



The negative effect of monopolistic firms on the economy of developing countries

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Abstract: The study tries to answer the question: Do monopolistic firms have a negative effect on the economy of developing countries? By discussing several articles made to a similar topic in the past, we found the index named The Herfindahl-Hirschman Index (HHI) which shows the level of monopoly in the market of the country. Thus, the GDP per capita of the ten developing countries was compared with the HH index, in order to find the correlation between monopoly and the economy of the countries. After the estimation and discussion of the correlation, the finding showed us that the monopolistic market slows down the development of the economy over a long period.

Key words: economy, monopoly, inflation, taxes, barriers to importing goods.

Introduction

There is a fact that the market structure of the country has a large effect on the development of the country, and mainly on its economy. Nowadays, almost all scientists tend to believe that perfect competition is the best market structure for countries and its economy. On the other hand, there are still many countries that do not have a fully free market. For example, Nicaragua, the Republic of Niger, Mongolia, and the Kyrgyz Republic are some countries with a high level of monopoly in their markets. (WITS, 2023)

A monopoly is one of the market structures where one company or producer dominates the whole market. Mainly the monopolistic market has a negative impact on everything such as consumers, the economy, and the development of the country. The reason for this is that the monopolist can change the price of the product as it wishes. Moreover, being the only producer in the market causes a decrease in the quality of the product and a loss of interest in innovations in production.

At the end of the 19th century, the monopoly increased its power in the world. One of the most popular ones was Standard Oil company by John Rockefeller. His company in 1880 was controlling 90 percent of the oil industry, meaning that he was controlling the whole oil market in the United States. In that period of time, the government started steps against the monopolistic system of John Rockefeller, by putting lots of restrictions. However, there were many years before the United States decreased the level of monopoly

in the oil production industry. Besides that, perfect competition in the market in the United States had a large positive effect on the economy of the country.

Nowadays, many countries try to control the monopoly level in their markets, but a large number of developing countries do not take care of it, or even support the monopolists in their markets. Thus, in this study, it will be analyzed if the level of monopoly has a negative effect on the well-being of the country in the case of developing ones.

Literature review

There were conducted several studies to estimate the effect of the monopoly on the economy. Most of them concluded stating that the monopoly is one of the factors of countries' well-being. On the other hand, there are some articles that state about benefits of the monopolistic firm. Below, it will be discussed main studies of the correlation between monopoly and the economy of the countries.

First of all, in the article named Monopoly by EconomicsOnline (2020), it can be seen that there were explained how the monopoly works by curves. Moreover, it was stated that there are some benefits for the country from monopoly in its market. For instance, a monopolistic firm that has high earnings due to its power in the market can attract foreign investors to invest, which has an effect on the well-being of the country. Furthermore, to protect their power in the market, the dominants establish barriers to importing goods, which is one kind of the taxes that go to the budget of the country. However, the study demonstrates several negative impacts on consumers. One of the main examples provided in this research was the inefficient price change and shortage of choice. Since the monopolistic producers have no competition with other producers, they charge higher prices in order to earn more. At the same time, monopolistic companies start to produce fewer products so that they could lower their expenses. Overall, the article states that monopoly leads to an inefficient and not competitive economy in the country.

In addition to this, the research by Tatiana Kotcofana et al (2020) discussed the influence of monopoly on inflation and economic growth in the case of Russia. They compared the producers' price index, inflation, and GDP growth, by using dialectical materialistic and concrete historical methods. The results of their study showed a positive correlation between inflation and the level of monopolization. Moreover, they found that monopoly is a drawback to the economic growth of the country.

In 2022, Paul Gabriel Ekpeyong and Babajide Wasiu Akintunde studied the monopoly in Nigerian Electricity Regulatory Commission. The qualitative analyses showed that over a long period of time, there is a loss for the monopolistic firms too. Moreover, the monopoly in the market of developing countries causes the inefficiency of the economy and a decrease in the development of the country.

Furthermore, the World Bank (2016) researched competition in several industries and poverty in the country. There was an empirical study of the negative correlation between poverty and the level of competition in the market and found that less competitive markets like monopolies cause the rise of poverty in the country.

