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The Philippines' Service Industry: The Three Major Influences on GDP.

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Abstract — The study aims to determine the relationship between the total growth rate of the service sector, gross value-added of the service sector, and total employment contribution in the service sector (independent variables) on the Philippines' GDP (dependent variable). Numerous studies show a relationship between the independent variable, Total Growth Rate, Employment Contribution and Gross Value Added of the Service Sector to the dependent variable, Gross Domestic Product of the Philippines. The researchers demonstrate the strong positive relationship between the total employment contribution and gross value added (GVA) of the service sector to the GDP of the Philippines as well as the weak positive relationship between the service sector economic growth rate using the Pearson Coefficient Correlation test. The group utilized available data from credible sources from the year 1990-2020.

Keywords — Services, Growth, Gross Domestic Product, Employment Contribution, Philippines, Sector, Gross Value Added.

I.INTRODUCTION

The country's economy has become more reliant on services, which account for more than 61 percent of GDP. In terms of GDP contribution, the Philippines' service sector surpassed the industrial sector in the early 1980s, rising from 36% in 1980 to more than 60% by 2020.7 The services sector now employs a larger proportion of the country's workers than the agricultural and industrial sectors combined. Bajpai, P. (2022, March 17). *Emerging Markets: Analyzing the Philippine's GDP*.

Business process outsourcing (BPO) has played a crucial influence in the growth of the service sector. The Philippines was able to build its BPO sector due to having experts who spoke the appropriate languages, partially due to interest in US culture. The USA is the Philippines' largest BPO market and the customer service-focused component of the industry's professionals.

Tourism is the second most crucial component of the service industry, with a long history of steady growth. Tourism in the Philippines has not fully utilized its resources and has lagged behind regional peers (such as Singapore, Indonesia, and Thailand) in attracting international tourists. Among the key factors are inadequate infrastructure (airports, short rail and road connectivity, and a lack of tourist services and facilities).

This study discusses the relationship of the gross value-added of the service sector on the GDP, growth rate, and the employment rate in the service sector. in the Philippines' GDP. The researchers want to know the relationship of the three independent variables on our dependent variable. The global economy is becoming more and more of a service economy. This is primarily due to the service sector's growing prominence and role in the economies of both developed and developing countries. Indeed, the service sector's expansion has long been regarded as a barometer of a country's economic progress. According to economic history, all emerging countries have seen a shift from agriculture to the service industry and subsequently to the service sector as the mainstay of the economy. The definition of commodities and services has also changed due to this transformation.

The three (3) variables of this study are the gross value-added, employment rate, and the economic growth rate of the service sector and its relation to the Philippines' gross domestic product. The gross value-added (GVA) is



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a contribution to a country's economy by a producer or sector, it is the value-added of a good or service produced (O'farrell, 2019). The employment rate is the number of individuals employed by a company. It is the proportion of the employed individuals to the working-age population (OECD, 2022). The economic growth rate is the percentage change in the value of all goods and services produced in a country over a given time period when compared to a previous period (Chen, 2020).

The following are the research objectives that researchers want to accomplish:

• To find the relationship between the Total growth rate, Gross value-added, and the Total employment contribution in the Service Sector to the GDP of the Philippines.

• To determine which of the three independent variables has the strongest relationship to GDP in terms of correlation

• To identify and formulate policy implications that may be used to enhance the findings of this research study.

II.LITERATURE REVIEW

2.1 Economic Contribution and Growth Performance

Since the 1990s, the Philippines' services industry has been a major driver of economic growth. On average, the sector has developed steadily, notably over the previous two decades, with growth increasing from 4% in the 1990s to 5.3 % in the 2000s. It has a very modest growth rate of 6.6 percent from 2010 to 2014. The broad expansion has occurred in the sector, with most of its sub-sectors likewise experiencing constant rising growth rates over the years.

Most sub-components of the services industry experienced higher average growth rates from 2010 to 2014 than in the 1990s and 2000s. The most significant growth has occurred in the construction, finance, and real estate sub-sectors. Meanwhile, the sub-sectors with the slowest average growth rates include private services, transportation, communication, and storage. Nonetheless, it is important to note that the recent average growth rates in these two sub-sectors are still around 5%, indicating modest growth performances. *Securing the future of Philippine industries*. (n.d.).

Source of basic data: National Accounts of the Philippines, National Statistical Coordination Board.

