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## Investigating the Factors Causing Price Differences from Country to Country

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### ABSTRACT

This study investigated the factors causing differences in the prices of MNC operating in different countries that affect the pricing in different regions and deviating from the law of one price and influencing factors by comparing prices of both India and Pakistan being developing countries. The study focused on some specific variables such as GDP, exchange rate, purchasing power parity, and price in the dollar that have been analyzed from January 2016 to January 2021 based on biannual data. The quantitative approach has been applied and the study is based on secondary data, Statistics are taken from the “Big Mac Index” which is used as a benchmark for the comparison of the prices to have a deep insight about prices. The product taken for comparison between 2 countries is “The Big Mac” which is a product of McDonald’s (A multinational corporation) that operates more than 36,000 restaurants in more than 100 countries around the world. The tool used for the analysis of the collected data is Microfit software. Results show currency value, Dollar exchange, and Dollar GDP is statistically not significant, in the case of India analysis shows that dollar exchange, dollar GDP, and dollar PPP having values 0.047, 0.004, and 0.011 respectively are significant and currency value 0.458 & dollar price 0.11 are not significant.

### INTRODUCTION

The importance of pricing for a company's long-term profitability and survival has been underlined by a large community of scholars. While effective pricing will never be able to compensate for poor execution of the first three criteria, inefficient pricing will almost likely prevent those efforts from succeeding financially. The only part of the marketing mix that makes company revenue is pricing, According to Finch et al. (1998), Potter (2000), and O'Connor (2003). Furthermore, according to Urbany (2001), it is a highly flexible aspect in that pricing decisions may be applied fast and at a minimal cost.

“Pricing is a bit like the weather”, Garda (1991) noted. People gripe about it, worry about it, and ultimately believe there is little they can do about it. The preceding comments demonstrate a consensus in the existing literature that, while price decisions are critical to a firm's performance and profitability, marketing scholars have not given them the attention they deserve. As a result, there

are very few empirical studies on the topic of pricing within the marketing discipline, and this is even more visible in the case of goods and services (George J. Avlonitis and Kostis 2004).

Evidence of the “rule of one price”, the idea that prices of individual items should be equal if reflected in a common currency, has been perhaps more striking than the aggregate implications. Giovannini (1988), Isard (1977), Knetter (1994), and Richardson (1978) use data on internationally traded products classified at relatively high SIC levels to find considerable and persistent deviations from PPP. According to Engel (1993), relative price volatility for similar items across borders is higher than for dissimilar goods inside countries. When compared to international price dispersion within the US, Engel, and Rogers (1996), Engel and Rogers (2001) discover that the Canada-US border adds significantly to a geographic interpretation of relative price dispersion across CPI sub-indices. Jenkins and Rogers (1995) investigate the prices of various commodities and services at various levels

of aggregation and find that they cannot reject a unit root using 200 monthly observations for all except the least aggregative and most homogeneous goods. Using data at a degree of aggregation like ours, Parsley and Wei (1996) discover strong evidence of the law of one-price infractions across US cities. Finally, Froot, Kim, and Rogoff (1995) look at 700 years of data on grain and dairy prices between England and Holland and discover extremely persistent volatility patterns in deviations from the law of one price. Taken together, this research demonstrates that departures from PPP are an essential feature of microeconomic international relative prices, not only a feature of large aggregate indices made up of items of dubious comparability. Therefore, this study aims to find the differences in the prices from country to country for similar products and compare the factors that cause the dispersion from the law of one price by the doing comparison of Big Mac products by using the most familiar index which is known as burgeronomics or "Big Mac Index". The Big Mac index, introduced by the Economist, is a novel technique for evaluating whether market exchange rates for various currencies are overpriced or undervalued. This is done by comparing each currency to a common benchmark, which would be the Big Mac hamburger sold at McDonald's restaurants all around the world. Using the current currency rate, The Economist converts the annual mean price of a Big Mac into US dollars twice a year. Because a Big Mac is a completely uniform product everywhere in the world, the argument goes, that it should have the same effective price in every country. Differences in the price of a Big Mac expressed in US dollars reflect differences in each currency's purchasing power.

