

Exemplar

Volume 2

Issue 1

October 2020



A selection of
outstanding
undergraduate
research
projects
of the final
year students
on the
Bachelor of
Business
(Honours)



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Editorial



Welcome to the second edition of Exemplar. Exemplar is a collection of some of the best undergraduate projects of the final year students on the Bachelor of Business (Honours). The purpose of the publication is to showcase student work, recognise the quality of their work, and develop the research acumen of students and supervising staff.

After the formal grading of the final year projects was completed supervising staff were invited to nominate students for possible inclusion. Nominations were reviewed by the editorial team and a shortlisted selection of students were contacted to confirm if they would like to be included. Supervising staff then oversaw a revision and enhancement of the graded submission and the final work is published in Exemplar.

Students were required to identify a business topic that interested them and that they would like to learn more about whilst meeting the research expectations of the programme. This non-prescriptive approach allowed students to flex their intellectual muscle in a unique project of their own design. As with the first edition, you will notice students' interests are broad ranging from examining the potential of snail farming as a farming alternative for elderly farmers, to the impact of employment on adolescent development, to seeking to more deeply understand workplace injuries amongst young adults.

Each student reviewed the available literature and looked at their issue through the lens of that literature to develop a deeper and more critical understanding of their topic. Students were not required to complete any primary research but to make best use of the secondary resources available to them to examine their issue. A review of the references used illustrates the students' ability to source relevant published materials to enable them to complete their task.

Congratulations to the students and their supervisors for completing the projects. My thanks to Kevin McDonagh, John Byrne, Laura McTigue and Deirdre Lusby for their support in compiling this edition.

Colm Kelleher

The potential of snail farming as one alternative farming solution for elderly farmers in the West of Ireland

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Abstract

This project examines the potential of snail farming as an alternative farming solution for elderly farmers in the West of Ireland. It will make use of the available literature to more deeply understand the challenges faced by elderly farmers and compare alternative farming types to identify the viability, or otherwise, of snail farming as an opportunity. The project will also uncover gaps which exist in the literature on snail farming in Ireland and will provide accurate information to help elderly farmers in the West of Ireland in their decision-making process.

Key words: Alternative farming, Elderly farmers, Snail farming, Ireland

Introduction

Teagasc is the state agency providing research, advisory and education in agriculture, horticulture, food and rural development in Ireland (Teagasc, n.d.) As such, they are the agency from which one would expect to seek advice when looking to enter into an alternative farming plan. Unfortunately, at the time of writing this literature review, information and advice on certain alternative farming options was not available through Teagasc.

The Teagasc National Farm Survey (NFS) 2018, categorises Irish farms as falling within six farm types: (i)Dairy, (ii)Cattle Rearing, (iii)Cattle Other, (iv)Sheep, (v)Tillage and (vi)Mixed Livestock. Many Irish farms typically have more than one farm type. According to the National Farm Survey 2018, the average farm size in 2018 was 43 hectares and the average income level per hectare was €541, €23,263 p.a., (down from €692 in 2017). The highest average Family Farm Income (FFI), on a per hectare basis, was on Tillage farms, at €675, an increase of €75 year-on-year (Dillon, et al., 2018). This would give a per annum average of €29,025. These figures are far below the Irish national average earnings of €783.62 in Q4 2019 (Central Statistics Office, 2020). For 52 weeks of the year this would indicate a yearly average Irish income of €40,748.24, suggesting a situation where farming cannot be considered a full time employment option for many farmers in Ireland.

This situation is further emphasised by 2016 data from the Central Statistics Office data which indicates there were 137,500 farms in Ireland and that around a quarter of these farm holders were aged 65 years of age and over. More recent data shows that the percentage of farm holders over 65 years of age has grown to 41.2% (CSO, 2018). The data also shows that just 5% of farm holders were aged less than 35 years of age (Central Statistics Office, 2016). The 2016 data shows that a small number of economically large farms (12%) produced close to two-thirds

(62%) of the agricultural output using 29% of the total farmed land area. This also indicates that the other 71% of farmed land only produced 38% of agricultural output. Considering these recent figures, it is reasonable to suggest that Ireland should consider alternative farming directions for a large percentage of its farmers.

Studies of farm unemployment by Loughrey & Hennessy (2014) concluded that the severity of hidden underemployment affects approximately 20% of farms and is in excess of 80 days per annum. They believe there is a direct link between the rate of underemployment and the introduction of Government's direct single farm payments. It seems this Government policy is partly causing farm underemployment and a revision of farm income supplements is needed to encourage consideration of profit making farming alternatives.

Ireland is the most rural of the EU27 countries for both population and land area. Under the definition of rural, as given by the Organisation for Economic Co-operation and Development (OECD), 70.5% of the population is predominantly rural. The Commission for the Economic Development of Rural Areas' (CEDRA) definition considers two-thirds of the national population, and 90% percent of the population in the Western Region, as living in rural Ireland. According to the 2016 census of population, there were 20,880 farmers while there were 40,709 Revenue farmers (whom pay tax) and 54,215 Common Agricultural Policy (CAP) beneficiaries in the Western Region (Western Development Commission, 2017).

Farming continues to be a dangerous occupation, particularly for the over 65s. According to Ryan (2017), farmers accounted for almost half of the work-related deaths reported in Ireland in 2016. The NFS (2018) reported 2,814 accidents occurred in the five-year period from 2012 – 2017 and found that 11% of all farms in Ireland had accidents. Teagasc (2018) research shows that farm accidents have risen by 13% in the last five

years and by 31% in the last ten years. In 2017 35% of all fatal accidents occurring on farms over the last ten years involved persons 65 years of age or older. Machinery, livestock and falls from height (HSA, 2017) caused most fatal accidents.

A correlation can be drawn between the increase in accidents and the farmer age progression over a ten-year period. As farmers age they are often physically unfit to carry out the farm work as they had in previous years. Ageing affects mobility, eyesight and balance among other abilities. Despite these physical realities, retirement is undesirable for many farmers and can increase levels of depression and illness. The reluctance to retire means that many older farmers put their lives at increased risk daily.

Around one third of all farms are classified as economically vulnerable (Central Bank of Ireland, 2019). Farmers are unhappy with Government supports for their sector as seen at a protest held recently in Dublin during November 2019, where they demanded the Government take steps to address what they call a crisis in rural Ireland. The Irish Government are addressing the crisis with beef farmers who had protested months earlier demanding better prices for farm produce (McNulty, 2019). Farmers make little profit on rearing beef cattle, most of their income is from the European Union single-farm payment and the farms they operate are not viable in the long term. These are the claims made by a leading Irish economist and published in the Irish Times newspaper (FitzGerald, 2019) and are backed by an Economic letter from the Central Bank. This letter shows that beef and sheep farms (7 out of every 10 farms) on average face significant viability challenges and are heavily reliant on direct payments.

In addition, Grossi et al (2019) observe that beef farming has received much criticism for its contribution to greenhouse gases which have been proven to be problematic to both the environment and climate change. The *Life Beef Carbon* project has been set up between Ireland, France,

Italy and Spain to reduce the beef carbon footprint by fifteen percent over ten years in an attempt to address these problems (O'Brien, et al., 2020).

There is a government initiative to reduce the total number of traditional beef-producing farms, yet the farmers must keep traditional beef farms, even at a loss, in order to receive EU payments. This dilemma is particularly difficult for elderly farmers in the West of Ireland as these payments are the farmers' main source of income. Therefore, the farmer continues to put his life at risk but with the realisation that a dividend yielding alternative is needed.

Farming alternatives

One legal scholar at Université de Lille, France presented six farming alternatives for Irish farmers, in Sept 2019, as part of a project to strengthen focus on farming and climate crisis (Crowley, 2019). The first farming alternative is dairy farming, which at present is an economically attractive option for farmers. This option however could prove costly at the initial setup point. Dairy farming is very labour intensive and is best suited to farms larger than those generally found in the West of Ireland. Due to this labour intensity, it may not suit all elderly farmers especially those without help in their farming activities. The second alternative is entitled Diversification. Simply put, it proposes farmers get involved in more than one farming type at a time. Teagasc encourages farmers to diversify into rural tourism, renewable energy, organic farming, forestry, pet farms, equestrian centres, hemp, mushrooms and Christmas trees to name a few options. This proposal holds many options for elderly farmers with less labour required and less investment needed. Often grants are also available to promote diversification in farming. However, farm diversity has its disadvantages including possible significant initial financial outlay, increased demands on the farmer's time and abilities, and consequent increased stress as additional skills may need to be learnt.

Lack of experience with the new supply chain, inadequate management skills, marketing, distribution of the new product and best practices on new farm methods can also be daunting to elderly farmers. (AgLibrary, 2018).

The third option of leasing the land is an option already used by many elderly farmers in the West of Ireland. Farmers wishing to increase their farm size are often left with no other option but to lease as only 0.5% of land goes up for sale each year (Crowley, 2019). Leasing gives a fixed income to the farmer and effectively is retirement, this may not be the preferred career choice for the elderly farmer. Income from leasing is based on the size of land leased. Farms in the West of Ireland are traditionally smaller than the rest of the country, therefore leasing may have a low-income ceiling. In 2018, the national average price of agricultural land with a residential holding was €10,326 per acre, €25,515 per hectare and without a residential holding was €9,554 per acre, €23,608 per hectare. Despite an increase in price from the previous year, these prices were a little higher than in the West. The price increase is thought to be due to the lack of land offered for lease in the West of Ireland (Scsi/Teagasc, 2019).

Forestry and Woodlands are presented as a fourth alternative and receives a lot of Government encouragement. Collins (2017) argues, Forestry represents a key sector in the transition towards a low-carbon and climate friendly economy and is one of the main sectors that keeps our rural areas vibrant and sustainable. A combination of tax breaks and government grants have helped with a push to plant more trees to combat greenhouse emissions. Agencies such as Coillte, Nature Initiative and Teagasc, which has a Forestry Development Department, provide advice, training and research on farm forestry and related matters. At present 20,000 farmers in Ireland have a forest on the farm. Some of these forests are yielding returns of up to €10,000/acre income tax free, according to the

Western Forestry Co-op. A co-operative set up to, improve farm income, create employment and to maximise the benefits of forestry programmes on rural community development (Western Forestry Co-Op, 2017). While this would appear to offer an alternative solution to the elderly West of Ireland farmer's dilemma, a more detailed look at forestry casts many doubts on its suitability. Policies taken by government have negatively affected the industry. Elimination of forest premiums, new restrictions on planting marginal land, unwarranted retrospective recoupment of premium payments, increased environmental restrictions, as well as increased management costs as a result of the introduction of new requirements are serious negative issues to be considered. In addition, forestry is no longer seen as a safe investment after significant financial losses were incurred by many farmers following disease and fire outbreaks in recent years (Irish Farmers Association, 2017). Forestry is a long-term investment and many forests in Ireland that were planted within the last 30 years are only now reaching thinning stage (Forestry.ie, 2019). The time needed to invest in a long-term farming project may be a barrier for elderly farmers.

While the West of Ireland's elderly farmer is accustomed to harsh working conditions, forestry is physically demanding with exposure to dangerous chemicals and high levels of noise and vibration. Increasingly, forestry operations are carried out by contractors, leading to an added expense after years of waiting for harvest. The Food and Agricultural Organisations of the United Nations (2020) report that accidents are often caused by lack of training, limited supervision and inadequate tools and equipment. This evidence coupled with an elderly physical condition may make forestry an unrealistic option.