2.2. Evolution of the Service Sector in Asian Economies Over Time

The evolution of the percentage of GDP and employment in Asian countries through time substantially matches the international historical experience. Clearly, the growth rate of the service sector is playing a big and expanding role in GDP and employment across the entire region. At the same time, as Ghani emphasizes, our examination of country experiences reveals a significant deal of variety in the relative importance of services among Asian countries (2010). To some extent, this heterogeneity stems from the great range of income and development levels. levels across Asia

With rising per capita income, the share of GDP and employment in services rises. However, income and development levels can only account for a portion of the intra-Asian variation. For example, India's service sector is more significant than other countries with comparable income levels, whereas the PRC's is the opposite. Furthermore, there is considerable variation in the growth rate of the share of services in GDP and employment. For example, in 1980, the share of employment devoted to services was comparable in Indonesia and the Philippines, but by 2010, it was substantially greater in the Philippines. Park, D., & Shin, K. (2012). *The Service Sector in Asia: Is It an Engine of Growth?*

2.3 Gross Value-added in Service Sector



The service sector of the Philippine economy is one of the most robust and rapidly developing sectors of the country's economy, which in recent years has become an increasingly important sector overall. Its contribution to the gross value added reached 57% in 2014, up from 36.6% in the 1970s, and it has grown by an average of 6.3% from 2000 to 2014.

Even if the vast majority of analysts have lauded this achievement as remarkable, there is still a massive opportunity to increase involvement in global value chains and expand value-added in service outputs. The Philippines hopes to establish itself as the primary hub for the trade of services with Southeast Asia and the rest of the Asia-Pacific region by capitalizing on this one-of-a-kind competitive advantage in the services sector. Securing The Future of Philippine Industries (n.d)

2.4 Service Sector Development

Since the mid-1980s, the service sector's share of GDP has surpassed that of the industry sector, rising from 36% to 55% in 2010, and the sector's percentage of total employment has expanded. They increased from 40% in 1990 to 52% in 2010. In recent years, the service sector's percentage of GDP has increased. It increased from 54.1 percent to 57.1 percent in 2012. In 2011, services employed 19.4 million people, more than agriculture and industry combined. Export-oriented services were notably essential, accounting for 12% of overall industry revenue in 2009.

This is comparable to India and substantially greater than Indonesia. However, it is low compared to Hong Kong, China, Malaysia, Singapore, and Thailand (World Bank 2013 n,d). The extensive service sector shows that agricultural and manufacturing expansion has been modest. The service sector's overall growth performance in the Philippines has been moderate due to limited growth in the local market and external demand, poor investment in infrastructure, education, and other public goods, and an inadequate overall business climate. However, the performance of the various areas of the service sector varies greatly. Mitra, R. M. (2013). *Leveraging Service Sector Growth in the Philippines*.

2.5 Employment Contribution

Regarding job contribution, the service industry began to overtake manufacturing in the 2000s. It is still the largest employer at the moment. Over the last decade, it has held an average share of 54.3 percent of total employment. This is greater than its average contribution of 47.3 percent in the 1990s. Among the service subsectors, wholesale and retail commerce, as well as aggregated communal, social, and personal services, are some of the largest contributors to employment relative to the other sub-sectors. Except for the construction subsector, all sub-components of the services sector grew their average employment contribution from 2010 to 2014 compared to their average shares in the 1990s and 2000s. Securing the future of Philippine industries. (n.d.).

Sources: Yearbook of Labor Statistics (1980-2000) and Current Labor Statistics (2001-2002), Bureau of Labor and Employment Statistics, Department of Labor and Employment and Employed Persons by Major Industry Group, National Statistics Office Labor Force Survey (2003-2010).

2.5 Economic Development

While GDP growth has accelerated, the economy has failed to create enough new jobs, particularly for unskilled and rural workers. This is reflected in the national unemployment rate of 7.0 percent –7.5 percent from 2007 to 2012 and the underemployment rate of 19.8 percent –22.6 percent (Bureau of Labor and Employment Statistics 2011–2013). In 1985, 34.9 percent of the population lived in poverty, 22.4 percent in 2000, and 22.6 percent in 2006. (Ravallion and Chen 2008).

Significant internal migration has occurred due to urban-centered economic growth and a lack of employment possibilities in rural areas and smaller towns. For several decades, economic development has been focused on a few urban areas, the most prominent of which is the Higher Metro Manila area, which today accounts for nearly



a fourth of the country's total population and an even more significant part of its exports and GDP. Mitra, R. M. (2013). Leveraging Service Sector Growth in the Philippines.

2.6 Synthesis

The Gross Domestic Product is affected by Macroeconomic Indicators and Factors that make up the National Accounts of a country. As mentioned in the discussion above, certain indicators and factors such as Value Added in the GDP, Employment Rate, and Growth Rate of the Service Sector is said to increase the GDP of a Country. Given the sector's expansion during the previous 20 years and its contribution to the economy, the Economic Accounts of the Service Sector are stated to have a positive association with the Philippines' GDP.

