to Law Number 1 of 2011 on Housing and Settlement region, referred to the settlements which consisted of more than a unit of housing that has the infrastructure, facilities, public utilities, as well as having to support activities other functions in urban or rural areas [3].

According to the Law of Industry Number 3 of 2014, the industry is all forms of economic activity that processes raw materials and or take advantage of industry resources to produce goods that have additional value or higher benefits, including industry services [4]. From the geographical perspective, the industry as a system, sub-system is a mix of physical and human sub-system [5]. Ministry of Industry of Indonesia's national industry grouping into 3 major groups: 1) Basic Industry, 2) Miscellaneous Industry, and 3) Small Industries.

Agglomeration by modern location theory is one of the factors that influence economic activities, agglomeration also be one of the factors in addition to compare advantage and economies of scale that explains why the industry raised areas and cities [6]. Some things that can cause agglomeration [7] are: 1) labor provided many of which have the ability and expertise better than the outside area, 2) a company becomes an attraction for other companies, 3) development of a companies from small to large, causing other companies to support the enlarged company, and 4) transfer of production activity from one place to some other place. Other companies approach the source material for the production activity generated by existing companies to support each other. So agglomeration is the concentration of economic activity spatially arise because of the savings gained due to nearby locations.

The effect by each industrial area varies according to the characteristics and potential sector at different certain sectors. Thus, if an industry or industry area built in a location and then the industry is growing then it would be predicted that other economic units tend to pick a location connected directly which is ultimately going to give mutual benefits.

The existence of PGS industry clusters in the village of Karang Pule have an impact on social, economic and environmental. Social impact, with the presence of PGS industry clusters raises the number of people that affect the building density and increased economic activity. It is also impact on the environment, such as pollution, and the formation of slums around the industry area due to industry conditions that are in settlements [1].

2. Research Methods
The location of this research is located in the village of Karang Pule, Sekarbela district of Mataram. The approach used in this study is derived from the rationalistic approach theory and empirical truth. Kind research used a qualitative descriptive that systematically describe the situation, the situation, the specific program [8]. Data collection methods used were primary data collection in the form of direct observation and questionnaires.

3. Results and Discussion

3.1. Region overview
Karang Pule village has an area of 106.7 square kilometres. Karang Pule village have 544 households with a population of 10423 people divided into seven environments. Karang Pule village is divided into seven environments, they are: 1) Karang Pule, 2) Pande Besi, 3) West Pande Mas, 4) East Pande Mas, 5) Karang Seme, 6) Mas Mutiara and 7) Kekalik BTN.
3.2. Distribution
PGS for the distribution industry Karang Pule Village is divided into three groups: craftsmen, craftsmen who is also the seller, the seller (merchant). There are four environments is a core area of industry PGS Karang Pule village is in the Environment of Pande Besi, Pande Mas West, East Pande Mas, and Mas Mutiara. For the spread of the location of PGS the industry cluster in the village of Karang Pule, can be seen in the table 1.

| No | Environment   | Craftsmen | Craftsmen and Sellers | Seller |
|----|---------------|-----------|-----------------------|--------|
| 1  | Pande Besi    | 1         | 3                     | 4      |
| 2  | West Pande Mas| 13        | 0                     | 9      |
| 3  | East Pande Mas| 62        | 1                     | 14     |
| 4  | Mas Mutiara   | 0         | 4                     | 7      |
| Jumlah |             | 76        | 8                     | 34     |

Source: Observations and Interpretations Map

For the distribution of craftsmen more dominant location in the East Pande Mas environment. The location of the craftsmen is housing that is also used as a workshop while the spread of craftsmen who is also the seller is housing that is also used as a workshop or shop. Location spread of sellers is largely a shop and a small portion of which is used as homes and shops. For the spread of sellers (traders) were in four environments, which are scattered along major roads namely Sultan Kaharudin street which is indeed the most strategic location to sell products.

3.3. Relationship Between Industrial Zone PGS with Settlement Region
Cluster) is the geographic concentration of companies and institutions that are interconnected in a particular area [9]. In this case of the PGS industry cluster is not only related to the industry sector alone but also to the surrounding residential areas associated with the location of industry craftsmen PGS who also serve as homes and workshops and stores. It shows that the agglomeration occurs between industry clusters with surrounding residential areas. Thus indirectly, the industry activity in the region of course affect the surrounding residential areas, both in terms of social, economic, and environmental.

Judging from the distribution of industry location map can be seen that the location PGS craft industry are located in settlements areas. This can be seen in the following figure.

![Figure 1. Distribution Map](image-url)
From mapping the distribution of the industry, it is obtained a regional division based on its potential in the development of PGS industry cluster area, here is a map of the distribution of potential area for the PGS industry cluster.