The fifth alternative proposed is High Nature Value Farming aimed at helping farmers, as well as the natural environment. One such project is the "farming for nature" in the Burren, West of Ireland. The Burren

Programme is a pioneering Agri-environmental programme which aims to conserve and support the heritage, environment and communities of the Burren (Burren Programme, 2015). Historically, the Burren has been a pastoral farming type but as elsewhere, farming on the Burren provides insufficient income. Programmes such as GLAS and Burren Progr0amme offer support and advice to farmers on farming while sustaining the Burren environment. These programmes add a new and interesting dimension to farming for elderly farmers but do not increase income sufficiently for an elderly farmer to sustain his household and fight off a forced retirement.

The sixth alternative suggested is Nature conservation and Agri-environment schemes. Schemes such as Green Low-Carbon Agri-Environment (GLAS) focusing in particular, on the preservation of various habitats and species, mitigating climate change and improving water quality (Agriland, 2020) and Rural Environment Protection Scheme (REPS), are well-known to those in the farming community and provide another option. Unfortunately, these options continue along the lines of providing grants to sustain profitability. This leads to underemployment and underproductivity on the land. Loughrey & Hennessy (2014) emphasized that hidden underemployment is a loss to productivity of the labour force and to the economy, government policy should not facilitate this situation.

Each of the six alternatives is realistic for the Irish setting but not all possible alternatives have been considered including snail farming, which has not been as forcibly supported as the other alternatives. There is a growing appetite for escargot (Digby, 2017) and Ireland, and its farmers, should look more closely at snail farming as a profitable use of land.

Snail farming

Snail farming is known as heliciculture and is widespread throughout Europe. Escargot is the term used when trading edible snails. Snails are raised as edible escargot, their eggs as gourmet caviar and their slime used for cosmetics and pharmaceuticals products. Snails are a superfood, rich in protein and very low in fat. It is estimated that escargots contain eighty percent water, fifteen percent protein and 2.4 percent fat. Their nutritional value also contains Magnesium, Calcium, Iron, vitamin C, Fibre, raw snails also contain Vitamin A, Vitamin B-12 and Vitamin B-6 (Escargot World, 2017)

Teagasc promotes snail farming in its alternative farming factsheet leaflet number 64 but there is limited information available. Irish snails are enjoying a growing demand in the Middle East and Asia. Land should preferably be medium light soil, rich in lime and calcium, in a location with moisture bearing winds. Land and location as found in the West of Ireland. Minimum land is required but it should provide space for growing leafy vegetation needed for feeding purposes. Night dew is important for healthy snail mobility as is abundant in the West of Ireland (Teagasc, 2017).

Snail farming is a very realistic option for elderly farmers. It has a ten-month cycle from December to September thus, freeing the farmer to enjoy some down time. Farmers already have land, and many have the necessary infrastructure in place. A profit can be made on as little as one acre. Some out sheds are needed and a polytunnel. One acre can yield ten tons of snail, with a market value of €40,000 according to Eva Milka owner of Gaelic Escargot, Ireland's first commercial snail farm, set up in 2013 (Digby, 2017). This compares very favourably with forestry, where yield only returns up to €10,000/ acre income tax free, after many years of waiting.

Whilst there is some initial investment needed (Feagas, 2016) it is not as high as the set up costs involved with many of the other alternatives mentioned such as dairy farming. Initial costs for a ten-ton production is approximately €24,000, of which baby snails account for €7,500. This cost is eliminated in year two as the farmer will have their own breeding snails held back from harvest. Annual costs include feed, electricity, labour and maintenance and can be in the region of €17,000 (Godsil, 2017). Initially 30,000 snails must be purchased for breeding for a ten-ton production. Alternatively, baby snails can be purchased and put to fatten from March onwards. 1,200,000 baby snails per ten-ton production. *Helix Aspersa Muller* is the best option when choosing a snail to farm in Ireland. Other species including the closely related *Helix Aspersa Maxima* are not as successful, according to Eva Milka (Godsil, 2017).

Infrastructure for snail farming is quite basic and easily achievable for elderly farmers. It includes a fully insulated breeding room of minimum 50m². This room could be a shed but must have access to electricity and water, be well ventilated and have good drainage. It must also house an HVAC unit to control the temperature. Similarly, temperature-controlled Incubation room is needed. This room must be kept at 20°C for fifteen days in order to hatch the eggs, again possibly a shed could be used. A polytunnel minimum size 100m², is also required. Housed within the polytunnel are a waste oil burner, wooden shelving and wooden tables, all used for the first fattening stage and the subsequent harvest stage.

The second fattening stage is carried out on the one acre of land which is completely sown with Forage Rape. The land must be enclosed with corrugated iron fencing, bird netting and a 24v electric fence. When harvested the snails are packed in netted bags (Milka, 2019). None of this work is strenuous or requires heavy lifting nor is the infrastructural set-up daunting to an elderly Irish farmer. This is in contrast with the labour-intensive dairy and forestry alternatives.

The elderly farmer can avail of many grants and schemes including the Organic Farming Scheme, On-Farm Capital Investment Scheme which offers to those who qualify, an aid of forty percent on investments up to a ceiling of €80,000 (Teagasc, 2017) . Gaelic Escargot have received financial aid from New Frontier, Ryan Academy, Local Enterprise Office and The Arthur Guinness Fund (Cunningham, 2015) (Traynor, 2014).

The main problem encountered in Ireland is processing. At present, snails are sent abroad for processing, but this problem may soon be resolved. Steven Ryan, Galway Snail Farmer and winner of the Irish NEWBIE Farm Entrant Competition 2019, is heavily involved in plans to develop a processing facility in Ireland (Teagasc, 2020). The NEWBIE Network is an EU Horizon 2020 funded project. It offers a platform by bringing together, successors, advisors, researchers, important regional and national actors and relevant stakeholders in national networks, to promote successful establishments of sustainable farm businesses in Europe (Teagasc, 2020).

Snails farmers can produce many product lines currently including:

1. Snail Caviar. Snail Caviar is a new and very lucrative market. A five-gram jar of caviar sells wholesale for €80. The 300 eggs needed can be produced by five snails (max) in a space of six – eight weeks (O’Sullivan., 2018)
2. Snail Mucus. Snail slime or mucus has a wide range of product possibilities as its properties are praised for its healing abilities as well as in beauty products (Harti, et al., 2016). Italy has emerged as the lead snail producer in this area. An estimated 44,000 tons of live and preserved snails are produced by more than 4,000 producers annually. 2017 saw at least a forty-six percent increase

in snail slime production due to demand from the Italian cosmetics industry (Vogt, 2017). Growing demand exists for these highly priced cosmetics containing organic snail mucus which promise to stimulate collagen production, slow the onset of wrinkles and heal acne and scars (The Telegraph, 2017).

3. Protein Powder. This Protein Powder is an idea being developed by Mayo snail farmer Pauline Durkan with help from Teagasc (Digby, 2017).
4. Snail liver Pate. Gourmets declare this appetizing dish tastes similar to other liver pates except more gentle and softer. Snail liver does not contain fats and because of its composition, contributes to cholesterol reduction (Snails House, 2016).
5. Medical products - Scientist are currently investigating the possibilities of preventative and healing treatments derived from snails in the area of colon cancer (Magdalena Matusiewicz, et al., 2018) Scientists also found *Helix aspersa* extract is a natural, safe and effective alternative treatment in open wound management of partial thickness burns in adults (Tsoutsos, et al., 2009) .
6. Snail shell fertilizer, Marinated escargot livers and who knows what other products the snail has yet to offer up.

There is a market for the exportation of escargot (Teagasc, 2020). The market is mainly in Europe, but American, Canadian and Asian markets have increased in recent years. Annually there exists a shortage of snails for sale in this growing market. In 2014 the total worldwide market of snail consumption has reached twelve billion dollars. In France, in 2010 there was a lack of 90,000 tonnes of snails due to their high consumption. Based on these published figures, it is expected that the demand for snails

will not be covered even in the next ten years (Touchstone Snail, n.d.). The shortage of produce has in fact escalated in the last ten years. On average there is an annual shortfall of 100,000 tonnes of snail meat in Europe (Digby, 2017).

The escargot global market of forty-three thousand tonnes in 2016, \$154M approx. (wholesale prices) was expected to reach fifty thousand tonnes by 2025 (Food Dive, 2018). The countries with the highest consumption are Spain (16.5 thousand tonnes), Morocco (6.0 thousand tonnes), France (5.3 thousand tonnes) and Italy (2.1 thousand tonnes), together comprising near sixty-nine percent of global consumption. (Food Dive, 2018). Ireland has easy access to these markets through geographical position and EU membership, thus further emphasising the suitability of the country as a place to develop snail farming.

The future growth of the escargot market depends on the acceptance of this French delicacy becoming easily available on menus throughout Ireland and the world. Raw snail meat has 1.7 percent fat as opposed to beef meat which is fifteen percent and chicken which is eleven percent (La Lumaca del Cavaliere, n.d.). In today's weight and diet obsessed world these are favourable selling points. The growing popularity of a healthy lifestyle has nutritionists recommending this high protein low carbohydrate meat (Press Association , 2018).

Snails are eaten daily in some regions of the world. Their acceptability is affected by factors such as habits, customs and traditions. Their acceptance is also dependant on its preparation as a meal. According to a 2013 study, the preferred snail meat preparation is Mediterranean as opposed to French regarding smell and taste (Sandro, et al., 2013). Mediterranean cuisine has long been recommended to achieve a long-life span (Yarnell & Evans, 2000).

While elderly farmers may be concerned by the fact that snail farming can be considered labour intensive, according to Godsil (2017) this is really only at harvesting time. More concerning to elderly farmers in the West of Ireland may be an issue regarding *Fasciola hepatica*, a parasite well known to all farmers. It is more commonly known as Liver Fluke and can cause high financial losses in livestock. Liver fluke needs a lymnaeid snail as intermediate host to complete its life cycle (Caron, et al., 2014). The Lymnaeid snail is commonly known as a pond snail. This is not a snail which is farmed in Ireland. However, research in Turkey has shown the *helix aspersa muller* snail (preferred snail to farm in Ireland) acts as an intermediate host to larval stages of *D. dendriticum* liver fluke (Köse, et al., 2015). This concern can be easily put to rest when the snail area is properly secured and hygienically maintained. Additional peace of mind can be achieved by a back-up generator to power the 24v electric fence in the rare event of a power outage.

Conclusion

Snail Farming is a potentially viable alternative opportunity for elderly Irish farmers in the West of Ireland. It is a low labour intensive activity requiring a low financial initial investment. International markets exist for all the snail farm products with advice networks existing within this farming community. Concerns are minimal and solutions are easy to implement. The potential market value of €40,000 per acre on snails or €3,000 per kg for snail caviar illustrates the viability of the enterprise.

This literature review also exposes a scarcity of official data on snail farming. Existing literature is often published in the languages of the countries where snail farming is considered mainstream agriculture and therefore not readily available to Irish farmers due to language barriers. Only sources in English and Spanish were researched for this review and therefore other relevant literature in other languages may have been

overlooked. Further research by the relevant Irish advisory and research authorities is recommended.

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A review of the literature on the impact of decision-making on fluctuations of the economic cycle

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Abstract

Economies expand and contract over time resulting in a cycle of peaks and troughs. This literature review seeks to more deeply understand the influence of decision-making, and behavioural biases in particular, on these fluctuations in the economic cycle by exploring the issue through the lens of behavioural economics.