Overall, all past studies were concluding that the monopoly is a danger to the economy and the market of the country. Due to the fact that monopolistic companies have control over the price change and the quality of the product, the economy decreases slightly in the long run. Thus, the article states that the government should take some steps against the monopoly through restrictions and policies.

Data and variables

The secondary data from WITS and World Bank Open Data were used in order to find whether there is any negative effect of monopolistic firms on the economy of developing countries. The time-series data was used due to it covers the 5 countries for a 20-year period starting from 2001. Five countries with the

highest monopoly level in 2001 and with lower one in 2020 were selected because their fluctuation could show us the correlation of monopoly level with the economic well-being of the country.

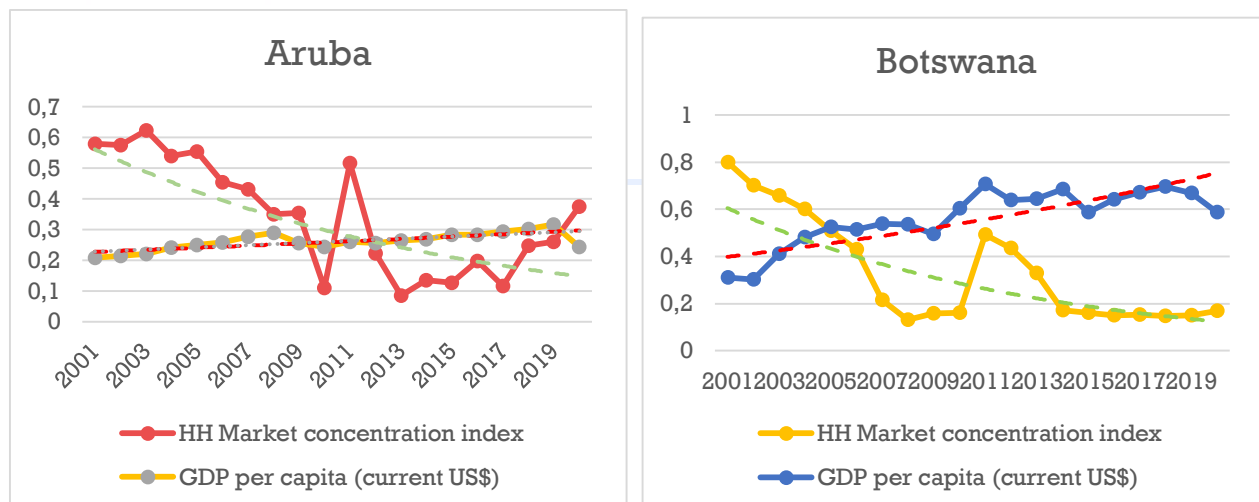
In order to see the level of monopoly in the country, the Herfindahl-Hirschman index (HHI) was taken. The Herfindahl-Hirschman index (HHI) is the measurement of constation on the market and is mainly used for understanding the level of monopoly in a specific industry. The HHI is calculated by squaring the market shares of the firms and is in the range from 0 to 10000. However, in order to find a monopoly in the whole country, it was calculated the mean of the monopoly levels in the main industries in the country and divided into 10000. Thus, in the graphs below, you are going to see the monopoly level in the range from 0 to 1.