Purchasing power parity (PPP) is the concept that things should be priced the same in different nations based on the exchange rate at the hour. This correlation does not hold in practice. Tax rates, wage restraints, whether components must be imported, and the level of market competition all influence price discrepancies between countries. The Big Mac indicator ranks the basic premise that one US dollar can buy more in some countries than in others. There are, however, more precise ways to estimate PPP discrepancies that convert a wider variety of products into dollar pricing. Adjustments

to the PPP can have a major impact on how we view a country's GDP (Statista, 2021).

The issue of analysis is the comparison between countries that share a single currency or investing area, as well as between regions within the same country, which has piqued people's interest in recent years (Fabiani & Harvey, 2006). Because border controls and inefficiencies within a country are considerably less than those between nations, the Law of One Price (LOP) has a greater chance of survival in a domestic rather than increasingly globalized world (Dayanandan & Ralhan, 2005). The convergence of prices across geographical regions because of circumstances has been a contentious issue in macroeconomics, giving rise to the Law of One Price (LOP). Therefore, this study looks at the pricing differences between MNC restaurants in the fast-food class, as there has been an obvious price discrepancy.

Swapping scale financial matters is loaded up with puzzles. The resource approach has fizzled. Buying Power Parity is a valuable, best-case scenario, over the long haul. There is no unmistakable connection between trade rates and essentials. With no observationally upheld hypothesis for trade rates, open-economy full-scale models are based on sand. Data and exchange cost likewise partition markets into retail, discount, and closeout. At retail, all products are non-exchanged. Nobody purchases shoes in a retail chain in New York and offers them to a retail chain in London or Paris. A Londoner in New York may purchase a couple of shoes and take them home, however that is not really "exchange". The significant part of exchange costs in swapping scale financial matters is broadly perceived. Exchange costs assume a critical part here, yet not because they cause flawed rivalry, clingy compensation, and clingy costs, which they do. The position taken here is that to comprehend the impacts of things like defective rivalry, clingy costs, and clingy compensation we should initially perceive the more significant impacts of the differentiation between retail, discount, and sale markets. The capacity of APPP and additionally ACTFX to clarify endless riddles proposes that the game merits the flame (Pippenger, 2020).

According to (Bell, Brooks, & Moore, 2017) in opposition to mainstream origination, the laws of effortlessness and solicitation were notable in

medieval times. For example, the French scientist Richard Delaware Menneville (d.1302) planned a psychological look at as well as two nations, one during which grain was flooding at any rate wine scanty and also the alternative in which wine was ample and grain onerous to find. As an analogous issue once rich is a smaller amount restoring than when it's meager, therefore corn in nation A is going to be added affordable than in nation B, whereas after all wine in nation A will be dearer than in nation B. Menneville battled that the 2 nations would consequently advantage from mercantilism their individual excesses. Luckily, it is regular for the matter of exchange to change simply because the dealer purchases corn modest in nation Associate in Nursing and sells it at the additional outrageous price that's overseeing in nation B, and the contrary path around for wine. Essentially, such a go-between might fairly profit by buying at the lower market cost in one nation and marketing at the upper market cost within the other.

Across the country impacts (estimated by time fixed impacts or unrefined petroleum costs) disclose up to about 51% of the fuel value scattering across stations. Processing plant explicit costs, which have been disregarded in the writing because of utilizing nearby informational collections inside the USA, contribute up to another 33% to the value scattering. While state charges clarify about 12% of the value scattering, spatial factors, for example, neighborhood agglomeration externalities, land costs, and dispersion expenses of gas disclose up to about 4%. The commitment to brand-explicit elements is moderately minor (Yilmazkuday & Yilmazkuday, 2016).

The instability of LOP deviations is discovered to be expanding both on the separation isolating two areas and on the level of cost tenacity. Clingy costs are likewise discovered to be efficiently identified with the tirelessness of LOP deviations: Half-existences of LOP deviations are productively greater at items with stickier expenses. These observations are seemed to accord well with the desire for a remarkable general equilibrium model including authentic market division besides, Calvo assessment. Most importantly, international LOP deviations for items with stickier costs will as a rule show lower blending rates than those for stock with more versatile expenses (Elberg, 2016).

