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THE IMPACT OF BREXIT ON CROSS-BORDER TRADE BY THE CONSTRUCTION SECTOR IN IRELAND: AN EXPLORATORY STUDY

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Cross-border co-operation can foster learning and contribute positively to business performance and social cohesion. This paper considers construction firms' economic motivation for co-operation around the Ireland - Northern Ireland border. This area, while impacted by the Brexit uncertainty, shares many of the economic and developmental characteristics of border areas throughout Europe. The purpose of the study is to investigate the impact of Brexit on cross border trade by the construction sector in Ireland and investigate the current tensions and barriers to that sector. A qualitative methodology adopted a literature review and semi-structured interview strategy. Data was collected from purposively selected contractors in the North and South of Ireland, who have recent experience of cross border construction. Qualitative analysis identifies themes and issues arising which enabled examination of commonalities and differences between the respondents. Differing regulatory regimes, perceived barriers to cross-border co-operation and uncertainty reduce cross-border trade. The study establishes the lack of Brexit preparedness of industry and the need for more industry specific research regarding the level of existing cross border trade, and the measures that could be adopted to resist fragmentation and integrate Irish cross border construction trade in the context of Brexit.

Keywords: border, Brexit, co-operation, fragmentation, Ireland

INTRODUCTION

On the 23rd June 2016, the United Kingdom (UK) voted by 51.9% to 48.1%, to leave the European Union (EU). In Northern Ireland (NI), 56% of voters opted to remain in the EU. As the only region with a land border between the UK and the EU, the potential risks for Ireland, North and South are severe; impeding cross border trade, labour and supply chain movement (Doherty *et al.*, 2017). At present, tens of thousands of people move freely across the 500km Irish border every day (Basheska *et al.*, 2017). Whilst the final form of Brexit adopted will not be known until detailed trade negotiations are complete, political, legal and commercial arrangements across

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the island of Ireland will be altered, entailing adjustment and potentially making cross border trade more difficult and expensive (de Mars *et al.*, 2016).

Cross border cooperation has been credited with building prosperity and peace (Hayward and Magennis 2014); company cooperation can also facilitate knowledge exchange and increase innovation. However, the Irish border acts as a fault line dividing the economies of the North and South of Ireland. It separates the more dynamic South from the North, which has growth levels lagging behind the Republic of Ireland (ROI) (Hayward and Magennis 2014) and has been characterised as "inward orientated...[with] a small private sector, and an over-reliance on the public sector" (Hübner 2015:3).

Given the uncertainty regarding the outworking of Brexit, there has been little research regarding its impact on the construction sector in general, and none on the construction sector across the North and South of Ireland. The UK Government's construction focused Brexit analysis was published on the 21st December 2017; however, the government analysis contains no primary research. Potentially the most interesting parts of the Government paper, the section covering sector views and stakeholder engagement, were redacted prior to publication.

To clarify the terminology used throughout this study, the term 'Ireland' refers to both the North and South of Ireland. NI refers to Northern Ireland, and ROI refers to the Republic of Ireland, the South. The UK is the United Kingdom of Great Britain and Northern Ireland; whereas Great Britain (GB) refers to England, Wales and Scotland. The authors of the paper do not intend to take a position regarding the rights and wrongs of the Brexit vote, nor of the position and status of the border in Ireland. Instead they aim at dispassionate analysis, undertaken as objectively as possible, given the authors' own backgrounds and experiences.

BACKGROUND

Cross Border Cooperation - from 1922 to Today

Since 1922 when the Republic of Ireland was founded, the citizens of the Republic of Ireland and the UK have been free to travel and work across both jurisdictions, giving Irish and British nationals special status in their closest neighbours' jurisdictions. The Common Travel Area (CTA) was formally agreed and ratified in 1952. Trade tariffs were reduced then dismantled in the 1960s as part of the Anglo Irish free trade agreement (Hayward and Magennis 2014). The close trading relationship was consolidated in 1973 when both ROI and the UK joined the EU; however, the value of cross border trade fell as a result of the conflict in the North in the 1970s and 80s. It is important to note that the CTA predates, and is distinct from, EU membership. The practical result of the CTA is the absence of any physical manifestation along the 500km long border between the North and South of Ireland (Barrett *et al.*, 2015).

