

Investigating the Potential Economic Impact of Brexit Decisions on Business Performance in the United Kingdom: A Case Study of the UK Construction Industry

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Abstract

The looming argument on the decision of the United Kingdom (UK) to leave the European Union (EU) popularly referred to as Brexit is UK's greatest concern today. While business experts and economic analysts have been trying to decipher the potential effects of this decision, many businesses are beginning to prepare themselves for the worst-case scenario. This study is primarily aimed at investigating the potential economic impact of Brexit on business performance in the United Kingdom with specific reference to the construction industry which serves as one of the UK's major contributor to output. The methodology, therefore, is based on an epistemological assumption grounded in positivistic philosophy with the use of a deductive and applied research approach. Additionally, both quantitative and qualitative research methods were employed using secondary sources of data. The data was further estimated using a t-Test statistical model to test the significance level between the population means of the variables measured along a time period that covers 2014 to 2018. The variables measured include industry labour employment, interest rate, inflation

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and exchange rate, output, imports, and exports. The research findings suggest that there are potential adverse effects of Brexit on labour activities within the industry if a favourable deal is failed to be struck. Additionally, external economic factors were deemed to have a very high negative influence on business performance. It was also reported that trading activities which were the core performance measures in the industry were not significantly reactive to Brexit since the leave vote although there are potential threats after the implementation period.

Keywords: Brexit, business performance, construction industry, labour activities, trade activities, external economic factors.

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Introduction

The decision embarked upon by the United Kingdom to exit the European Union has generation a lot of concerns for businesses in particular. The fickle and inability to predict what the next few years or even a decade after the exit would result into is the most threatening concern and as such, businesses are having to go back to their drawing boards to figure out ways to tackle the adverse effects while taking cognizance and advantage of the benefits that Brexit would create. Nonetheless, many other businesses are more concerned with the short-term effects as this is likely to help forecast the effects in the long-term. Many of the statistics that have been put forward have predicted that the UK stands the chance to lose more than the gains if Brexit occurs without a suitable deal; this is based on the fact that without the usual trade cooperation between the UK and EU being dependent on each other, there are more loses in terms of free trade, labour supply and profitability (Djankov, 2017).

Similarly, Bourke (2018) likened the Brexit decision to a coin having two sides; the first side represents the positive effects while the other represents the negative effects. It was further implied that while the UK will have the supreme power to act upon its laws and regulations without any interference of the EU, it will also be able to establish trade alliances with other countries to foster gains from international trade; however, before a cordial relationship and agreement with the intended countries can be solidified, the UK may likely witness a fall in aggregate demand, depreciation of the sterling and decrease in productivity as a result of labour shortage many of which has started to happen.

The construction industry, being the central focus of this research is a major contributor to the UK economy. According to the House of Commons (2015), the industry contributed about 6.5% to the total output of the UK economy in 2014. However, sequel to the post-Brexit vote, the industry recorded a decrease of 1.1% in output as at November 2016. Nonetheless, the industry's contribution to decreasing unemployment has been encouraging over the years, but with the looming Brexit, European workers, in particular, may find it challenging to cope.

As a result, this research seeks to examine the potential impact of the decision of the UK to exit the EU regional bloc on business performance in the UK with specific reference to the construction industry.

Literature Review

Concept of Regional Integration

According to Howorth and Menon (2015), regional integration otherwise known as regionalism is a familiar term that denotes the coming together or collaboration of countries within a particular territory to form an alliance based on improving economic and social welfare. Similarly, Rugman and Collinson (2016) expressed their opinion on regional integration as a deliberate attempt by countries to make international trade more effective and efficient through the removal of specific barriers to trade or by giving concession to other countries in trade; therefore, regional integration is the alliance formed by independent states driven by a common goal that is enabled via a set of agreed regulations or terms of conditions to ensure that international trade is made easy without strict constraints to enable all integrated states to gain the benefits of mutuality.

Regional integration according to Petit (2006) is construed in the knowledge of whether countries that become integrated are grouped based on similar levels of development which may be measured on the level of productivity and capabilities or based on their geographical proximity. Whichever way it is, integrated countries focus on interdependence among each other coupled with the mutual agreement to ease the terms of trade. Contrastingly, Baldwin (2008) observed that on the one hand, many economics experts focused mainly on the need for integration in the aspect of fair trade; on the other hand, European leaders interpret regional integration as not only to foster economic prosperity but also to ensure political integration, hence, avoid wars and foster peace among member states.

Advantages of Regional Integration

Gains from Trade

Regionally integrated countries are most likely to enjoy the benefits from trade otherwise known as gains from trade relative to non-integrated states. This is because, the sole objective of forming and integration is to reduce the barriers to trade and encourage a free flow of goods, services and the factors of production in order to increase economic welfare. Therefore, a reduction in the cost of production, operation, transportation and distribution will translate into increased profits for businesses within the region which will also positively influence the output of these countries (Nordas et al., 2006).

Economies of Scale

Another vital benefit of forming a regional integration is to achieve economies of scale. The collaboration between countries is expected to result in trade specialisation and absolute or comparative advantage wherein countries focus or specialise in the production

of goods and services they are most efficient in producing. Specialisation, therefore, would enable countries to produce in large quantities and as such, the cost of production is cheaper as quantity increases before diminishing returns set in (Matthijs, M. and Kelemen, 2015).

Price Reduction

Regional integration also creates high competition within specific industries globally; therefore, as the competition increases, producing countries are likely to reduce the prices of their products or services to prevent customers from switching to competitors or to entice potential customers and drawing them away from their existing suppliers. This price reduction will then translate into a surplus for the customers, therefore, increasing welfare (Hancock, 2009).

Improved Welfare

According to Rugman and Collinson (2016), regional integration propels the government of each member state to implement better policies that support fairness and welfare to benefit citizens and non-citizens within the regional bloc. These policies are therefore essential to ensure a smooth run of trade activities among states.