According to (Crucini, Telmer, & Zachariades, 1998) a normal over merchandise for a specific nation of proportions unfamiliar to homegrown costs gives a shockingly precise forecast of the ostensible conversion standard for generally cross rates Variation around this mean is huge and is identified with proportions of trade ability buy size and topographical separation using the information on item marks that item heterogeneity is at any rate as significant as topography in clarifying relative value scattering.

(Liu, Su, Chang, & Xiong, 2018) Diverged from past examinations, this article works with the Sequential Panel Selection Method (SPSM) to inspect the non-fixed properties of the LOP in China's locales. The Eastern area's worth change is non-fixed additionally, the buyer regard record (CPI) levels of the Western, Central furthermore, and Northeastern districts are humbly taken an interest in China. The conduction technique for the CPI level is from the Eastern territory to the accompanying districts. It shows that costs can meet with one another by LOP and the appraisals of the tantamount item in the Western and Central locales are the same and on the off chance that there is a valuable capability, by then it okay is also disposed of by interregional exchange. The joined utilization of the Panel KSS looks at with a Fourier cutoff and therefore the SPSM system licenses U.S. to expire off from on the stationarity of individual CPIs SPSM offers sturdy wildcat ensure bolsters the LOP, suggesting that 66% of the districts in China, for the foremost half within the Western, Central and Northeastern regions, expertise a CPI level modification configuration depicted sort of a mean inversion toward balance regards.

The intermingling of costs across geological locales, which offers ascend to the Law of One Price (Cut), has been broadly bantered in macroeconomics. Even though there are subtleties in the level of the deviations, a large portion of the writing focuses to a disappointment in the union of costs to the LOP. The meaning of assortment is acquired from the exchange writing, specifically from models based on monopolistic rivalry. Inside a given market or item classification, a few merchandises offer comparative attributes to the purchaser. An assortment will be an assortment of comparative products: i.e., in the brew market, there are assortments of Bud Light, Budweiser, or Coors

Light (Borraz & Zipitria, 2020). An enormous collection of writing in worldwide money has endeavored to appraise the speed of union between nations' total value lists to those levels anticipated by pursuing force equality (PPP) (Rabe & Waddle, 2020).

According to (Affinito & Farabullini, 2009) Euro-region, the budgetary combination is a significant issue, since both financial hypothesis and exact discoveries propose that the incorporation of money-related business sectors adds to the smooth working of the single money-related approach, to monetary soundness, and financial development. Until this point, a few fragments of euro-region money-related business sectors have gained incredible ground regarding mix, while there is little proof of comparable mix having occurred in retail banking. Notwithstanding, the overall cycle of European reconciliation relies upon the evaluated half-life fell by around two years throughout the span of the past fifty years, suggesting that the supposed operation puzzle results conjointly serve to contextualize past appraisals by insidious soul starting a real degree of check-call affectability during this composition. In addition, explanations for the saw accelerated overall value change, focusing on a basic level on the unquestionably tradable nature of the sport set up of the U.S. client cost record (CPI). In the embodiment of extended economic process and trade, a trademark request arises with relevancy to what influence, exceptive any, these forces have had on esteem contrasts across edges. The liberal affectability of those appraisals to the choice of the time test. Exploitation Monte Carlo assessment, we tend to show that once one checks a 1 of a sort constant live employing a static-coefficient model, the following evaluations are uneven. Plus, the sign and size of this inclination rely urgently upon the decision of the time horizon of the data. This result serves to contextualize contrasts in existing assessments of the get-along speed and the probability that these qualifications are driven on any occasion somewhat by the affectability of the evaluations to the decision of the model period bring a lot of homogenized banking frameworks too. Indeed, the euro-territory banking assembly is sought after as an objective by European supranational associations, since the euro-zone nations are banking-focused, and the normal

money-related approach is actualized primarily through the banks.

Clients on standing offer taxes utilize 18% less power than clients on 'high rebate' items, showing the presence of market division and certain second-degree value segregation. Environmental change strategy and the rise of innovations, for example, family sun powered PV, battery stockpiling and home energy the board frameworks will make further value scattering in Australian power advertises due to much more prominent item heterogeneity. That strategy creator should encourage, instead of forestalling, both cost and tax structure scattering to improve purchaser results (Nelson, McCracken-Hewson, Whish-Wilson, & Bashir, 2018).