2.7 Simulacrum



Figure I. Research Simulacrum

2.8 Hypothesis

H0: The total growth rate in the service sector does not have a relationship with the GDP of the Philippines. H1: The total growth rate in the service sector has a relationship with the GDP of the Philippines.

H0: The gross value-added of the service sector on the GDP does not have a relationship with the GDP of the Philippines.

H2: The gross value-added of the service sector on the GDP has a relationship with the GDP of the Philippines.

H0: The total employment contribution in the service sector does not have a relationship with the GDP of the Philippines.

H3: The total employment contribution in the service sector has a relationship with the GDP of the Philippines.

III. METHOD

A. Research Design

The current research we are conducting is during the pandemic, where there was a social distancing circumstance. Given our limited time, the researchers are using publicly available data, including economics working paper series, books, journal articles, and official and reliable websites for data collection to disseminate information.



The study aims to assess whether the growth rate of the service sector, gross value-added of the service sector to the GDP, and employment rate of the service sector (independent variables) have a relationship in the Philippines' GDP (dependent variable) using the Correlation Coefficient model.

B. Data Selection

The relationship between gross value-added rate, employment rate, and economic growth rate in the service sector of the Philippines' GDP. The researchers will use the data from the Philippine Statistics Authority (PSA), and World Bank Group data files. This covers the years 1990-2020 in the Philippines to configure reliability.

C. Data Collection

This research combines three (3) factors and their relation to the Philippines' GDP. It includes the Gross valueadded rate, Employment rate, and Economic growth rate of the service sector in the Philippines. The researchers have major data sources, the Philippines Statistics Authority, all national censuses and surveys, sectoral statistics, community-based statistics, consolidation of chosen administrative recording systems, and compilation of national accounts are their responsibility. The World Bank Group covers every important area of development that a country requires. Gretl is a cross-platform software that is used to determine the economic ramifications of specific areas.

D. Choice of Secondary Data

For this research study, secondary data is the best option; part of the material required is available online through trusted websites, reliable online journals, and the university's online library. This research focuses on understanding the relation between the gross value-added rate, employment rate, and economic growth rate of the service sector to the GDP of the Philippines. Due to the study's time, restrictions, scope, and parameters, the researcher chose to use secondary resources regression analysis data.

There are reasons why the researcher will use secondary data in this thesis. The secondary data is easier to work with, and the researchers don't have to obtain the original data. Secondary resources are also credible because the sources are based on previous research or primary resource data.

E. Econometric Tools and Models

To illustrate the relationship between the Growth Rate, Employment Rate and Value Added of the Service Sector to the GDP of the Philippines. Pearson Coefficient Correlation would be used as an Econometric Model. This statistical method's aim is to produce a statistic, which is a value that summarizes a big data set and represents the degree of linear relationship that exists between the two measured variables.(Taylor, 1990) . Correlation may be described as the degree of association between two variables. (A. G. Asuero, A. Sayago & A. G. González , 2006). The formula for this would be:



 x_i = values of the x-variable in a sample

= mean of the values of the x-variable

 y_i = values of the y-variable in a sample

= mean of the values of the y-variable

Correlation Analysis measures a relationship or association ; it does not define the explanation or it's basis (Taylor, 1990)

IV. RESULT AND DISCUSSION

To ascertain the relationship between four variables: the service sector's growth rate, gross value-added, and employment rate (all independent variables) and the Philippines' GDP (dependent variable). The economic model that fits in this research study is Pearson Coefficient Correlation which is a test statistic that assesses the statistical relation between variables. The Level of Association is denoted by -1 and +1 which pertains to the degree of correlation between the variables. Refer to the Table below for reference.

I dolle I. Rejerence j	Table 1. Reference for Level of Association			
Correlation Coefficient (Absolute Value)	Level of Association			
0.7 - 0.9	Strong			
0.7 - 0.4	Moderate			

5% critical value (two-tailed) = 0.3550 for n = 31

Weak

Service Sector Total Growth Rate

0.4 - 0.1

Table II, Correlation Coefficient between Service Sector Total Growth Rate and GDP of The Philippines

Variable	IV	DV
Result	0.1399	1

The Philippines' GDP is not solely relying on the Service Sector Economic Growth Rate. It results in a *weak* positive relationship. Moreover, the correlation coefficient for Economic Growth Rate for Service Sector is 0.1399 (refer to Table II.). The Philippines received 4.3 million international tourists in 2012, up from 3.1 million in 2007 and 2 million in 2000. Domestic tourism reached 22 million in 2011, up from 11 million the previous year. Between 1995 and 2010, the annual average growth rate of international arrivals was 4.7%, while the annual rate of growth in the domestic market was 3.3%. (DOT 2012). These rates of growth are quite low when compared to competitors such as Indonesia, Malaysia, Thailand, and Vietnam (WEF 2012). Despite rapid



growth in recent years, the Philippines still trails Indonesia, Singapore, and Thailand in terms of international tourist arrivals and international tourism receipts per capita.

