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To What Extent Does Offshoring Impact a Private Firm, the Labour Market, and the Economy?

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Abstract: *Covid-19 has adversely affected the entire world, and this pandemic has caused severe economic repercussions. In such a situation, firms need to significantly cut costs in order to survive, because most economic activity has come to a standstill. One of the methods of becoming more cost-effective is engaging in offshore outsourcing. A firm may resort to offshore outsourcing for cheaper raw materials and resources during the production process. Understanding the impacts of offshoring is crucial for the government as they need to make critical economic decisions, based on this data, for the country. The purpose of this research paper is to gain an in-depth understanding of the effects of offshoring on a firm and an economy, and I have developed and analysed a formula to interpret the impact of outsourcing on the firm and the economy, in terms of the labour market.*

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I. Introduction

Trade liberalisation over the years has directly affected employment in economies across the globe. In-house labour, who were paid more than international labour, are often made redundant as firms seek less expensive sources of labour. Firms started offshoring manufacturing jobs in the 1960s, and service sector jobs were offshored from the early '90s. However, most offshoring today calls for services, namely labour, just as much as it requires raw materials.

Offshore outsourcing is when firms transfer their production process from the country which is their base of operations to one or more developing countries, causing a structural change of employment in the economy. Offshoring is when a firm outsources a production process or a service from another country in order to reduce costs or to use resources that are not available in the base country.

Offshoring is one of the most common forms of reducing the costs of production for multinational companies. They relocate their production sources to locations where the factors of production, such as land and labour, can be availed at lower costs. Alternate countries such as India, China, and Mexico offer cheaper labour, lower land rents, lower levels of competition as compared to their home countries, and less expensive natural resources.

A prominent example is Apple, who offshored their production to land in China. This offshore outsourcing cut their costs drastically, as labour, land, and resources can be purchased at much lower rates. Incessant globalisation has confirmed the key notion to firms that efficiency is the most important. Firms can respond to growing consumer demand and market requirements using offshoring as well. Offshore outsourcing has several impacts on different economies.

Offshore outsourcing is such that the exporting economy and the importing firm benefit from the outsourcing, but the importing economy may be harmed in certain situations. This situation occurs because of the adverse effects created in the importing economy, such as unemployment. However, the exporting economy would benefit because of the large number of jobs created. It helps grow their GDP and valuation. It helps them advance their economic efficiency and worth.

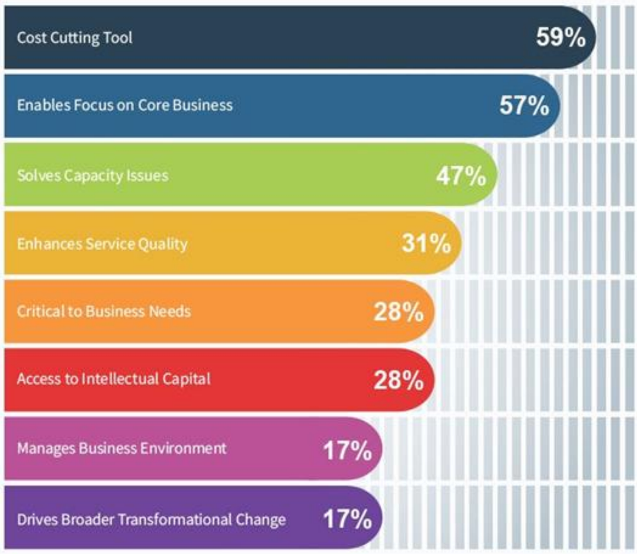


Figure 1*- Deloitte 2016 Global Outsourcing Survey*[1]

The diagram above from the Deloitte 2016 Global Outsourcing Survey states that 59% of firms procure their resources from external sources primarily to reduce their costs of production.

II. Research Methodology & Scope of Investigation

In this investigation, Secondary Data is used to research and analyse the information related to the costs of Offshore Outsourcing. The pandemic has posed several limitations to the collection of primary data, as there is no scope to collect the relevant primary data in person. The data collected will help in measuring further data related to offshore outsourcing and the costs involved in the process, and the data collected will prove the basis of the formula developed and the following research. Economic theories as well as relevant mathematics were applied to develop the formula for the calculations. The formula is later dissected and analysed from multiple perspectives as well.