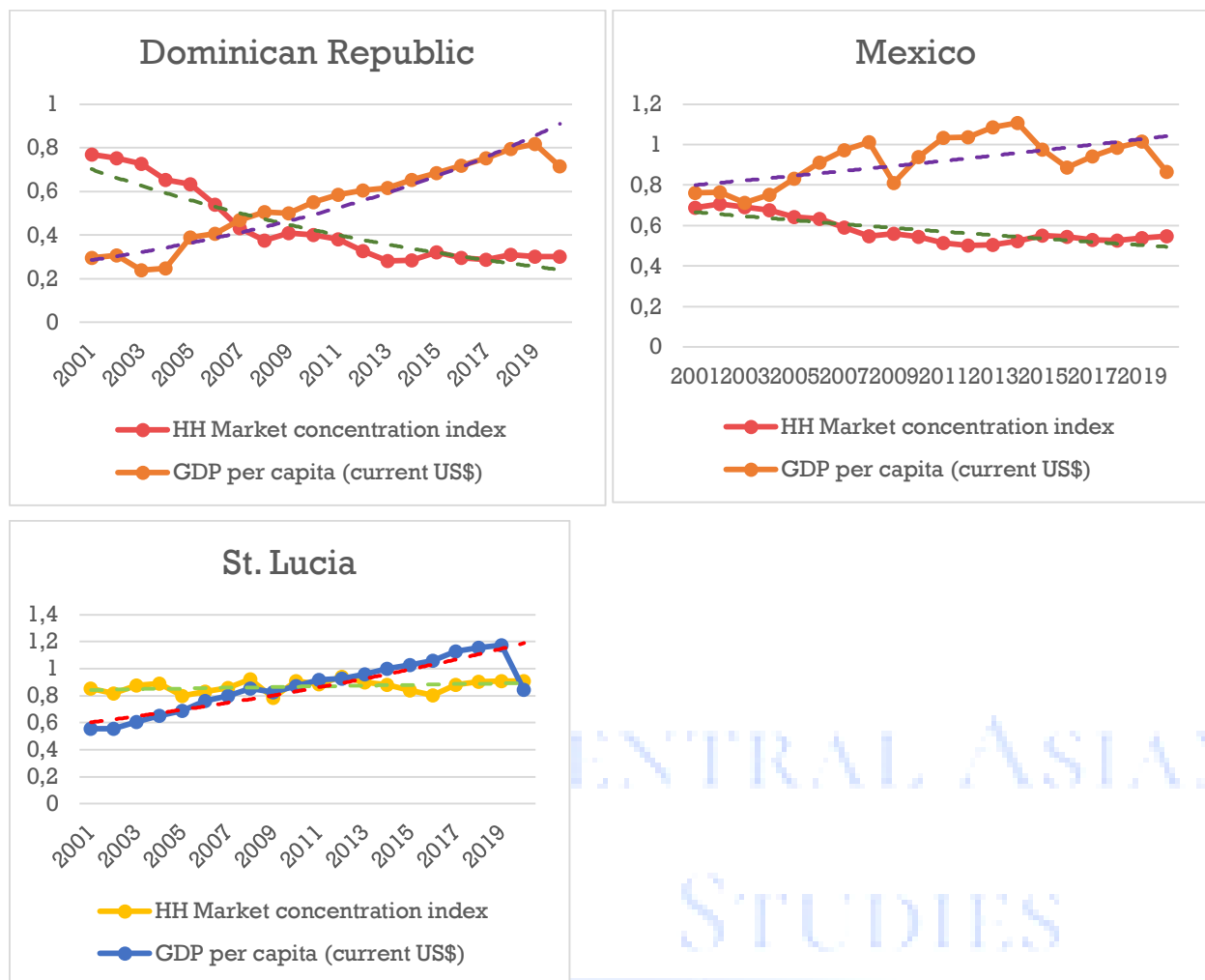
As we are comparing the monopoly with the economic well-being of the countries, it was taken GDP per capita as it is the measurement of the economy in the countries. Gross Domestic Product (GDP) value shows the final goods and services that were bought or used inside of the country in the given period. Therefore, the GDP per capita is the GDP divided by the population of a country. The World Bank states that the GDP per capita is a widely used indicator of the level of economy in the country.

Furthermore, to analyze the correlation between HHI and GDP per capita, the graphical method has been used to see the correlation, and the OLS method has been used in order to prove the effect of monopoly on the economy of the country.

Results

Below you can find the graphs of the countries' GDP per capita and HH market concentration index. The GDP per capita was divided into 1000 in order to see the correlation between variables.





From the graphs above, it can be seen that Aruba, Botswana, Dominican Republic, and Mexico, have a clear negative correlation between the HH market concentration index and GDP per capita. The trend line shows that while the level of monopoly decreases the GDP per capita and the economic well-being growth. At the same time, the results from the OSL method are similar to the graphical results. The regression models of Aruba and Botswana showed that the HH Market concentration index explains about 45 percent of the whole regression. However, in the case of the Dominican Republic and Mexico, the regression has about 75 percent in R-squared. The p-values for all four countries are lower than 0.05, meaning that independent variables are significant. Moreover, the coefficients are negative due to the negative correlation between the level of monopoly and the economy of the countries. On the other hand, the graph of St Lucia shows stability in the HH Market Concentration Index and a slight growth of GDP per capita. Furthermore, the results of the regression state that the level of monopoly in St Lucia is not the factor that affects the GDP per capita of the country.