Reduced Risk of War

With regional integration, countries are more comfortable in their international dealings and negotiations with members of the union as there is a general regulation that guides all member-states to discourage being worse-off. As countries are aware of the implications of waging wars, there is an increase in the opportunity cost of war, that is, since during wars there is a high tendency for infrastructure to be destroyed and lives lost, regional integration seeks to prohibit such happenings.

Disadvantages of Regional Integration

High Transaction Costs

According to Rugman and Collinson (2016), for countries to be able to join a regional union, some transaction costs need to be fulfilled which also involve an investment of political capital. Similarly, Prabir-De (2004) argues that transaction costs act as a significant barrier to regional integration and these costs are determined by the level of port efficiency and quality of infrastructure.

Trade Divergence and Diversion

Rugman and Collinson (2016) argue that in some cases where policies and negotiations are not well implemented, such could result in a divergent trade among concerned states. This is sometimes due to the high concentration of industries in some states relative to the others and therefore, rather than for convergence in trade, a divergence is more likely to occur. Also, failure to adequately plan could deter the objective of welfarism among

member states caused by trade diversion whereby within the same region, a country opts to give more preferential treatment to another as against the regulations of the union.

Political Instability

On the grounds that regional integration stipulates that independent states should become interdependent to allow for fairness in trade; in some countries where there is an existence of political will to be autonomous as a result of a change in power or political party, the objectives of a changed government may not align with the regulations of the union, therefore, resulting in a trade disturbances or eventually regional break-out (Charap and Shapiro, 2014).

An Overview of the United Kingdom's Economy

The United Kingdom (UK) is one of the top developed countries in the world and stands among the category of the Group of Seven (G7) that contributes about 58% to the net wealth of the world (InterNations, 2018). According to the Jackson et al. (2018), the UK has been able to recover from the financial crisis of 2008; however, it still encounters a slow growth rate coupled with the fact that the economy is less concerned with increasing productivity; rather, it is more concerned about improving its employment levels. Also, with a 0.6% growth in GDP and an annual percentage change of 2.3%, the UK's prospects for rapid growth still looks uncertain. According to a Bloomberg report in 2018, the GDP growth rate in the UK at the start of 2018 was very poor compared to historical rates; however, this slow growth seemed to have been attributed to the weather condition.



Figure 1. United Kingdom GDP Growth and Exchange Rates
Source: Bloomberg (2018)

Also, according to Figure 1. the sterling has been reported to have weakened against the dollar and has been lower than the 30-year average trend which has affected the exportation of goods from the UK; nonetheless, the UK currency still stands tall among the dollar and euro (Jackson et al., 2018).

According to the Office for National Statistics (ONS, 2018) shown Figure 2., with an annual growth rate of 0.6%, the UK's population is slightly over 66 million as at 2017

and ranks at 21st in the world's population census. The increasing rate of population has been accorded to the increase in migrants into the country.

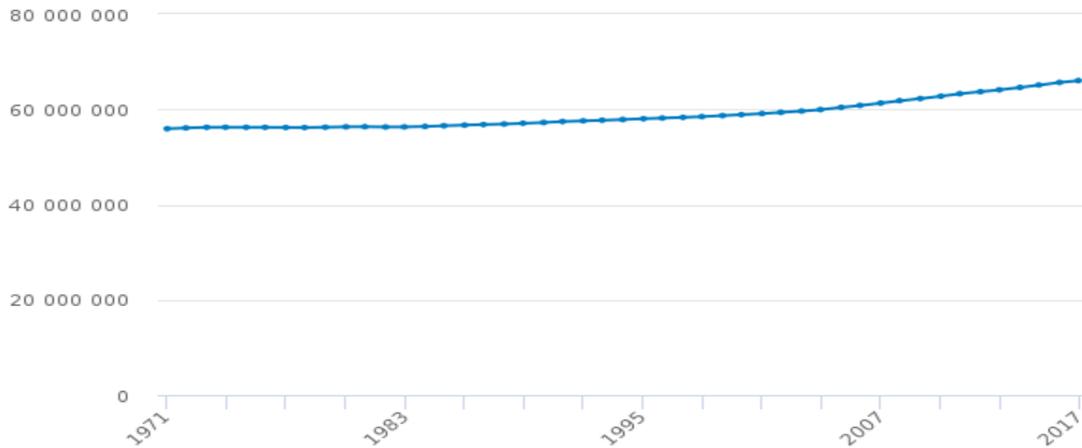


Figure 2. United Kingdom Population Mid-year Estimate
 Source: Office for National Statistics (2018)

Having recorded an employment rate of 76% and a decreased rate of unemployment capped at 4.1%, the success in the rate of employment in the UK has been one of its strengths. Also, according to Figure 3, although the inflation rate has increased in recent years, the UK still maintains a very low, one-digit inflation rate which as of 2018 was reported to be about 2.3%. Moreover, the Bank of England has been increasing and reducing the interest rate since 2014; interest rate in 2014 till the second quarter of 2016 stood at 0.5% but was reduced to 0.25% afterwards till the third quarter of 2017 and then back to 0.5% but now 0.75% as at the third quarter of 2018 (Jackson, 2018).

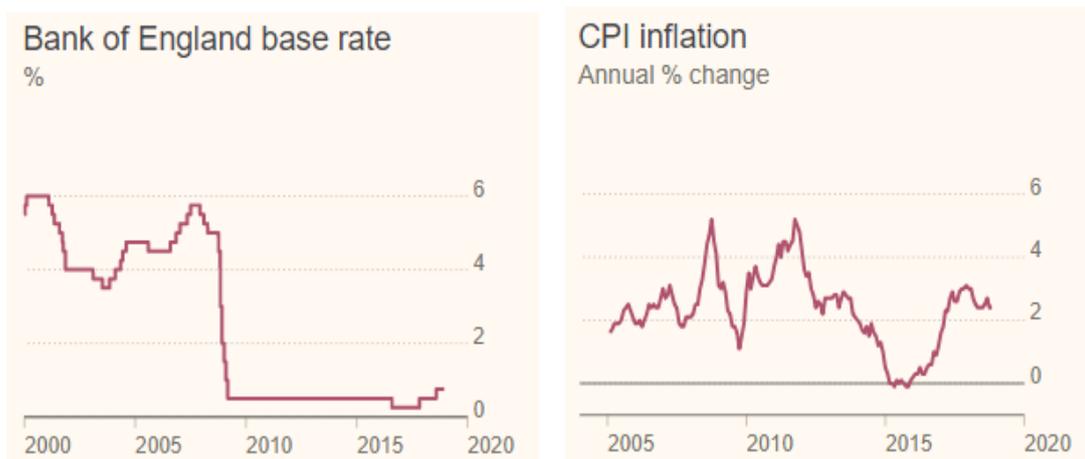


Figure 3. United Kingdom Interest and Inflation Rates
 Source: Bloomberg (2018)