The project seeks to raise awareness of the existence of behavioural biases in the decision-making process and how it can lead to suboptimal judgements. It suggests that individuals should practice more inference and be more aware of their cognitive biases, on a general and institutional level, as improved reasoning would encourage better financial choices. In turn, this would increase economic stability and reduce the undesirable social consequences associated with economic troughs.

Keywords: Decision-making, Behavioural Bias, Economic cycle

Introduction

Aayat (2020) claims that decision-making involves the selection of the best available alternative. However, this contrasts to the beliefs of many behavioural economists, namely Keynes (1937) and Kahneman (2011) who assert that individuals are irrational and make suboptimal choices. A more accurate definition of decision-making, perhaps, is that of Sisk et., al (1985, p. 126) who maintain that “a decision is the selection of a course of action from two or more alternatives; the decision-making process is a sequence of steps leading to that selection”. Herbert A. Simon (1959) defined economics as the science that describes and predicts the behaviour of several kinds of economic being – the consumer and the entrepreneur. This writing is based on “descriptive economics”, the category of economics that strives to describe and explain economic behaviour Simon (1959), and “behavioural economics” which studies the often irrational judgement of humans, evoked by cognitive bias that influences their decision-making process. As described by Simon (1959), understanding the behaviour of individual economic agents, (a main element of descriptive economics) is necessary to provide a foundation for macroeconomics.

The purpose of this project is to examine the impact of decision-making on the fluctuations of the economic cycle. Following a thorough review of academic literature, it is anticipated that this research will deduce well-informed rationale of the contributing factors of one’s often flawed decision-making process that creates an ongoing boom/ bust economic cycle between periods of stability and instability. It will investigate and decipher the motivating factors (in the form of behavioural biases) that influence certain decisions and consequently affect economic growth (GDP) causing fluctuations in a country’s economic health. This is in anticipation of raising awareness of such motivating factors so as to encourage prudence and caution among individuals when making financial decisions on both a general and institutional level. In

encouraging sensible decision-making this project hopes to minimise the prevalence of boom and bust cycles, to flatten the economic growth curve for stability and longevity in economic security, and to minimise the re-occurrence of recessions in economies.

The scope of this project is centred on the various decision-makers that occupy and influence an economy of whom's judgements determine its level of progression as identified by its stage in the economic cycle. Each section of this literature review, divided thematically, will refer to literature that highlight various behavioural biases that affect economic decision-making. The project will initially introduce a comparative analysis of behavioural economic thinking. This review of behavioural economic ideology and theory serves to form a basis of understanding of the level of rationality of one's decision-making and how such judgements, deemed either good or bad, impact positively or negatively on an economy.

Following this, the project will define and explain the economic cycle. The analysis will then examine and highlight the interrelationship between utility, consumption, affect and their collective impact on an economy. Building on this, the subject matter of both successive concluding sections will analyse one of the four factors of production that constitute economic growth (GDP); namely entrepreneurship (in the form of investment) to briefly highlight an economic sector that is susceptible to behavioural bias, thus influencing the course an economy takes. This will be accomplished by expanding on how the economic cycle is impacted by behavioural bias and investor confidence by means of Minsky (1986) and Rodrigue's (2006) respective models as prime examples of boom/ bust cycles. The final section will refer to destabilising institutional dynamics and some of the causes and effects of institutional decision-making as it relates to an economy.

This analysis is primarily microeconomic in character but assists in the explanation of the implications of certain elements of decision-making that influence the economic cycle on a macroeconomic level. For the

purpose of precedence, the project will draw on examples from and refer to the U.S. and Irish economies where appropriate.

What is the economic cycle?

A fluctuation is a change, or the process of changing, especially continuously between one level or thing and another (Cambridge Dictionary, 2020). As such, the economic cycle is the fluctuation of the economy between periods of expansion and contraction i.e. the downward and upward movement of GDP (Gross Domestic Product), which measures economic growth. Factors such as GDP and consumer spending (lead by consumer confidence), can help to determine the current stage of the economic cycle (Chappelow, 2020). An explanation of contributing factors to fluctuations in the economic cycle (see figure 1) is described briefly in four stages as follows:

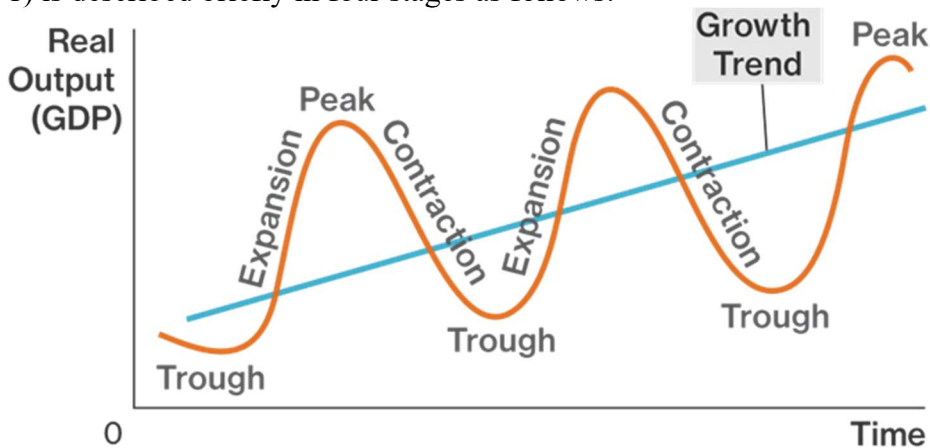


Figure 1 – Economic cycle with an upwards growth trend (coursehero.com, 2020)

During the initial stage of “expansion”, an economy moves out of a recession. Interest rates on loans are cheap, businesses increase stock levels and consumers begin to increase spending. Further to this, GDP rises, unemployment declines and per capita income inflates. Following

this, the expansion stage reaches a “peak”; High consumption and demand leads to increased prices of goods and services, inflating GDP. However, uncertainty among other factors (referred to later in this document) causes demand to recede. Business revenues reduce as a result and economic growth abates. To reduce expenditure, companies stop hiring and may lay off staff thus increasing unemployment. In “contraction”, an economy plummets further into a “trough” or a “recession” i.e. a period of temporary economic decline during which industrial trade and activity are reduced. This is then followed by the evolution of a recovery back to the expansion phase and the cycle continues.

Comparative Analysis of Economic Ideology

Behavioural economics, descriptive and pluralist in nature, concentrates on individual decision-making (Schettkat, 2018) and aims to understand how markets *actually* function in a real-life setting. It explains that humans are not rational and are incapable of making good decisions (Kenton, 2019). It can be interpreted as an effort to develop alternatives for the overly abstract and unrealistic assumptions of human behaviour in neoclassical economics. In contrast, economic theories founded on the neoclassical basis assume rational choice of subjects in the form of optimal judgement, according to the criteria of neo-classical economics. However, behavioural theory assumes limited rationality in the choice of subjects (Soukup et. al, 2014). Neo-classical economists seek to explain behaviour from assumptions about the nature of “economic agents” or “homo economicus”, terms implying that individuals are comprehensively rational (Oxford, 2020). In comparison, behavioural economists suggest improving upon the model of a rational “homo economicus” as a more descriptive model of human behaviour in order to produce more accurate and psychology-based models of human behaviour. This section will chronologically outline behavioural

economic philosophy that challenges the rational actor assumption of neo-classical economics.

Initial economic thinking was established by “the father of economics” (Sharma, 2020), Adam Smith, author of *The Theory of Moral Sentiments* (1759) which provided psychological underpinnings of economics (Brown, 2018). Bentham (1748-1832) developed the first systematic account of utilitarianism (Driver, 2009). One of the pioneers of behavioural economic thinking was Veblen (1899) best known for his book *The Theory of the Leisure Class* (1899). Veblen coined the term “conspicuous consumption” to describe his belief that people make purchasing decisions of goods or services for the specific purpose of displaying wealth and social status. This is suspected to be a major factor in the economic cycle (Kapeller and Schütz, 2012). This was followed by Keynes’ theory of the aggregate consumption function that he developed in his *General Theory* (1937). According to Keynes, aggregate consumption was a positive function of aggregate income. Deussenberry (1949), with his book *Income, Saving and the Theory of Consumer Behaviour* made an emphasis on the social dimensions of consumption. It challenged Keynes’ construction of consumption behaviour by introducing psychological factors associated with habit formation and social interdependencies based on relative income concerns (Palley, 2008). However, Duesenberry’s theory of consumption was dismissed in the 1950’s by Modigliani and Brumberg’s (1954) life-cycle theory of consumption and Friedman’s (1957) permanent income hypothesis stating that people will spend money at a level consistent with their expected long-term average concerns (Mason, 2000).

Becker (1976) demonstrated that a relationship exists between affect, (i.e. mood, emotions, or feelings) decision making and behaviour (Becker, 1976). Simon (1959), as aforementioned, asserts that understanding the behaviour of individual economic agents, (a main element of descriptive economics) is necessary to provide a foundation for macroeconomics. Simon developed the bounded rationality model (1982) which advocates

the idea that humans are only partially rational; the idea that rationality of decision-making in individuals is restricted by the information they have, the cognitive boundaries of their minds, and the limited amount of time they have to make a decision. However, some neo-classical models such as rational choice theory believe that humans can be reasonably approximated or described as "rational actors", assuming that individuals in an economy making rational choices based on rational calculations and rationally available information (Ganti, 2019). Smith (1776) was one of the pioneers of rational choice theory. Further behavioural economic study was established by way of Kahneman and Tversky's (1979) Prospect theory, challenging the rational choice expected utility theory of Von Neumann and Morgenstern (1944) which models the decision that perfectly rational agents would make. In opposition to such, the prospect theory is more substantive, aiming to describe the actual behaviour of people. The Interconnection of Utility, Consumption and Affect and their effect on economic decision-making

Consumption, utility and affect are interrelated components of economic decision-making and are the basis for many economic theories and hypotheses. They also assist in explaining the triggers of certain decisions that impact elements of the economy.

Utility

Utility, described by Bentham as "the greatest happiness principle" (Mill 2009, p. 8) is one of the main driving forces of decision-making. This idea is backed by both traditional and behavioural economists. Utility refers to the total satisfaction received from consuming a good or service (Chappelow, 2020). Theories based on rational choice typically assume that consumers will strive to maximise their utility (Von Neumann and Morgenstern, 1944), whereas behavioural economists might ask "is this assumption of profit maximisation an accurate assumption of real individuals' behaviour?" Behavioural economics asserts that people are

altruistic and do not make decisions exclusively out of self-interest. Utility and consumption are inter-linked as utility is the level of satisfaction one gains from the consumption of goods.

Consumption. Black et al. (2009) define consumption as spending for acquisition of utility. Consumption plays a major role in the fluctuation of the economic cycle (Hall, 1984). This supports the Keynesian view that consumer demand is the primary driving force in an economy (Amadeo, 2020). Even a small downturn in consumer spending hinders economic growth. An effect of such is the deflation of prices and GDP. If slow consumer spending continues, the economy contracts (see figure 1). Consumer spending drives a significantly large part of U.S. and Irish GDP, making it a predominant measure of economic strength.

