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The Mapping Of Local Leading Potentials For Improving Competitiveness Of Small And Medium Enterprises In Tarakan City, Indonesia

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Abstract

The competitiveness of Small & Medium Enterprises can be improved by developing products delivered by local leading sectors. This research is aimed to identify work sectors that can be categorized as local leading sectors in Tarakan City. Secondary data used by this research were data concerning Gross Regional Domestic Products of Tarakan City from 2016 to 2020. Data analysis methods were Location Quotient, Klassen Typology, and Comparative Contribution to Gross Regional Domestic Products. Result of research showed that four work sectors considered potential to become leading sectors are Wholesale and Retail Tradings, Construction, Transportation and Warehousing, and Processing Industry. Research suggests that fishery-based processing industry should be set as priority to become leading sector in Tarakan City.

Keywords: competitiveness, local leading products, gross regional domestic products, fishery-based industry

Introduction

The existence of Small & Medium Enterprises (SMEs) gives a great contribution to both international and domestic economic growths. Government has empowered this role through the Regulation of Domestic Affairs Minister (Permendagri) Number 9, 2014 on Local Products Development with main goal to improve Small & Medium Enterprises' competitiveness through development of products from local leading sectors. This legal standing also asserted that any development must respect local potentials and local diversity. Every locality has different characteristics, especially on its society, culture and geography. Therefore, different policy is needed to capture local aspirations which are always diverse.

Local Leading Products (PUD) are associated with goods or services owned and mastered by a locality, which is containing high level of economic value and competitive advantage, absorbing great number of workers, produced with technical considerations (raw material and market), using talent of people surrounding and managed with local organization style (indicated by technology mastery, human resource capability, infrastructure support, and sociocultural condition) [1]. Usually, PUD have distinctive markers that cannot be found in other localities or that other localities do not have. Those products are highly competitive, giving job opportunity to local community, environmentally friendly and traded at local, national and regional markets [2].

Related to the concept above, PUD is in line with the effort to improve SMES competitiveness based on local

leading sectors. Products are said to be competitive if those products are set at low price and with better differentiation from other products in similar kind [3]. This position is consistent to comparative theory, which said that a certain state will get competitive advantages if it can produce goods or services at lower cost than the other states [4]. One component that constitutes the concept of Local Leading Products is the use of local raw materials. The access to abundant raw materials and the availability of these materials will enable the producers to create products at lower price. High differentiation value can be obtained from distinctive markers and unique attributes of PUD, or any features that make PUD different from other products or better than them.

Lantu, et al. [5]said that one factor determining SMES competitiveness is the condition of business environment. Resources needed by businesses can include raw materials, machineries, equipments and human resources. These resources are components that constitute PUD, which then help SMES to improve its competitiveness. Strategies to improve SMES competitiveness comprise identifying and maximizing potentials of local economic resources and then making those resources become leading capacities [6]. Referring to this situation, the mapping of work sectors with leading capacities, therefore, will be important because the resultant map will provide bases to identify local leading products that can improve the competitiveness of SMES.

Based on data in 2017, Tarakan City had two work sectors known for their local leading potentials. These sectors are Fishery and Agriculture. For Fishery Sector, productivity level of captured fishery has reached 10,726.41 tons. The cultivation of brackish commodities (fish, shrimp and crab) has productivity level of 56,270 tons whereas the cultivation of fresh water fish gets productivity level of 52,724 tons. Meanwhile, productivity level of Agriculture Sector has achieved 7.120,5 ton [7]. In 2017, there were 4,451 SMES in Tarakan City [8]. Several SMES in Tarakan City have their own leading products but these SMES are weak on marketing [9]. This situation signifies that there is no mapping yet for products that can be categorized as local leading products. Therefore, both identification and mapping of potentials of local leading sectors are truly needed.