Trade activities in the UK have also been varying and in fact, according to the ONS report, the UK's imports for goods has been exceeding its exports for a long time; contrastingly, the UK's exports of services have exceeded its imports, therefore, it has

created a better balance of trade in services relative to its balance of trade in goods. Nonetheless, despite the efforts of the government to reduce public spending, it still remains challenging to close the budget deficit gap.

In conclusion, despite all the metrics and trend analysis that have been reported about the UK, the economy still has potentials for improved growth and development particularly with the low levels of inflation and unemployment.

An Overview of the UK's Brexit Situation

The most talked about, and current news in the UK is the looming situation of Brexit which was as a result of the UK's vote to leave referendum on the 23rd June 2018, which saw the UK requesting to leave the European Union (EU). It was reported that the vote ended at 52% in favour of leaving the EU and included more than 30 million people in the UK from about a 71% turnout (Hunt and Wheeler, 2018). It was further alleged that with the due date for leaving the EU set in for the 29th March 2019, the UK is still battling a negotiation to land a soft Brexit so as not to have a very high adverse effect on both the UK and EU.

Also, the decision was borne out of several factors and more specifically the need to regain sovereignty or national autonomy which allows the UK to be excluded from any binding law or regulations that governs the member-states in the EU. However, after a series of negotiation, a deal was landed which is covered in a 585-page withdrawal agreement. Moreover, the deal cover parts of the long-term relationship put in place by both parties concerning security, defence and trade.

Besides the deal, another major concern for the UK is the 'backstop' agreement which is associated with the deal. According to Kentish (2018), the backstop could be regarded as an insurance policy; it provides an agreement to ensuring that there is no hard border to keep an open border to allow the movement of goods between the Northern Ireland and the Republic of Ireland. However, the backdrop still keeps the UK in the Customs Union which is one of the reasons for the vote to leave as it still keeps the UK within the EU regulations.

The UK Construction Industry

The construction industry is one of the UK's major output contributors and employer of labour. Moreover, with the numerous construction works all over the UK, the construction industry stands as one of the vital industries in the UK. According to ONS (2018), Great Britain has continued in its increase in the value of new building construction projects, and as at 2017, the industry recorded its highest value totalling about £110 billion; this growth has been driven by the contribution of the private sector owning about 75% of the new projects. Also, since 2011, there have been increases in the value of new orders for construction and in 2017 there was an increase of about 7.4%.

Statistics from the ONS also reveals that there have been increasing trends in the number of construction companies in Great Britain which as at 2017 was calculated to be about 6.2% bringing a total of 314,590 construction companies. The increasing number

of companies also translated into a rise in the number of insolvencies which grew above 3% bringing a total of 2,792 insolvent companies.

Additionally, 2017 saw an increase in the construction industry's employment by 3.8% in the whole of Great Britain totalling about 1.32 million construction workers the highest recorded so far. However, since the industry's 2016 fall in the average per week earnings, the last quarter of 2017 witnessed an increase to £607 per week. Nonetheless, there has been a continuous deepening of the industry's trade deficit of materials and other components, and by 2017, it had amounted to almost £10 billion as imports were more than twice the exports value.

Brexit and the Construction Industry

The construction industry has been reported by business analysts as not having any immunity against the looming issues surrounding the uncertainties of Brexit. Even with the exit date drawing near and recent agreements in late November 2018, there are still several concerns on the effect of Brexit on the construction industry. These concerns are broken down into:

Supply Chain and Cost of Materials

According to the Royal Institution of Chartered Surveyors (RICS, 2018), even with an agreed Brexit deal, the supply chain of construction companies will be affected. It was implied that although the prices of construction materials are relatively low meaning that if there are tariffs placed on the goods, it would have a minimal effect; however, the transit of these materials across the border will likely be delayed as drivers will have to encounter certain checks which delay the supply of materials. Contrastingly, The Telegraph (2018) in one of its reports argues that although there are bound to be significant delays in the transit of materials, however, it affords the UK the chance to maintain checks and create assurance in the durability and quality of construction materials.

Also, the cost of materials has been reported to have increased owing to the decrease in the value of the sterling; as such, the value of imports and exports have been slightly unbalanced (ONS, 2018). Contrastingly, Francis (2018) opined that even with the uncertainties surrounding Brexit and the fact that increasing material cost is likely to increase the inflation rate, these increases are more likely to result in the emergence of innovative delivery methods (such as improved offsite production) that will counter the effects of input price increases.

Labour Employment

Another threat from Brexit is the uncertainties of the effect on the labour force in the UK. According to RICS (2018), the construction industry currently faces a shortage of labour supply, and a Brexit deal is likely to worsen the current predicament. It was further alleged that there are over 3 million non-UK construction workers with the EU citizens totaling almost 30% of the workforce, as such, even with the agreement placed to allow existing workers to continue to live in the UK and obtain residence, the future of the

industry is threatened as the deal is unlikely to be favourable to new EU entrants after the transition period. As such, since the UK will be unable to provide adequate workers in the coming years, the cost of labour is very likely to increase.

In contrast, many other analysts have reported that Brexit is not all bad for the industry because it also ensures that quality is improved upon and sustained through the recruitment of skilled workers and nurturing of talents (Ganguanco, 2018). The Telegraph (2018) also argues that these conditions will enable the UK's ability and control to ensure that workers have the legal backing to work in the UK.

