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A Simple Explanation of Gross Domestic Product with Tyler's Output as an Example

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In this issue of the ***Hibbs Brief***, we explore an economic term, the *Gross Domestic Product*, and how Tyler is doing compared to other cities in Texas with this useful economic measure.

The *Gross Domestic Product*, or GDP, is the total value of everything that is produced in a region, namely, a country, a state, a city, a Metropolitan Statistical Area (MSA), etc. The GDP includes only the final value of a product, not the value of its parts, so the value is not double-counted. For instance, a garment manufacturer would count the value of a shirt, not the cotton, the fabric, or the buttons used to make the shirt.

In essence, the GDP has five components, which by convention, are each one represented by a letter: personal consumption (C), business investment (I), government spending (G), exports (X), and imports (M). The calculation of the GDP is simply the result of C + I + G + X - M. Typically, the major component of the five is personal consumption, which accounts for about 70% of the total GDP every year.

The U.S. government measures GDP every month via the Bureau of Economic Analysis (BEA) and publishes its calculations in both, quarterly and annual basis. Experts estimate that a healthy economy should grow between 2% and 3% every year.[1] The U.S. economy grew 2.22% in 2017 and 2.86% in 2018.[2]

The GDP can tell you how large is the size of an economy. The United States is the largest economy in the world with a GDP of $20.494 trillion in 2018, followed by China ($13.608 trillion), Japan ($4.970 trillion), Germany ($3.996 trillion), and the United Kingdom ($2.825 trillion).[3]

The GDP is also calculated at the regional level to estimate the size of an economy, such as a city or an MSA. Since we often want to compare the economic performance of a city with respect to another and examine several years at the same time, we divide the GDP by the number of residents in the city and adjust for the annual inflation.[4] This alternative calculation is known as *per capita real GDP* and is recognized as a good measure of the standard of living of a city or MSA.

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[1] Economist's View. https://economistsview.typepad.com/economistsview/2007/01/what_output_gro.html
[2] Bureau of Economic Analysis (2019). www.bea.gov
[3] World Bank (2019). www.worldbank.org
[4] The Balance. GDP is adjusted by inflation via the use of a deflator. The BEA calculates the deflator every year as a ratio of what it would be the cost in a given year compared to a base year. www.thebalance.com

Table 1 depicts per capita real GDP for 12 MSAs in Texas, including Tyler. Tyler MSA ranked second on the list in 2017 with $64,085 only after Dallas with $64,824. Tyler's output exceeds large MSAs such as Austin and San Antonio once quantities are adjusted for population and inflation. We can see that Tyler's economy is doing very well.

The ***Hibbs Institute*** has completed a whitepaper that incorporates several variables that measure the standard of living in addition to per capita real gross domestic product, such as housing prices, unemployment rates, crime rates, and others.

Table 1. Per Capita Real Gross Domestic Product (Selected MSAs in Texas)

	MSA	Per Capita Real GDP (2017)
1	Dallas	$64,824
2	Tyler	$64,085
3	Austin	$63,839
4	Houston	$63,311
5	Beaumont	$48,838
6	San Antonio	$47,794
7	Witchita Falls	$42,871
8	Longview	$42,012
9	Corpus Christi	$41,272
10	Waco	$39,731
11	Killeen	$34,727
12	Texarkana	$30,869

Source: Per Capita Real Gross Domestic Product: Bureau of Economic Analysis (BEA).