Keynes (1937) argues that humans are irrational and are highly susceptible to psychological forces. Akin to such, Kahneman (2011, p. 73) claims “Irrationality is part of the human condition, ever-present and predictable”. The Keynesian ideology of consumption is proposed in his General Theory of consumption as: “The fundamental psychological law, upon which we are entitled to depend with great confidence both a priori from our knowledge of human nature and from the detailed facts of experience, is that men are disposed, as a rule and on the average, to increase their consumption as their income increases” (Keynes, 1937 p. 96). Keynes hypothesises that households increase their utility by consuming more goods and services as their income increases, and thus increase their well-being by the major component of aggregate demand. Keynes (1937) also asserts that the propensity to consume of a community depends partly on psychological propensities of individuals. Another central belief in Keynesian economics is the concept of uncertainty. Keynes argued that investors face uncertainty in their daily financial decision-making processes; whether to stockpile or invest their capital. It is “based upon their lack of knowledge about the future” (Stohs, 1980 p. 372). According to Stohs (1980 p. 372), Keynes acknowledged that this uncertainty could have “significant effects on the

economic process”. This may clarify why periods of economic recovery are generally slow as consumers are hesitant to spend whilst uncertain. Simon (1959) highlights the role of one’s level of certainty and its impact on decision-making and the economy: “Prediction of the future is an element common to many decision processes, and particularly important to explaining business cycle phenomena” (Simon, 1959 p. 279). Deussenberry’s (1949) relative income hypothesis states that the satisfaction an individual derives from a given consumption level depends on its relative magnitude in society (e.g. relative to the average consumption) rather than its absolute level (R. Santos, 2013). It is based on the hypothesis that individuals care about status (Kockesen, n.d.). Easterlin (1995) finds that relative income is the dominant determinant of happiness (i.e. utility). Similarly, experimental work by Alpizar et al. (2006) confirms that relative income and consumption matter for individuals. In relation to this, the Rajan hypothesis predicts that households will react to a decline in (permanent) relative incomes by lower saving and higher debt (van Treeck and Sturn, 2012), thus explaining consumer decision-making as a potential contributing factor to recessions. As part of Keynes’ (1937) absolute income hypothesis, the consumption function describes a positive relationship between consumption and disposable income (Lindauer 1976, Hall 1984). This is supported by McCarthy and McQuinn (2014), who, in their analysis of consumption and the Irish housing market, found that higher income leads to higher consumption. According to Hall (1984), when individuals are better off they consume more. This correlation is attributed to the upward slope of the consumption function (see figure 2).

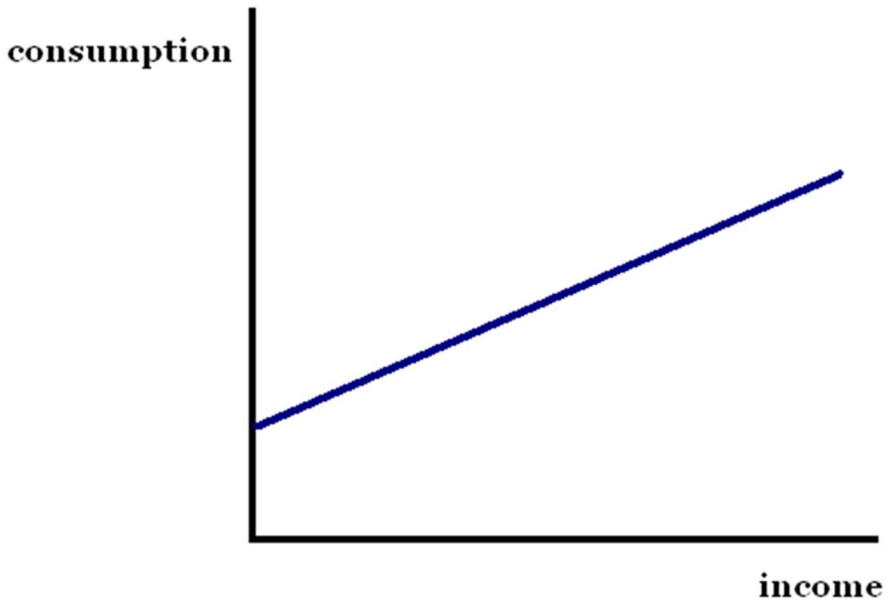


Figure 2 – Relationship between Consumption and Income (York.psu.edu, n.d.)

Pursuant to Hall (1984), shifts in consumer behaviour explain the positive correlation between income and consumption and are a main factor in overall fluctuations in the aggregate economy. This correlates with the Keynesian view that shifts in the consumption function are a source of overall economic fluctuations (i.e. the consumption function slopes upward, demonstrating a definite link between GDP and consumption). Keynes (1937) believed that although people who earn high incomes spend more on consumption than people who earn less, they are less inclined to spend as much out of a given increase in income than those earning less. This helps to explain the higher aggregate consumption activity of the overall general population driven by low-earning

individuals during expansions or “booms” that contributes to a higher GDP.

In assuming that higher consumption equates to lower savings, Keynes’ (1937) consumption function as described by Hall (1984), contrasts to Modigliani and Brumberg’s (1954) life-cycle theory which argues that individuals seek to save when their income is high. However, the life-cycle hypothesis contrasts to decision-making patterns displayed by the Irish and U.S. public during their most recent (2008) financial crises. The activity displayed by citizens of both nations during this period resembled that of Keynes’ description in his consumption function. The period of recession (when income is generally low) saw both population’s savings rate increase. Figure 3 shows an increase in the personal savings rate of U.S. citizens. In the recent recession, from December 2007 to May 2009, the savings rate increases from 3.6 percent to 8.2 percent.



Figure 3 – Personal Savings rate of U.S. citizens – July 2005 to January 2013 (fred.stlouisfed.org, 2020)

Figure 4 shows an increase in the savings rate for Irish households. The rate dramatically increased from 5.1 percent to a peak of 15.2 percent in October 2009.

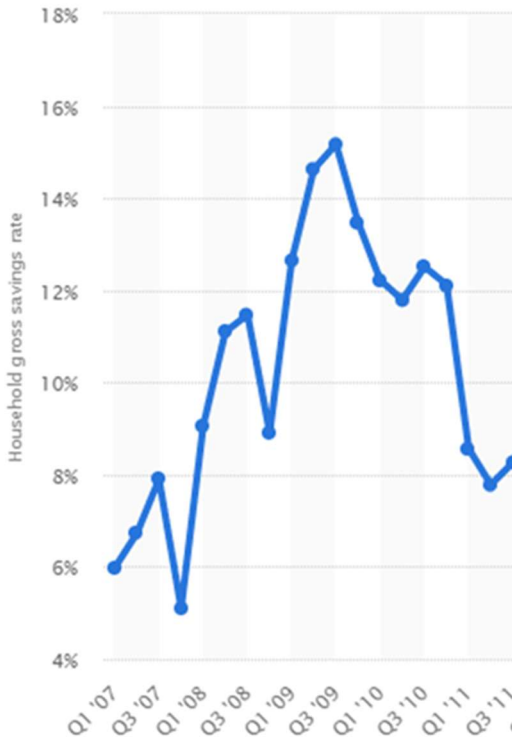


Figure 4 – Household Savings Rate, Ireland – January 2007 to October 2011 (Statista, 2020)

Affect

Affect refers to the underlying affective experience of feeling, emotion or mood (Hogg et. al., 2010). As aforementioned, the neo-classical economic ideal of decision-making assumes that one makes choices to maximise their utility (Von Neumann and Morgenstern 1944). However, Hermalin and Isen (2000, p.1) contend that one’s “current emotional state is not explicitly considered” in such ideology. A model

developed by Hermalin and Isen (2000) shows that current emotional state, in particular positive affect, influences decision-making. Similarly, and in accordance with Simon (1982), Macleod (1996) and Kaufman (1999) have also emphasised the effect of emotional state on decision-making as it relates to cognitive abilities causing “bounded rationality” in individuals.

During periods of economic growth, it is suggested that individuals experience heightened positive affect. Bewley (2007) found that an increase in one’s wage has a modest positive effect on morale. A wage increase is most common during an expansionary economic period where wages and aggregate earnings rise due to inflation and a reduction in unemployment. This suggests a link with GDP because, as aforementioned, Keynes’ (1937) consumption function hypothesises that an increase in income equates to an increase in consumption (see figure 2). This would cause inflation, thus leading to higher GDP and further economic growth. Additionally, Rook and Gardner (1993) undertook an exploratory study on the mood antecedents of consumption, summarising that eighty five percent of their survey sample revealed they were more likely to consume on impulse if they were in a positive mood rather than a low emotional state. Moreover, scientific evidence suggests that positive affect can promote careful and flexible thinking (see Isen 2000, Ashby et al. 1999). Therefore, it could be hypothesised that an improved financial position experienced by the general public of an economy, during periods of economic recovery, is associated with citizens making more astute decisions that lead to further personal financial growth that would contribute to greater expansion in the overall economy.

At the opposite position of the economic cycle, individuals often experience financial instability as a result of wage-cuts that are experienced during recessions. According to Hermalin and Isen (2006), even a short-term wage cut experienced by an individual during an economic downturn can have lasting consequences for morale (Hermalin and Isen, 2006). Furthermore, Beatty and Ferrell (1998) found that

impulse consumption occurs more frequently when people feel positively than when they are in a poor emotional state. Pleasure (i.e. utility) was the most prevalent reported mood state preceding impulse consumption. Therefore, it could be suggested that lower mood as a result of wage cuts leads to lower consumption during downturns, thus exacerbating the severity of recessions. Additionally, during “troughs”, decision makers may wish to postpone consumption if they anticipate consumption will be more enjoyable given future affective states, where marginal utility (i.e. the extra satisfaction a consumer accumulates from consuming additional units of goods or services) will be greater (Hermalin and Isen, 2006). In other words, it is possible that decision makers prefer to save relatively on “rainy days”; also delaying economic recovery and leading to a deeper trough.

Feeling, an element of affect, is defined as an emotional state or reaction (Merriam-Webster, 2020). Shiller (2009) contends that investors often make decisions on emotions rather than rational calculations. This aligns with Simon’s (1982) bounded rationality theory. In 2008, at the beginning of the global financial crisis when stock-markets crashed, investors displayed a reaction of panic and irrational herd behaviour (see O’Mahony, 2018) by selling stocks at low prices (Farmer, 2011). A more rational decision would have been for investors to exhibit patience and hold on to their stocks as prices would eventually take an upturn in value. This sort of human irrationality affecting stock-markets is highlighted by Thaler (1994). As an individual sees their investments drop in value, they are likely to reduce their level of consumption, which negatively affects business’ revenues, leading to a decline in economic growth (Pratten, 1993).

What is the link between decision-making and the economic cycle?