There are several parties that will benefit from this research. Primarily, firms will be at an advantage with this research as they can analyse the different costs of production in terms of labour and the effectiveness of offshore outsourcing on the costs of production for a firm and an economy. Along with private entities, the formula developed and the research is equally beneficial to the government as they make decisions on international trade tariffs and regulations, and the research can also help them analyse the position of the market and employment in their economy.

III. Literature Review

Pahirathan (2017) described outsourcing and offshoring as 'one of the fastest spreading forms of international trade in a globalization era.' 'Successful outsourcing requires a strong understanding of the organization's capabilities and future direction,' according to Lynn and Louis (1999).

Outsourcing, according to Domberger (1998), is the 'process of searching for and appointment of contractors for the provision of goods and services and the execution of the contractual relations needed to support such activities.'

Alteka R (2006) said that 'the primary reason for outsourcing by enterprises is the cost factor that is significantly less than in sourcing what with the managing of the personnel, infrastructure and the technology.'

These writers all agree that outsourcing is an essential, useful tool for a firm and an economy, and is generally effective while evaluating a method to reduce the different costs of production. According to these researchers, offshore outsourcing is a form of globalisation, and it is a major strategic decision in a business to reduce costs.

IV. Offshore Outsourcing Methods

There are several forms of outsourcing from different countries in which a firm can engage. Outsourcing and offshoring do not necessarily have to be for raw materials or resources. It is possible that the firm outsources labour and production. The firm might get part of their product made in a different country, and

[1] https://www2.deloitte.com/content/dam/Deloitte/nl/Documents/operations/deloitte-nl-s&o-global-outsourcing-survey.pdf

then source that semi-finished product in to complete their production process. However, the typical forms of offshore outsourcing are 'complete outsourcing,' 'selective outsourcing,' and 'departmental outsourcing.'

1. Complete Outsourcing: Complete Outsourcing occurs when firms delegate over 75% of raw materials and expected activity to an outside organisation or economy, resource provider, or vendor. The firm can outsource small projects as well.
2. Selective Outsourcing: Selective Outsourcing occurs when a firm delegates partial parts of work to different employees and units in the external organisation or economy. It requires mutual dependency with the external source.
3. Departmental Outsourcing: Departmental Outsourcing occurs when parts of a product are outsourced from an external organisation or economy, for parts of a product that belong within the firm. This is preferred in specialisation fields and executive projects as they may result in economies of scale due to the aforementioned specialisation.

V. Impacts on the Exporting Economy

Offshoring has several benefits to the exporting economy. There are economic advantages of exporting raw materials and simple production tasks. The most important benefit is the rise in employment in the exporting economy. As the demand for raw materials increases, the economy will increase production to match the demand. The creation of jobs leads to lower levels of unemployment in the economy, and eventually, higher aggregate demand- with higher export revenue generated. This rise in employment will also lead to higher tax revenue collected by the government, thus raising the Gross Domestic Product of the economy. Along with the GDP increasing, the government can also use the extra revenue to increase living standards for the public or subsiding firms and consumers to make necessities in life more affordable for everyone. They can also improve the public healthcare systems available, infrastructure can be updated to become more efficient, and more schools and colleges can be set up to ensure that everyone- the rich and the poor- can afford a good education.

Figure 2- *Gartner: Global Outsourcing Market Size*

According to this data from Gartner, the market is estimated to have a worth of $443 billion, and it is expected to rise by 4% every year. Out of this, over 63% is contributed by the IT-related services. Rising exports help raise aggregate demand and healthy inflation. The jobs create benefits for low-income households in the economy, and they generate more money in the economy. Continuous foreign trade will also affect the exchange rate of the economy. While this is beneficial for an economy, a distorted balance of trade can be dangerous too. If the exchange rate increases too much, the products or raw materials become more expensive, and the economy will lose the demand it currently holds for these raw materials, as the outside economy will, once again, look for a cheaper alternative. When an economy exports high levels of goods, it will lead to a larger a flow of revenue into the economy, which stimulates consumer expenditure and contributes to economic growth. Unfortunately, this may lead to unhealthy levels of inflation for an economy if the government doesn't balance this with the import expenditure by the economy.