Cost liberation in Australia's National Electricity Market has prompted expanded rivalry and more noteworthy cost scattering in retail power markets. Be that as it may, ongoing expansions in power costs and worries around separated clients have driven strategy producers to force a 'default offer' to cover retail power costs. In this article, a model is constructed that shows the segment through which a worth cap prompts the withdrawal of the most un-esteemed recommendations from the market, fundamentally diminishing the preferences open to customers that 'search around'(Esplin, Davis, Rai, & Nelson, 2020).

This research has been designed to study the prices of fast-food products for the same multinational corporation in different countries. To find the difference between prices and influencing factors.

## **METHODS**

To compare the factors that contribute to the prices of the Big Mac Index, the price dispersion from the law of one price is taken as the dependent variable while the GDP, PPP, Exchange rate, Currency value, and price in the dollar are taken as independent variables the data is collected through secondary data sources of Big Mac Index biannually from 2016 to 2021. Price comparison has been done by comparing the one product comparison of Big Mac which is a well-known product of McDonald's used to compare the prices in the countries and know about the PPP and exchange rate. The collected data is analyzed through microfit software.

11 observations used for estimation from 2016 H1 to 2021 H1 to check t- ratio R-Squared, coefficient Akaike Info. Criterion, Schwarz Bayesian Criterion, and different diagnostic tests have been done like serial Correlation, functional form, normality test, and heteroscedasticity.

The Big Mac Index is a purchasing power parity metric that integrates the price of a burger across distinct nations into a single currency (such as the US dollar). It all started in 1986 when The Economist magazine decided to utilize Big Mac prices at McDonald's fast-food outlets to measure the value of currencies by country. As a result, The Economist proposed a simple metric for evaluating the intrinsic value of global currencies. What was the Big Mac's relevance as a predictor?

The explanation for this is simple. The Big Mac is the most well-known product of McDonald's. Furthermore, all countries use the same ingredients for a Big Mac: chicken, hamburger, cheese, greens, onions, and so on. As a result, rather than estimating the cost of a consumer basket (which is more challenging), The Economist analysts rely solely on Big Mac.

A powerful form of the PPP hypothesis is founded based on one price. The law of one price states that any good traded on global markets will sell for the same price in every trading country when the prices are expressed in the same currency, absent complicating factors such as transportation costs, taxes, and customs. For the law of one price to explicitly entail PPP, the same items must be included in each country's price indices.

**Price comparison**

Table 1. Price comparison

US \$ AS A Base Currency				
Currencies Overvalued				
Country	Currency	Big Mac	US Price	Over/under valued
Switzerland	Franc	6.50	US\$5.66	28.8
Sweden	Krona	52.88	US\$5.66	12.6
Norway	Krone	52	US\$5.66	7.5
Currencies Undervalued				
Israel	Shekel	17.00	US\$5.66	-5.5
Canada	C\$	6.77	US\$5.66	-6.6
Euro area	Euro	4.25	US\$5.66	-8.8
Australia	A\$	6.48	US\$5.66	-11.9
Denmark	Krone	30.00	US\$5.66	-13.4
New Zealand	NZ\$	6.80	US\$5.66	-13.9
Uruguay	Peso	204	US\$5.66	-15.2

Purchasing power parity (PPP) is an economic concept that allows you to compare the purchasing power of different world currencies. It compares the relative pricing levels of countries over a given time frame (Michelle and Thomas 1999). PPPs are determined by accumulating and analyzing information on the prices of similar goods and services across multiple economies to see how one country's price corresponds to another. PPPs can therefore be used to translate the price of a basket of goods and services into a single currency termed "international dollars".

$$S=P1/P2$$

Where:

S= Exchange rate of currency 1 to currency 2

-P1= Cost of good X in currency 1

-P2= Cost of good X in currency 2

The Economist's Big Mac Currency index, dubbed "Burgernomics" by the publication, is a well-known example of a one-product comparison. The Big Mac PPP is the conversion rate that would make hamburgers cost the same in America and abroad (Francette & Paul, 2002). As result, there is a pricing disparity between international items due to a variety of causes (Christian Pierdzioch, et al, 2021).