Building on Keynesian ideology of economics, an array of economists have determined links between human decision-making and fluctuations in the economic cycle. Vercelli (2009) and Rodrigue (2006) highlight the cyclical fluctuations of financial conditions that endogenously generate

instability and fragility leading to contractions. Minsky (1986, 1992) contends that behavioural biases influence decision-making, which determine one's propensity to spend, borrow and invest in an economy. Minsky's (1992) financial instability hypothesis argues that a key mechanism in depressing an economy is the accretion of debt by the private sector led by irrational decision makers. This hypothesis is characterised by the Minsky cycle (Minsky, 1986) which describes how credit cycles, led by availability of credit access over time, generate boom/ bust cycles in an economy. This relationship between citizens and their economy is described in figures 5 and 6 as follows:

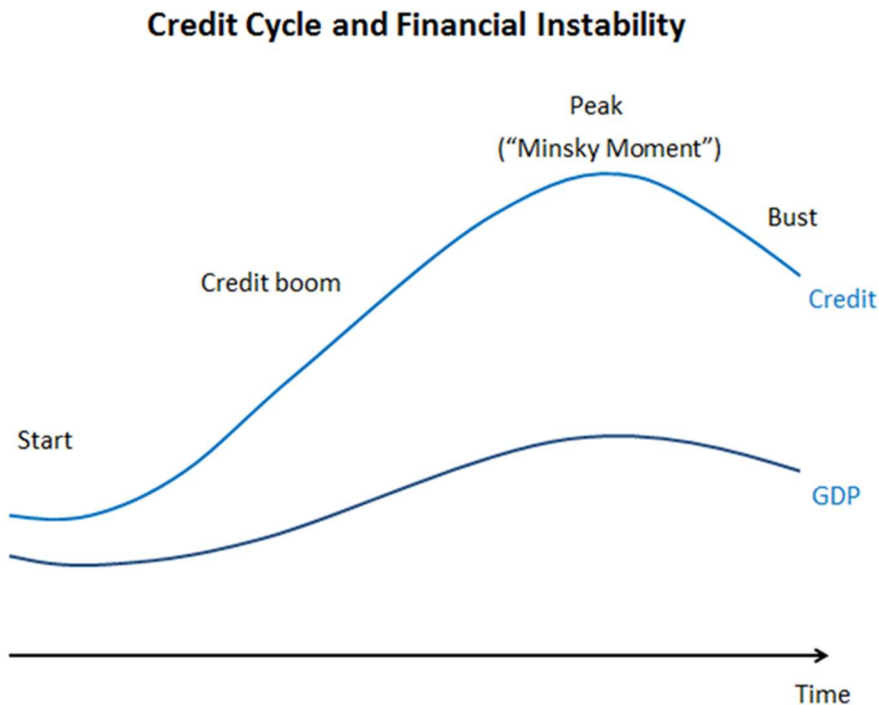


Figure 5 – The Minsky Cycle (Soroushian, 2017)

Each stage of the Minsky cycle is influenced by decision-making. As aforementioned, (Becker 1976, Hermalin and Isen 2000) human decision-making is influenced by emotion. A brief explanation of the Minsky cycle will be built upon by a more detailed analysis of Rodrigue's (2006) cycle showing the impact of such emotional factors and behavioural biases. Fazzari et al. (2008, p. 556) characterise the Minsky cycle as "the interaction between finance and investment, influenced by aggregate demand and output".

The stages of the Minsky cycle are as follows: The model initiates in a period of restraint where only the most creditworthy investments get funded (Soroushian, 2017). This prompts the economy to expand and lenders to ease lending criteria, funding more investments demanded by

overly optimistic borrowers who borrow beyond their means. This causes the economy to expand rapidly (i.e. “boom”), making the economy appear robust. As a result, creditors fund further investments that are not creditworthy, which leads to extensive defaults (see “Minsky moment” figure 5). High defaults cause creditors to dramatically tighten lending standards leading to a credit crunch (i.e. decline in lending activity by financial institutions triggered by an abrupt deficiency of funds and stringent lending criteria). This credit crunch drives a recession (bust). The cycle then restarts (Soroushian, 2017).

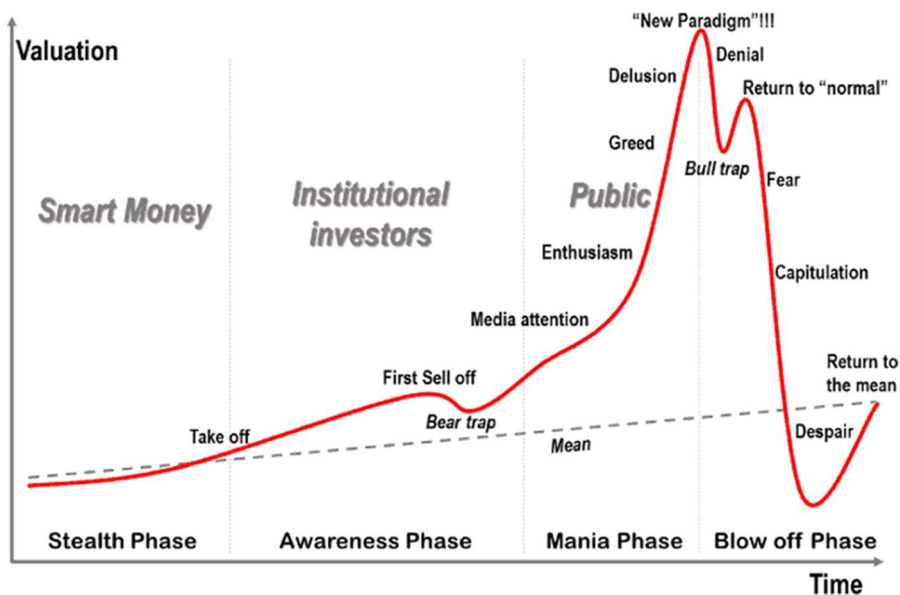


Figure 6 – Rodrigue’s Credit Cycle (Rodrigue, 2006)

Reflecting Minsky’s cycle, Rodrigue’s (2006) cycle (figure 6) portrays the life cycle of an economic bubble (a situation in which asset prices appear to be based on inconceivable or ill-advised views about the future), described by the level of economic growth and defined by the

accumulated value of spending and investment in the economy. In alliance with the Minsky cycle, it comprises of four phases that describe the relationship between human judgement and the economy. Each stage can be defined by human behaviour, primarily confidence, that drives an investor's propensity to allocate funds. Confidence, degree of rationality and risk propensity in one's decision-making play a substantial role in influencing the economic cycle. Another influencing factor of each phase of the cycle are behavioural biases i.e. potentially damaging behaviours led by unfit reactions causing erroneous decisions; the two main categories associated are cognitive (e.g. irrationality) and emotional (e.g. confidence) (see Simon 1982, Keynes 1937, Macleod 1996 and Kaufman 1999). Three behavioural biases; investor over-confidence, irrationality and flawed risk-taking contribute to market crashes. An example of such behavioural biases are evident from the market crash of 2008 in Ireland. According to FitzGerald (2016, p. 278) "empirically established behavioural biases were active to an extent in Ireland and contributed to an ensuing bubble of a scale that it's bursting destroyed the economy". This idea is supported by Nyberg (2011 p. 94) who, in investigating this crisis found that decision-makers made poor choices, and that irrational forces led to sub-optimal decision outcomes (FitzGerald, 2016). Fitzgerald (2016, p. 4) also referred to the symptom of flawed "stubborn confidence" causing unsustainable inflation. Lunn deliberates that in the lead-up to the 2008 crash, Irish policy-makers solely looked at data that upheld what they wanted to believe (confirmation bias), predicted outcomes too conclusively, misconstrued the accuracy those predictions (overconfidence bias) and were averse to uncertainty (ambiguity aversion) (Lunn, 2013 p. 566). In opposition to Lunn's (2013) assertion regarding confirmation bias, Fama's (1970) efficient market theory (Fama, 1970) states that humans act in a rational way and make the right decisions because they have access to all available data.

As aforementioned (Stohs, 1980), the level of certainty among individuals induces either fear or confidence which influences their

propensity to invest and consume. According to an official inquiry conducted by the European Commission (2013) on “The Impact of Uncertainty on Consumption and Investment” it was established that such level of certainty impacts one’s inclination to take risks. For example, during recessions there is a higher level of uncertainty, causing one to be more risk averse. This helps to explain why recoveries are typically slow (European Commission, 2013). The opposite is the case for prosperous economic conditions.

A study conducted by Dowling and Lucey (2014) on decision-makers in the lead up to Ireland’s economic crash in 2008, found the likely presence of behavioural biases among senior bank executives affecting their risk management strategy (Dowling and Lucey, 2014 p. 1). This view is backed by FitzGerald (2016, p. 8) who claims that “senior decision-makers in Irish banks were subject to considerable behavioural biases affecting their approach to risk taking”. Similarly, Jianu et al. (2017) discovered that the fifteen member states of the EU accumulated excessive financial risks in the 2005-2014 period, indicating a possible link between the EU-wide financial crisis of 2008 and high levels of risk-taking.

The impact of risk-taking on the economy is also reflected in the Minskian (1992, financial instability hypothesis) assertion that as an economy expands, financial institutions become gradually less cautious and more flexible with their lending criteria (supported by Nyberg, 2011). Many general investors exploit this opportunity, being awarded risky and unaffordable loans that may not be honourable. Examples of such is evident from the pre-2008 financial crisis one hundred percent loan-to-value (in Ireland) (FitzGerald, 2016) and the subprime scandals (in the U.S.) (McCulley, 2009) that awarded individuals mortgages who were barely creditworthy. Such irrationality is backed by Ryoo (2016, p. 1) who claims that “a long period of prosperity sows a seed of its destruction by encouraging riskier financial practices lead by decision-making”. Following a market crash (Minsky moment – see figure 5)

where there is a precipitous collapse in asset values and the resulting bankruptcies lead to a sudden readjustment of risk perceptions in financial institutions. This creates a credit crunch (Kapeller and Schütz, 2012) where investment capital is difficult to secure (Ganti, 2019), slowing business growth and thus the cycle restarts.

Building upon Minsky's (1986) cycle, an explanation of Rodrigue's (2006) model characterises how behavioural bias and decision-making factors such as confidence in investment and consumption decisions impacts the economic cycle. The initial "stealth" phase is characterised by rational investments made by prudent, skilled investors. The general public keeps out of the markets as uncertainty is high and confidence is low. Investing at this moment is perceived as risky to general investors. Consumers are hesitant to spend due to decreased levels of disposable income (Keynes, 1937) and dampened consumer confidence (Minsky, 1986). Consequentially, Price levels increase very slowly (see Stohs, 1980). A symptom of reduced confidence at this stage is the aforementioned "credit crunch", stifling economic growth through decreased capital liquidity and the reduced capacity to borrow.

During the second stage of "awareness", assured investors begin to notice economic momentum and inject additional funds to the market which causes inflation. Reasoning for such may be the gambler's fallacy bias, proposed by Kahneman and Tversky (1971); where investors believe that because a stock has done well in the past it will continue to do so in the future. Corporate profits grow as the economy recovers. In turn, the general public increase consumption due to factors such as higher income levels (Keynes, 1937) and conspicuous consumption (Veblen, 1970). This view is backed by Gurley and Shaw (1955, 1960 and 1967) who assert that financial development is a positive function of real income and wealth.

The third stage, "mania", is a period where the general public get involved, engaging in risky investment activity defined by extreme market confidence (over-optimism) and negligible uncertainty,

irrationally absent of any expectations of failure. This is known as a Minsky moment (see figure 5), where the onset of a market collapse is brought on by the reckless speculative activity that defines an unsustainable period of constant inflation (Ganti, 2019). Aggregate consumer spending also escalates (Keynes 1937, Minsky 1986).

The final juncture as Rodrigue (2006) describes, is a “blow-off” phase, defined by panic and low market confidence. It is when a trigger impulse breeds uncertainty, and everyone begins to expect price declines. For example, the U.S. market crash began on September 29, 2008 when the Dow fell 777.68 points (us.spindices.com, 2020). At this stage, general investors irrationally panic by selling their assets and stocks at lower prices than their purchasing value. Asset prices plummet as a result, causing further declines in GDP. This is known as availability bias; when investors overreact and fail to use proper context when evaluating this information (Esgate and Groome, 2005). This expeditious transition is known as the “bursting of the bubble”. An explanation for such panic selling resides in Kahneman and Tversky’s (1979) aforementioned prospect theory built upon the idea of “loss aversion”; The idea that humans fear a loss more than they get pleasure from a gain. What follows this final stage of Rodrigue’s (2006) cycle is a stable period of consolidation, where past debts are repaid, financial stability is regained and conspicuous consumption motives and destabilising institutional dynamics gradually take over again.