VI. Impacts on Importing Firm

Offshoring has several benefits to a firm, for which it engages in offshore outsourcing. With outsourcing, a firm may significantly reduce its costs of production. The primary objective of a private firm is profit maximisation. Outsourcing helps reduce the costs of growing raw materials, additional labour training costs, and labour production costs. Firms use offshore jobs to reduce costs. A typical accountant in India would earn approximately $5,000 per annum, whereas a U.S. accountant earns about $63,000. Such wage differentials significantly encourage firms to lower costs by substituting U.S. based labour with overseas, international workers. Labour costs account for over 70% of technology firms, so offshoring can reduce the costs of production significantly.

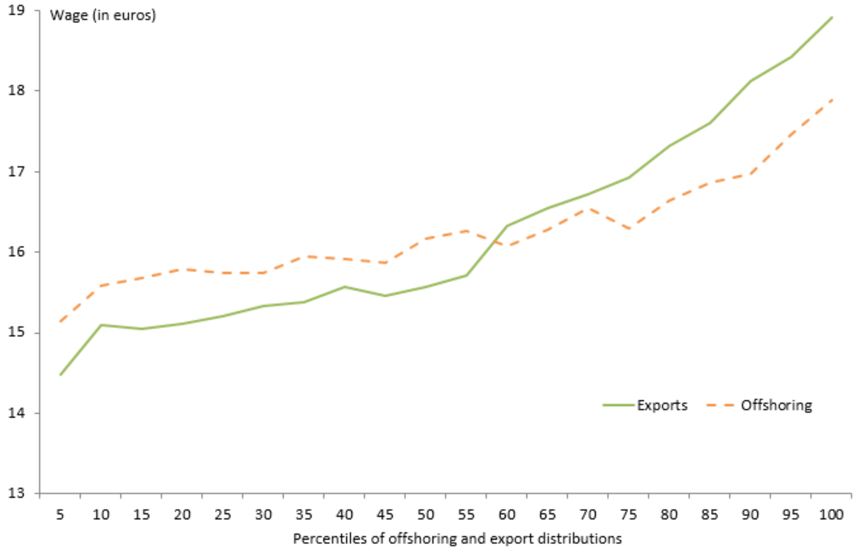


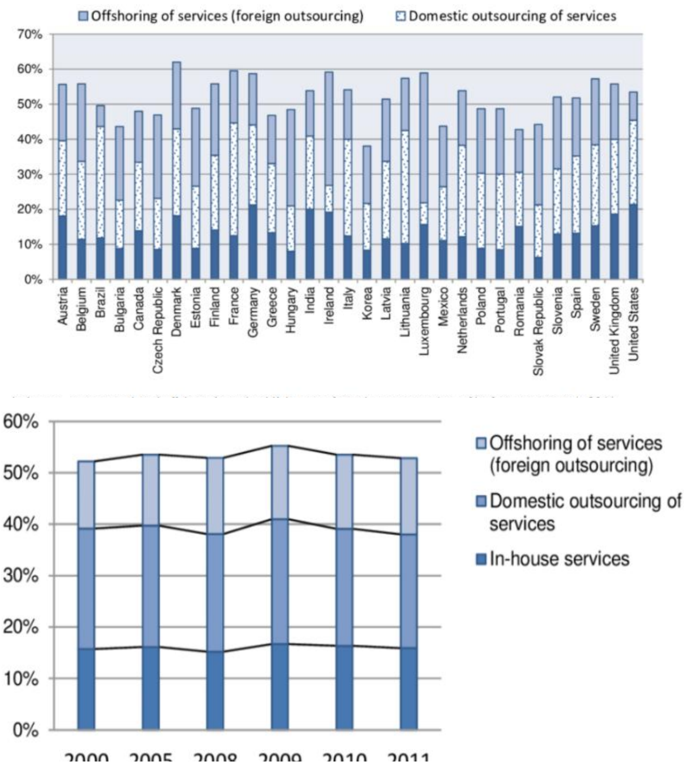
Figure 3- *Average Hourly Wage by Exports and Offshoring Per Worker*

The graph above displays the average hourly wage by exports and offshoring per worker. It demonstrates the relationship of wages with exports and offshoring, showing firm-level average hourly wages to the percentiles of the distribution of exports or offshoring, for each employee. The graph shows a positive correlation, and firms that trade more tend to pay higher wages.

