Abstract: The industrial center has a significant role in supporting the national economy through its ability to absorb labor, technology transfer, and add value to products. The strength of industrial centers is its resilience in facing unstable economic conditions. Government through Nawa Cita has included industrial elements as part of the priority agenda to improve welfare through independence in the economic field. Malang is the second-largest city in East Java which has numerous industrial centers as an economic basis. The industrial centers in Malang City to be mentioned are the Sanan tempe chips, the Blimbing furniture industry, the Arjosari rattan industry, and the Dinoyo ceramics industry. The centers of the industry need to develop so that they can compete with products from other regions and countries. This study aims to map existing industrial centers in Malang and determine the best industrial centers or leading industrial centers by using 12 criteria of regionally superior products according to Minister of Home Affairs Regulation of Indonesia Republic Number 9 of 2014 concerning Guidelines for Regional Superior Product Development. Furthermore, this study will analyze the weaknesses, strengths, opportunities, and threats of the leading industrial centers. Then the results of the analysis are mapped into a matrix of internal and external factors as a basis for determining strategies to improve the competitiveness of leading industrial centers. The research used the Analytical Hierarchy Process (AHP) and SWOT Analysis as the research method. The information explored through Focus Group Discussion (FGD) and in-depth interviews. The results showed that Malang City has 4 (four) leading industrial centers, namely tempe chips, ceramics, furniture, and rattan. On the IE matrix, the position of Malang’s leading industrial centers is in cell V which is maintaining and defending. In this cell, the strategy that must be carried out by the superior industrial centers of Malang City is an intensive strategy by conducting market development and product development. The market development strategy is to introduce existing products or services to a geographical area or a new market segment. Based on the QSPM matrix, the alternative strategy that has the highest TAS score is to increase demand by using social media and supporting clusters (tourism destination) as a marketing channel supported by the superiority of the products and services offered.

Keywords: Industrial Centers, Leading Products, Analytical Hierarchy Process (AHP), SWOT Analysis

Indonesia’s government launched a priority agenda, Nawa Cita, which aimed at encouraging progress in the political, economic, and cultural fields in Indonesia. The industry got a particular concern because some economic agendas in Nawa Cita sought to develop the industrial sector as stated in point 6, namely “increasing people’s productivity and competitiveness in the international market” and in point 7, namely “creating economic independence by driving the strategic sector of domestic economy” (Cahyono, 2015). These two points need to prepare so that Indonesia can more develop and equal to other developed countries in Asia (Wihadhi, 2016).

Related to industrial development, Nawa Cita put a commitment to (1) the development of natural-resource manufacturing; (2) reduction of the import content in the manufacturing industry; (3) development of new industrial centers outside Java; (4) protection of intellectual property rights; (5) promotion of national manufacturing products and development of SME and Cooperatives; (6) partnerships with higher education in terms of innovation; (7) fiscal and non-fiscal facilities to promote national intellectual property rights in the global market (Presidenri.go.id, 2016). One of the strategic sectors that are the pillars of the domestic economy is industrial centers. Cities in Indonesia have superior industrial centers and have the potential to improve people’s welfare through their ability to produce products, create added value, use available resources, open employment opportunities, increase people’s incomes and attract investors (Hayun, 2007). Malang has a several industrial centers, namely the furniture in Blimbing District, pottery and ceramics in Sukun and Lowokwaru Subdistricts, car body repairing in Blimbing and Klojen Districts, handicraft in Blimbing and Sukun Districts, the chemical in Blimbing and Sukun Districts, metal in Sukun and Klojen Districts, the food and beverage in Klojen and Sukun Subdistricts, textile printing in Blimbing and Klojen Districts, and tobacco in Kedungkandang and Sukun Subdistricts (Nuraini, 2013).

This study aims to identify the most superior industrial centers or leading industrial centers as a basis for Malang City Government to create governmental programs. The program is expected to focus more on support and develop leading industrial centers and gain awareness for the industry in particular. So, it will encourage the emergence of supporting clusters (industrial networks that interconnected in the process of increasing the value chain) of leading industrial centers. Superior industrial centers expected to play a role in absorbing more labor and improving people’s living standards and boost the economic growth of Malang City.