A prime example of ‘over-optimism’ during the aforementioned “mania” stage of a bubble is the flawed psychology displayed among Irish decision-makers and the general public in relation to the continuation of Ireland’s abnormally high economic growth prior to the 2008 downfall. Nyberg (2011) refers to such “mania”; stating: “the widespread consensus as well as the confidence, until the very last moment in late 2008, that everything would end relatively well points to the existence of a national speculative mania in Ireland during the period” (Nyberg, 2011 p. 94). Additionally, in line with Minsky’s beliefs, Regling and Watson

(2010) refer to ‘euphoric conditions’ and behaviour ‘embedded in collective psychology’ in Ireland during such period.

According to O’Mahony (2018) and Brunnermeier (2001), humans have a natural tendency to “follow the herd” i.e. blindly following what other investors are doing. If one were to follow the wisdom of Warren Buffett and “be fearful when others are greedy and greedy when others are fearful,” it would be expected that one would avoid investing during booms. However, we all exhibit irrational behaviour at times (Kahneman and Tversky, 1979) and it can cause poor decision-making, such as taking excessive and illogical risks at inappropriate times.

Conclusion

Evidence from the analysed body of literature suggests that decision-making has a convincing impact on fluctuating the economic cycle between periods of prosperity and decline. The basis of this conclusion is well-founded upon research of a wide body of academic literature and credible sources. This is a topical subject as the explanation of fluctuations in aggregate economic activity between economic expansions and contractions is one of the primary concerns of macroeconomics. The continuous cyclical oscillation of economic growth as defined by GDP, between periods of perceived stability and definite instability is endlessly experienced in western economies. Examples of such phenomenon was provided by means of reference to the Irish and U.S. economies respectively. As such, the relevance of my research should be deemed justifiable. The majority of reviewed literature in this document supports my research proposition that decision-making has an effect on the cyclical nature of economic development. As specified, such decision-making is shaped by behavioural biases that often cause irrational decisions with negative outcomes. Although some neo-classical economic theorists, as mentioned above, believe that humans are completely rational, there is empirical evidence in this literature review that this is not the case. The

sections of this project have set out the theoretical underpinnings for my contention that peoples decisions matter as it pertains to an economy and that learnings from behavioural economics can improve our understanding of how decisions are made. I believe the project has therefore achieved its goal of raising awareness of bounded rationality in human decision-making. My hope for the future is that this awareness would lessen the prevalence of boom/ bust cycles, characterised by economic instability so as to promote more judicious thinking among individuals with the result of continual economic stability.

This project sought to get to the heart of what goes wrong in economic cycles as it pertains to the financial judgements that have either a direct or indirect effect on it. I believe this literature review, although brief, forms a solid basis of understanding from which supplementary research can achieve that purpose. The main learning from this research was that individuals must practice more inference and be more aware of their cognitive biases, on a general and institutional level. Improved reasoning would encourage citizens to make better financial choices, and worldwide leaders to improve policy approaches. This would increase longevity in financial stability, so society can reap the benefits that come with it and avoid the social consequences associated with credit bubbles and eventual recessions such as unemployment, emigration, cuts to public services, tax rises, and general disorder.

Further research stemming from this project could explore further in-depth, the impact of decision-making, in particular behavioural biases, on different sectors of an economy that constitute GDP. Since the most recent market crash in Ireland of 2008 was predominantly attributed to the housing market crash, a particular area I would like to research is the impact of housing dynamics and related investment decisions on the creation of economic bubbles.

Slovic (1971, p. 2) asserts “having a full understanding of human limitations will ultimately benefit the decision-maker more than will naïve faith in the infallibility of his intellect. As such, the following

question arises will informing individuals about their cognitive biases make them less susceptible to them?” Since this research suggests the presence of irrational forces influencing individuals’ decision-making process, further research could emphasise the development of methods to help decision-makers overcome such behavioural biases. Another question arising from my analysis is: “is it possible to reveal behavioural biases as they are happening so that action can be taken which would lessen or deter future crises?” Further study could design and apply a method of identifying behavioural bias in individuals (in government officials, for example) so as to recognise it and prevent the potential effects of such to avoid recessions. To quote Smith (1968) “you are - face it - a bunch of emotions, prejudices, and twitches, and this is all very well as long as you know it”.

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An investigation into the potential impact of electric vehicles on Irish Society

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Abstract

The purpose of this literature review is to explore the benefits of Electric Vehicle (EV) adoption in Ireland and Irish consumers' attitudes to EVs. Ireland has great potential for the successful adoption of EVs due to its geographical location, short inter-urban routes, high levels of wind power and mild climate. Whilst some critics highlight the environmental damage caused in the manufacturing process most focus on the benefits of EVs which include lower GHG emissions, less damage to the environment and some benefits for human health. Government targets have been set and financial incentives have been developed to promote the adoption of EVs. However, Irish consumers feel that the infrastructure needed for EVs is underdeveloped and requires more Government intervention delaying mass adoption.

Keywords: Electric Vehicles, Consumer attitudes, Ireland

Introduction

Widespread adoption of sustainable innovations such as electric vehicles (EV) are currently gaining much attention and are being introduced as a resolution to address problems such as global climate change, local air and water pollution, reliance on fossil fuels and increasing Greenhouse Gas (GHG) emissions (Lebeau *et al.*, 2013; Meelen *et al.*, 2019). According to the United States Environmental Protection Agency (U.S. EPA) (2020a), GHG emissions are “*gases that trap heat in the atmosphere*” and such gases include carbon dioxide (CO₂), nitrogen oxides (N₂O) and sulphur oxides (SO₂). Lebeau *et al.* (2013) argues that the environmental challenges as already mentioned, are forcing the transportation sector to shift towards eco-friendly technologies. Furthermore, they also declare that there are various pushing factors like the increasing awareness of the carbon footprint of Internal Combustion Engine Vehicles (ICEV) have led and gained interest in EVs. Moreover, as a result of environmental degradation from climate change, various government bodies have developed an uptake of EVs by implementing financial incentives to increase consumer adoption of EVs.

According to the International Renewable Energy Agency (2017), an EV is defined as “*a vehicle with an electric drive (motor) propulsion system that can be plugged in to recharge the batteries that provide at least some of the energy storage on the vehicle*”. Additionally, EVs emit zero tail pipe emissions and offer various other benefits. However, several analysts also assert negative criticism of EVs, and such arguments are presented in the literature review. The purpose of this research is to further explore the EV phenomena and analyse the value of EVs within society. Subsequently, this research is significant because EVs are timely and as a result of environmental deterioration from climate change, it has now become a responsibility within society to reduce such environmental problems.

This research is valuable as it seeks to make an incremental theoretical contribution to the field by providing a clearer understanding of what

EVs are, and how significant they are within society. In order to understand how EVs will be diffused within society, it is useful to look at the situation in one jurisdiction. As such, this study will examine how Ireland is planning to achieve the widespread use of EVs. In order to examine the situation of EV use in Ireland, it is important to explore three perspectives:

1. What are the environmental influences of electric vehicles?
2. How are Government bodies promoting the use of electric vehicles within society?
3. What are the feelings and thought processes amongst consumers towards purchasing an electric vehicle?

Evidence for Climate Change

Van Mierlo (2018) carried out a study investigating the history and the development of EVs throughout the years. He states that EVs have been in operation since the nineteenth century. In his study, he mentions Thomas Parker, an electrical engineer, who invented the first EV in 1884. However, De Santiago *et al.* (2012) points out that the ICEV took over from EVs at the beginning of the twentieth century. As a result of the oil crisis in the 1970s, De Santiago *et al.* (2012) proclaim a revived interest in EVs developed. Throughout this period, due to energy issues and environmental protection issues, Chan (2013) observes that a safe, energy flexible and sustainable way of transportation that would be effective, intelligent and sustainable was needed. Therefore, according to Van Mierlo (2018), car manufacturers like Renault, Peugeot and Citroën assembled thousands of EVs in Europe. Nevertheless, the cost for maintaining an EV, relative to an ICEV, ultimately became a critical challenge to the EV. For instance, a history completed by Chan in 2013 states that Henry Ford's ICEVs were comparatively inexpensive compared to EVs. Subsequently, recharging EV batteries cost €0.20 per kilowatt-hour whereas filling an ICEV cost €0.05 a litre. As the number

of gas stations increased, consumers began to favour ICEVs because they were cheaper and more efficient (Chan, 2013).

Nonetheless, interest in EVs has resurfaced over the last decade (Rezvani *et al.*, 2015). Woodward *et al.* (2019) assert that EVs are becoming more popular in a positive way because customer perceptions, technological developments and intervention from governments are merging to focus attention on EVs adaption. Likewise, a study conducted by Van Der Linden *et al.* (2015) portray due to customer perceptions, technological advances and governments promoting EVs, EVs are increasingly popular because climate change is a growing concern and human beings are a huge contributor to the changing climate. *The United Nations' Framework Convention on Climate Change* (UNFCCC) defines climate change as “[A] change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere, and that is in addition to natural climate variability over comparable time periods” (United Nations, 1992). More specifically, the Environmental Protection Agency (EPA) (2020a) describe climate change as “a significant change in the measures of climate, such as temperature, rainfall, or wind, lasting for an extended period – decades or longer”. For example, according to Mechler *et al.* (2019), climate change is likely to be a potential cause of severe climate events, for instance, heat waves, droughts, flooding, hurricanes and rising sea levels.

Consequently, increasing the use of EVs may assist the environment and could potentially reduce the frequency of such extreme weather events. For instance, an analysis of EVs in China concluded, environmental impacts of EVs between 2010-2020 found that EVs would minimise the energy consumption of vehicles by a national average of 17%-19% and 30%-33%, respectively (Lang *et al.*, 2013). Thus, EVs will generate fewer emissions that contribute to climate change as opposed to ICEVs (U.S. Department of Energy, 2018). Similarly, Choi *et al.* (2018) state, to counter the impacts of climate change, EVs are liable to contribute to

the decrease of environmental pollutants, such as GHG emissions in comparison to ICEVs.

Justification of the Use of Electric Vehicles

Egede *et al.* (2015) designed a study to explore the life cycle of EVs and identified influencing factors for the ecological use of EVs. In relation to the environment, they state EVs solve problems that are initially caused by ICEVs. As an illustration, EVs generate little or no local air pollution and Egede *et al.* (2015) propose that this is an opportunity for large cities like New York which experience problems from severe air pollution and high noise levels caused by ICEVs. Moreover, they also indicate EVs are more advantageous to the environment than ICEVs. For instance, EVs are more energy efficient and environmentally friendly as they have zero tailpipe emissions. For example, the Sustainable Energy Authority of Ireland (SEAI) (2017a) state that for every kilometre driven, EVs have less N₂O and SO₂ emissions than ICEVs. They also proclaim that EVs produce 60 grams of CO₂ emissions per kilometre (60g/km) where as ICEVs generate 130g/km. Consequently, EVs provide 70g/km fewer emissions in contrast to ICEVs. The SEAI (2017a) also articulate EVs “*remove emissions from the air*” which are caused by ICEVs, thereby saving cyclists and pedestrians from inhaling harmful gases. By charging EVs at night, the amount of renewable energy sources (RES) used will be significantly higher. Consequently, this acts as a safeguard to stabilise the electricity system (SEAI, 2017a). According to the U.S. EPA (2020b), EVs convert more than 77% of electrical energy whereas ICEVs transform about 12%-30% of energy. However, there are also positive non-climatic effects of EVs, for example, Hawkins *et al.* (2015) argue that autism spectrum disorder and low birthweight of children is correlated with GHG emissions. In addition, a study by Malmgren (2016) states that children are more susceptible to health impacts as a consequence of their physiology, because they are growing, and have elevated respiratory levels. Such emissions can be eliminated by

converting to an EV motorised by clean renewable energy (Malmgren, 2016).