The Philippines has historically ranked low in the World Economic Forum's annual travel and tourism survey, which calculates a country's competitiveness index based on three criteria: regulatory framework, business environment and infrastructure, and human, cultural, and natural resources. The Philippines was ranked last among ASEAN neighbors in terms of the number of airlines operating flights from the country and the availability of good air connections to overseas markets, according to a 2009 report. It also lags in terms of road and ground transportation network quality, and restrictions on foreign ownership of companies and property rights continue to be a barrier to attracting tourism investment, particularly from international chains. The time and money required to start a tourism business should also be considered.

As seen in Table V shows a 4.6% service sector growth rate in 1990 that fell to 0.3% in 1991, indicating a weakly positive relation. However, this relation did not affect the Philippines' GDP, which grew at \$50.51 billion in 1990 and \$51.78 billion in 1991. Despite the service sector's increased size during the last 31 years, productivity growth has slowed. The service sector's productivity varied annually between 1990 and 2020, whereas the GDP grew annually. The same outcomes were observed in the years that followed, resulting in a weak positive relation.

The services sector is made up of a wide variety of services, including, among others, business and retail services, educational services, and health services. While some services directly affect human capital development, others are used as production inputs. In the Philippines, the services sector contributes 60% of the country's GDP and nearly 57 percent of all jobs. The contribution of services, however, varies across regions and subsectors. Our research indicates that the GDP of the Philippines does not solely depend on the growth of the service sector. Due to the decline of the tourism industry, which contributes significantly to the service sector, there is a weak positive relationship.



Figure II presents the Pearson correlation coefficient test of the Service Sector Growth Rate and GDP. To demonstrate a weak positive correlation, the value of Y increases slightly as the value of X increases.

Gross Value Added for Service Sector



Table III. Coefficient Correlation between Gross Value Added for Service Sector and GDP of the Philippines

Variable	IV	DV
Result	0.8982	1

The findings point to the conclusion that the Gross Value Added (GVA) has a *significant positive association* to the Gross Domestic Product of the Philippines (GDP). In addition to this, the coefficient of correlation for Gross Value-Added is 0.8982 (*refer to Table III*.). It is pretty apparent that the service sector makes a contribution, both large and positive, to the GDP of the country. The development and expansion of the service industry in the country has led to an increase in the value that the service industry contributes to the overall gross domestic product of the country.

If we look at Table V, under the Gross Value Added for Service Sector, we can see that the Gross Value Added for the Service Sector continued to increase alongside the GDP of the country from 1990-1997. This indicates that Gross Value Added for the Service Sector has a connection with the Gross Domestic Product of the country, which is relevant to the expansion of the economy. The rating for Gross Value Added For Service Sector remained near constant from 2001 to 2008, in contrast to GDP, which indicates significant growth over the same time period.

According to the related literatures, the service industry in the Philippines is one of the fastest growing and most resilient parts of the country's economy, which has grown in significance over the past few years. This is one of the reasons why the Philippines has become one of the most competitive economies in Asia. Its contribution to GDP as measured by the Gross Value Added rose to 57.0% in 2014, up from just 36.6% in the 1970s, and its size climbed by an average of 6.3% between the years 2000 and 2014. However, the performance of the service industry has not yet realized its full potential despite its recent improvements. The overall growth performance of the service sector in the Philippines has been moderate as a result of restricted growth in both the local market and external demand, low investment in infrastructure, education, and other public goods, and an unsatisfactory general climate for conducting business. All of these factors have contributed to the moderate growth performance of the service sector. When it comes to making additional contributions to the country's GDP, the Service Sector can take advantage of a wide variety of options. Considering that Gross Value Added is still linked to the expansion of Gross Domestic Product throughout the course of these many years.

In conclusion, an increase in the Gross Value Added of the service sector would, relatively speaking, result in an increase in the GDP of the country. This is because the factors and circumstances that the GrossValue Added created in order for the GDP to grow in terms of share of the service sector's development would cause the GDP to increase.



Figure III. presents the Pearson correlation coefficient test test of Gross Value Added for Services and GDP. The scatter plot points appear to form a line that slants up from left to right. The variables have a positive relationship or a positive correlation.

Total Employment Contribution for Service Sector

Table IV. Coefficient Correlation between Total Employment Contribution for Service Sector and GDP of the Philippines.