This study uses 12 criteria for regional superior products in ranking to identify leading industrial centers and evaluating internal factors (Internal Factor Evaluation / IFE) and external factors (External Factor Evaluation / EFE) and SWOT Analysis at leading industrial centers in developing power strategies industrial center competitiveness, which has never been studied by studies beforehand. The selection of the right competitiveness strategy is needed by leading industry centers so that the leading industrial centers gain optimal benefits from competition at the local, regional, national, and global levels and have high growth and business sustainability. Based on this background, this study raises the title of the Strategy for Increasing Competitiveness of Superior Industry Centers in Malang City.

Research purposes

Based on the problems described, the objectives of this study are:

1. To map the industrial center of Malang City
2. Evaluating the industrial centers of Malang City by using 12 criteria of superior products.
3. Determine the main industrial centers of Malang City based on AHP ranking
4. Evaluating internal factors (Internal Factor Evaluation / IFE) and external factors (External Factor Evaluation / EFE) at the leading industrial centers in Malang City.
5. Determine the competitiveness strategies that are appropriate for the superior industrial centers of Malang City with SWOT Analysis.
LITERATURE REVIEW

Industrial Centers

According to the Indonesian Language Dictionary (2008), the center is defined as a place located in the middle, while the meaning of industry is an activity to process goods using facilities or equipment. Decree of the Minister of Cooperatives and SMEs No: 32 / Kep / M.KUKM / IV / 2002, regarding Guidelines for Growth and Development of Centers defined centers as business activities in certain regions or locations that use the same raw materials or facilities, producing products and has a prospect to be developed into an integral part of the cluster and as an entry point for cluster development efforts. Cluster is an industrial network that is interconnected in a value chain improvement process (core industry, supplier of raw materials, auxiliary materials and assessments, and related industries).

To conclude, the industrial center can define as the center of processing goods that are in a particular area or location by using the same raw materials and facilities or equipment to produce the same or similar products and prospects to be developed.

Criteria of Superior Industry Centers

The definition of leading industrial centers adopts the definition of the Decree of the State Minister of Cooperatives and SMEs No: 32 / Kep / M.KUKM / IV / 2002, concerning Guidelines for Growth and Development of Centers. Leading industrial centers defined as business activities related to regional superior products. These centers have well-developed capacity and productivity, also play a role in employment. To define superior industrial centers, this study used 12 criteria regional superior products as stipulated in the Regulation of Minister of Home Affairs Republic Indonesia Number 9 of the year 2014 concerning Regional Superior Product Development Guidelines which are:

1. Employment absorption of regional superior products is produced by utilizing skilled labor in the production area to have an impact on job creation and income for the local community.
2. Contribution of the economy is products that have economic value to provide benefits to consumers have a forward and backward relationship that gives a multiplier effect of the economy and simultaneously provides economic benefits for all stakeholders and regions that produce these superior products.
3. The regional economic base sector is the regional superior product that breaks into the category of the base sector group in the GDRP and provides the largest contribution in the regional economy.
4. Renewable means that regional superior products are not mining goods and utilize renewable and environmentally friendly raw materials. Mining goods cannot be included as regional superior products even though at that time they gave a large economic contribution to the region.
5. The socio-cultural element in creating, producing and developing regional superior products by used community talents and institutions that built and developed based on local wisdom derived from distinctive characteristics and cultural heritage from the local and socio-cultural conditions.
6. Market availability is the ability of regional superior products to be traded in local, regional, national, and global markets.
7. The availability of raw materials is guaranteed with the acquisition of competitive prices, guaranteed continuity and environmentally friendly.
8. Capital is the availability and adequacy of funds for investments and working capital needed for the continuity of the business.
9. Production facilities and infrastructure are facilities for entrepreneurs to obtain production facilities and infrastructure at competitive and easily obtainable price levels.
10. Technology that is relevant, effective, and not easily imitated.
11. Business management is the ability to manage the business professionally by utilizing talents and community institutions.
12. Price is the ability to provide added value and bring operating profit.
Strategy for Increasing Competitiveness

The tight competition both in the local market and the global market puts pressure on the leading industrial centers to have productivity and competitiveness. Competitiveness is an interaction between input and output factors optimally which will help leading industrial centers in facing competition. According to Porter (1990), 4 main factors can be used to determine industrial competitiveness, namely 1) resource factors, 2) demand, 3) supporting industries and related industries, and 4) structure, competition, and corporate strategy.