Infrastructure

Experts have reported on the threats of Brexit on the level of infrastructural plans in the industry. Many have opined that the £39 billion divorce bill which is expected to be paid by the UK to the EU as the cost of relocating its UK-based operations is very likely to affect the funding to infrastructure (RICS, 2018). The construction industry is a primary beneficiary of infrastructural projects has raised the fear of a decline in future outputs resulting from less funding. Also, according to the Construction Industry Training Board (CITB, 2018), the UK would be excluded from benefitting from the EU funding should Brexit take effect and as a result, the industry is very likely to be affected.

Nonetheless, Ganguanco (2018) reports that the fact that Brexit will affect the budget on infrastructure, however, the effect is likely to be insignificant since the UK government under its construction strategy has planned to invest over £600 billion over the next decade which is an opportunity for the industry to harness the gains of an increase in potential projects. Also, exiting the EU would allow the UK to establish bonds with international associations to seek for funds.

Theoretical Underpinning

The theory surrounding the nature of this research which is grounded majorly in both economics and international business is founded on the concept of regional integration. Therefore, this research considers a summary of the theories of regional integration and includes the ideas and views of relevant authorities, economics and business experts coupled with some limitations of the theories. There are two major theories of regional integration, namely; Federalism and Neo-Functionalism as shown in Figure 1.

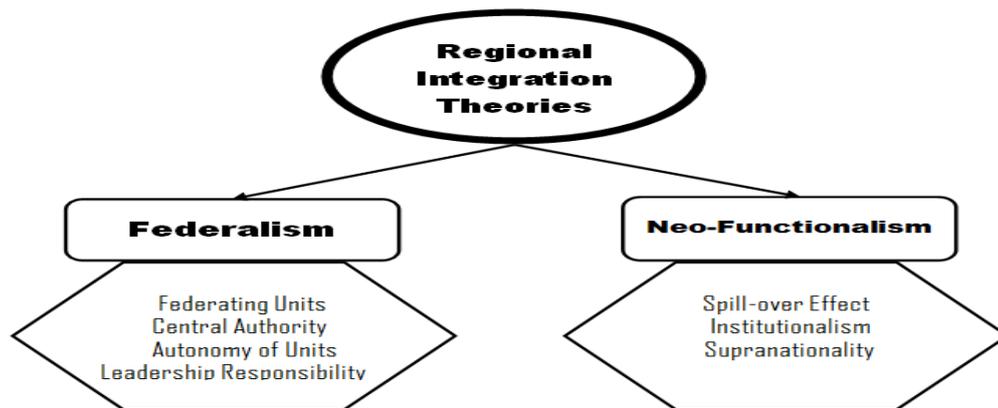


Figure 1. Theoretical framework

Federalism

Federalism depicts the process and structural elements that are related to the establishment of federations within a country (Dosenrode, 2010). It was also insinuated that federalism is a system where the central government controls other federating states particularly in the areas of the establishment of institutions, structures and procedures. According to Vollard (2014), the term federalism is focused on explaining the formation of federating units and their functional arrangements or patterns.

According to Soderbaum (2016), the liberal school, on the one hand, insinuates that federalism is characterised by its advocacy for security, economic prosperity, interdependence, geographical proximity and a common goal among federating states. Nonetheless, the associated factors surrounding federalism is unlikely to give rise to integration in the absence of an individual taking up the role of a leader.

On the other hand, according to Dosenrode (2010), the school of realism posits that federalism is crucial to solving the problems that are related to an enlarged government since there is likely to be a reaction from the neighbouring nations through imitation and as such, integration is made possible and easier to implement.

In spite of the benefits accrued to federalism, it was critiqued for been unrealistic in ensuring a smooth integration relatively to other theories. It was insinuated that the theory failed to recognize the influence of the individual federating states and the power of cointegration among these states to surmount the central power. It therefore, became obvious that in the occurrence of a conflict in objectives among federating states or with the central government, the integration process is bound to be altered (Dosenrode, 2010).

Neo-Functionalism

According to Haas (2001), the neo-functionalism theory is built upon the notion of the 'spill-over effect.' The spill-over effect is an occurrence wherein the formation of an integrated union within a particular region is likely to result into the creation of many other integrations among other regions. Besides, according to Saurugger (2013), the

theory is also premised on the assumption that the formation of one regional integrated union is very likely to result into an unintended spill-over effect, hence, the reason for the various integrations among countries.

However, in the study of Webber (2014), it was ascertained that the neo-functionalism theory is rooted in the elements of historical and sociological institutionalism. Also, Webber argued that the basis of the theory is to create an understanding that the institutions made by the government are known only to perform efficiently and as espoused to cover the government's interests, although they lack the ability to forecast the repercussions of the institutions that have been created. Schimmelfennig (2018) also opined that in contrast to federalism, the neo-functionalism theory is based on the premise of long-term feedback which is aimed at bolstering the actors that are associated with the process even beyond their presumed preferences.

In the study of Dosenrode (2010) neofunctionalism is characterised by the features of non-exclusiveness of nations resulting from interdependence and reduced sovereign power, fostering integration based on national interest as opposed to collective ideas, biased decision making resulting from information asymmetry, regional-supranationality and convergence of goals or interests among member states.

In spite of the gains from neo-functionalism, the theory was critiqued by some theorists that are of the opinion that it is impractical and deviates from the reality of the world today. These theorists insinuated that the nature of neo-functionalism which is built around certain institutions that are expected to enhance national welfare and public interest have only been used to divert and exploit opportunities in the interest of the actors to gratify their personal gains at the expense of the general public (Borzel and Risse, 2016). Another critic was based on the diverse results and evidences that reveal an aberration and misconception of the potential benefits that are accrued to neo-functionalism as a factor of integration. It was insinuated that the spill-over effect which is advocated by the theory also gives rise to adverse effects for unions in the long-run as member states will begin to feel the need to becoming independent (Hoffman, 1966); such is the case of the EU and UK today.