By comparing the results of this study and the previous ones, we can conclude that they are similar to each other.

Conclusion and Recommendations

To sum up, the study showed us the negative impact of the monopoly on a developing country's economy. Since monopolistic firms control the price and the quality of the product, it causes inefficiency in the market. Moreover, consumers are less happy because they can not buy the product at an efficient

price. In addition, the monopoly mostly causes a lack of innovations and options of products, which leads to stability in the development of the country.

On the other hand, the government in highly monopolistic countries can improve the situation by several steps. In my opinion, the government can put restrictions on the price of the product that the monopolists produce. This will lead to a decrease in overpricing and a rise in the efficiency of the market. Additionally, the government can provide investments and opportunities to the firms and companies that are competing with monopolistic firms, which will build perfect competition in the long run. Furthermore, the government can lower the taxes and barriers to foreign products and companies. This is going to accelerate the building the perfect competition in the market of the country.

Appendix

. reg Aruba ArubaHHMarketconcentrationin

Source	SS	df	MS	Number of obs	=	20
Model	62091435.6	1	62091435.6	F(1, 18)	=	11.73
Residual	95282022.8	18	5293445.71	Prob > F	=	0.0030
				R-squared	=	0.3945
				Adj R-squared	=	0.3609
Total	157373458	19	8282813.6	Root MSE	=	2300.7

Aruba	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
ArubaHHMarketconcentrationin	-9863.254	2879.875	-3.42	0.003	-15913.65	-3812.862
_cons	29573	1113.779	26.55	0.000	27233.04	31912.96

. reg Botswana BotswanaHHMarketconcentration

Source	SS	df	MS	Number of obs	=	20
Model	13523417.1	1	13523417.1	F(1, 18)	=	18.39
Residual	13233537.2	18	735196.513	Prob > F	=	0.0004
				R-squared	=	0.5054
				Adj R-squared	=	0.4779
Total	26756954.3	19	1408260.75	Root MSE	=	857.44

Botswana	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
BotswanaHHMarketconcentration	-3804.241	887.006	-4.29	0.000	-5667.772	-1940.711
_cons	6897.719	354.3963	19.46	0.000	6153.16	7642.278

. reg DominicanRepublic DominicanRepublicHHMarketcon

Source	SS	df	MS	Number of obs	=	20
Model	53516922.1	1	53516922.1	F(1, 18)	=	98.64
Residual	9765510.15	18	542528.342	Prob > F	=	0.0000
				R-squared	=	0.8457
				Adj R-squared	=	0.8371
Total	63282432.3	19	3330654.33	Root MSE	=	736.57

DominicanRepublic	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
DominicanRepublicHHMarketcon	-9746.985	981.3771	-9.93	0.000	-11808.78	-7685.188
_cons	9712.03	461.6315	21.04	0.000	8742.178	10681.88

. reg StLucia StLuciaHHMarketconcentratio

Source	SS	df	MS	Number of obs	=	20
Model	7035668.23	1	7035668.23	F(1, 18)	=	2.01
Residual	62877454.9	18	3493191.94	Prob > F	=	0.1729
				R-squared	=	0.1006
				Adj R-squared	=	0.0507
Total	69913123.1	19	3679638.06	Root MSE	=	1869

StLucia	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
StLuciaHHMarketconcentratio	13564.87	9558.157	1.42	0.173	-6516.074	33645.81
_cons	-3108.919	8314.132	-0.37	0.713	-20576.26	14358.42

. reg Mexico MexicoHHMarketconcentrationi

Source	SS	df	MS	Number of obs	=	20
Model	19159145.5	1	19159145.5	F(1, 18)	=	48.65
Residual	7088651.72	18	393813.985	Prob > F	=	0.0000
				R-squared	=	0.7299
				Adj R-squared	=	0.7149
Total	26247797.2	19	1381463.01	Root MSE	=	627.55

Mexico	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
MexicoHHMarketconcentrationi	-14702.52	2107.896	-6.97	0.000	-19131.04	-10273.99
_cons	17704.5	1226.757	14.43	0.000	15127.18	20281.82

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