The objective of this research is to identify work sectors that can be categorized as local leading sectors in Tarakan City. The determination of local leading sectors gives researcher the necessary bases to choose commodities that must be developed as local leading products. Analysis on local leading sectors is conducted using data regarding Gross Regional Domestic Products (GRDP) and also data concerning economic potentials of Tarakan City. Method of analysis comprises Location Quotient (LQ), Klassen Typology and Comparative Contribution to GRDP. Result of analysis showed that there are four work sectors that are considered potentials to become leading sectors. These sectors are Wholesale and Retail Tradings, Construction, Transportation and Warehousing, and Processing Industry. With respect to this result, researcher recommends processing industry sector, especially fishery-based processing industry, to be developed to become leading sector that delivers local leading products.

Result of this research can be used as references for the next relevant research, especially that concerning with how to identify local leading products on work sectors in Tarakan City. The elaboration of this research is divided into few sections. First section is for Introduction. Second section contains Literature Review. The third section on the methodology. The results and discussion is discussed in fourth section whereas Conclusion is given in Fifth or final section.

LITERATURE REVIEW

Competitiveness

Competitiveness is one of few criteria to determine whether a certain state has successfully achieved higher level of its economic growth and surely also its income. Competitiveness is identified with productivity, which can be determined by counting how many output delivered from every input used in production process. The increase of productivity is a reasonable consequence from the more number of input used in production process (physical capital and workers), the improvement of input quality and the advancement of technology [10]. Three indicators are often used to measure competitiveness, namely comparative capacity, competitive capacity, and absolute capacity [11].

The competitiveness of local sectors is a concept derived from competitiveness concept used in corporate and state contexts. If competitiveness concept is used in state context, the term for this concept becomes global competitiveness, which is controlled by two global institutions, namely World Economic Forum (through Global Competitiveness Report) and International Institute for Management Development (through World Competitiveness Yearbook). Economic competitiveness of a certain state is a reflection of economic competitiveness of localities that make up the state. After decentralization program is carried out, then the government finds as more necessary to understand how competitive each locality is [12].

Abdullah [13]informed that indicators used to determine local competitiveness are (1) local economic, (2) openness, (3) financial system, (4) infrastructure and natural resources, (5) science and technology, (6) human resources, (7) organization, (8) governance and government policy, and (9) management and micro economic.

Local Leading Products

For making local economic development coming true, local government shall inventory local economic potentials because the understandings about these potentials may help the government to ensure during policy making session whether the development must be focused on single sector or multi sector. One example of inventarization (or identification) of local economic potentials is the identification of potential or leading products of work sectors in a locality (including work sectors in district or regency).

Local Leading Products represent the capabilities of a locality in manufacturing products, creating values, utilizing resources, giving job opportunity, providing income for local people and local government, and showing prospects of higher productivity and good investment. A product is considered superior if it is competitive, capable to overcome competitor products in domestic market, and capable to penetrate export market [14]. According to Ahmadjayadi [2], Local Leading Products have many characteristics. The products are local products that have distinctive markers and unique attributes that other locality does not have. The products are dependable, competitive, and giving job opportunity to local people. Local Leading Products are often environmentally friendly and oriented to local, national and regional markets.

Developing leading products and empowering them to become local economic potentials are not easy tasks. It is said so because the development of PUD is closely related with political and policy orientations of Local Government. The role of local government is important and even highly needed for the development and empowerment of local leading products as one of pillars for local economics. Each stakeholder may have different authority on the position of local leading products. Stakeholders in certain locality include owner of raw materials, processor or producer of raw materials, user or consumer, facilitator, government and social institution that represent people. These stakeholders are interdependent and supportive of each other. Therefore, it is not surprising if good coordination across different stakeholders is the main element in PUD development. Coordination is also an important instrument for the development of local leading products [2].

Methodology

Main goal of this research is to identify local leading sectors. The process of identification is done by collecting secondary data, precisely data concerning Gross Regional Domestic Products (GRDP) of Tarakan City from 2016 to 2020. The data were obtained from the Central Bureau of Statistics (BPS) for Tarakan City and also from BPS for North Kalimantan Province. Data analysis methods used by this research are Location Quotient, Klassen Typology, and Comparative Contribution to GRDP.