Research Methodology

This research is based on an epistemological assumption as it studies what is perceived as acceptable knowledge, based on the theories that have been discussed earlier in this research. However, it is grounded on a positivistic philosophy because the research employs a scientific method to analyse and interpret the results from the data collected. Positivism also allows the researcher to observe and measure facts and as such, the results or findings are generalised. This philosophy also suits this research as it allows for causal explanation and contributes to findings based on predictions for the future. In addition, the research employs the use of deductive reasoning as it helps the researcher to build upon existing theories to derive a reasonable conclusion that can be generalised and made specific to certain conditions. The nature of this research is explanatory, exploratory and evaluative. The research explains the why, what and how of the research questions to build consistency in the research.

This research employs the use of secondary data which are sourced from a variety of government reports, peer-reviewed articles, and credible online resources. The data was mainly sourced from the Office of National Statistics (ONS) which represents the primary source of data in the UK. To derive an outcome for the research, the t-test statistic is used to determine the level of significance between the two population means understudied. Therefore, using a standard 0.05 level of significance, the null hypothesis is rejected where the p-value is lesser than 0.05 and accepted where the p-value is greater than 0.05. The analysis was also conducted using the quarterly data on the variables that range from 2 years before the announcement of the referendum and two years after the referendum. The estimated variables include; total output (TOUT), total imports (TIMP), total exports (TEXP), labour employment (LEMP), interest rate (INR), inflation rate (INF), and exchange rate (EXR). The model for the t-test as specified by Curwin and Slater (2008) is:

$$t = \frac{(\bar{x}_1 - \bar{x}_2) - (\mu_1 - \mu_2)}{S_p \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}$$

Statistical Data Analysis

The statistical data analysis is based on the use of an inferential statistical tool (t-test statistic) to determine the occurrence of a significant difference between two groups of population (before [bef] and after [aft] the referendum).

t-Test: Two-Sample Assuming Unequal Variances										
	Mean	Variance	Observations	Hypothesized Mean Difference	Df	t Stat	P(T<=t) one-tail	t Critical one-tail	P(T<=t) two-tail	t Critical two-tail
<i>LEMPbef</i>	2163.100	1938.544	10.000	0.000	16.000	-6.172	0.000	1.746	0.000	2.120
<i>LEMPaft</i>	2280.375	1337.125	8.000							
<i>IRbef</i>	0.500	0.000	10.000	0.000	8.000	1.835	0.052	1.860	0.104	2.306
<i>IRaft</i>	0.389	0.033	9.000							
<i>INFbef</i>	0.870	0.285	10.000	0.000	16.000	-5.125	0.000	1.746	0.000	2.120
<i>INFaft</i>	2.200	0.350	9.000							
<i>EXRbef</i>	1.557	0.008	10.000	0.000	14.000	7.525	0.000	1.761	0.000	2.145
<i>EXRaft</i>	1.307	0.003	9.000							
<i>TOUTbef</i>	94.560	7.154	10.000	0.000	15.000	-7.295	0.000	1.753	0.000	2.131
<i>TOUTaft</i>	105.278	12.989	9.000							
<i>TIMPbef</i>	405.500	12150.500	10.000	0.000	12.000	0.592	0.283	1.782	0.565	2.179
<i>TIMPaft</i>	383.375	1466.839	8.000							
<i>TEXPbef</i>	537.200	4542.178	10.000	0.000	12.000	-0.233	0.410	1.782	0.820	2.179
<i>TEXPaft</i>	546.625	9466.554	8.000							

Source: Analysis created by Author from MS-Excel

Having carried out a statistical test on the variables of measurement, the results revealed that out of the seven (7) variables, four (4) of the variables tested to have a significant effect on the population, while the remaining three (3) variables were tested to have no significant effect on the population examined.

The result indicates that the industry's labour market activities were more likely to have been affected since the announcement of the referendum as the levels of employment seemed to have increased despite the referendum. However, the announcement of the referendum is more likely to have affected the performance of the industry based on the level of output in the construction industry; whereas, for both the industry's imports and exports levels, the result revealed that no was no significant effect since the announcement of the referendum on the trading activities in the construction industry.

Nonetheless, the findings on the external economic factors that affect business performance elicited different results; while the general interest rate proved not to be affected by the announcement of the referendum, both the inflation rate and exchange rate proved more likely to have affected the United Kingdom's economy, which is also very likely to have an effect on the construction industry.

Discussion of Findings

Discussion 1: What is the effect of a potential Brexit on labour market activities and performance in the construction industry?

The study finds that labour market activities represented by the rate of labour employment in the construction industry seemed to be positive since the referendum leading to a high significance level. Although, statistics from the first quarter after the referendum revealed that labour employment declined but afterwards increased and have since been continuously increasing. This trend can be said to be because the industry is one of those that lack adequate labourers leading to labour shortages over the years and as a result, there is a need for an increase in the demand for both skilled and mainly semi-skilled labour.

According to Mohamed et al. (2017), reality has not hit the UK's construction industry as it enjoys the benefits of still been in the EU; however, after the transition period is over, and a comprehensive plan is not in place, then the effects of the decision will affect not only the industry but also the economy since the industry contributes a large quota to the output of the economy. It was further said that based on the ONS statistical report on the industry which reveals that there are about 165,000 EU nationals working on the industry, there are implications for the retention of these workers after Brexit as their residency status may be affected due to changes in the UK regulations on immigration. Being a massive employer of semi-skilled and unskilled labour, the new immigration initiative (skill-based immigration) is likely to affect this section of workers in the industry unless there are concessions in the future. In support of this view, Gardiner (2018) argued that although the UK government and construction industry have started making efforts to cope with Brexit by training UK staff to develop their skills and competencies, there is still a looming crisis if a favourable deal is not struck. The fact that

EU citizens may have to apply for a work visa in a no-deal situation is likely to make jobs less attractive in the UK and as such unemployment will increase in the EU countries as many citizens return home. However, based on the unpredictability of the situation, the government needs to act fast so as not to be drained of labour before the end of the implementation period.