Variable	IV	DV
Result	0.9209	1

The results indicate that Total Employment for the Service Sector has a coefficient correlation of 0.9209 (*refer to Table IV.*) which proves that there is a *significant positive relationship*. The GDP of the Philippines, with the service sector continuing to increase, and the importance of jobs in every sector generated the greatest jobs. In labor economics, as more workers enter the workforce, it also increases the workforce's productivity and the country's economy. Serafica, et al. (2021) state that the service sector is made up of a wide variety of services, including production, retail, and consumer services. It can also involve human capital development such as verbal and written communication with clients, interpersonal skills, and social skills which are necessary in the service sector. (Lloyd and Payne, 2009). Furthermore, a changing service culture that adapts to new needs and integrates social and professional skills, creativity, and flexibility fosters employment and economic progress.

In 2018, services accounted for about 57% of employment and 60% of the country's Gross Domestic Product (GDP). The services industry takes up a greatest component of the economy, employs the most people overall, including both men and women (Serafica, et al. 2021).

The world's most significant industry by far is the service industry. The European Union (EU) and other developed nations' service industries are estimated by the International Labor Organization (ILO, 2006) to have made up 71.4% of all employment in 2005, up from 66.1% in 1995. (Breitenfellner & Hildebrandt, n.d.). It's a clear contribution to the country's economy in terms of GDP, employment rate, and competitiveness (Securing the future of Philippine industries, n.d.).



In reference to Table V, the year 1990 has shown that there is a 40% total employment contribution in the service sector resulting in \$50.51 billion in the total GDP of the Philippines. An observation in the year 1991, the total employment contribution in the service sector, increased in 1% and surprisingly has an increase in the total GDP with \$51.78B results that as more workers enter the workforce, it also generates labor productivity and involves human capital development. In the years 1992, 1993, and 1994, the total employment remained stable at 40% in three consecutive years, indicating that it has continued to increase in the GDP. In 2019, the total employment contribution was 58% resulting in an increase of \$376.82B in the country's GDP, however, in 2020, there is a decrease in the employment contribution by 1.1% resulting in a decrease in the total GDP by \$15.33B due to economic circumstances.

In conclusion, as the economy gains in employment and productivity, more jobs are created while also contributing to the growth of the economy. It is undeniable that there is a strong correlation between the Philippines' GDP and total employment.



Figure IV. presents the Pearson correlation coefficient test on Total Employment in Service and the Philippines' GDP. The data points form a straight line from the origin to high y-values. A positive correlation exists between the variables.

Table V. Raw Data for GVA for Services, Total Employment Contribution of Service Sector, Service Sector Growth Rate and GDP of the Philippines.

Year	Gross Value Added for Services	Total Employment Contribution in Service (%)	Service Sector Growth Rate (%)	GDP of the Philippines (in billion \$)
1990	42.7	40	4.6	50.51
1991	44	41	0.3	51.78
1992	44.4	40	1	60.42
1993	44.8	40	2.5	62.04
1994	44.6	40	4.2	73.16





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1995	45.4	42	4.8	84.64
1996	46.3	42	6.2	94.65
1997	47.9	45	5.3	94.11
1998	50.4	46	2.9	74.49
1999	51.3	46	4.6	85.64
2000	51.1	47	3.3	83.67
2001	51.8	47	3.9	78.92
2002	51.8	47	3.8	84.31
2003	52.3	48	5.3	87.04
2004	52.4	48	8.3	95
2005	52.7	49	5.3	107.42
2006	53.2	50	6.4	127.65
2007	53.4	50	7.7	155.98
2008	52.7	50	4	181.62
2009	53.9	51	3.4	175.97
2010	53.9	51	7.6	208.37
2011	54.6	52	5.2	234.32
2012	55.5	53	7.4	261.92
2013	56.8	53	7.6	283.9
2014	56.7	54	6.7	297.48
2015	58.8	55	7.4	306.45
2016	59.5	56	8.2	318.63
2017	59.7	56	7.4	328.48
2018	59.8	57	6.7	346.85
2019	60.9	58	7.2	376.82
2020	61.4	56.9	-9.2	361.49

V. CONCLUSION

The primary goal of this research is to determine the relationship of the independent variable, the Total Growth Rate, Gross Value Added, and the Total Employment Contribution, and the dependent variable, the Philippines' GDP, utilizing secondary data from the Philippine Statistics Authority (PSA), and the World Bank Group data files that covers the year 1990-2020. The researchers found that gross value-added and total employment for the service sector has a significant positive relationship with the Philippines' GDP which supports the improvement



of the economy. However, for the total growth rate, it is deemed to have a weak positive correlation between the country's GDP. This was concluded by using the Pearson Correlation Coefficient as the econometric model to determine the strength of its relationship.

H0: The total growth rate in the service sector does not have a relationship with the GDP of the Philippines. H1:The total growth rate in the service sector has a relationship with the GDP of the Philippines.

The researchers will reject the null hypothesis and accept the alternative hypothesis. This research indicates that the GDP of the Philippines does not solely depend on the growth of the service sector, but it has a *weak positive relationship* with the total growth rate in the service sector.