Location Quotient (LQ)

Analysis method of Location Quotient (LQ)is basically analysis to estimate whether a locality is acting as net importer or net exporter after comparing its local production with its local consumption.

The formula of LQ value to find out leading sectors is written as the following:

$$LQ = \frac{S_i/S}{N_i/N} \quad \text{.....(1)}$$

Where:

LQ = the value of Location Quotient; S_i = GRDP of Sector i in Tarakan City; S = GRDP of total work sectors in Tarakan City; N_i = GRDP of Sector i in Tarakan City; and N= GRDP of total work sectors in Tarakan City.

The value of LQ is set based on conditions suggested by Tarigan [11].If the value of LQ is >1, then the role of Sector i in local domain is more dominant or stronger than its role in national domain. Based on this condition, then it can be said that Sector i is exporter (Relative Specialization in Sector), which exporting is carried out because there is surplus. This Sector is also considered as leading sector due to its high prospect for development and its high contribution to local economics improvement. When the value of LQ is < 1, then the role of Sector i in local domain is less dominant or weaker than its role in national domain. This Sector needs to do importing (Production Deficit in Sector) because the Sector fails to fulfill its own needs. In the condition of LQ = 1, the role of Sector i at local and national domains is similar. Productivity level of this Sector at both domains is said to be in balance. This situation signifies that the Sector is only fulfilling the demand of local people and never thinking about exporting (Average Production in Sector).

Klassen Typology

Analysis method of Klassen Typology is performed with two comparison, precisely by comparing the growth of each work sector in Regency/Town with the growth of GRDP of Tarakan City and also by comparing the contribution of each work sector in Regency/Town to GRDP of Tarakan City. Klassen Typology classifies work sectors into four categories, respectively (a) Prime (Leading) Sector, (b) Potential Sector, (c) Developing Sector, and (d) Laggard Sector.

The categorization of work sectors is made based on mean growth level of each work sector and mean contribution level of each work sector to GRDP. Referring to this categorization, a matrix of Klassen Typology is created as shown in the following table:

Table 1. Category Matrix of Klassen Typology

Mean Contribution Rate of Each Work Sector to GRDP / Mean Growth Rate of Each Work Sector	Y of Work Sector > Y of GRDP	Y of Work Sector < Y of GRDP

r of Work Sector > r of GRDP	Prime Sector	Developing Sector
r of Work Sector < r of GRDP	Potential Sector	Laggard Sector

Source: Widodo [15]

Where: Y of Work Sector = Mean Contribution Level of Each Work Sector, Y of GRDP = Mean Value of GRDP, r of Work Sector = Mean Growth Rate of Each Work Sector, and r of GRDP = Mean Growth Rate of GRDP

Result and Discussion

Result of Location Quotient (LQ) Analysis

If a work sector has Location Quotient (LQ) value more than 1, then that work sector will be categorized into prime sector because the sector has exported its outputs and the export carried out by this sector has successfully initiated economic growth. Result of LQ Analysis for all work sectors in Tarakan City from 2016 to 2020 is presented in Table 2.

Table 2. Result of Location Quotient(LQ) Analysis

Work Sector	2016	2017	2018	2019	2020	Mean
Agriculture, Forestry, and Fishery	0.75	0.72	0.73	0.72	0.72	0.72
Mining and Excavation	0.21	0.21	0.20	0.19	0.18	0.20
Processing Industry	1.37	1.35	1.33	1.33	1.31	1.33
Electric and Gas Supplies	1.92	1.91	1.87	1.85	1.80	1.86
Water Supply and Management of Trash, Waste & Recycle	1.32	1.23	1.25	1.22	1.19	1.23
Construction	1.26	1.23	1.25	1.25	1.25	1.24
Wholesale and Retail Tradings; Reparation of Cars & Motorcycles	1.95	1.88	1.86	1.85	1.85	1.87
Transportation and Warehousing	2.08	2.02	2.02	1.99	1.97	2.00
Accommodation and Food & Beverage Provisionings	1.39	1.36	1.33	1.32	1.31	1.32
Information and Communication	1.69	1.66	1.65	1.63	1.62	1.64
Finance and Insurance Services	0.94	0.89	0.84	0.83	0.80	0.84
Real Estate	1.47	1.46	1.45	1.43	1.41	1.44
Company Services	2.36	2.34	2.26	2.23	2.21	2.26
Administration of Governance, Defense and Mandatory Social Security Affairs	0.88	0.88	0.89	0.89	0.89	0.89
Education Services	1.22	1.20	1.20	1.21	1.22	1.21
Health and Social Activity	2.00	1.94	1.95	1.96	1.98	1.97