Cross border trade accelerated from 1994 onwards (Hayward and Magennis 2014). The 1998 Good Friday Agreement marked a watershed in cross border relations and trade, providing for institutions specifically set up to enhance North - South cooperation and trade, including the North South Ministerial council (Tannam 2006). The EU has provided 1.3bn Euro of 'peace funding' to the North and South of Ireland since 1995, in itself a 'powerful incentive' for the two parts of Ireland to work together, creating 'symbolic' and concrete policies of integration (Keating 2004).

Both sides of the Irish border were affected by the early 2000s construction boom and subsequent bust. The ROI construction industry fell 76% from its 2006 peak output to

€9.1 billion in 2012 (SCSI 2015). The North also suffered, contracting from 2007 to 2014. Cross border trade dipped during the recession, particularly during 2007 - 2010 in "products that were tied to the construction boom" (Hayward and Magennis 2014:160). The construction sector, which has taken years to recover from the worst effects of the recent economic recession, is still susceptible to uncertainty and economic shock (Tansey and Spillane 2016).

European Integration Theory

European Integration theory emerged in the 1960s (Wiener and Diez 2009). Its premise can broadly be summarised that, as Europe became more integrated and assumed more significance in citizens' lives, the rules and boundaries imposed by their national governments would fade in significance, thus creating a condition of 'fuzzy statehood' (Emerson, 2001). Haas defines integration as the process "whereby political actors in several, distinct national settings, are persuaded to shift their loyalties, expectations and political activities toward a new centre, whose institutions possess or demand jurisdiction over the pre-existing national states" (Haas 1958: 16). Keating (2004) claims that operating within the European Union can help ease tensions between state and nationality, enabling borders to be transcended. The stated objectives of the peace funding are "cohesion between communities involved in the conflict in Northern Ireland and the border counties of Ireland; and economic and social stability" (Azevedo and Haase 2017). The resultant cooperation has helped characterise the border area as an evolving patchwork of integrated multiple identities which are continually asserted and negotiated (Keating 2004).

Barriers and Drivers of Cross Border Trade

In the pre Celtic Tiger and pre-1998 Belfast agreement era, Hitchens *et al.* (1996) noted low levels of cross border trade in business services (advertising, graphic design, market research, product design and management consultancy). They noted the main barriers cited to cross border trade in these industries as travel time, travel costs and the frequency of meetings. Tannam (2006) examined the issue of fragmentation caused by the Irish border from a 'bottom up' perspective, where embryonic cross border economic cooperation might multiply from informal, loose contact, to more formal networks of cooperation, generating a domino effect. She found that the single European market had integrated many regulatory and policy positions across the border, enhancing the environment for cooperation. However, she cited "perceptions of conflicts of interests among civil service departments, compartmentalisation, business perceptions of conflicts of interest, insufficient information provision and the need for institutionalisation of cross-border arrangements", as barriers to cross border trade (Tannam 2006:259). These barriers were weakened where economic incentives were sufficiently strong.

In 2006, Roper conducted a study examining the extent of cross border trade and found the extent of local cooperation to be far greater than that of cross border cooperation. One of the reasons cited was that Northern companies were discouraged from trading across the border, in part, due to higher labour costs found in the South. Hayward and Magennis in 2014 found barriers to cross border trade include material impediments, such as differing currencies, taxation and regulatory regimes; and psychological barriers, including an asymmetric knowledge base regarding the home and the target market. Hitchens *et al.*, (1996) suggested that enhanced cross border trade would reduce dependence on local markets, producing a competitive advantage in larger, global markets. Exchange rate instability has been found to drive trade

across the border, the direction dependent on the relative fluctuating strengths of the Pound Sterling and Euro (Roper 2006).