H0: The gross value-added of the service sector on the GDP does not have a relationship with the GDP of the Philippines

H2: The gross value-added of the service sector on the GDP has a relationship with the GDP of the Philippines

The researchers will reject the null hypothesis and accept the alternative hypothesis as there is a *positive relationship* between the GDP of the Philippines and the gross- value added of the service sector on the GDP of the country.

H0: The total employment contribution in the service sector does not have a relationship with the GDP of the Philippines.

H3: The total employment contribution in the service sector has a relationship with the GDP of the Philippines.

The researchers will reject the null hypothesis and accept the alternative hypothesis since there is a *positive relationship* between the Philippines' GDP and the total employment contribution in the service sector. The period between 1990 and 2019 demonstrates unmistakably that there has been a growth in the overall employment in the service sector, which raises the nation's GDP. The service industry is the largest employer at the moment therefore, it also has the largest employment rate, it also supports the economic development of the country.

Given in the discussion above, the researchers can easily determine that the level of association of total employment contribution has a strong positive relationship to its GDP with an absolute value of 0.9209. The country's GDP solely relies on the total employment contribution in the service industry. Meanwhile, the GVA in the service sector has led to the development and contribution to the nation's GDP, additionally, the GVA has an absolute value of 0.8982 which also has a strong positive correlation. However, the total growth rate in the service sector does not rely on the Philippines' GDP even though the service sector has a wide variety of services.

Through an analysis of the connections between various factors that have an impact on a nation's GDP, the study aims to gain a better understanding of the role that the service industry plays in the overall economy. The rate at which GDP increases over the course of time is influenced by a number of socioeconomic factors, one of which is employment in the service sector. With the findings of the research in hand, the government could put more of its attention towards creating employment opportunities in the service industry, or it could even try to entice foreign investors in the service sector, in order to increase the number of job opportunities available in our country within the service industry.

One socioeconomic issue that can be addressed is a lack of services, which is frequently caused by a lack of public awareness of their importance. The majority of people may believe that services are unnecessary or easily accessible. The same lack of knowledge could explain why services are not adequately funded. In this case, failure to recognize the need for assistance results in inadequate institutional support and regulatory enforcement, necessitating compelling reforms to address the complex institutional constraints. Significant work remains to be done to realize the service industry's potential fully. The government should be able to outline the development and marketing of competitive tourist products and destinations, the improvement of market access, connectivity, and destination infrastructure, and the improvement of tourism institutional, governance, and human resource capabilities not just in the tourism industry but also in other service sector's industries.



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The research goes on to analyze the Macroeconomic Concepts that apply to the Service Sector, which in turn refers to the overall production that the Service Sector Contributes to the Economy. The stability of the service sector is one component that stands out in light of the findings of the research since it is one of the factors that further influences the findings of the research. In order to find a solution to the problem at hand, the service industry should keep expanding throughout the resolution process in order to preserve the favorable correlation it has with GDP. For the purpose of fostering even further expansion, the government should initiate programs that will assist in better making use of the resources provided by the service sector.

REFERENCES

[1] A Fragile Recovery. Economic Report Senate Economic Planning Office. (2021). Retrieved from https://legacy.senate.gov.ph/publications/SEPO/SEPO%202021%20Midyear%20%20EconReport_final.pdf

[2] A. G. Asuero, A. Sayago & A. G. González (2006) The Correlation Coefficient: An Overview, Critical Reviews in Analytical Chemistry, 36:1, 41-59,

[3] Adetokunbo, A.M., Edioye, O.P. Response of economic growth to the dynamics of service sector in Nigeria. Futur Bus J 6, 27 (2020). https://doi.org/10.1186/s43093-020-00018-9

[4] Ajmair, M., Gilal, M. A., & Hussain, K. (2016). Determinants of services sector growth in Pakistan. European Scientific Journal, 12(34), 297-306.

[5] Alam, M. M., Sultan, M., & Afrin, S. (2010). Analyzing Growth and Dynamics of Service Sector Economy. Journal of Business and Technology, 5(1), 86-98.

[6] Alhowaish & Abdulkarim. (2014). Does Services Sector Cause Economic Growth? Empirical Evidence from Saudi Arabia. The Global Studies Journal. 7. 1.

[7] Arroyo, G. M. (nd). The services sector in the Philippines.

[8] Asian Development Outlook 2012: Rebalancing Asia's Growth ADB (Asian Development Bank). 2005. Key Indicators for Asia and the Pacific.

[9] Attiah, E. (2019). The role of manufacturing and service sectors in economic growth : an empirical study of developing countries. European Research Studies Journal, 22(1), 118-124.

