

# The Influence Of Product Quality, Price And Exchange Rate Towards Export Volume On SME's Creative Sculpture Industry In Mojokerto

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## Abstract.

*The aim of carrying out this research is to determine the influence of production concepts, prices and exchange rates on the export volume of the creative sculpture craft industry in Mojokerto, East Java, Indonesia. Research includes research with a quantitative approach. Primary data was collected using a questionnaire during the period February 2025. Based on the data that was collected, the total amount of data that can be used is sixty SME's. The results show a simultaneous influence, the three independent variables used jointly influence the dependent variable. Partially, it was found that production did not have a significant influence, while international prices and exchange rates had a significant influence. It is hoped that the results of this data processing will have implications for creative sculpture industry producers in Indonesia in general to be able to improve quality in order to increase export volume so that it has a significant impact on economic growth and social welfare.*

**Keywords:** *Production, International Prices, Exchange Rates and Export Volume.*

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## I. INTRODUCTION

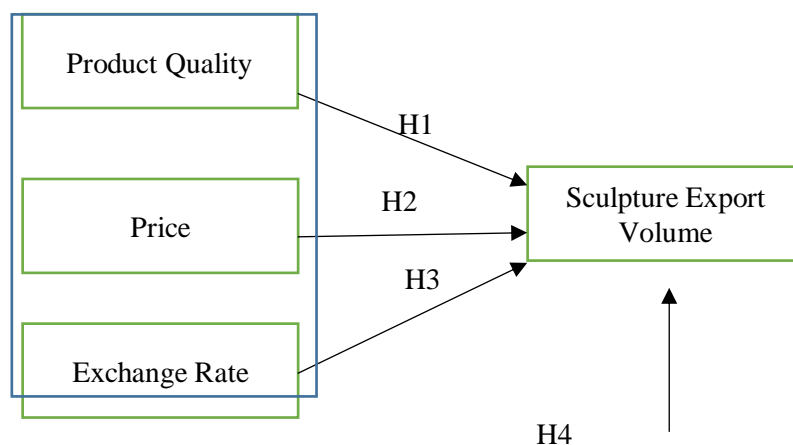
Fundamental changes are taking place in the world economy in recent decades. The economy, which was originally known as an independent national economy, is starting to move towards an open economy that reduces trade boundaries between countries (distance, time zones, culture, & language). This event is caused by developments and progress in the fields of technology and transportation. Differences in geographical location and resources owned by a country are also triggers for conducting international business activities. One form of international business activity is export. Export is selling products made in one's own country to be used or resold in other countries (Griffin & Pustay, 2015:10). Exports generally play a significant role in contributing to the country's foreign exchange reserves. Indonesia is one of the countries that carries out export activities. The diversity of export commodities exported by Indonesia is due, among other things, to the diversity of forms of tangible cultural works such as metal forging, carving and sculpture that have been passed down from their ancestors. One of Indonesia's leading export commodities is the export of statues. The art of carving statues produced by Indonesia has been famous for a long time. This art is the peak of the highest sculpture art that has been proven to have been exported to various parts of the world with various functions ranging from decoration to religious rituals. Indonesia as a country that exports statues must be able to compete with other countries in order to become the main commodity of choice chosen by countries that import statues in the world. Increasing statue exports can be done by focusing on factors that influence exports. Some factors that influence exports are international prices, exchange rates, export-import quotas, tariff and non-tariff policies, policies to increase non-oil and gas exports (Soekartawi, 2005:122). Products are one of the factors that influence exports.

Production is an activity that changes input into output (Sugiarto et al., 2005:202). Input can be in the form of capital, labor, land, and natural resources, while output is a product that has added value after production. The quality and quantity of products produced can influence export demand and supply. International prices are another factor that influences exports. If the price of an item increases, producers tend to increase the number of goods produced (Rahardja & Manurung, 2010:28). International price fluctuations will affect the demand and supply of statues in Indonesia. Another factor that should be

considered because it affects other exports is the exchange rate. The exchange rate can affect the purchasing power of importers and the cost of commodity production carried out by exporters. Exchange rate fluctuations will cause instability in the export market. Indonesia as an exporting country needs to create an appropriate exchange rate policy in order to trigger an increase in exports. Mistakes in decision making in making policies will be able to reduce exports which can harm Indonesia. Exports of Indonesian statues are a very promising prospect for Indonesia. Increasing exports of these commodities can boost state revenues obtained through exports or as foreign exchange. In order for these promising prospects to be realized, careful planning and supervision are needed. Exports of Indonesian statues are also required to increase competitiveness in order to be able to compete with other statue exporting countries such as Thailand, Cambodia and Laos.