Possible Scenarios and Outcomes from Brexit

It is beyond the scope of this paper to enter into detailed discussion of the possible options which may be adopted for the relationship between the UK and the EU - hence NI and the Republic of Ireland - post Brexit. However, it is worth covering in broad terms the likely implications of Brexit and its impact on Ireland.

If a post Brexit UK opts out of the single market and the customs union, then the Irish border effectively becomes the external border of the EU (Basheska *et al.*, 2017), where EU regulations and tariffs must start to apply (Mars *et al.*, 2016). This could lead to potential restrictions on freedom of movement for business and for the Irish workforce, North and South. The effect on the citizens of Ireland may be mitigated by the CTA (Schiek 2017) or a 'technological' solution, but any bespoke arrangement must be agreed by the UK, ROI and the 26 other members of the EU (Basheska *et al.*, 2017). A 'no deal' Brexit is problematic: under WTO rules, basic construction materials could be levied between 4 - 8% at the border (De Mars *et al.*, 2016).

Barrett *et al.*, (2015) predict that Brexit will impact both North and South Ireland, but the North will be the worst impacted. Brownlow (2016) suggests that negative outcomes could include reduced trade and investment, economic slowdown and uncertainty in labour, materials and money markets. Economic predictions are notoriously unreliable, but Oxford Economics modelled nine different Brexit scenarios in February 2016; and found that the economy of Ireland is disproportionately affected (relative to other EU countries) in every case (Oxford Economics 2016). The same study finds Construction in NI to be one of the two most vulnerable sectors to the impact of Brexit, suffering a predicted 4.9% drop in output, due to its sensitivity to business investment as the foundation of demand. Northern Ireland suffers (with the rest of the UK) from low productivity (Brownlow 2016); hence does not have the resilience that the South might have (Hayward and Magennis 2014), nor the policy flexibility, to weather a potential Brexit economic shock.

Whilst Brexit presents many dangers, it may present an opportunity to the Republic of Ireland, as the last English speaking country in the EU with a well-educated, young population (Schiek 2017) and a taxation regime designed to attract Foreign Direct Investment. De Mars *et al.*, (2016) predict that ROI may emerge as 'winners' from Brexit, which would consolidate its current comparative trade advantages.

Historically, Ireland has been the largest provider of non-native construction labour in GB, but the indigenous Southern Irish construction industry has grown in output and sophistication in recent years, enticing many workers home. In GB, these 'lost' Irish workers have been replaced with those from recent EU accession countries (Fellini *et al.*, 2007). The all Parliamentary working group report "Building on Brexit" found that in 2015, the five most common non-UK countries of birth of construction workers were Poland (55.5k), Romania (27k), India (19.4k), Lithuania (17.9k) and ROI (15.k). With the exception of offsite construction, the construction product is largely stationary, requiring a mobile workforce (Fellini *et al.*, 2007). Restriction of freedom of movement for EU workers into the UK will most likely present a recruitment problem for the construction industry.

It is important to note that despite the referendum outcome, as yet nothing has legally changed. For now, until withdrawal negotiations are completed, the UK remains a part of the EU, and compliance with EU law is required. The political likelihood of

any contest to the outcome of the Referendum is currently low and therefore the authors assume that the UK will be leaving the EU, setting out the research in this context.

RESEARCH APPROACH

This research aims to better understand how the architecture, engineering and construction (AEC) industry in both Northern Ireland and the Republic of Ireland has begun to make sense of the recent decision and expectations following the outcome of the UK vote for Brexit. The methodology applied was determined on the basis of relevance to the focus of this research enquiry, but also on the basis of pragmatic positioning. This was the case as a different methodological stance would not have allowed the research to be completed within the constraints applicable. Creswell (2009) states that research methodology is the systemic approach that a research enquiry adopts to accomplish the research's aim and with that in mind, an explorative interpretivist position has been adopted. In relation to the purpose of the research, it is surmised that the theoretical argument developed for the enquiry has the potential, by using an explorative perspective, to reveal new insights and a better understanding of stakeholder perceptions and awareness of how Brexit will impact on cross-border trade by the construction sector in Ireland and whether there is some alignment of those positions.