[10] Beerepoot, N., & Hendriks, M. (2013). Employability of offshore service sector workers in the Philippines: opportunities for upward labour mobility or dead-end jobs? Work, Employment and Society, 27(5), 823–841. https://doi.org/10.1177/0950017012469065

[11] Bosworth, B., & Maertens, A. (2009). 2. The Role of the Service Sector in Economic Growth and Employment Generation in South Asia. The Service Revolution in South Asia, 95.

[12] Breitenfellner, A., & Hildebrandt, A. (2006). High employment with low productivity? The service sector as a determinant of economic development. Monetary Policy and the Economy, 1, 110-135.

[13] Clemes, M. D., Arifa, A., & Gani, A. (2003). An empirical investigation of the spillover effects of services and manufacturing sectors In ASEAN countries. Asia Pacific Development Journal, 10(2), 29-40.

[14] Cororaton, Caesar B. (2002): Total Factor Productivity in the Philippines, PIDS Discussion Paper Series, No. 2002-01, Philippine Institute for Development Studies (PIDS), Makati City

[15] Das, D. K., Erumban, A. A., Aggarwal, S., & Sengupta, S. (2013, November). Revisiting the Service-led Growth in India Understanding India's service sector productivity growth. In IARIW-UNSW conference on productivity: measurement, drivers and trends. University of South Wales, Sydney (pp. 26-27).

[16] Eichengreen, B., & Gupta, P. (2011). The service sector as India's road to economic growth (No. w16757). National Bureau of Economic Research.

[17] Eichengreen, B., & Gupta, P. (2013). The two waves of service-sector growth. Oxford Economic Papers, 65(1), 96-123. Retrieved from doi:10.1093/oep/gpr059

[18] Harelimana, J.B., & Mukarwego, B. 2021. Service Sector as an Engine of Growth: Empirical Analysis of Rwand, Business and Management Studies, Redfame publishing, vol. 7(2), pages 47-59.



September 2022

[19] Iqbal, B. A., & Rahman, M. N. (2015). Contribution of ASEAN-6 SMEs to economic growth of ASEAN. Economics World, 3(11-12), 258-269.

[20] Jain, D., Nair, K., Nair, K., & Jain, V. Factors Affecting GDP (Manufacturing, Services, Industry): An Indian Perspective (2015). Annual Research Journal of SCMS Pune, Vol. 3, April 2015, pp. 38-56. Retrieved from https://ssrn.com/abstract=2658996

[21] Kaliappan, S. R., KhaMIS, K. M., & ISMAIL, N. W. (2015). Determinants of Services FDI Inflows in ASEAN Countries. International Journal of Economics & Management, 9(1).

[22] Kim, H. (2006). The Shift to the Service Economy: Causes and Effects (in Korean).

[23] Kleibert, J. M. (2014). Strategic coupling in 'next wave cities': Local institutional actors and the offshore service sector in the Philippines. Singapore Journal of Tropical Geography, 35(2), 245-260.

[24] Kleibert, J. M. (2015). Expanding Global Production Networks: The emergence, evolution and the developmental impact of the offshore service sector in the Philippines.

[25] Lee, J.-W., and W. McKibbin. 2014. Service Sector Productivity and Economic Growth in Asia. ADBI Working Paper 490. Tokyo: Asian Development Bank Institute. Retrieved from: http://www.adbi.org/working-paper/2014/07/18/6358.service.sector.productivity

[26] Lim, J. Y. (2000). The effects of the East Asian crisis on the employment of women and men: The Philippine case. World development, 28(7), 1285-1306.

[27] Lim, J. Y. (nd). The Services Sector in the Philippines. An Agenda for Research InASEAN, 54.

[28] Lim, J. Y., & Montes, M. F. (2007). The structure of employment and structural adjustment in the Philippines. The Journal of Development Studies, 36(4), 149-181. Retrieved from https://www.tandfonline.com/doi/abs/10.1080/00220380008422641

[29] Magnoli Bocchi, A. (2008). Rising growth, declining investment: the puzzle of the Philippines. World Bank Policy Research Working Paper, (4472).

[30] Malec, K., Gouda, S., Kuzmenko, E., Soleimani, D., Å^{*}ezbovÅ_i, H., & Å Ã_inovÃ_i, P. (2016). GDP Development and Employment in Egypt (2000-2013). International Journal of Economics and Financial Issues, 6(1), 199–206. Retrieved from https://www.econjournals.com/index.php/ijefi/article/view/1577

[31] Mattoo, A. (2009). Is Service Sector a Source of Growth?. Accelerating Growth and Job Creation in South Asia, 175-203.

[32] Mendoza, R. R. (2017). Relationship between intangible assets and cash flows: an empirical analysis of publicly listed corporations in the Philippines. Review of Integrative Business and Economics Research, 6(1), 188-202.