Work Sector	2016	2017	2018	2019	2020	Mean
Services						
Other Services	1.38	1.35	1.37	1.39	1.39	1.37

Source: Data of BPS are processed (2021)

The LQ value of 17 work sectors in Tarakan City are displayed in Table 2. All these seventeen work sectors are sorted out to select only work sector with LQ value > 1. Result of selection is displayed in Table 3.

Table 3. Work Sectors with LQ Value > 1

No.	Work Sector	LQ Value
1	Company Services	2.26
2	Transportation and Warehousing	2.00
3	Health and Social Activity Services	1.97
4	Wholesale and Retail Tradings; Reparation of Cars & Motorcycles	1.87
5	Electric and Gas Supplies	1.86
6	Information and Communication	1.64
7	Real Estate	1.44
8	Other Services	1.37
9	Processing Industry	1.33
10	Accommodation and Food & Beverage Provisionings	1.32
11	Construction	1.24
12	Water Supply and Management of Trash, Waste & Recycle	1.23
13	Education Services	1.21

Source: Data of BPS are processed (2021)

As shown in Table 3, there are 13 work sectors with LQ value > 1. This situation indicates that these work sectors have greater role in their own localities than in other localities in Tarakan City. This position informs that these work sectors have exported their outputs (Relative Specialization in Sector).

Result of Klassen Typology Analysis

Klassen Typology is aimed to identify work sector, business, or commodity that has leading capacity. In the context of this research, it is conducted by comparing the growth rate of each work sector in Regency/Town with the growth rate of GRDP of Tarakan City and also by comparing the contribution of each work sector in Regency/Town to GRDP of Tarakan City. The processed data are the mean growth value of each work sector in Tarakan City and the mean contribution level of each work sector to GRDP of Tarakan City in 5-year period from 2016 to 2020. Result of Klassen Typology Analysis will show the position of the growth rate of each work sector in Tarakan City and also its contribution to GRDP of Tarakan City.

Under Klassen Typology, work sectors are classified into (a) Prime (Leading) Sector, (b) Potential Sector, (c) Developing Sector, and (d) Laggard Sector. Result of Klassen Typology Analysis is exhibited in Table 4.

Table 4. Result of Klassen Typology Analysis

Work Sector	Y of Work Sector in Tarakan City	Y of GRDP of Tarakan City	r of Work Sector in Tarakan City	r of GRDP of Tarakan City	Category
Agriculture, Forestry, and Fishery	12.51%	17.45%	4.75	4.96	Laggard
Mining and Excavation	5.29%	27.46%	(1.10)	1.09	Laggard
Processing Industry	12.41%	9.38%	3.08	2.80	Prime
Electric and Gas Supplies	0.12%	0.07%	9.04	8.89	Prime
Water Supply and Management of Trash, Waste & Recycle	0.08%	0.07%	4.64	6.08	Potential
Construction	15.51%	12.48%	7.92	6.79	Prime
Wholesale and Retail Tradings; Reparation of Cars & Motorcycles	20.04%	10.80%	6.66	6.57	Prime
Transportation and Warehousing	12.52%	6.31%	5.40	5.65	Potential
Accommodation and Food & Beverage Provisionings	1.83%	1.40%	6.06	7.19	Potential
Information and Communication	4.80%	2.94%	8.33	8.17	Prime
Finance and Insurance Services	2.41%	1.14%	4.90	4.67	Prime
Real Estate	1.35%	0.94%	4.07	3.62	Prime
Company Services	0.56%	0.25%	0.45	0.74	Potential
Administration of Governance, Defense and Mandatory Social Security Affairs	4.55%	5.12%	7.12	5.58	Developing
Education Services	2.96%	2.45%	8.01	6.97	Prime
Health and Social Activity Services	2.22%	1.13%	9.64	8.59	Prime
Other Services	0.83%	0.60%	10.00	8.70	Prime