Fletcher (2018) also opined that the industry is bound to lose access to cheap labour which it derives from employing non-UK citizens particularly those from the EU countries; as such, it faces a potential increase in operational cost which is likely to cause a decline in output and slow down growth. It was opined that this is not only peculiar to the construction industry but many others, however, based on the £500 billion infrastructure pipeline, the industry is bound to witness a standstill in such respect except it gains access to the single market.

Contrary to the views of others on the adverse effects of Brexit on the industry's labour, Francis (2018) argued that although the likelihood of skills shortage is high if certain conditions are placed on entry into the UK based on the 'Skill-Based Immigration' policy, however, in the long-term, these skills will be complemented by the emergence of artificial intelligence which would enable innovative creation of robots and machine learning programmes that would aid the improvement in the construction industry.

Discussion 2: To what extent do the external economic factors affect the performance of the construction industry?

The main external economic factors that affect the construction industry include inflation, exchange rate and interest rate. These three factors are crucial to the growth of the construction industry because although they are different, yet they are interrelated and as such, any change in one is most likely to affect the others. Findings from the research reveal that besides the interest rate which stands to be insignificant to the economy since the referendum but affects the industry, both inflation and exchange rate resulted in being highly significant. Nonetheless, this trend can be explained by reviewing several articles written by economics experts.

According to Benjamin (2018), there is a significant relationship between inflation rate, exchange rate and interest rate as they all have causal effects on business activities within the economy. It was further said that with a rise in the UK's inflation immediately after the referendum, the Bank of England (BOE) has been trying to sustain the level of prices within the economy hence the reason for the changes in interest rates.

Similarly, James and Mew (2018) reported that the decrease of the interest rate from 0.5% to 0.25% was to stimulate the economy by reducing the rate of borrowing to encourage high investment, decrease unemployment and increase output; this is one of the main reasons for the industry's increased output and employment. However, the cut in interest rate resulted in a sharp increase in inflation rate which forced the BOE to increase the interest rate resulting into a gradual decline in the inflation rate.

Additionally, Gardiner (2018) stated that the depreciation of the pounds sterling resulted in a gradual decline in the industry's exports and imports level. Although the

depreciated currency is expected to increase the amount of exports while imports decrease, the amount of exports of construction materials gradually declined; this is attributed to the fact that inflation rose and as such, the prices of the materials also increased, therefore, having less effect on the depreciated currency. This indicates that external factors can either positively or negatively affect business activities; however, in the case of the construction industry, it was more negatively affected than positive effects.

Discussion 3: What are the likely effects of an actual Brexit on the performance of the construction industry?

Findings from the analysis depict an unusual trend as exports and imports in the construction industry recorded no significance. Although, output seemed to have increased steadily since the referendum which accorded it a very high significance level, however, trade activities regarding exports and imports of the industry's materials were not severely affected. This trend is unusual when compared to the trade activities in many other industries such as the manufacturing and food industries within the UK (ONS Statistics, 2018); however, the reason for this unusual trend is explained by other literature.

According to Benjamin (2018), the construction industry is unlikely to feel the heat at the moment until after the implementation period in December 2020. It was further said that exports and imports have been non-reactive to the Brexit votes although many companies within the industry are aware of the potential effects of a no-deal after the implementation period. In addition, a no-deal Brexit is undoubtedly going to cause severe problems for the industry and as such many of the firms have advocated for a favourable deal or no-Brexit at all; this is because, the industry depends on the EU for about 64% of its imports and 63% of its exports (Department for Business, Innovation and Skills (DBIS), 2018). Therefore, a no-deal will result into a shortage of construction materials and increase in prices of materials.

Contrastingly, Sangster (2017) argued that although there are some adverse effects of Brexit on the industry, however, there are also many positive effects if a deal is made and Brexit happens. It was further said that besides the uncertainties looming around Brexit, it is more likely for the decision to result in reduced prices of houses and rent and also a significant cut in the red-tape resulting from the ties with the EU. Also, Benjamin (2018) reported that even with the apparent adverse effects, a deal is likely to be favourable particularly if the financial sector does not react negatively to the deal as it may have an impact on the demand for mortgages and need for rebuilding or building new houses in the UK. It was further said that the land banking initiative might translate into reduced land prices which will also lower the costs of housing prices and delivery of materials.

According to Gardiner (2018), a no-deal will hit trade badly as the UK may have to fall back and be reliant on the rules of the World Trade Organization (WTO). It was further said that although the WTO tariffs are moderately low yet the main issues are the non-tariff barriers including customs checks at the border and standard compliance which have been considered to create alterations in the just-in-time (JIT) strategy resulting from significant delays. Contrastingly, according to the Future Constructor and Architect

(FC&A, 2017) news article, compliance will not affect the industry because the UK has strong and quality compliant products. This is also supported by Francis (2018) in the view that Brexit will allow for the emergence of innovative delivery methods.

It is worthy to note that although from the discussions, there are some aspects related to both the federalism and neo-functionalism theory; however, the theories of federalism tend to be more prevalent in the case of the UK. This is because, with the present situation of Brexit where the primary rationale for leaving the EU is to gain full autonomy of the UK geared towards obtaining national security and also to reduce the influence of the EU in regulating the UK's economy; the critics of Dosenrode (2010) reflects in this situation as the UK is unwilling to remain under the influence of the central power, that is, the EU. Also, as a result of conflicting objectives among integrated states, the UK government tends to be frustrated with the issues of free entry of EU migrants and its inability to have the final say in decisions relating to the EU nationals living in the UK; as a result, the need to break-out from the EU has become compelling for the UK.

Conclusion and Recommendations

This research was undertaken to investigate the potential economic impact of Brexit on business performance with specific attention to the construction industry in the United Kingdom. This research has, therefore, based on facts, opinions, theories, and empirical findings carried out a critical investigation of the topic. However, as a result of the unpredictability surrounding Brexit, various positive and negative effects have been predicted based on the current trend and situation at hand. The researcher has therefore been able to make the conclusions which will be discussed based on the objectives and general aim of the research.