## II. METHODS

The type of research uses explanatory research using a quantitative approach. The research was conducted in Indonesia by obtaining data directly from statue craftsmen located in Trowulan District, Mojokerto Regency, East Java. In order to obtain accurate data and support several related agencies, we also involved them to support official data validation, including the Central Statistics Agency, the Tourism and Culture Office, the Cooperative and UMKM Office and the Cultural Heritage Conservation Center. Data collection was carried out by filling out a questionnaire assisted by a surveyor to the owners and/or direct managers of statue craft UMKM during February 2025 with a sample size of 60. Analysis of the data obtained was processed with instrument stages using descriptive analysis and classical assumption tests (normality test, autocorrelation test, multicollinearity test, heteroscedasticity test). In addition, to see the effect between the independent variables on the dependent variables, multiple linear regression analysis was used and hypothesis testing (determination coefficient, F Test and t Test) using SPSS 24.0 software. For more details, the research model framework can be described as follows.



The formulation of the research hypothesis is:

H1: Product Quality has a positive and significant effect on the Export Volume of Indonesian Sculpture.

H2: Price has a positive and significant effect on the Export Volume of Indonesian Sculpture.

H3: Rupiah's Exchange Rate against US Dollar has a positive and significant effect on the Export Volume of Indonesian Sculpture.

H4: Product Quality, Price and Rupiah Exchange Rate against US Dollar simultaneously have a positive and significant effect on the Export Volume of Indonesian Sculpture.

## III. RESULT AND DISCUSSION

Classical Assumption Test where the results of the normality test show that the data is spread around the diagonal line and follows the direction of the diagonal line, so it can be concluded that the regression model meets the normality assumption. Autocorrelation Test results of the Durbin-Watson statistical test

show a value of 1.963 which is between 1.705 and 2.295. This value indicates that the Durbin-Watson value is in the acceptance area. It can be concluded that the model estimation does not experience autocorrelation. Multicollinearity Test results show that the tolerance value of each independent variable as a whole is  $> 0.1$ , which means that there is no correlation between the independent variables so that the multicollinearity assumption is met. Heteroscedasticity Test results of the heteroscedasticity test obtained a scatterplot display diagram that was spread and did not form a certain pattern, so there was no heteroscedasticity, so it can be concluded that the residuals have a homogeneous (constant) variety. Multiple Linear Regression Analysis. The results of the multiple linear regression analysis test obtained the following linear regression model:

$$Y = (-0.027) X_1 + 0.279 X_2 - 0.611 X_3$$

Based on this equation, it can be interpreted as follows:

1)  $X_1 = -0.027$

The coefficient value of the Indonesian Sculpture Product variable is -0.027. The explanation for this is that the Indonesian sculpture product variable has a negative relationship with the volume of Indonesian exports. Every 1 unit increase in  $X_1$  (Indonesian sculpture Production) can reduce 0.027 units of Indonesian sculpture export volume. Another explanation is that when there is a decrease of 1 unit of  $X_1$  (Indonesian sculpture Production) it can increase 0.027 units of Indonesian sculpture export volume.

2)  $X_2 = 0.279$

The coefficient value of the International sculpture Price variable is 0.279. The explanation of this is that the International sculpture Price variable has a positive relationship with the volume of Indonesian sculpture exports. Every 1 unit increase in  $X_2$  (International sculpture Price) can increase 0.029 units of Indonesian sculpture export volume. Another explanation is that when there is a decrease of 1 unit of  $X_2$  (International sculpture Price) it can decrease 0.279 units of Indonesian sculpture export volume.

3)  $X_3 = -0.611$

The coefficient value of the Rupiah Exchange Rate variable against the US Dollar is -0.611. The explanation of this is that the Rupiah Exchange Rate variable against the US Dollar has a negative relationship with the volume of Indonesian sculpture exports. Every 1 increase in the Rupiah Exchange Rate against the US Dollar can decrease 0.611 units of Indonesian sculpture export volume. Another explanation is that when there is a 1 decrease in the Rupiah Exchange Rate against the US Dollar it can increase 0.611 units of Indonesian sculpture export volume.

#### d. Hypothesis Test

##### 1) Determination Coefficient ( $R^2$ )

The output of the  $R^2$  calculation produces a value of 0.312. The explanation is that the independent variable explains 31.2%, while 68.8% is other variables that are not explained.