The underlying aim of the study is to investigate the impact of Brexit on cross border trade by the construction sector in Ireland and investigate the current tensions and barriers in that sector. The overall research process involves the following steps; (1) a review of the existing literature. 'Grey' literature was included, due to the dearth of peer reviewed journal published data in this area; (2) purposefully selecting sample firms working in the design and construction industry who have historically been associated with cross border AEC activity; (3) developing the semi structured interviews; (4) performing interviews and collecting data from the selected participants; and (5) analysing the collected data.

The semi-structured interview process involved a set of interview questions developed in advance with the same questions asked to each interviewee with a consistently administered process (Campion *et al.*, 1988). Each interview started with questions relating to the participant's background, experience and company. The questions then probed existing trade patterns, barriers and drivers for cross border trade, and the participant's predictions for changes that Brexit might bring. The agreed participants included 9 senior AEC professionals recently involved in cross border AEC activity; from either side of the border as shown in tables 1 and 2. The interviews were transcribed verbatim then analysed using an iterative analysis to determine themes. The use of structural and descriptive coding (Saldana 2016) in NVivo software (version 11) assisted in identification of themes in the interview data (Fereday and Muir-Cochrane 2006).

Table 1: Summary of Northern interviewees' organisations

Northern Ireland Interviews	Type of Organisation	Interviewee Position	Size (Emplo yees)	Turnover (€ equiv /yr)	Current cross border trade (% of turnover)	Current Trade in GB (% of turnover)
Interviewee 1	Industry Representative Body	Assistant Director	N/A	N/A	N/A	N/A
Interviewee 2	Modular / off site construction co	Director and Innovation Manager	250	€75m	10% of turnover	90% of turnover
Interviewee 3	Contractor and property developer	Director	100	€33m	<1% of turnover	1% of turnover
Interviewee 4	Contractor and FM provider	Procurement Manager	1800	€562m	2% of turnover	60% of turnover
Interviewee 5	Contractor Building and Civil	Procurement Manager	500	€281m	2% of turnover	75% of turnover

Table2: Summary of Southern interviewees' organisations

Republic of Ireland Interviews	Type of Organisation	Interviewee Position	Size (Emplo yees)	Turnover (€ / yr)	Current cross border trade	Current Trade in GB
Interviewee 1	Civils and General contractor	Director	350	€600 Million	7% of Turnover	NA
Interviewee 2	General Contractor	Director	300	€300 Million	NA	2 contracts (England)
Interviewee 3	General Contractor	Director	385	€750 Million	15%	5 contracts (England)
Interviewee 4	Building and Civil Contractor	Director	1208	€1.3 Billion	NA	26% of Turnover

FINDINGS / DISCUSSION

1. Existing North-South and East-West cross border trade of workers and materials

Contractors with live projects in the Irish border region report using a number of direct employees, subcontractors and materials from the opposite jurisdiction for their delivery. However, the main direction of travel is East - West, where key members of staff from organisations all over Ireland travel to GB to deliver contracts there. Organisations working in GB reported using local expertise to navigate regulatory and employment requirements. One of the larger Irish organisations described their long-established presence in GB. The company had established local regional bases to foster loyalty amongst loyal employees and subcontractors and counter the perception of their organisation as 'parachuted in' from Ireland. Physical offices in GB were seen as a key to maintaining flexibility with the ability to "upscale or downscale dependent on how the markets are reflecting." In addition to a physical base, one ROI interviewee's organisation had established a UK registered trading division which controlled UK regulatory compliance.

In NI and ROI, gypsum and steel products are ordered from the GB, Spain, France and China. In terms of movement of material, the importation of goods to NI through Dublin ports was singled out as a key logistical route for EU materials and specialist systems. EU Kitemarking was cited as an important indicator of quality when ordering materials. One southern contractor ordered 60% of materials from outside Ireland, of which 40% came from the UK.