Criticism of the Use of Electric Vehicles

Nevertheless, in 2010 a study by Notter *et al.* exposed that EVs produce more CO₂ emissions through their manufacture than ICEVs. Furthermore, they state that EVs have a lower overall carbon footprint throughout their full life cycle in comparison to ICEVs. However, a paper published in 2012 by Hawkins *et al.* particularly emphasises the harmfulness within the manufacturing process of EVs compared to ICEVs. It concludes that during production, EVs produce twice as much CO₂ emissions than ICEVs. Similarly, McManus (2012) mentions the batteries within EVs such as lithium-ion and nickel–metal hydride batteries are the highest-ranking CO₂ emissions producers. Moreover, Dehghani-Sanij *et al.* (2015) mention the metals and non-metals involved in battery manufacturing of EVs can endanger human health by different exposures such as eye or skin contact, inhalation, injection and ingestion and such batteries create natural toxins, including harmful waste, GHG outflows, and noxious vapor. Subsequently, Elwert *et al.* (2015) state collecting, recycling and transfer of batteries may be a challenge as there is specific recycling activities and dismantling challenges in the field of EVs especially because EV batteries cannot last a fifteen-year cycle which is about the average lifespan of ICEVs (Deloitte Global Services Limited, 2011). Also, according to Ramoni and Zhang (2013) if such batteries are damaged, toxic gases are produced and ingredients such as lithium and cobalt are limited and exploitation will contribute, among other environmental consequences, to water pollution and depletion.

Environmental Forces

A proponent of EVs, Canals Casals *et al.* (2016), declare EVs are regarded as the most compelling option for a sustainable transport market as opposed to ICEVs. As previously mentioned, Egede *et al.* (2015) assert that EVs produce zero tailpipe emissions, however, Canals Casals *et al.* (2016) also argue that EVs have null tailpipe emissions such as N₂O

and SO₂. Furthermore, a study conducted by Nanaki and Koroneos (2016) state that the automotive industry plays a significant role when considering pollution because it contributes to approximately one-fifth of the world's total energy consumption, while one-quarter of all energy is CO₂ emissions, with nearly half of those emissions originating from ICEVs. Thus, Canals Casals *et al.* (2016) state that the introduction of EVs is a potential opportunity to attain pollution and increase energy efficiency.

Due to environmental degradation, it has become a primary concern for governments to support the implementation of EVs within society, which will be further discussed throughout the document. Additionally, the EPA (2020b) focuses primarily on the causes of climate change, however, they state the main problem is an increase in GHG emissions. For example, Ireland's GHG emissions have increased and as a result of this, EPA (2020b) state that the Earth's climate is becoming warmer. Ireland's GHG emissions like CO₂, and N₂O, have increased immensely, as an illustration, they articulate that emissions have increased by 3.5% and 3.7% in 2016 and 2017, respectively. Moreover, EPA (2020b) also declare 72% of total GHG emissions are derived from the transport sector in Ireland. Thus, pursuant to Hawkins *et al.* (2012), EVs produce 26-30% fewer GHG emissions in comparison to ICEVs during the reported lifecycle. Consequently, the introduction of EVs within society may conceivably maintain GHG emissions from increasing gradually.

Subsequently, research conducted by Moriarty and Honnery (2012) indicates that such effects from climate change, as already stated by Mechler *et al.* (2019) are heat waves, flooding, droughts hurricanes and rising sea levels. However, Moriarty and Honnery (2012) elaborate by stating such climate change effects will involve a major transition from fossil fuels to renewable energies as the primary source of energy. As EPA (2020b) proclaim most GHG emissions are produced by transport, in addition to this, in 2016 EPA asserts that transportation is the principal cause of air quality issues in large cities. Both studies produced by the

EPA suggest that the amount of CO₂ emissions discharged by transportation has a negative effect on global warming.

Notwithstanding, in accordance with the International Energy Agency (IEA) (2020), globally, transportation is “responsible for 24% of direct CO₂ emissions” from ICEV. As a consequence of this, a different study completed by Moriarty and Honnery in 2009 explores the global energy demand. However, throughout the analysis, they assert that oil reserves are decreasing gradually, and as a result of this, a shift towards RES will be required. In addition, they forecast that reserves such as oil, gas, and coal will banish by 2030. Furthermore, they also point, due to technological advances of RES such as EVs, will assist degradation of the earth’s environment and defend against the decrease of oil reserves. Subsequently, a report published in 2017 by the Department of Communications, Climate Action and Environment (DCCA) states there will be several changes occurring primarily in the transport sector, such as aiming to have one million EVs on the road by 2030. Therefore, the previous studies suggest EVs are becoming vital in relation to reducing CO₂ emissions to enable climate change.

Government and Regulatory Regimes

A report conducted by the European Commission in 2018 observes that governments are aware that CO₂ emissions particularly from ICEVs have increased and it is a problem that requires attention. However, Micari *et al.* (2017) states that reducing the dependability of fossil fuels within the transport sector may be a challenge for governments to ensure it does not affect its performance and mobility. DCCA (2020a) proclaim in order to assist climate change and prevent CO₂ emissions from increasing gradually, the *Paris Agreement*, a global arrangement on climate change, was put in place in December 2015 in Paris. Furthermore, in accordance with DCCA, a total of 196 states and the European Union (EU) signed the *Paris Agreement* and as a result, such states will “take ambitious mitigation action”. Moreover, Rogelj *et al.* (2016) assert that the *Paris Agreement* goal is to limit global warming well below 2°C and “pursue

efforts” in order to restrict it to 1.5°C. Additionally, DCCAE (2017) mention that the agreement also seeks to enhance the global capacity to adapt to climate change adverse effects. Likewise, the EU are also taking action to enable climate change by implementing and following such policies. As an illustration, the EU aim to reduce 40% of GHG emissions by 2030 (European Commission, 2020). In addition to this, according to the European Commission (2020), this objective also implies approximately a 32% share for renewable energy and a 33% improvement in energy efficiency. Such climate change policies developed by the EU and the *Paris Agreement* seek to utilise EVs as a potential substitute to ICEVs, as according to the UNFCCC (2020), there will be a 20% growth in the use of EVs by 2030.

Parallel to the UNFCCC (2020) estimations, the Irish government has set similar targets by ratifying to reduce climate change by adopting to the *Paris Agreement* (DCCAE, 2020b). A report published by the DCCAE (2019) states that the Irish Government has also implemented the *Climate Action Plan* whereby Ireland are tackling climate change by achieving decarbonisation goals which are set out in the plan. Within the report, the DCCAE (2019) declare that the Irish Government aim to reduce GHG emissions by 30% in 2030. Furthermore, they also mention in accordance to the *Climate Action Plan*, the Irish Government also seek the adoption of a net zero CO₂ emissions target in Ireland by 2050. In order to achieve such goals, the Irish Government provide several financial incentives with the intention of decreasing CO₂ emissions. As mentioned already, due to environmental degradation, it has become a primary concern for governments to support the implementation of EVs within society. As an illustration, an analysis completed in 2018 by Weldon *et al.*, state that the Irish Government are assisting the adoption of EVs amongst consumer by implementing crucial incentives such as providing a €5,000 subsidy to purchase any vehicle that produces less than 75g of CO₂ emissions per km driven. Therefore, as previously mentioned, according to the SEAI (2017a), EVs produce 60g/km of CO₂ emissions where as ICEVs emit

130g/km. Thus, the Irish Government are trying to encourage citizens to purchase EVs. Moreover, the SEAI (2017b) mention that Ireland's vehicle registration tax usually varies from 14% to 36% of the sale value. However, SEAI (2017b) also proclaim Ireland's road tax is based on the amount of CO₂ emissions produced - EVs currently fall under the lowest tax category at €120. Furthermore, SEAI (2017b) also observe the first 2,000 citizens to purchase an EV were rewarded a free home charge point for their EV, nonetheless, the remaining EV owners are provided with a €600 grant towards implementing a home charger. Additionally, the Electricity Supply Board (ESB) (2020a) proclaim EV owners are provided with higher discounts on tolls during off peak times as they can save up 50% , also, Weldon *et al.* (2018) declare that electricity from public charge points is free due to delays in implementing a pricing system for the public charging system. As specified by the ESB (2020a), there are approximately 1,100 public charging points available for EV owners as there is a fast charger located every 60km along main roads and major urban centres.

However, in comparison to Norway, Ireland is performing relatively weak in the EV industry (Weldon *et al.*, 2018). Norway with a similar population size of 5.9 million (Central Statistics Norway, 2020) is a global leader in terms of EVs and had a market share of 56% in 2019 (NEVA, 2019) which accounts to roughly 230,000 registered EVs (NEVA 2019). Alas, as of 2018, Ireland with a population size of 4.9 million (CSO, 2020) had a comparatively low EV market share which was a mere 0.6% that accounts to roughly 2,200 EVs (Weldon *et al.*, 2018). Notwithstanding, a report conducted by IEA (2018) affirm EVs have been adopted and deployed in Norway through policy and have been actively supported by the Norwegian Government since the 1990s. A study carried out by Figenbaum *et al.* (2015) explore the opportunities and experiences of electromobility in Norway. Furthermore, Figenbaum *et al.* (2015) conclude that the Norwegian EV policy has reduced the barriers for electromobility that enable consumers to purchase EVs by

introducing various incentives. For instance, Figenbaum *et al.* (2015) declare that there is an exemption from 25% value-added tax (VAT) on the purchase of EVs. Moreover, in contrast to Ireland, Figenbaum *et al.* (2015) also points out that consumers who maintain an EV in Norway, have access to bus lanes which is advantageous for consumers as it saves time especially during rush-hour delays within traffic. However, an analysis completed by Wang *et al.* (2019) assert providing consumers admittance to bus lanes is a disadvantage as a limited number of EVs can utilise the lanes. Wang *et al.* also adds that this could lead to vehicle ownership because people who drive an EV will drive on the bus lane instead of travelling on the bus. Moreover, Figenbaum *et al.* (2015) proclaim that an exemption from the registration tax was initially introduced in 1990 which was based on the value of the car but today this tax has altered as EVs below 1540 kilograms are excused from paying tax. Additionally, NEVA (2019) assert that as a result of the progressive tax systems such as the VAT and weight tax, it makes several EV models inexpensive to buy as opposed to an ICEV. As an example, NEVA (2019) emphasise that the price of a Volkswagen E-Golf is €33,286, while the purchase price of a Volkswagen Golf is €34,076. Furthermore, NEVA (2019) proclaim this is the key explanation why the Norwegian EV market has been successful in comparison to other countries. Like Ireland, Kolbenstvedt *et al.* (2014) state the Norwegian Government provide EV owners with free public parking in most places and offer free toll roads which is beneficial for commuters as Figenbaum *et al.* (2015) proclaim toll roads are expensive in Norway as commuters can pay up to €2,500 a year. Moreover, as previously mentioned, the ESB (2020a) state that there is approximately 1,100 public charging points available for EV owners and, a fast charger located every 60km along main roads and major urban centres in Ireland. However, in contrast, NEVA (2019) declare that Norway currently have more than 10,000 public charging points available while more than 1500 cars can fast-charge their EV at the same as well as having two fast charging stations located every 50km on all main roads in Norway.