##### 2) F Test

The output produces a sig. F (0.000) value  $< \alpha = 0.05$ . The explanation is that the independent variables simultaneously have a significant effect on the dependent variable.

##### 3) t Test

a) Production produces a sig. value of 0.799. The explanation is that the Production variable partially does not have a significant effect on the dependent variable.

b) International Price produces a sig. value of 0.013. The explanation is that International Price partially has a significant effect on the dependent variable.

c) Exchange rate produces a sig. value of 0.000. The explanation is that the exchange rate partially has a significant effect on the dependent variable.

## **DISCUSSION**

### **The Effect of Product Quality on Sculpture Export Volume**

From the results of the regression test that we present above, we can see the results showing that the coefficient value of the relationship between the quality of statue products in Indonesia does not have a positive and significant effect on the volume of statue exports. This is indicated by the negative regression

coefficient value and from the partial relationship test also shows that there is no direct relationship. The interpretation of the test results above can be concluded that so far there have not been many problems related to the quality of statues sent to various countries, both in terms of material, model and delivery guarantees that make customers have high confidence in statue craftsmen in Indonesia. From this phenomenon, the suggestions for improvement given to statue craftsmen are to remain consistent in maintaining this quality and if necessary, it can be improved so that later it can maintain the continuity of good relations between exporters and importers abroad, which in fact also have many threats from competitors from other countries. plus lately there have also been many suppliers offering cheaper prices with molded statues that can guarantee a relatively faster processing time and much cheaper prices. Based on the explanation from the craftsmen, they are not worried about the threat because by maintaining the old carving method, their products are more durable and timeless because most of their products are placed outdoors.

#### **The Effect of Price on Sculpture Export Volume**

From the results of the regression test that we present above, we can see the results showing that the coefficient value of the relationship between the price of statues in Indonesia has proven to have a positive and significant influence on the volume of statue exports. This is indicated by the positive regression coefficient value and from the partial relationship test, it also shows that there is a direct relationship. The interpretation of the test results above can be concluded that price fluctuations depend on various factors that follow such as raw materials, labor wages, shipping costs and no less important is the exchange rate because this is international trade. So that the price variable in terms of any product is not only in the production of statues but also other export commodities will still have a relationship with the volume of exports carried out by importers.

#### **The Effect of Exchange Rate on Sculpture Export Volume**

From the results of the regression test that we present above, we can see the results showing that the coefficient value of the relationship between the exchange rate of the rupiah currency in Indonesia against the US dollar does not have a positive and significant effect on the volume of statue exports. The results of the regression test are negative, but from the partial relationship test, it shows that there is a direct relationship or in other words, it is significant. This phenomenon often occurs in various social studies that show significant negative values. Negative significance occurs when an influence between independent variables is not proven to affect the dependent variable, but in fact the intention of the influence has a large impact. Of course, not only the statue industry but also in other commodities, this significance value has a meaningful difference so that we can conclude that the influence of this exchange rate actually determines the large or small volume of exports carried out by entrepreneurs, but this time it did not happen in the statue industry in Indonesia.

#### **The Effect of Product Quality, Price and Exchange Rate on Sculpture Export Volume**

From the results of the regression test that we present above, we can see the results showing that the coefficient value of the relationship between product quality, price and exchange rate on export volume has various values. There are positive and negative values on the volume of statue exports. However, from the simultaneous relationship test (F test) it shows that there is a direct relationship or in other words, it is significant together affecting the volume of statue exports. This significance value does not occur immediately, but many other determining factors contribute, such as the economic and political conditions of a country, both from the exporter's side and from the importer's side, which can ultimately synergize with each other. Factors such as economics and politics are difficult for business actors to control because they are not directly involved and only get the impact of these activities. From these results, we can further examine the various factors that actually have a more dominant role in influencing the level of export volume of a commodity to be sent abroad.

#### IV. CONCLUSION

1. Product Quality has a negatif and not significant effect on the Export Volume of Indonesian Sculpture.
2. Price has a positive and significant effect on the Export Volume of Indonesian Sculpture.
3. Rupiah's Exchange Rate against US Dollar has a negative and significant effect on the Export Volume of Indonesian Sculpture.
4. Product Quality, Price and Rupiah Exchange Rate against US Dollar simultaneously have significant effect on the Export Volume of Indonesian Sculpture.