Regarding the effect of a potential Brexit on labour activities and performance, the industry stands to be more negatively affected. Although the current trend and statistics, employment in the industry seems to be on the increase, however, depending on the kind of outcome from the negotiations, labour activities stand to be altered even in the slightest way. The fact that the industry is a major employer of semi-skilled and unskilled labour poses a threat to this category of workers as the UK considers implementing a skilled-based immigration policy, therefore, making it difficult for unskilled labourers to gain entry into the UK. The possibility of allaying the threat of labour shortage on the economy can be effected using new technologies such as artificial intelligence to complement human labour activities. However, this may take a few years for the industry to fully achieve such a feat.

Without any form of doubt, one of the critical factors that affect business performance is the role of external economic factors considering the fact that they are difficult to control. Therefore, factors like inflation, exchange rate and interest rate which have been earlier stated to be interwoven regarding how they affect business activities and the economy at large can be planned for but cannot be eradicated. Hence, regarding the construction industry, it is conclusive to mention that the external factors have been the main antecedent to the fluctuations in the trading activities, that is, exports and imports. The fact that a depreciated currency makes exports cheaper and imports more expensive

mixed with increases inflation and fluctuations in the exchange rate make investment decisions challenging to undertake. As a result, external economic factors have a very high influence on business performance.

The findings on the likely effects of Brexit on the industry's performance have mixed results, and therefore a variety of predictions for the future can be made. Despite the increased output in the industry since the referendum, imports and exports of construction materials will be threatened if a comprehensive deal is not made in due course. The fact that a significant amount of trading activities within the industry is transpired between the UK and EU relatively to other nations, a no-deal outcome is very likely to cause a long-term damage to trading activities in the industry as it would be very challenging to rapidly build up international trade relationships even with the high quality of products it produces and the ability to easily pass the compliance test.

It is also worthy to note and restate that based on the overall research findings, the theory of federalism is found to be most evident particularly with the several critiques that have been made against the theory. Therefore, it can also be concluded that the research findings are based on the need for the UK to exit the EU in order to gain absolute autonomy and disengage from battling amidst conflicting objectives which impedes its potentials for improved growth and development.

On these bases, the researcher offers the following recommendations to help the industry gain more knowledge into the need for preparing for an eventual exit:

Companies should intensify efforts to ensuring that they make the best use of the opportunities that Brexit may offer particularly in the advent of negotiating with other non-EU member countries to foster multilateral trade.

Based on the unpredictability and threats that Brexit may pose to the industry regarding labour market activities, companies should intensify more efforts to training more UK staff and embracing the benefits of artificial intelligence which can enhance industrial productivity and competitiveness.

Should the outcome of the negotiations result in a no-deal, companies should form alliances or associations that will help interact with the government and ensure that it establish ties with other top construction materials import and exporting countries to sustain or improve output growth.

In addition, since the government is likely to implement a skill-based immigration policy, the industry should begin to make efforts to further make use of low-cost operational strategies in order to accommodate the potential rise in the cost of labour.

Limitations of the Research

Just as with many other kinds of research, there were some limitations encountered in the course of this research. Firstly, there is the issue of using secondary data to derive explanations for the trend analysis in the researched industry due to the fact that many secondary data may be imprecise and inaccurate; nonetheless, to guarantee some form of

data reliability and validity, the research collects data from mainly the UK governments statistical body, that is the Organization for National Statistics and a few from reputable articles and international blogs. Secondly, the inability to carry out longitudinal studies as a result of the short span of the research limits the study to the potential effects of Brexit.

Recommendations for Further Research

Since this research focuses mainly on the potential impact of Brexit on the construction industry, it is necessary that other researchers also examine the potential impacts of Brexit on other industries in the UK. Also, further research could include longitudinal studies to examine the economic impact of a post-Brexit.

References

- Baldwin, R. (2008). Sequencing and depth of regional economic integration: lessons for the Americas from Europe. *The World Economy*, 5-30.
- Benjamin, D. (2018). *What will be the impact of BREXIT on the UK construction industry?* [blog] Available at: <http://www.benfieldatt.uk/articles/what-will-be-the-impact-of-brexit-on-the-uk-construction-industry#> [Accessed 12 December 2018].
- Bloomberg (2018). *U.K. economy's best quarter in two years hides loss of momentum.* [blog] Available at: <https://www.bloomberg.com/news/articles/2018-11-09/u-k-economy-s-best-quarter-in-two-years-hides-loss-of-momentum> [Accessed 12 December 2018].
- Börzel, T. & Risse, T. (2016). *Regional integration in Europe*. Oxford: Oxford University Press.
- Bourke, P. (2018). *What next? How Brexit may impact the UK aviation industry.* [online] Available at: <https://apex.aero/2018/03/15/how-brexit-may-impact-the-uk-aviation-industry> [Accessed 10 November 2018].
- Charap, S. & Shapiro, J. (2014). How to avoid a new cold war. *Current History*, 113(765), 265–271.
- Construction Industry Training Board (2018). *CITB Report*. [online] Available at: <https://www.citb.co.uk/publications/> [Accessed 12 December 2018].
- Curwin, J. & Slater, R. (2008). *Quantitative methods for business decisions*. 6th ed. United Kingdom: Cengage Learning.
- Department for Business, Innovation and Skills (2018). *UK construction Sector*. [pdf] Available at: <https://www.gov.uk/government/publications/construction-sector-deal/construction-sector-deal> [Accessed 12 December 2018].