Source: Data of BPS are processed (2021)

By virtue of the contents of Table 4, there are 10 (ten) work sectors categorized as prime (leading) sector. The categorization as prime sector is declared because the sector has higher growth level than other sector

in Tarakan City and also because the sector has higher contribution level to GRDP of Tarakan City. Those prime sectors are:

1. Processing Industry
2. Electric and Gas Supplies
3. Construction
4. Wholesale and Retail Tradings; Reparation of Cars & Motorcycles.
5. Information and Communication
6. Finance and Insurance Services
7. Real Estate
8. Education Services
9. Health and Social Activity Services
10. Other Services

Few work sectors are classified into potential category. These sectors are recognized from its higher contribution to GRDP of Tarakan City but its growth rate is lower than the growth rate of GRDP of Tarakan City. Work sectors in potential category are:

1. Water Supply and Management of Trash, Waste & Recycle
2. Transportation and Warehousing
3. Accommodation and Food & Beverage Provisionings
4. Company Services

Only one work sector goes into developing category, which is, Administration of Governance, Defense and Mandatory Social Security Affairs. As developing sector, this sector is recognized for its low contribution to GRDP of Tarakan City but this sector is growing faster than the growth rate of GRDP of Tarakan City. Therefore, this sector is capable to compete other sector because its competitiveness is supported by its fast growth rate.

Laggard category comprises work sector that its growth rate is lower than the growth rate of GRDP of Tarakan City. Two work sectors are in this category, respectively:

1. Agriculture, Forestry, and Fishery
2. Mining and Excavation

Analysis on the Contribution of Work Sector to GRDP

The contribution of 17 work sectors to Gross Regional Domestic Product (GRDP) of Tarakan City is analyzed. This contribution indicates how important is the role of each work sector in giving contribution to GRDP of Tarakan City. By assuming that the price prevailed in each work sector is constant.All work sectors are sorted out by one criterion, which is, that the sector must have contribution level above 10%. Result of the sorting is exhibited in Table 5.

Table 5. Mean Contribution Level of Work Sectors to GRDP Above 10%

No.	Work Sector	Mean
1	Wholesale and Retail Tradings; Reparation of Cars & Motorcycles	20.01
2	Construction	15.47
3	Agriculture, Forestry, and Fishery	12.52
4	Transportation and Warehousing	12.51
5	Processing Industry	12.46

Source: Data of BPS are processed (2021**)**

With respect to the contents of Table 5, there are five work sectors with contribution to GRDP at level above 10%. The highest mean contribution level in the last five years (2016-2020) were given by five work sectors, respectively Wholesale and Retail Tradings with contribution level of 20.01%, followed by Construction with 15.47%, Agriculture, Forestry and Fishery with 12.52%, Transportation and Warehousing with 12.51%, andProcessing Industry with 12.46%.

Result of Joint Analysis

Joint Analysis involves the use of Location Quotient,Klassen Typology, and Comparative Contribution to GRDP. This analysis serves two goals, which firstly is to determine work sectors that can be managed into leading sectors and then secondly is to find out leading sub-sectors and leading products that can be developed into local competitiveness sources.

Within the context of this research, Joint Analysis only concerns with leading sectors with level of contribution to GRDP above 10%. Result of this analysis showed that there are 4 work sectors suiting to those requirements.