It is expected that the government can support the efforts of Indonesian statue craftsmen to improve the quality of their production. Some ways to improve these efforts can be done by improving the technology of automatic statue carving business, providing counseling to statue craftsmen in order to increase production and providing assistance both technically and non-technically related to improving the skills of sculptors. The quality of materials is also an important concern that supports the production section. Quality products will be able to increase competitiveness against other statue exporting countries. Increasing the quality of Indonesian statues is expected to increase state revenues to support Indonesia's economic growth.

#### V. ACKNOWLEDGEMENTS

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#### REFERENCES

- [1] Griffin, R. W., & Pustay, M. W. (2015). *Bisnis Internasional: Sebuah Perspektif Manajerial*. Jakarta: Salemba Empat.
- [2] Hamdani. (2012). *Ekspor Impor Tingkat Dasar Level 1*. Jakarta Timur: Bushindo.
- [3] Harahap, Arman ,2018, Macrozoobenthos diversity as bioindicator of water quality in the Bilah river, Rantauprapat, Medan. *J. Phys.: Conf. Ser.* 1116 052026.
- [4] Harahap, et, all, Macrozoobenthos diversity as anbioindicator of the water quality in the Sungai Kualuh Labuhanbatu Utara, AACL Bioflux, 2022, Vol 15, Issue 6.
- [5] Harahap, A. 2020. Species Composition & Ecology Index Of The Family Gobiidae At The Mangrove Belawan Of Sicanang Island *International Journal of Scientific & Technology Research* Volume 9, Issue 04, April 2020.
- [6] Harahap, A., et all ( 2021), Monitoring Of Macroinvertebrates Along Streams Of Bilah River *International Journal of Conservation Sciencethis link is disabled*, 12(1), pp. 247–258.
- [7] Kotler, P., & Amstrong, G. (2008). *Prinsip-prinsip Pemasaran*. Jakarta: Penerbit Erlangga.
- [8] Mankiw, N. (2007). *Makroekonomi*. Jakarta: Penerbit Erlangga.
- [9] Rahardja, P., & Manurung, M. (2010). *Teori Ekonomi Mikro Suatu Pengantar*. Jakarta: Fakultas Ekonomi Universitas Indonesia.
- [10] Sokartawi. (2005). *Agribisnis: Teori dan Aplikasinya*. Jakarta: Rajawali Press.
- [11] Setia Pratama, A., Sudarmiati, S., & Wishnu Wardhana, L. (2023). The Influence Of Product Perceived Quality, Service, Environment And Assortment On Customer Loyalty With Customer Satisfaction As An Intervening Variable In Angkringan UMKM In Mojokerto Regency. *International Journal of Science, Technology & Management*, 4(6), 1420-1432. <https://doi.org/10.46729/ijstm.v4i6.978>.
- [12] Evanthe, A., & Mukti Azhar, R. (2023). Planning and Implementation of Event Marketing in Sociopreneurship . *International Journal of Science, Technology & Management*, 4(6), 1451-1459.
- [13] Nugraha, B., Sianturi, I., & Aini Rakhman, R. (2023). The Effect Of Supply Chain Management And Corporate Communication Skills On Production Performance At PT. Berlian Manyar Sejahtera. *International Journal of Science, Technology & Management*, 4(6), 1477-1485. <https://doi.org/10.46729/ijstm.v4i6.966>.
- [14] Parulian Simanjuntak, G., & Sensi W, L. (2023). Evaluation Of The Implementation Of The Internal Audit Capability Model (IACM) Level 3 In The Supervision System Of The Inspectorate General Of The Ministry Of Agriculture. *International Journal of Science, Technology & Management*, 4(6), 1581-1602.

- [15] Hanif Triyana, M., & Indah Fianty, M. (2023). Optimizing Educational Institutions: Web-Based Document Management . *International Journal of Science, Technology & Management*, 4(6), 1653-1659. <https://doi.org/10.46729/ijstm.v4i6.976>
- [16] Muryanto, F., Sukristyanto, A., & Juliswara, V. (2022). Examining The Policy Narrative and The Role of the Media in the Policy Response to the Covid-19 Crisis in Indonesia. *International Journal of Science, Technology & Management*, 3(5), 1295-1306. <https://doi.org/10.46729/ijstm.v3i5.599>
- [17] Sugiarto, & Dkk. (2005). *Ekonomi Mikro: Sebuah Kajian Komprehensif*. Jakarta: PT Gramedia Pustaka Utama.