Furthermore, a firm may want to focus on its primary tasks and dedicate their time and effort to working on their own goals. They would want to leave the administrative tasks to be outsourced material. A firm may also outsource or offshore because of specialisation, risk management, and lack of availability of raw materials. Outsourcing can also lead to production economies and access to higher advanced technology for a firm. The firm can use the lower costs of production for three reasons: it can increase its profits, it can decrease the product's price for the consumer, and it can increase its production quantity. However, outsourcing increases the dependency of the firm significantly. The more the firm outsources, the more dependent it becomes on the other organisation or economy. This may be unhealthy for the firm because it can be directly impacted by any natural disasters or civil unrest occurring in the exporting economy. For example, if a war or natural calamity occurs in the exporting economy, it renders the firm incapable of production due to the unavailability of resources.

VII. Impacts on Importing Economy

Offshore outsourcing will stimulate the economy because of more purchases of products in the market. If the raw materials are cheaper, then the firm would ideally produce a larger quantity of goods and services. More production would lead to higher consumer expenditure. When more consumers purchase higher numbers of products, the government collects higher tax revenue, so government expenditure can also increase, resulting in higher aggregate demand. This aggregate demand can lead to healthy economic growth and inflation. However, the disadvantages outweigh the benefits for the importing economy. This is because the economy itself is not importing the goods or raw materials, but the firm is outsourcing the materials. This means that the economy loses investment expenditure of the firm because the investment is occurring in a different economy. The most significant impact would be the unemployment created. Many jobs will be lost if a firm decides to offshore their raw materials. For example, local raw material vendors would run out of business. If a firm produces pencils and offshores its wood, then local woodcutters would lose their jobs, creating unemployment.



Figures 4 & 5- In-House & Offshored Service as a % of Gross Exports

The graphs above show us that offshoring and outsourcing constitute a much larger percentage of the services as compared to in-house services as a percentage of gross exports over the years. Furthermore, if a firm decides to outsource half-finished products, it would not require such a large workforce, so the firm decides to lay off its workers. This creates a type of structural unemployment, where the unemployment occurs due to the industrial reorganization and relocation of raw material or product sources. This is very dangerous for an economy because it can lead to high levels of unemployment if all firms decide to engage in offshore outsourcing. The government can implement different policies such as outsourcing limits or regulation, limiting a firm from firing employees to prevent the resulting unemployment, which can pose threats to the economy.

VIII. Calculation of the Impact of Offshoring on Labour

We can calculate the impact of offshoring on the labour market using this simple formula that I designed. There are different manners in which different entities will interpret the data, as described below. We must collect data from the individual firms for the number of people fired because of the outsourcing, the total workforce employed by the firm before the outsourcing was conducted, and the percentage of the product that was outsourced. The formula is:

$$I = \frac{L_{new} - L_{old}}{L_{old}} \times \frac{\%\, p}{100}$$

Where:
‘I’ → ‘Impact of Outsourcing on labour cost of production,’
‘L_{new}’ → ‘the new total labour cost for the firm after outsourcing,’
‘L_{old}’ →’the old total labour cost for the firm before outsourcing,’
‘p’ → the ‘percentage of the product that is outsourced.’
We must remember to use ‘p’ as a whole number of percentages, not the decimal value.
In this formula, the scale ranges from -1 to ∞. This same formula can be interpreted in different ways by a private firm and the labour market (and government). We can conclude that if the percentage of labour laid off by the firm is less than the percentage of the product outsourced by the firm, then the outsourcing had a positive impact on the labour market in the economy.
The same formula can be interpreted in different ways by the firm and the government. While a firm’s primary motive is profit maximisation, a government looks at maximising public welfare and reducing unemployment.