The Big Mac index measures the price of a burger across the McDonald's network. Meat, veggies, cheese, baguette, and other elements make up a Big Mac. It also considers the cost of renting space and equipment, as well as personnel and other costs. We can say that the prices in the country are low if the price of a Big Mac is low, even though the high costs are comparatively expensive.

Britain	Pound	3.29	US\$5.66	-21.6
Singapore	S\$	5.90	US\$5.66	-21.7
Thailand	Baht	128	US\$5.66	-24.9
Czech Rep	Koruna	89	US\$5.66	-27.2
South Korea	Won	4,500	US\$5.66	-27.5
Chile	Peso	2,940	US\$5.66	-27.8
UAE	Dirham	14.75	US\$5.66	-29.1
Brazil	Real	21.90	US\$5.66	-29.7
Bahrain	Dinar	1.50	US\$5.66	-29.7
Costa Rica	Colon	2,350	US\$5.66	-32.4
Kuwait	Dinar	1.15	US\$5.66	-33.1
Argentina	Peso	320	US\$5.66	-33.8
Japan	Yen	390	US\$5.66	-33.9
Colombia	Peso	12,950	US\$5.66	-33.9
Saudi Arabia	Riyal	14.00	US\$5.66	-34.1
Sri Lanka	Rupee	700	US\$5.66	-34.6
Croatia	Kuna	23	US\$5.66	-34.9
Honduras	Lempira	87	US\$5.66	-36.2
Qatar	Riyal	13	US\$5.66	-36.9
Nicaragua	Cordoba	124	US\$5.66	-37.1
Poland	Zloty	13.08	US\$5.66	-37.9
China	Yuan	22.40	US\$5.66	-37.9
Pakistan	Rupee	550	US\$5.66	-39.4
Peru	Sol	11.90	US\$5.66	-41.9
Jordan	Dinar	2.30	US\$5.66	-42.7
Guatemala	Quetzal	25	US\$5.66	-43.4
Hungary	Forint	900	US\$5.66	-46.5
Philippines	Peso	142	US\$5.66	-47.8
Moldova	Leu	50	US\$5.66	-48.7
Vietnam	Dong	66,000	US\$5.66	-49.4
Oman	Riyal	1.10	US\$5.66	-49.5
Egypt	Pound	42.50	US\$5.66	-52.0
Mexico	Peso	54	US\$5.66	-52.6
Hong Kong	HK\$	2050	US\$5.66	-53.3
India	Rupee	190	US\$5.66	-54.3
Taiwan	NT\$	72	US\$5.66	-54.5
Romania	Leu	9.90	US\$5.66	-56.4
Malaysia	Ringgit	9.99	US\$5.66	-56.4
Indonesia	Rupiah	34,000	US\$5.66	-57.5
Azerbaijan	Manat	3.95	US\$5.66	-58.9
Ukraine	Hryvnia	62	US\$5.66	-61.1
South Africa	Rand	33.50	US\$5.66	-61.9
Turkey	Lira	14.99	US\$5.66	-64.5
Russia	Rouble	135	US\$5.66	-68.0
Lebanon	Pound	15,500	US\$5.66	-68.7

Source: Big Mac Index 2021

The above table shows the prices of Big Mac in different countries in reference to their currency values and how the currency value can have an impact on the price which shows that the prices of

commodities are influenced by the exchange rate, the prices drastically change as the currency is overvalued or undervalued.