One determining factor in competitiveness is the use of appropriate strategies. As a basis for strategy setting, leading industrial centers need to carry out SWOT analysis. SWOT analysis is based on a framework of thinking on how to optimize strengths, minimize weaknesses, take advantage of opportunities, and face threats faced by leading industrial centers (Rangkuti, 2015).

METHOD

Research design

This study uses descriptive research methods, by studying the problems of the object under study, namely the industrial center of Malang City. The introduction of the problem to the object of research is used as the basis for producing the right and best business strategy formulation for the superior business centers of Malang City to improve competitiveness. The data used in this study are primary data and secondary data. Primary data collection was obtained through in-depth interviews and FGDs. The research method itself is expected to be able to describe a deep understanding of the existing industrial centers in Malang City.

This study consists of two stages. The first stage is to determine the main industrial centers of Malang City. The second stage is to determine the strategy to increase the competitiveness of the leading industrial centers in Malang City. Data collection methods were used to determine the superior industrial centers of Malang City and determine competitiveness improvement strategies, namely Focus Group Discussion and In-depth interview. FGD is a special method for organizing discussions or a series of discussions (Budiharsono et al., 2006). The FGD participants came from the Industrial Center of Malang City and related agencies. In addition, researchers will look for other data in the form of secondary data obtained from literature from various relevant sources.

In the first stage, which is determining the superior industrial centers of Malang City, the data will be analyzed using AHP (Analytical Hierarchy Process). AHP was first introduced by Thomas L...

![Figure 1 The Hierarchy Model of Malang City Leading Industrial Centers](source: Researcher (2018))
Strategy to Enhance Indonesia’s Leading Industrial Centers Competitiveness

Saaty (1980). AHP is a tool in decision making that useful for a diversity of criteria and complexity inherent in a situation. The basic principles in AHP are making hierarchical arrangements (problem-criteria-alternatives), weighting criteria, weighing alternatives, and synthesizing (Saaty, 2008). AHP is useful to find out which industry centers are the most superior in Malang City based on 12 criteria of regional superior products stipulated in the Republic of Indonesia Minister of Home Affairs Regulation Number 9 of 2014 concerning Guidelines for Regional Superior Product Development. Weighting criteria is done by using Expert Choice software. The results of the weighting multiplication average with 12 criteria for regional superior products will produce a ranking. This ranking will be the determinant of the superior industrial center of Malang City (later called the flagship industrial center).

In the second stage, FGD participants were Malang industry-leading players who were obtained from the first stage. At this stage, efforts were made to explore information relating to the internal and external environmental conditions faced by Malang’s leading industrial center players. Furthermore, information obtained from FGD participants will be identified and grouped into internal (IFE) and external (EFE) strategic factors by conducting in-depth interviews with the industrial centers of Malang City. Weighing of groups of internal (IFE) and external strategic factors and factors (EFE) is carried out through pairwise comparison methods. In developing a strategic alternative, a SWOT matrix is used (David, 2004) to help match strength and opportunity strategies (SO) and strength and threat strategies (strength and threat/ST), weakness and opportunities/ WO strategies and weakness and threat strategies (weakness and threat/ WT). From this SWOT matrix, a variety of the best alternative strategies will emerge and will be recommended for the Malang City Superior Centers. Furthermore, priority strategies are determined which need to be carried out by the industrial centers of Malang City using the Quantitative Strategy Planning Matrix (QSPM).

**Informant**

The informants in this study were the Industrial Centers of Malang City and related agencies such as the Department of Industry.

**Data Collection Method**

Information explored through Focus Group Discussion (FGD) involving the Industrial Centers of Malang City, academics, and related agencies. In-depth Interview with the Industrial Center of Malang City is conducted to obtain information related to internal (IFE) and external (EFE) strategic factors.