Based on the distribution map of potential area PGS industry can be seen that the most potential area in the development of industry cluster is settlements that is unfeasible. This suggests that industry activity PGS's in the Village Karang Pule affect the surrounding residential areas. The slum area located at Pande Besi, West Pande Mas and East Pande Mas environment with an area of 13.50 ha, or approximately 10.23% from the total area of Karang Pule village. As for the quite feasible settlement contained in Mas Mutiara environment with an area of 18.65 ha, or approximately 14.12% and had a feasible settlement are outside the region, namely in Kekalik BTN and Karang Pule environment of 95.20 Ha or about 72.10%. For Karang Seme environment which are outside the PGS industry cluster included in the category of settlements region is quite feasible with an area of 4.69 ha, or approximately 3.55%. For more details can be seen in the following table 2.

Table 2. Feasibility of Settlement Region On PGS Industry Cluster and PGS Non Industrial Cluster

| No | Environment     | Land Area (Ha) | Percentase (%) | Eligibility Settlement Region | Cluster type |
|----|-----------------|----------------|----------------|-----------------------------|--------------|
| 1  | Karang Pule     | 92,40          | 69.98          | Feasible                   | Non cluster  |
| 2  | Kekalik BTN     | 2,80           | 2,12           | Feasible                   | Non cluster  |
| 3  | Mas Mutiara     | 18,65          | 14,12          | Quite Feasible             | PGS Cluster  |
| 4  | Karang Seme     | 4,69           | 3,55           | Quite Feasible             | Non Cluster  |
| 5  | Pande Mas Timur | 2,80           | 2,12           | Unfeasible                 | PGS Cluster  |
| 6  | Pande Mas Barat | 2,87           | 2,18           | Unfeasible                 | PGS Cluster  |
| 7  | Pande Besi      | 7,83           | 5,93           | Unfeasible                 | PGS Cluster  |
|    | **Total**       | **132,04**     | **100.00**     |                             |              |

3.4. Implications of PGS Industrial Cluster
The implication is a change caused by an activity, a business investment in development activities have the potential ability to create an impact. So the implications are the PGS industry cluster effect of the
emergence of human activity in the construction on the environment, including human PGS industry group.

3.5. Social Implications
The impact of the presence of PGS industry clusters towards the surrounding settlements in the social aspects include: level of education, public welfare, institutional and social inequality. The social implications of the presence of PGS industry clusters can be seen in Figure 3 below:

![Figure 3. Social Aspects Diagram](image)

The social implications of the presence of PGS industry clusters in the village of Karang Pule are:
1. There were changes in levels of public education in four environments and the highest in Mas Mutiara environment by 90%.
2. There were changes in the welfare of society in four environments and the highest in the neighborhood West Pande Mas by 90%.
3. The establishment of the institutional environment West Pande Mas at 50%, is still not evenly distributed in the other surroundings.
4. There was social inequality in four environments, and the biggest is in Mutiara Mas environment up to 90%.

So the social implications of PGS industry clusters to settlements region is the presence of a significant change in the level of education, social welfare and social disparities, but less significant to the formation of institutions, particularly in community participation and or community.

3.6. Social Expectations
Based on social implications, people who lived in those environments have some expectations to build that region more better than before. People’s expectations are:
1. With the change in the level of education in 4 (four) PGS industry cluster environment, especially in environment Mas Mutiara with percentage of 90%, it shows that the presence of industrial clusters PGS affects levels of public education so that the presence of so great influence society also wants their non-formal education in the form of training or courses related to the manufacture and craft PGS's creativity.
2. In terms of public welfare to the existence of the PGS industry cluster in 4 (four) the environment, especially in the environment Pande Mas west with a percentage of 90% which indicates that the presence of industrial clusters PGS affects the level of welfare so that with these changes the public wants PGS's handicraft industry can be an attempt hereditary and make this industry become more organized and orderly.
3. With a percentage of 50% of the institutional, it shows that the presence of PGS industrial clusters does not affect the existing institutional development while craftsmen PGS industry itself wants the institution related to shade and protect the PGS's handicraft business.
4. Social inequality that occurred in 4 (four) industrial cluster environment PGS with a percentage of 90% indicates that the presence of industrial clusters PGS affect the level of social inequalities between communities. This can occur because people just hire their own family so that people outside do not have access to have a job. Though the presence of this industrial cluster in the community look forward to working with both among the people in the surrounding areas so that there is social inequality.

3.7. Economic Implications
The existence of PGS industry clusters for the economic aspects include: employment status and income growth. The economic implications of PGS industry clusters can be seen in Figure 4 below:

![Economic Aspects Diagram](image)

**Figure 4. Economic Aspects Diagram**

1. There were changes in the people's income from four environments and the highest in Environmental West Pande Mas and Pande Besi amounted to 100%.
2. There were a change in the status of community work from four environments and the highest in Environmental Pande Besi and East Pande Mas of 100%.

So the economical implications of the PGS industry cluster settlement area is a change in the status of community work, and significant increases in revenue in four the environment, especially in the Environment Pande Besi and West Pande Mas.