**RESULTS AND DISCUSSION**

Big Mac statistics in India and Pakistan

Table 2. Big Mac index 2021

Year	Local Price	Dollar ex	Currency valuation	Local Price	Dollar ex	Currency valuation
Jan-2016	127	66.8025	-61.4	300	104.885	-42
July-2016	162	67.2	-52.2	375	104.82	-29
Jan-2017	170	68.3275	-50.8	375	104.775	-29.3
July-2017	178	64.5575	-48	375	105.15	-32.7
Jan-2018	180	63.86125	-46.6	375	110.505	-35.7
July-2018	173	68.825	-44	375	121.49	-54.4
Jan-2019	178	69.685	-54.2	460	138.88	-40.6
July-2019	183	68.5544	-53.5	480	157.45	-46.9
Jan-2020	188	70.87815	-53.2	520	154.875	-40.8
July-2020	190	75.1975	-55.7	550	166.5	-42.1
Jan-2021	190	73.39	-54.3	550	160.35	-39.4

Source: Big Mac Index 2021

Table 2 shows the prices of Big Mac, dollar exchange, and currency valuation for both countries. The comparison is done to know about the differences of prices between both countries from 2016 to 2021 by taking the exchange rate as a common factor in this comparison. It demonstrated that there is fluctuation in the prices of the product taken as the exchange rate is fluctuating there is a drastic change in the prices for both countries when

there is exchange dollar difference in both countries have the currency difference like 1 Indian rupee equals to 2.27 Pakistani rupee as per recent exchange rate of 2021 apart from the exchange rate there are other factors that cause this fluctuation in the prices according to the Big Mac index these are the PPP of the country GDP, dollar exchange rate and currency valuation are given below. Statistics in India.

Table 3. Ordinary Least Squares Estimation

Ordinary Least Squares Estimation			
Dependent variable is LOC_PRICE			
11 observations used for estimation from 2016 H1 to 2021 H1			
Regressor	Coefficient	Standard Error	T-Ratio[Prob]
C_VA	-.35821	.45205	-.79241[.458]
DOL_EX	-2.8705	1.1520	-2.4917[.047]
DOL_GDP	.087036	.018884	4.6089[.004]
DOL_P	-43.6546	23.7520	-1.8379[.116]
DOL_PPP	9.3823	2.6114	3.5928[.011]
R-Squared	.97500	R-Bar-Squared	.95833
Akaike Info. Criterion	-31.5638	Schwarz Bayesian Criterion	-32.5585

**Statistics in Pakistan**

Table No: 4: Ordinary Least Squares Estimation

Ordinary Least Squares Estimation			
Dependent variable is LOC_PRICE			
11 observations used for estimation from 2016 H1 to 2021 H1			
Regressor	Coefficient	Standard Error	T Ratio [Prob]
C_VA	.37810	1.2780	.29586[.777]
DOL_EX	5.4575	3.0772	1.7735[.127]
DOL_GDP	.77800	1.5429	.50424[.632]
DOL_P	-27.5589	44.0429	-.62573[.555]
DOL_PPP	.0027654	.068629	.040295[.969]
R-Squared	.98697	R-Bar Squared	.97828

Akaike Info. Criterion	-45.0864	Schwarz Bayesian Criterion	-46.0811
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**Interpretation**

**T Ratio**

The t-ratio is calculated by dividing the estimate by the standard error. T-ratios larger than 1.96 (in absolute value) show that your coefficient is statistically substantially different from 0 at the 95 percent confidence level if you have a large enough sample. For 90 percent confidence, a criterion of 1.645 is applied. Greater the t value means the greater difference among groups in the above table all variables t value is near to zero except dollar exchange having a value of 1.7735 and in the case of India values are dollar GDP is 4.608 and dollar PPP is 3.5928.

**P Values**

As per the significance value which is called the p-value, it should be less than 0.05. In the above table currency value has a significance value of 0.77 which shows that the variable is statistically not significant, the second variable in the table is Dollar exchange which has p-value of 0.127 which is also not significant, the third variable is Dollar GDP which has significant value of 0.632 which show Dollar GDP is not significant, Dollar price has significant value of 0.555 it is also significantly not significant, and Dollar purchasing power parity has p-value of 0.969 which is also not significant. In the case of India analysis shows that dollar exchange, dollar GDP, and dollar PPP having values 0.047, 0.004, and 0.011 respectively are significant and currency value 0.458 & dollar price 0.11 are not significant.

**Standard error**

The Standard Error is a measure of the constancy of the mean. A small Standard Error suggests that the sample mean more precisely represents the real population mean. A larger sample size is usually related to a reduced Standard Error. Only the dollar price has a greater standard error of 44 in the above table, whereas the dollar price in Pakistan has a standard error of 23.7520.