2. Employment of EU workers

Fewer young people are entering into construction, good apprentices are hard to recruit, and the existing skilled workforce of those interviewed is aging. The director of the NI Industry representative body cited an example of a member whose average bricklayer age is 52. A small, but significant, proportion of workers in the

interviewees' companies Northern and South Irish workforces were of EU origin, mainly from recent EU accession countries. In the contracts delivered in GB, reliance on EU workers was heavier and their significance in the workforce greater still. A NI interviewee stated, "We're highly dependent on EU labour to deliver our infrastructure projects, we're highly dependent on our supply chain of subcontractors who employ EU migrant labour". Another NI interviewee described a subcontractor thus "if they didn't have the foreign labour, they wouldn't be able to operate, they've told me that."

EU workers and subcontractors were unanimously reported as being hard working, with one interviewee remarking; "if anything the productivity and work ethic is fantastic." Cultural and language barriers, although referenced, were not considered significant, with pictorial health and safety signage and dual language health and safety briefings commonplace.

3. Factors restraining North-South cross border trade at present

In the interviewees' organisations, it is notable that the extent of current cross border trade in construction is limited. There are currently no restrictions or impediments at any point across the 500km land border between North and South. Contracts are advertised in the Official Journal of the European Union (OJEU) and experience, qualifications and accreditations are mutually recognised. Yet, of the eight construction contractors interviewed, two in the South had no contracts in the North; and three in the North had very limited cross border trade.

Regulation in the opposite jurisdiction cannot preclude an organisation from tendering. However, in the view of one interviewee, regimes in the North and South are "definitely not fully aligned at the moment" with requirements such as the obligation to submit an additional set of accounts with a differing accounting period to that in the home jurisdiction. Although qualifications should be mutually recognised, interviewees have encountered issues with recognition of basic Health and Safety cards (CSR in the north and CSCS in the South). These factors add an administrative burden which disincentivises small and medium firms from tendering across the border. Social clause requirements, measuring the extent that the contract value is ploughed back into the local community, have impeded cross border trade. Although requirements vary, they tend to favour a contractor with a local presence; a physical base in the contract area. As suggested by one interviewee "...if you aren't local and you are not doing that...you are at a disadvantage."

From the NI perspective, the southern marketplace is seen as too competitive to justify a sustained effort in winning work there. Pay rates, compared to those in the North, are high, and profit margins, compared to those in GB, are low; echoing Roper's earlier findings (Roper 2006). The size of the market in Great Britain is clearly a huge magnet for experienced, competent contractors from both sides of the border, with three quarters of all contractors interviewed conducting substantial trade across the Irish Sea.

4. Effect of Brexit to date

To date, construction investment in Ireland and GB has slowed, as investors wait for a clearer picture of the Brexit outcome. In GB there has already been an immediate economic impact on the construction industry, with forecasts for growth being revised downward for 2017 and 2018. Financial experts have predicted that the uncertainty as to the terms of a UK exit will have a negative effect on the construction industry until investor confidence returns.

Sterling has fallen significantly in value against the Euro since the Brexit vote - from £1.29 to the Euro on the 23rd of June 2016, to £1.14 to the Euro, at the time of writing (March 2018.) This has led to dramatic price increases for imported goods, and for raw materials such as timber and steel. One Northern interviewee reported a 60% increase in the price for steel, with a further 20% expected. Timber had increased in price by 25%, leading to a requirement for client 'education' to expect a rise in tender prices. This is a particular issue on multiyear and framework contracts, where no inflation mechanism exists, and the contractor is expected to absorb price rises. Interviewees have started to price currency risk into contracts at tender stage. One Northern contractor has countered this risk through forward buying materials and exploiting their buying power by setting up project specific purchase agreements directly from manufacturers. The expectation is that suppliers "will be loyal to that supply chain agreement and try and hold prices regardless of Brexit." Currency fluctuations have had a positive impact on the profitability of contracts in ROI for Northern Contractors; however, as these tend to form a small percentage of their turnover, they don't offset the problems caused to their organisations by rising prices.