**Data analysis method**

The research method used is Analytical Hierarchy Process (AHP) assisted by Expert Choice as an analysis tool and SWOT Analysis for the determination of the best strategies in improving the competitiveness of Malang City Superior Industrial Centers.

**RESULTS AND DISCUSSION**

**Stage 1 - Determination of Malang City Featured Centers**

The first stage was carried out to determine the best (leading) industrial centers in Malang City. The informant in the first stage is the industrial center in Malang City and related agencies, namely the Department of Industry of Malang City. Data was collected through the implementation of Focus Group Discussion (FGD).

To determine the superior industrial centers of Malang City, this study uses several stages, namely:

1. Gather information about existing industrial centers in Malang City

In the first stage, information about industrial centers in Malang City was obtained from data held by the Department of Industry of Malang City. Furthermore, the 15 industrial centers are grouped by industry sector to obtain 12 industrial centers, a. Tempe Center for Soybean and Tempe Chips; b. Emping Industry Centers and
Marning Corn; c. Lolipop Industry Center; d. d. Footwear Industry Center; e. Racket Industry Center; f. Furniture Industry Center; g. Rattan Industry Center; h. Wet Cake Industry Center; i. Vehicle Number Plate Industry Center; j. Ceramics Industry Center; k. Pottery Industry Center; and l. Sanitair Industrial Center

2. Establish 4 leading industrial centers in Malang City
From the data obtained, the next step is to determine the superior industrial centers of Malang City. To establish a superior industrial center in Malang City, this study used Borda. Borda method is a voting method that can complete group decision making, wherein each application the decision-maker gives a rating based on the existing choices, the selection process in the Borda method, each voter is given a choice. Suppose there are n selected candidates, the first candidate or alternative is given n points by the voter or decision-maker. The second candidate is given point n-1 and so on. Determining the winner or the best alternative based on the highest points. The alternative with the highest score is the consideration to be chosen.

3. Exploring information about leading industrial centers is assessed from 12 criteria of leading industrial centers in Malang City
After obtaining 4 leading industrial centers (the most superior industrial centers), the next step is to make criteria ranking derived from the 12 most important criteria for industrial centers to be called superior by using the AHP method which is then processed using Expert Choice software.

Second Phase - Strategy for Increasing Competitiveness of Superior Industry Centers in Malang City

The second stage is determining the strategy of increasing the competitiveness of the leading industrial centers in Malang City, there are several steps taken:

1. Phase Input
   The input stage summarizes the basic input information needed to formulate a strategy. Input devices require strategists to calculate subjectively in the initial stages of the formulation process. Making small decisions in the input matrix concerns the relative importance of external and internal factors that produce and evaluate strategies more effectively. Good intuitive assessment is always needed in applying appropriate weighting and judgment. The External Factor Evaluation Matrix (EFE) and Internal Factor Evaluation Matrix (IFE) are one way to formulating strategies at the input stage.

   1) External Factor Evaluation Matrix (EFE Matrix)
      The EFE matrix is used to evaluate the centers’ external factors. External data is collected to analyze issues relating to economic, social, cultural, demographic, environmental, political, governmental, legal, technological, competition in the industrial market and other relevant external data. This is important because external factors have a direct or indirect influence on the company (Umar, 2003).

   2) Internal Factor Evaluation Matrix (IFE Matrix)
      The IFE matrix is used to determine the centers’ internal factors related to the strengths and weaknesses that are considered important. Data and information on the internal aspects of the company can be extracted from several functional companies such as management, finance, human resources, marketing, information systems and production or operations (Umar 2003).

2. Matching Steps
   The matching stage is the second stage which focused on producing viable alternative strategies by combining external and internal factors. Information obtained from the input stage is used at this stage. The SWOT matrix (Strengths, Weaknesses, Opportunities, and Threats) and the Internal-External (IE) matrix are included in the matching phase.
Strategy to Enhance Indonesia’s Leading Industrial Centers Competitiveness

In this cell, the strategy that must be carried out by the centers is an intensive strategy by conducting market development and product development. Market development strategies are introducing existing products or services into new geographical areas or market segments. Product development strategy is to make efforts to increase sales by improving existing products or services or developing new ones.