**Beta coefficient**

The above tables show the coefficient relationship between the variables and the values for currency valuation -0.35821, dollar exchange -2.8705, and dollar price -43.6546 are having negative values and in table 2 the dollar price is having a negative value -27.5589. The range of

values is -1.0 to 1.0. There was an error in the correlation measurement if the calculated number was more than 1.0 or less than -1.0. A perfect negative correlation is represented by a correlation of -1.0, whereas a perfect positive correlation is represented by a correlation of 1.0. A correlation of 0.0 indicates that there is no linear link between the two variables' movements.

*R-Squared and Adjusted R-squared*

The proportion of variance in the dependent variable that can be explained by one or more predictor variables is represented by the R-squared value (Elliott & Woodward, 2007). R2 values for endogenous latent variables, according to Cohen (1988), should be 0.26 (substantial), 0.13 (moderate), and 0.02 (weak) (weak). The value of R square in the table of ordinary least squares is 0.975, indicating that 97.5 percent of the total variance of the dependent variable has been explained.

The value of R square for the table of ordinary least squares is 0.98697, which suggests that 98.69 percent of the total variance of the dependent variable has been explained. In the above table 1 R-Bar Squared or Adjusted r square is 0.95 which is less than 1 and it is a significant ratio. And above table shows the .97828 value of R-Bar Squared which is also a significant ratio.

*Schwarz Criterion and Akaike Info. Criterion*

The Schwarz Criterion is a metric for determining and selecting the least complex probability model among a group of options. This technique, also known as the Bayesian Information Criterion (BIC), disregards prior probability in favor of comparing the efficacy of competing models at predicting outcomes.

**Discussions**

Following the international financial crisis caused by World War I, many governments were faced with the challenge of realigning their respective currency values. Gustav Cassel, a Swedish economist, was an early proponent of establishing nominal exchange rates at what we now term their purchasing power parity values. "The actual rate of exchange cannot wander very much from this purchasing power parity", according to Cassel (1918), "as long as anything like free movement of commodities and a generally



extensive commerce between the two countries occurs". Currently, the topic of price convergence throughout countries with the same currency or trading area has sparked people's curiosity (Busetti, Fabiani, and Harvey, 2006).

Because trade restrictions and inefficiencies within a country are frequently less severe than those between nations, the Law of One Price (LOP) has a higher probability of surviving in a domestic rather than international context (Dayanandan & Ralhan, 2005). Chinese authorities pursued spatial internal market absorption alongside state disengagement, economic advancement, and international exploration during the late 1970s economic reforms. Because China's external opening can only be effective if provinces have unlimited access and free flow of goods, the scale of regional integration and the country's transformation into a united, just, and controlled market as a result of its WTO membership have substantial implications in China (Poncet, 2005).

The significance of analyzing CPI convergence and local distribution mechanisms for national macroeconomic regulation and management cannot be overstated. Even though few studies on China's regional price discrepancies exist, the research is crucial (Liu, 2013; Wang, 2012). First, even though China's market economy has grown rapidly since the 1990s, the country remains an atypical communist state, with regional economic development heavily regulated and influenced by administrative interference. This suggests that the planned economy makes it extremely difficult for regional competition to be regulated by the free market. Second, China's local protectionism is extreme, and local governments' blockade and monopoly prevent the creation of a single marketplace.

Local protectionism clearly restricts the flow of production inputs and the regional configuration mechanism if price levels between areas do not match the LOP. Third, because China is a developing country that is constantly changing its institutions and economy, it creates a different and critical chance to study regional disparity because it is a developing country with indisputable and observable distinctions among its regions (Candelaria, Daly, & Hale, 2010). The establishment of an internal market was supported by a range of methods aimed at restricting the scope

of government intervention. A key component of the strategy was the progressive elimination of pricing rules (Fan & Wei, 2006). From the standpoint of macroeconomic change, this strategy is crucial in assessing whether China's economy has attained interregional competition.