Brexit opportunities were identified by two interviewees. The first, from NI, was involved with providing modular office accommodation in ROI for a pharmaceutical company which wanted to establish a laboratory sign off facility in the EU, prior to Brexit. According to the interviewee, this move was intended to reassure shareholders that the company had 'ticked a box' to ensure compliance with EU regulation, and he identified this approach of risk management, using modular construction as a quick, low cost base, as potential growth area for his company. The second interviewee, from ROI, was filling his order book as financial institutions and international organisations establish bases in the South of Ireland, prior to Brexit, for similar reasons.

5. Potential effects of Brexit: hopes, fears and predictions

All interviewees hoped for a soft Brexit, where the Irish border remains essentially unchanged from its position today. Any sort of hard border creates problems for construction organisations, North and South, and is variously described as "unacceptable" "potentially unworkable" and "disastrous." Customs checks will bring additional delay to construction deliveries and potentially add a bureaucratic burden, as suppliers may have to demonstrate country of origin; and workers and subcontractors might be required to prove their nationality or demonstrate a right to cross the border for work. Customs checks in the Irish Sea would disrupt East - West construction trade, which forms an important part of the business of three quarters of the construction companies studied.

None of the interviewees wanted any divergence in regulation - health and safety, environmental, or procurement - post Brexit. One northern interviewee referred to the UK conversion from British Standards in structural design to Eurocodes and said "I wouldn't like to be in a position where we would have to be adhering to two different standards. I just think that is a recipe for confusion."

CONCLUSION

From a legislative perspective, Brexit is unlikely to cause any immediate change, although in the future, it may give the UK more flexibility in relation to its procurement, environmental and health and safety legislation. The extent of any changes will be dependent on the nature of the new relationship with Europe and/or membership of the single market and customs union, and it remains to be seen how

this will impact on the Irish construction industry. Some opportunity may emerge as companies seek to establish residence in ROI; however, Brexit opportunities are less obvious and less tangible than the potential drawbacks.

The central theme throughout the interviews is the extent of uncertainty regarding the outcome of Brexit and its impact on the border in Ireland; and to North-South and East-West trading relationships. Construction companies are used to uncertainty - "uncertainty is pretty much a fact of life but over the last 10 years, the degree of uncertainty has increased, perhaps more than at any point in our generation." This uncertainty feeds into the climate for business and appetite for risk on both sides of the border. However, there is a limited amount of planning and preparation that can be undertaken to counter Brexit risk, as "It's so unknown - what are you planning for?" The construction industry has always been reactive but with respect to Brexit, this approach seems the only option as "nobody knows what's going on, and we'll probably deal with it when it comes rather than do some sort of planning for it."

This study underlines the need for further research, to examine ways in which the Irish construction Industry can be integrated North and South; and how further fragmentation can be resisted in the context of Brexit. The interviewees, and the researchers, find themselves in a situation with more 'unknown unknowns' than any politician on the "leave" side was willing to admit during the Brexit debate in 2016; and which are only going to become apparent in the weeks and months ahead. We are, it seems, unfortunate enough to live in interesting times.

W.B. Yeats, that greatest of Irishmen, more alive to the subtleties and nuance of the Anglo-Irish relationship than almost anyone, once wrote that "Things fall apart; the center cannot hold; Mere anarchy..." Is this what we are facing? Only time will tell.