1) SWOT Matrix
   This matrix is an important matching tool to help managers develop four types of strategies. The results of the analysis of the external and internal environments that have been carried out in the form of strengths, weaknesses, opportunities, and threats aim to form a SWOT matrix.

2) Decision Phase
   The Decision stage is the last step in formulating a company’s strategy. Information obtained at the input stage and the matching stage is used at this stage. The next analysis used is Quantitative Strategic Planning Matrix (QSPM), a technique that can objectively establish priority strategies that are prioritized. QSPM techniques require good intuitive judgment. QSPM uses input from the EFE SWOT Matrix analysis and matching results from the IFE SWOT matrix. The selection of alternative strategies with the QSPM method uses the value of attraction (Attractiveness Scores or (US)) and the total value of attraction (Total Attractiveness Scores or (TAS)). Based on the SWOT analysis, an alternative strategy was obtained to improve the competitiveness of Malang City’s shipping centers, namely eleven alternative strategies. To determine the appropriate alternative strategy, QSPM analysis is a priority.

   Based on the results of the questionnaire about the selection of alternative strategies shows the most preferred alternative strategies by respondents. Alternative strategies with the highest TAS value are strategies that need to be implemented first by the company. The results of the questionnaire show that the highest TAS value is an alternative strategy 1, namely increasing demand by using social media and supporting clusters as marketing channels supported by the superiority of the products and services offered.

![Figure 2 IE Matrix IFE’s Total Score](image)

Figure 2 IE Matrix IFE’s Total Score
CONCLUSIONS AND RECOMMENDATIONS

Conclusions
1. Malang City has 4 leading industrial centers, namely tempe chips, ceramics industry centers, furniture industry centers, and rattan industry centers.
2. The strengths of the superior industrial centers of Malang City are the availability of raw materials, cheaper price, high product innovation, fast processing time, reliable and trustworthy, loyal customers, high product variety, ability to fulfill orders, and better quality products.
3. The weaknesses of the superior industrial centers of Malang City are lack of technology, lack of managerial knowledge, lack of facilities and infrastructure, difficulty accessing capital, lack of skilled workforce, easily replicable products, prices played by collectors, limited marketing reach because marketing is done traditionally, and the high level of employee turnover.
4. The opportunity of Malang’s leading industrial centers are the market share that is still open, the emergence of social media as a marketing channel, and the supporting clusters (tourist destinations)
5. The threats faced by the superior industrial centers of Malang City are the level of economic growth, the rise of online competition, changes in market preferences, and the absence of price standardization among business actors.
6. Based on the IE matrix, the Malang superior industrial center positions are in the cell V which is maintaining and maintaining. In this cell, the strategy that must be carried out is an intensive strategy, which is doing market development and product development. The market development strategy is to introduce existing products or services to new geographical areas or market segments.
7. The SWOT matrix created displays several alternative strategies that can be chosen by the leading industrial centers of Malang City, namely:
   a. increase demand by using social media and supporting clusters as marketing channels supported by the superiority of products and services offered
   b. increase managerial knowledge to overcome weaknesses and take advantage of opportunities
   c. make a strong brand to increase awareness, difficult to imitate, and stable price
   d. improve and maintain the superiority of products and services offered in anticipation of intense competition
   e. improve the competencies possessed by the workforce, so that productivity and product quality will increase to face competition and changing preferences
   f. Coordinate and standardize prices among business actors to minimize the price play carried out by collectors
   g. Based on the QSPM matrix created, the alternative strategy that has the highest TAS score and must be done first is to increase demand by using social media and supporting clusters as marketing channels supported by the superiority of the products and services offered.

Recommendations
The superior industrial centers of Malang City need to maintain and increase their strengths, by continuing to make high product innovations, speed of work time, maintain reliability and reliability, increase product variety and product quality, and increase the ability to fulfill orders. Malang’s leading industrial centers need to minimize their weaknesses by increasing managerial knowledge, increasing the competence and skills of the workforce to overcome the lack of skills and the high level of employee turnover, making brands and uniqueness so that the products are not easily replicated and prices cannot be played by collectors, and expand the marketing range.
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