For a profit maximising firm, the following figure shows how the formula will be interpreted:

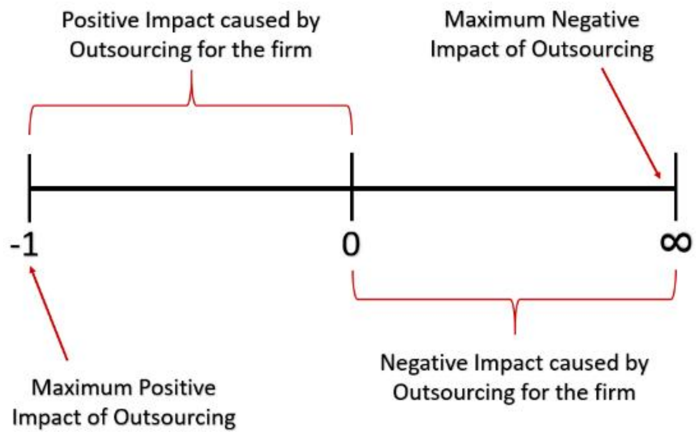


Figure 6*- Interpretation of Formula for a Profit-Maximising Firm*

In this formula, when resulting labour costs are lower for the firm because of outsourcing, it is an indication that the outsourcing has been successful in cutting costs for the firm. The firm has been able to replace the in-house labour with external production, resulting in lower costs and higher profits for the firm. If the firm lays off all of their employees and replaces all labour with outsourcing, the firm is likely to gain profit benefit, and the formula will read **-**1 as it is the maximum positive impact to the firm. A negative value would indicate that the costs of production have been reduced, and outsourcing was the right decision for the firm. However, for values above 0, the firm may read it as undesirable as the outsourcing has caused higher labour cost for the firm.

For members of the labour market, as well as the government, the following figure shows how the formula will be interpreted:

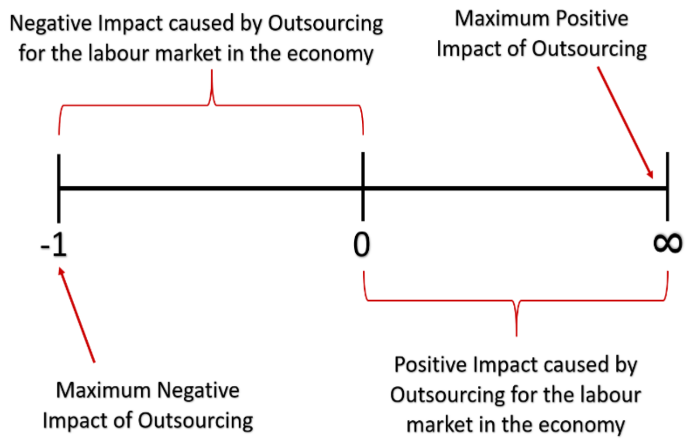


Figure 7*- Interpretation of Formula for the Government & Members of the Labour Market*

In this formula, when resulting labour costs are higher for the firm because of outsourcing, it is an indication that the outsourcing has been unsuccessful in cutting costs for the firm. However, it may be interpreted positively by the members of the labour market as it means that the firm has employed more people, which means lower unemployment in the market. The firm has either not been able to replace the in-house labour with external production, or then they had to employ more people to handle the outsourcing, resulting in higher employment for the labour market. If the firm lays off all of their employees and replaces all labour with outsourcing, there will be resulting unemployment in the economy, and the formula will read -1 as it is the maximum negative impact to the labour market. A negative value would indicate that employed labour by the firm has been reduced, and outsourcing was the right decision for the firm, but it has negative consequences in terms of unemployment for the labour market and the economy. However, for values above 0, the labour market would read it as desirable as the firm will employ more people due to outsourcing.