[33] Mitra, R. M. (2011). BPO sector growth and inclusive development in the Philippines.

[34] Mitra, R. Mi. (2013). Leveraging Service Sector Growth in the Philippines Asian Development Bank Economics Working Paper Series No. 366, Retrieved from: https://ssrn.com/abstract=2321536 or http://dx.doi.org/10.2139/ssrn.2321536

[35] Morrar, R., & Gallouj, F. (2016). The growth of the service sector in Palestine: the productivity challenge. Journal of Innovation Economics Management, (1), 179-204.

[36] Mujahid, H., & Alam, S. (2014). Service sector as an engine of growth: Empirical analysis of Pakistan. Asian Economic and Financial Review, 4(3), 377-386. Retrieved from https://archive.aessweb.com/index.php/5002/article/view/1165

[37] Park, D., & Noland, M. (2013). Developing the service sector as an engine of growth for Asia.

[38] Park, D., & Shin, K. (2012). Performance of the service sector in the Republic of Korea: An empirical investigation. Asian Development Bank Economics Working Paper Series, (324).

[39] Park, D., & Shin, K., (2012). The Service Sector in Asia: Is It an Engine of Growth? Asian Development Bank Economics Working Paper Series No. 322. Retrived from http://dx.doi.org/10.2139/ssrn.2198154

[40] Ramaswamy, K.V., & Agrawal, T. (2012). Services-led growth, employment and job quality: A Study of manufacturing and service-sector in urban India.

[41] Rathore, K., Shahid, R., Ali, K., & Saeed, A. (2019). Factors affecting service sector's contribution to GDP in Pakistan. Pakistan Vision, 20(2), 175.

[42] Rene, E.O. (2015) Growth and employment in de-industrializing Philippines, Journal of the Asia Pacific Economy, 20:1, 111-129, DOI: 10.1080/13547860.2014.974335



Universal Journal of Science and Technology

Vol.1 No. 2

September 2022

e-ISSN: 2962-917

[43] Rutkowski, Jan J. (2015) Employment and Poverty in the Philippines. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/26320

[44] Serafica, R.B., Vergara, J. C. M., & Oren, Q. C. A.. 2021. Regional Analysis of the Philippine Services Sector. © Philippine Institute for Development Studies. http://hdl.handle.net/11540/13753.

[45] Services Value Added by Sector - Securing The Future of Philippine Industries. (2015). Retrieved from Securing The Future of Philippine Industries website: https://industry.gov.ph/services-value-added-by-sector/

[46] Sharma, R., Hazra, S., & Chitkara, S. (2007). Measurement of GDP of Services Sector in the New Series of National Accounts Statistics. Economic and Political Weekly, 42(37), 3727–3731. http://www.jstor.org/stable/40276388

[47] Shintaro Hamanaka, Sufian Jusoh, Domestic legal traditions and international cooperation: Insights from domestic and international qualification systems, International Political Science Review, 10.1177/01925121211028472, (019251212110284), (2021). Crossref

[48] Taylor R. Interpretation of the Correlation Coefficient: A Basic Review. Journal of Diagnostic Medical Sonography. 1990;6(1):35-39.

[49] Thangavelu, S. M., Ing, L. Y., & Urata, S. (2015). Services productivity and trade openness: Case of ASEAN. ERIA Discussion Paper, 56.

[50] Thanh, V. T., & Duong, N. A. (2016). Promoting rural development, employment, and inclusive growth in ASEAN. Retrieved from http://hdl.handle.net/11540/10323

[51] Uddin, Mirza. (2015). Causal Relationship between Agriculture, Industry and Services Sector for GDP Growth in Bangladesh: An Econometric Investigation. 8.

[52] Umali, J. P. Jr., Torres, J., & Fabros, M. (n.d.). Service Sector. Retrieved from https://www.ombudsman.gov.ph/UNDP4/wp-content/uploads/2013/01/Services-Sector.pdf

[53] Yetiz, F., & Özden, C. (2017). Analysis of Causal Relationship Among GDP, Agricultural, Industrial, and Service Sector Growth in Turkey. Ömer Halisdemir Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi. 10. https://doi.org/10.25287/ohuiibf.305729

[54] Yousuf, M., Ahmed, R. ., Lubna, N. A. ., & Sumon, S. M. . (2019). Estimating the Services Sector Impact on Economic Growth of Bangladesh: An Econometric Investigation. Asian Journal of Economic Modelling, 7(2), 62–72. https://doi.org/10.18488/journal.8.2019.72.62.72

[55] Živković, V.L. A., & Pantić, N. (2020). Macroeconomic Analysis of GDP and Employment in EU Countries. Ekonomika, 66(1), 65-76. doi:https://doi.org/10.5937/ekonomika2001065V