REFERENCES

- Azevedo, F and Haase, D (2017) *Northern Ireland Peace Programme Factsheet*. Available at: <https://bit.ly/2uvQayn> [Accessed 14th February 2018].
- Barrett, A, Bergin, A, FitzGerald, J, Lambert, D, McCoy, D, Morgenroth, E, Siedschlag, I and Studnicka, Z (2015) *Scoping the Possible Economic Implications of Brexit on Ireland*. Dublin: Economic and Social Research Institute.
- Basheska E, Clavero S and Schiek D (2017) '*Brexit*' means '*Brexit*', but where is the (un)United Kingdom heading? With special emphasis on the Northern Ireland question. Brussels: Jean Monnet Centre of Excellence 'Tension at the Fringes of the European Union'.
- Birnie, E and Bradley, J (2001) *Can the Celtic Tiger Cross the Irish Border?* Cork: Cork University Press.
- Brownlow, G (2016) *Opportunity Brexit? Institutional Economic Implications for Northern Ireland*. Knowledge Exchange Seminar Series (KESS), 2016-17, Northern Ireland Assembly, Belfast.
- Colville, O [Chair] (2017) *Building on Brexit, All Party Parliamentary Group for Excellence in the Built Environment*. London: All Party Parliamentary Group/Construction Industry Council.
- Campion M A, Pursell E D, Brown B K (1988) Structured interviewing: Raising the psychometric properties of the employment interview. *Personnel Psychology*, 41, 25-42.
- Creswell, J W (2009) *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. Los Angeles: Sage.

- de Mars, S, Murray, C R, O'Donoghue, A and Warwick, B T (2016) Brexit, Northern Ireland and Ireland. Available from <https://dx.doi.org/10.2139/ssrn.2797948> [Accessed 18th July 2018].
- Doherty, B, Temple Lang, J, McCrudden, C, McGowan, L, Phinnemore, D and Schiek, D (2017) *Northern Ireland and Brexit: The European Economic Area Option*. Brussels: European Policy Centre.
- Emerson, M (2001) *Some Paradigms for the Evolving Map of Europe*. CEPS Working Document No. 164.
- Fellini, I, Ferro, A and Fullin, G (2007) Recruitment processes and labour mobility: The construction industry in Europe. *Work, Employment and Society*, 21(2), 277-298.
- Fereday, J and Muir-Cochrane, E (2006) Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. *International Journal of Qualitative Methods*, 5(1), 80-92.
- Haas, E (1970) The study of regional integration. *International Organisation*, 24(4), 91-108.
- Hayward, K and Magennis, E (2014) The business of building peace: Private Sector cooperation across the Irish Border. *Irish Political Studies*, 29(1), 154-175.
- Hitchens, D M W N, O'Farrell, P N and Conway, C D (1996) The comparative performance of business services in Northern Ireland and the Republic of Ireland. *Urban Studies*, 33(7), 1093-1110.
- Hübner, K (2015) *Modelling Irish Unification*. Vancouver, Canada: KLC Consulting.
- Oxford Economics (2016) *The Economic Implications of a UK Exit from the EU for Northern Ireland, a Briefing Paper*. London, Oxford Economics.
- Keating, M (2004) European integration and the nationalities question. *Politics and Society*, 32(3), 367-388.
- Saldaña, J (2015) *The Coding Manual for Qualitative Researchers*. London: Sage.
- SCSI (2015) *Irish Construction Prospects to 2016*. Available at: [Http://bit.ly/1RmRmUp](http://bit.ly/1RmRmUp) [Accessed 14th February 2018].
- Schiek, D (2017) 'Hard Brexit' -How to address the new conundrum for the Island of Ireland? Brussels: Education, Audio-visual and Culture Executive Agency/Erasmus+, Jean Monnet Centre of Excellence 'Tension at the Fringes of the European Union'.
- Tannam, E (2006) Cross-border co-operation between Northern Ireland and the Republic of Ireland: Neo-functionalism revisited. *The British Journal of Politics and International Relations*, 8(2), 256-276.
- Paul Tansey and John Spillane (2016) From Crisis to Opportunity: Turnaround Strategies of Large Irish Construction Contractors during the Period 2007-2015. In: Chan, P W and Neilson, C J (Eds.), *Proceedings 32nd Annual ARCOM Conference*, 5-7 September 2016, Manchester UK. Association of Researchers in Construction Management, 269-278.
- Roper, S (2006) *Cross-Border and Local Co-Operation on the Island of Ireland: An Economic Perspective*, Unpublished paper. Birmingham, UK: Aston Business School.
- Wiener, A and Diez, T (2009) *European Integration Theory*. Oxford: Oxford University Press, 3-17.