Table 6. Leading Sector After Joint Analysis

No	Work Sector	LQ	Klassen Typology	Contribution to GRDP (Percent)	Categorization
1	Wholesale and Retail Tradings; Reparation of Cars & Motorcycles	1.87	Prime Sector	20.01	Leading sector (based on LQ and Klassen Typology) with high contribution to GRDP (>10%)
2	Construction	1.24	Prime Sector	15.47	Leading sector (based on LQ and Klassen Typology) with high contribution to GRDP (>10%)
3	Transportation and Warehousing	2.00	PotentialSector	12.51	Leading sector (based on LQ) with high contribution to GRDP

					(>10%)
4	Processing Industry	1.33	Prime Sector	12.46	Leading sector (based on LQ and Klassen Typology) with high contribution to GRDP (>10%)

Source: Data of BPS are processed (2021)

Four work sectors have been regarded by Joint Analysis as having leading capacity. Those work sectors are Wholesale and Retail Tradings, Construction, Transportation and Warehousing, and Processing Industry. In Tarakan City, Work Sector of Processing Industry is a leading sector with high prospect to be developed for improving local economics. Processing Industry has become the backbone of local economics in Tarakan City and has given Tarakan City with competitive advantage over the other localities on the same province, which in this case is North Kalimantan Province. This competitive advantage has put Tarakan City in a better position to export its outputs (Relative Specialization in Sector)to other localities in North Kalimantan Province, such as to Bulungan Regency, Nunukan Regency, Malinau Regency and Tana Tidung Regency.

There is one sub-sector in Work Sector of Processing Industry that has strong impact on local economics in Tarakan City. This sub-sector is fishery-based processing industry. Researcher considers this sub-sector as highly potential for development because fishery commodities are available abundantly in Tarakan City. Moreover, if compared to other localities in North Kalimantan Province, fishery production outputs in Tarakan City is on the highest rank. This position is supported by Data in Period 2018/2019, the production level of fishery commodities in Tarakan City is more dominant or higher than other localities in North Kalimantan Province[16].

Due to this reason, Tarakan City has capability to supply fishery commodities to other localities. The development of local leading products in Tarakan City has been focused on Work Sector of Processing Industry, which in this matter emphasizes on the processing of fish raw materials. This development is consistent to the government program that has been stipulated in “Spatial Order Plan for North Kalimantan Province, Number 1 for Period 2017-2037”. According to this Plan, Tarakan City is set as National Activity Center (PKN). This status brings along several development orientations. One orientation is to make the City to become the center of processing industry, especially the processing industry based on fishery commodities, which is designed to be environmentally friendly.

Conclusion

The objective of this research is to identify local leading sectors that can be developed for improving the competitiveness of Small & Medium Enterprises in Tarakan City. Result of analysis showed that there are four work sectors highly potential to be developed into local leading sectors. These sectors are Wholesale and Retail Tradings, Construction, Transportation and Warehousing, and Processing Industry. Research recommends fishery-based processing industry to be developed as local leading sector. This recommendation is in line with the government program stipulated in “Spatial Order Plan for North Kalimantan Province, Number 1 for Period 2017-2037”, which is intended to declare Tarakan City as the center of processing industry, especially the processing industry that uses fishery commodities as main raw materials which are then processed through environmentally friendly procedures.

Data used by the current research were obtained from the Offices that are responsible to the Government of Tarakan City. The data were mostly about the development of Local Leading Products and given by the related departments such as: Department of Industry; Department of Cooperatives, Trade and Small & Medium Enterprises; and Department of Fishery. Several commodities in Tarakan City have become the leading products that have been popular to the consumers outside Tarakan City and even foreigners. Of these products, two products are the most popular, namely Crispy Soka Crab and Dried Fish/Peyek Pepija. Meanwhile, the other products have a good sale and become the pride of the people in Tarakan City. These products include Shredded Milkfish,Milkfish Amplang Crackers, and Chips/Crackers (processed from Fish,Shrimp,Crab, and Sea Grass).

Processed products with raw materials from fishery commodities have great potential for development because these raw materials are locally available in great abundance. This situation brings a strong sense of uniqueness to Tarakan City which distinguishes Tarakan City from other localities. Further research should identify the products that can be set as priority to be developed as local leading products and also examine the strategies to manage these leading products toward their sustainability.

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