3.8. Economic Expectations
Based on economic implications, people who lived in those environments have some expectations to build that region more better than before. People’s expectations are:

1. A change in people's income with a percentage of 100% indicates that the presence of PGS industrial clusters obviously affects the income of the people in the surrounding areas and communities want this business can continue to grow and energized.
2. A change in the status of people with a percentage of 100%, which indicates that the presence of PGS industrial clusters can create jobs for people who do not have jobs.

3.9. Environmental Implications
The existence of the industry on the one hand the changes that have an impact on the socio-economic, but on the other hand also brought changes that have a negative impact, the negative impacts include pollution of the environment surrounding the industry. Environmental aspects with the PGS industry cluster include: the condition of the building, the quality of buildings, slums, infrastructure and environmental pollution. Environmental implications of the presence of industry clusters PGS can be seen in Figure 5 below:
1. The existence of the PGS industry affect the condition of the building in four environments and the highest is in the East Pande Mas environment about 85%.
2. The existence of the PGS industry affect the quality of residential communities in four environment and the highest is in the East Pande Mas environment amounted about 75%.
3. PGS industry gave rise to slums in four environments and the highest is in the Pande Besi environment amounted about 80%.
4. The presence of PGS industry cause changes in the number of facilities and infrastructure in four environments and the highest is in the Pande Besi environment amounted about 85%.
5. PGS industries cause environmental pollution that occurred in four environments, and the highest is in the Pande Besi environment about 90%.

Thus, the environmental implications of PGS industry clusters towards settlements region to the environmental aspect is the change of the condition of the building, the quality of public housing, the presence of slums, infrastructures changes and the environmental pollution.

3.10. Environment Expectations
Based on environment implications, people who lived in those environments have some expectations to build that region more better than before. People’s expectations are:
1. The presence of PGS industrial clusters affect the quality of the building with a percentage of 85% so that the necessary arrangement of the layout of the building so as to create an environment with the condition of the buildings that deserve to be occupied.
2. The existence of the PGS industry that affects the quality of residential with percentage of 75% especially in the neighborhood East Pande Mas show that the conditions that exist today must do system management of garbage and waste disposal so as to reduce the impact on the quality of residential communities that surround PGS industry clusters.
3. The presence of PGS industrial clusters led to the emergence of slums with a percentage of 80%, which means the current circumstances that influence the MEP industry cluster in the surrounding area that causes slums so that the necessary arrangements for management and good systems in various aspects in order to minimize changes that occur as a result of this PGS industrial cluster.
4. The existence of the existence of industrial clusters led to the addition amount of infrastructure by 85%, which means that this situation shows the people want their supporting facilities are inadequate in supporting PGS craft business.
5. The existence of the PGS industry presence led to the emergence of environmental pollution is very high, reaching 90%, so the conditions are thus expected their processing systems and good management, and friendly environment will not cause pollution to the surrounding area.
4. Conclusion
From the research that has been done can be concluded as follows:

1. The existence of the PGS industry cluster linkages to settlements regions as the presence of slums thus indirectly impact or implications for the joints of people's lives both in terms of social, economic and environmental.

2. There were settlements region is unfeasible or slums on three environment located in the PGS industry clusters, namely Pande Besi, East Pande Mas and West Pande Mas while quite feasible settlements region located at Mas Mutiara environment. For Karang Seme environment which are outside the PGS industry cluster included in the category of settlements region is quite feasible too. Also had a feasible settlement are outside the PGS industrial cluster, namely in Kekalik BTN and Karang Pule environment.

3. The presence of PGS industry clusters implications on the feasibility of settlements region in the presence with the slums while settlements are outside the PGS industry cluster included in the category of feasible and quite feasible.

4. The social implications of PGS industry clusters to settlements region is the presence of significant changes in the level of education, social welfare and social disparities, but less significant to the formation of institutions, particularly in community participation.

5. The social expectations of people towards social implications that they want non-formal education in the form of training or courses related to the manufacture and craft MEP's creativity also PGS's handicraft industry can be an attempt hereditary and make this industry become more organized and orderly.

6. The economic implications of PGS industry clusters towards the settlements region of the economic aspect is the change in employment status of the community and significant increases in revenue from four the environment, especially in the Pande Besi and West Pande Mas.

7. The economic expectations of people towards economic implications that they want this business can continue to grow and energized also can create jobs for people who do not have jobs.

8. The environmental implications of PGS industry clusters on the settlements region are the changes of the building conditions, the quality of public housing, the presence of slums, infrastructure changes, and the environmental pollution.

9. The environmental expectations of people towards environmental implications that they want that the necessary arrangement of the layout of the building so as to create an environment with the condition of the buildings that deserve to be occupied, must do system management of garbage and waste disposal so as to reduce the impact on the quality of residential communities that surround PGS industry clusters, arrangements for management and good systems in various aspects in order to minimize changes that occur as a result of this PGS industrial cluster, people want their supporting facilities are inadequate in supporting PGS craft business also create processing systems and good management, and friendly environment will not cause pollution to the surrounding area.

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