The exchange rate is the most important aspect in comparing Pakistani and Indian fast-food products. In the foreign exchange market, the Indian rupee is much stronger than the Pakistani rupee (INR to PKR). In Pakistan's currency market, the current rate is RS 2.24. These price disparities are one of the most important factors in the price variations of MNC products because both nations' currencies are different, with the Indian rupee being stronger than the Pakistani currency. The second factor is the cost of raw materials. Because no company in Pakistan can meet their stringent requirements, the corporations import most of their raw materials. As a result, it imports enormous quantities of almost all its raw components, such as chicken, from China and other nations (MacDonald's, 2014). The content is then offloaded to various places across the globe, with 80 percent of truck time being defrosted, so the products are transported in the fanatical fleet's cold storage facilities, where it is first transported to MacDonald's fulfillment centers, then trucks for different products such as multi-temperature transports all that content to the establishments.

In India, McDonald's buys 90% of its raw materials from local suppliers, lowering the cost of importing the products from other countries. The spirit of the efficient supply chain model is certainly applied and attributed to the distinctiveness of its outsourcing concept from key local suppliers. The company's supply chain is entirely outsourced, and Indian McDonald's only imports in extremely rare instances, which is a rare occurrence in the trade market. However, McDonald's has complete control over the presentation's implementation. Outsourced organizations are evaluated based on Key Performance Indicators (KPIs) (Kshitiz Sharma, 2013).

Multinational firms, on the other hand, are impacted by the local customs of the countries in which they operate. MNCs import additives from all over the world, along with chicken and beef, as well as salad dressings; the price of their meat, chicken, and other additives is determined by the

rupee's exchange rate and the currency of the countries from which they import; and they are subject to additional taxes on imported goods (Karim Barhoumi, 2006). Additionally, the company's net taxable income is taxed at a rate of 29 percent. The 17% sales tax rate is for goods, whereas the rate for services ranges between 13% and 16%, depending on the location of the service provider and the region where the services are utilized. Sindh has a 13 percent rate, Punjab has a 16 percent rate, Islamabad capital area has a 16 percent rate, while Baluchistan and KPK have a 15 percent rate. This graphic depicts how to price dispersion differs by province. In comparison to other Asian countries, Pakistan today has a corporation tax rate of 29 percent, which is quite high (International tax Pakistan highlights 2020).

## CONCLUSION

Finally, the variables that affect pricing varies from place to place. Traditionally, we've assumed that price changes between similar products are caused by fluctuations in the US dollar exchange rate (Karim Barhoumi, 2006), or by inflation in that country (Andrade et al., 2018). This research, on the other hand, aimed to determine key features that have a significant impact on price dispersion. The objects' origins are disguised by the fact that they are made up of a range of packaging and raw materials inputs.

MNCs import essentially every component from outside Pakistan, which has a serious influence on end products, and customs charges and logistical costs add to the final product price. Once it comes to the critical phenomenon of price disparity, the fast-food business in Pakistan is experiencing it due to the production costs of multinational corporations (MNCs) like McDonald's, Burger King, KFC, Pizza Hut, and Dominos, among others. Transportation costs, regulatory constraints, exchange rate, and competition, which are regarded to be the key reasons for price dispersions, are all affected by MNCs in Pakistan.

When it comes to the transnational difficulties of inflationary pressures, it's evident that they're affecting people everywhere. At least one drive-through window can be found in almost every country on the planet. The most exclusive locations are McDonald's, Pizza Hut, Burger King, and KFC.

Given the productive assistance, low costs, and laid-back ambiance, cheap dinners appear to be the ideal "all-American" choice. McDonald's is always upgrading its menu items and gaining customer trustworthiness by broadening their customer base. If McDonald's wishes to prosper in an exceedingly competitive market, it must diligently incorporate an idea tied to innovative thoughts into all of its actions.

McDonald's aimed to build something long-term beneficial, such as long-term acceptability and an unparalleled position as a "food store". To direct the course of events, McDonald's deploys a worldwide system that thinks globally while acting locally. The limiting system has been important for McDonald's to fulfill its fundamental goal in India. Because the more effectively available the café is, the more people are satisfied and visit the restaurants in Pakistan, the region has a significant and beneficial influence on customer satisfaction.

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