- Department of Business, Innovation & Skills (2013). *UK construction: an economic analysis of the sector*. [pdf] Available at: <https://www.gov.uk/government/organisations/department-for-business-innovation-skills> [Accessed 10 December 2018].
- Djankov, S. (2017). *The city of London after Brexit*. *Peterson Institute for International Economics Policy Brief*, 17-19.
- Dosenrode, S. (2010). *Federalism: approaching the European federation?* Burlington: Ashgate.
- Fletcher, N. (2017). *Single market exit: UK construction 'could lose 175,000 EU workers.'* Guardian News Online, [online] 15 March. Available at: <https://www.theguardian.com/business/2017/mar/15/single-market-exit-brexit-uk-construction-sector-lose-175000-eu-workers> [Accessed 12 December 2018].
- Francis, N. (2018). *Brexit's effect on construction: what we know so far*. Construction News, [online] 29 March. Available at: <https://www.constructionnews.co.uk/analysis/expert-opinion/brexit-effect-on-construction-what-we-know-so-far/10029-36-article> [Accessed 12 December 2018].
- Future Constructor and Architect (2017). *How will Brexit affect the construction industry in the UK?* [blog] Available at: <https://www.fca-magazine.com/features/legal-and-business/1071-how-will-brexit-affect-the-construction-industry-in-the-uk> [Accessed 12 December 2018].
- Ganguanco, T. (2018). *Construction sector to feel Brexit's brunt – and insurance implications could be huge* [blog] Available at: <https://www.insurancebusinessmag.com/uk/news/construction-engineering/construction-sector-to-feel-brexit-brunt-and-insurance-implications-could-be-huge-109304.aspx> [Accessed 12 December 2018].
- Gardiner, J. (2018). *Deal or no deal: construction's post-Brexit future hangs in the balance*. [pdf] Available at: <https://www.building.co.uk/building-without-borders-construction-needs-a-deal/deal-or-no-deal--constructions-post-brexit-future-hangs-in-the-balance/5095218.article> [Accessed 12 December 2018].
- Hancock, K.J. (2009). *Regional integration: choosing plutocracy*. Basingstoke: Palgrave Macmillan.
- Hoffmann, S. (1966). Obsolete or obsolete? the fate of the nation-state and the case of Western Europe. *Daedalus*, 85(3), 865–921.
- House of Commons Library (2015). *Construction industry: statistics and policy*. [online] Available at: <https://researchbriefings.parliament.uk/ResearchBriefing/Summary/SN01432> [Accessed 10 December 2018].
- Howorth, J. & Menon, A. (2015). Wake Up, Europe! *Global Affairs*, 1(1), 11–20.

- Hunt & Wheeler (2018). *Brexit: all you need to know about the UK leaving the EU*. BBC News Online [online] Available at: <https://www.bbc.co.uk/news/uk-politics-32810887> [Accessed 12 December 2018].
- InterNations (2018). *The economy of the UK: an overview*. [blog] Available at: <https://www.internations.org/great-britain-expats/guide/29457-economy-finance/the-economy-of-the-uk-an-overview-16160> [Accessed 12 December 2018].
- Jackson, G., Strauss, D., Bernard, S. & Pearson, T. (2018). The UK economy at a glance. [blog] Available at: <https://ig.ft.com/sites/numbers/economies/uk/> [Accessed 12 December 2018].
- James, M. & Mew, C. (2018). *The implication of Brexit for UK construction*. [blog] Available at: <https://www.ukconstructionmedia.co.uk/features/implications-brexit-uk-construction/> [Accessed 12 December 2018].
- Kentish, B. (2018). *Brexit: what is the Northern Ireland backstop, what would it mean and why is it so controversial?* Independent News Online, [online] 11 December. Available at: <https://uk.news.yahoo.com/brexit-northern-ireland-backstop-mean-102800130.html> [Accessed 12 December 2018].
- Matthijs, M. & Kelemen, D. (2015). Europe reborn. *Foreign Affairs*, 91(1), 96–107.
- McKee, D. & McKee, M. (2018). What might Brexit mean for British tourists travelling to the rest of Europe? *Journal of the Royal College of Physicians of Edinburgh*, 48 (2), 134-140.
- Mohamed, M., Pärn, E. & Edwards, D. (2017). Brexit: measuring the impact upon skilled labour in the UK construction industry. *International Journal of Building Pathology and Adaptation*. 35, 264-279.
- Nordas, H., Miroudot, S., & Kowalski, P. (2006). Dynamic gains from trade. *OECD Trade Policy Papers*, 43, 1-53.
- Office for National Statistics (2018). *Construction statistics*. [pdf] Available at: <https://www.ons.gov.uk/businessindustryandtrade/constructionindustry/articles/constructionstatistics/number192018edition#employment-and-earnings> [Accessed 12 December 2018].
- Petit, P. (2006). Globalisation and regional integration: a comparative analysis of Europe and East Asia. *Competition & Change*, 10(2), 113-140.
- Prabir-De (2004). Transaction costs as barrier to economic integration in Asia: an empirical exploration. *Research and Information System (RIS) Discussion Papers*, 1-31.

- Royal Institution of Chartered Surveyors (2018) *Brexit: all the latest news about Brexit for our industry and professionals*. [online] Available at: <https://www.rics.org/uk/news-insight/latest-news/brexit/> [Accessed 12 December 2018].
- Rugman, A. & Collinson, S. (2016). *International business*. 5th ed. [ebook] Prentice Hall.
- Salisu, A. & Fasanya, I. (2013). Modelling oil price volatility with structural breaks. *Energy Policy*, 52(1), 554-562.
- Sangster, E. (2017). *How Brexit will affect the construction industry - infographics*. [blog] Available at: <https://geniebelt.com/blog/how-brexit-will-affect-construction> [Accessed 12 December 2018].
- Saurugger, S. (2013). *Theoretical approaches to European integration*. Basingstoke, U.K: Palgrave.
- Schimmelfennig, F. (2018). *Regional integration theory*. Oxford: Oxford University Press.
- The Telegraph (2018). *How the construction sector is preparing for post-Brexit changes*. Telegraph Online, [online] 15 July. Available at: <https://www.telegraph.co.uk/business/risk-insights-/construction-preparing-for-brexit/> [Accessed 12 December 2018].
- Vollaard, H. (2014). Explaining European disintegration. *Journal of Common Market Studies*, 52, 1142–1159.
- Webber, D. (2014). How likely is it that the European Union will disintegrate? a critical analysis of competing theoretical perspectives. *European Journal of International Relations*, 20, 341–365.