IX. Firm Pricing Decisions Based on Offshoring

There are various options that a firm can choose from while deciding whether to outsource or not. Firms prioritise profit maximisation, thus they primarily decide whether to outsource based on the potential rise in profits or reduction in their costs. If they choose to offshore and their costs decrease or profits increase, they then have three options for using the savings or profit:

1. Reduce costs for the consumer: the firm can decide to reduce the price of their product to increase sales. This is highly dependent on the elasticity of the product, but if the product is price elastic, then this gives the firm comparative advantage over their competition. This also incentivises the consumer to purchase the product provided by the firm instead of another rival, substitute firm. In such a situation, a firm would also analyse the price elasticity of demand for the product, and the market structure for its product. If the price elasticity of demand for the product is perfectly or relatively inelastic, then the business can retain the savings or profit as the reduction in costs will not significantly impact the demand for their product. On the other hand, if the price elasticity of demand for the product is perfectly or relatively elastic in nature, then decreasing the price can significantly help the business in terms of increasing the quantity demanded of the product, and the resulting profits for the firm. Moreover, the market structure needs to be considered, because if a firm is in a monopoly or monopolistic setting, then it does not need to lower its price, as consumers have no alternative but to buy from the single seller. However, if the firm is in a perfectly competitive market or in an oligopoly market structure, then reducing the price of the product will lead the firm to gain a price advantage over its competitors.

2. Invest profits in the business to increase production: the firm can use the profits/savings to invest in a larger volume of production if market demand shortage for the good exists. This will lead to higher sales and higher revenue for the firm. However, a firm might invest this in research and development to increase the efficiency and quality of their product, making the product more cost-effective as well. They will also gain advantage of economies of scale once production reaches a highly scalable level. This also portrays a more confident image to the investors of a company as it proves confidence in the success of the business's current and future endeavours. Along with this, the firm can also increase the scale of their operations to serve a larger audience, thus resulting in higher revenue too.

3. Share the profits as dividends with shareholders: the firm may decide not to invest their savings/profits back into the company, thus sharing the profits as dividends with the shareholders. This measure is generally taken when the shareholders are worried that there may not be a future for the product, and they want to receive their shares of the profit/savings. However, the shareholders may also decide that they do not want to increase production- if the market for the product is at equilibrium- or they do not want to invest in research and development- if the firm is already highly efficient and marginal utility may be diminishing. Thus, the shareholders receive their part of the profit based on the shares they hold.

X. Conclusion

Offshore outsourcing can be a strong source of cost reduction for a firm. There are several impacts that both economies face, and in most cases, firms only engage in outsourcing if they know they will have a significant cost advantage. The firm can outsource raw materials, labour, or production capital from a different economy. The reduced cost creates a market advantage for their product and the firm.

However, a large proportion of offshoring can be risky for a firm because the resources may be damaged or in an undesirable condition. These faults in resources can occur due to several negative external factors. Offshore outsourcing also has many factors affecting the importing economy. The most significant impact would be the rise in layoffs and unemployment that occurs. Locally sourced resources are now being imported from a different country, so the jobs for the locals are reduced.

Furthermore, if production processes occur in a different country, jobs for the economy's own population are lost. However, the government would collect more sales tax and corporate tax, which could still benefit the economy. The GDP of the country would also increase because of the higher sales and business, but there would be a greater inequality of income distribution in the economy. The exporting economy, on the other hand, will ideally very strongly support outsourcing as exports. There is a sharp rise in employment, as resources are gathered by locals.

The economy is stimulated by economic growth and rising aggregate demand. However, it may be dangerous for an economy to export too much as it may cause instability in their balance of payments, and it may lead to extremely high aggregate demand that can cause hyperinflation. Overall, based on economics situations and these cost factors, a firm may engage in offshore outsourcing.

XI. Limitations

During this research, there were several limitations that needed to be overcome, and the pandemic was the most severe implication in the investigation. Due to the pandemic, there was no scope of collection of first-hand data. Therefore, this research is based primarily on second-hand data, and this limitation was overcome.

Furthermore, due to the differences in the scales of the survey, the estimated values were different in the different investigations, which made verifying the data a challenge. To overcome this limitation, data from the most reliable sources, such as Deloitte and Gartner were used, and the averages were also taken to measure the differences, in order to reduce the inaccuracy of the data.

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