EV Adoption Behaviour Amongst Consumers

In terms of consumer behaviour and barriers towards successful adoption of EVs, Rezvani *et al.* (2015) affirm that supportive policies influence consumers decisions when purchasing an EV. Furthermore, they mention that national government bodies develop such policies for decreasing GHG emissions which results in an increase for the adoption of EVs. Nevertheless, concerns regarding the understanding and adoption of such policies have been developed by consumer behaviour analysts. For instance, Lane and Potter (2007) declare that in relation to the environment, fuel prices, financial incentives, and expansion in fuel infrastructure provided by the government, will significantly influence consumers' adoption of EVs. In addition, they also assert that such policies must be clear to consumers in order to effect adoption. Similarly, a study conducted in 2009 by Sovacool, illustrates that such policies, or frequent policy alterations can establish ambiguities amongst consumers who can become resilient and subsequently prevent the adoption of EVs. Also, consumers' behaviour towards EVs technological features and attitudes in relation to the usefulness of EVs are considered to inhibit the adoption rates. For example, Skippon and Garwood (2011) completed interviews with 56 UK households who were offered an opportunity to drive an EV for one week. As a result, several participants declared that there was a restricted range of 160km, therefore, it was perceived to have an EV as their second car. Furthermore, 34% of the participants proclaimed that they would prefer to own an EV that could drive up to 240km, as it would be more suitable to have as their first vehicle rather than having it as their second vehicle. Notwithstanding, the survey highlighted that the limited driving range of an EV is seen as a barrier to adoption. In addition to this, Skippon and Garwood (2011) identified that EVs performance, safety, style, and size were also perceived as barriers to adoption. However, they also acknowledged that several consumers mentioned in terms of performance, positive results were assessed primarily for acceleration, smoothness and less noise. In contrast, after one-week trial of EVs, interviews conducted in a study by Graham-Rowe

et al. (2012) portrayed that performance and safety of EVs were negatively assessed by consumers as they felt there was less power in acceleration especially at higher speeds. They also point out that following the one-week trial of EVs, consumers expressed diverse emotions such as “feeling good” or “feel a little less guilty” from driving an EV as it is more environmentally friendly. Nevertheless, some drivers felt “embarrassed” by driving an EV because they did not have the same visual appeal as ICEVs. Additionally, Skippon and Garwood (2011) and Graham-Rowe *et al.* (2012) mention that infrastructure for EVs such as charging points are underdeveloped and felt this could be improved upon as many drivers perceive EV technology and charging infrastructure as being “early days” of development. Moreover, they also mention this could be achieved by several government bodies by promoting EVs more, and consequently, adoption of EVs amongst consumers could increase significantly.

Conclusion

As demonstrated in the research, studies illustrate that EVs have the potential to be less damaging to the environment, as they could potentially contribute to a decrease in environmental problems such as GHG emissions. Furthermore, various proponents of EVs argue that EVs are advantageous in relation to the environment and human health (Egede *et al.*, 2015; Raz *et al.*, 2015; Canals Casals *et al.*, 2016; Malmgren, 2016; SEAI, 2017a; Choi *et al.*, 2018). However, the research also suggests that there is criticism for EVs regarding the manufacturing process of EVs, which can affect both the environment and human health (Notter *et al.*, 2010; Hawkins *et al.*, 2012; McManus, 2012; Ramoni and Zhang, 2013; Dehghani-Sanij *et al.*, 2015; Elwert *et al.*, 2015). Generally, most academics presented in this review argue that EVs can assist in combatting environmental issues as they produce fewer GHG emissions in comparison to ICEVs. As illustrated, the EPA (2020b) discovered that 72% of total GHG emissions are derived from the transport sector in Ireland, and the weight of evidence has shown that EVs produce fewer

GHG emissions in comparison to ICEVs. Therefore, the adoption of EVs within society could assist such environmental challenges in Ireland and in other countries.

As a result of environmental degradation, this research illustrates that is has become a primary concern for government bodies to support the implementation of EVs within society. Findings by the UNFCCC (2020) and the European Commission (2020) exemplify that such regulatory regimes highlight that EVs will be a potential substitute to ICEVs. Regarding the Irish Government, such studies demonstrate that they are tackling climate change by setting targets and promoting EVs by providing various financial incentives to consumers (SEAI 2017b; Weldon *et al.*, 2018; DCCAE 2019). However, it is important to consider, that as discussed in the literature review, Ireland has a relatively poor charging infrastructure and market penetration as opposed to Norway. Consequently, recommendations arising from this review would suggest a need for increased research in the development of EV charging infrastructure in Ireland.

As already demonstrated in the literature review, studies have shown that there are mixed feelings and thoughts amongst consumers towards EVs. In relation to consumer purchasing of EVs, interviews conducted by Skippon and Garwood (2011) and Graham-Rowe *et al.* (2012) concluded that consumers feel that the infrastructure needed for EVs is underdeveloped and could be improved by government intervention. Furthermore, according to the ESB (2020b), Ireland has great potential for the successful adoption of EVs due to its geographical location, short inter-urban routes, high levels of wind power and mild climate. However, to further investigate the EV phenomena, and gain a more in depth understanding on the topic, a piece of primary research could be conducted to critically analyse consumers attitudes and preferences towards EVs in both urban and rural areas throughout Ireland. This could be useful to differentiate the feelings amongst consumers in both areas and gain more timely and accurate results on the diverse preferences

amidst consumers. Such research could be gathered by conducting a concurrent mixed method research design. To collect this research, a survey could be completed which will produce qualitative and quantitative results. Upon completion, the findings from the survey could be linked with the secondary research that is presented in order to compare the findings and subsequently, develop informed conclusions.

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A study of workplace injuries amongst 16 to 29 year old workers in Ireland

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Abstract

This study seeks to more deeply understand the reasons why young workers are more susceptible to injury in the workplace than older workers in Ireland. Whilst this is a global phenomenon, there is little research on this topic in Ireland currently. In particular, this project will focus on injuries that cause workers aged 16 to 29 to miss three or more days of work and that are of a non-fatal nature.

The literature review highlights some of the common causes of injury including inadequate training, insufficient supervision, difficulties balancing shift work with study, physical makeup and gender. The economic costs and psychological consequences of injury in the workplace are highlighted. Finally, some implementable recommendations are made.

Keywords: Accidents, Injuries, Health and Safety, Ireland, younger workers

Introduction

This study aims to explore the reasons why young workers, defined by EuroStat (2020) as aged 16-29-year olds, are more susceptible to injury in the workplace than older workers. There has been research carried out on this topic with a focus on various countries however there is a lack of research that has a specific focus on Ireland. I will therefore conduct my research from an Irish viewpoint. For this research, I am investigating injuries that cause workers to miss three or more days of work. The injuries being investigated are of a non-fatal nature.

Throughout this project I will be addressing three questions:

1. What are the causes of young workers being injured in the workplace?
2. What are the effects of injury on those who have been injured?
3. How do Irish rates of injury compare to European rates (by sector)?

I will begin the project by giving a brief overview of health and safety in Ireland. I will then focus on my first research question which identifies the main causes of younger workers being injured in the workplace. Next I will examine the effects of injuries in terms of economic and psychological consequences. Following this, I will compare Irish and European injury rates by sector. The sectors concerned are construction, agriculture, fishing and forestry, transportation and storage and accommodation and food services. The project will conclude with a summary and an insight into the steps I would take following this research.

I believe this is an important topic to investigate due to the high rates of workplace injury involving young workers across the world- this was

discovered while completing a literature review on the topic. As I prepare to enter the workplace, I would like to be aware of potential causes of injury and to be equipped with the knowledge to avoid these. I also have a keen interest in occupational health, safety, and ergonomics.

Health and Safety in Ireland

The most recent statistics analysing workplace injury in Ireland by age band were published in 2017. They show that 39,000 workers between the ages of 16 and 34 were injured in workplace accidents in Ireland in 2017 (Health and Safety Authority, 2019 p.34). The causes of these injuries or the sectors they occurred in were not stated. These significant figures highlight the importance of the implementation of workplace rules and regulations regarding health and safety among young workers.

Due to the rising number of young people in employment in Ireland, there is an increased risk of injury. “The unemployment rate for 15-24-year olds (youth unemployment rate) decreased from 12.5% to 10.9% over the year to Q1 2019” (CSO, 2019 p.3). Employers play an important role in ensuring occupational safety exists for employees in the workplace. Government laws have been implemented in Ireland to protect the young person at work, such as The Protection of Young Persons (Employment) Act 1996. This act states information such as the minimum age for employment and the maximum working hours a young person may work. Employees must also work to ensure the safety of themselves and others in the workplace.

Literature Review

Occupational safety may be defined as “the absence of factors that could lead to accidents, injuries or interruptions to work” (Saad, 2015 p.1). O Alli (2008 p.7) defined it “as the science of the anticipation, recognition,

evaluation and control of hazards arising in or from the workplace that could impair the health and wellbeing of workers, taking into account the possible impact on the surrounding communities and the general environment.” It refers to ensuring the health and safety of employees in all aspects of their employment.

The Causes of Young Workers Being Injured in the Workplace

Tucker and Folkard (2003 p.97) found that injury rates among adolescents drastically rose during shift work. Clarkson et. al. (2018 p.120) supported this when it was found that adolescents who participated in shift work, particularly at inconvenient times while trying to balance work and study, were at high risk of injury. “Adolescents were working up to 20 hours a week and often worked after 11pm, before going to school the next day” (Clarkson et. al., 2018 p.120). Safe Work Australia (2013 p.5) found that “young workers were more likely to work under shift arrangements than their older counterparts with nearly one-quarter (23%) of young workers working under shift arrangements compared with 15% of older workers.” Those who rise at early hours of the morning may be susceptible to fatigue, resulting in an increased risk of injury. O’Brien (2010 p.130) indicated that adolescents’ risk-taking tendencies rose when they were not getting enough sleep. Shift work can lead to mental and physical health problems due to its interference with one’s sleep. Lee and Lee (2006 p.25) found long working hours to be a major contributor to workplace accidents. They found that a “one-hour reduction in weekly working hours significantly decreases the injury rate by about 8%” (Lee and Lee, 2006 p.25). Often young workers who attend full time college programmes work long shifts during the weekends to reach their contracted number of hours. Decreasing these hours may

result in lower rates of workplace injuries, due to workers having decreased levels of fatigue.

“Training workers in how to perform their job safely is often cited as an important strategy for preventing workplace injury” (Zackos and Runyan, 2000 p.256). Young workers may be inadequately trained in areas of manual handling, operating machinery, and hazardous chemicals. Training is often seen as an expense to companies and management may feel they lack the time and expertise to train young people. Jackson (2001 p.26) suggested that “better safety training, hazard assessments, tool and workstation design, engineering controls, and the use of personal protective equipment” would drastically reduce emergency department treated injuries. In the workplace, older workers may have worked for the company for many years and they may therefore be proficient in skills and expertise that could help them avoid injury, as compared to younger workers.

“Consistent with hypothesis, physical hazards, workload, and job boredom were positively related to work injuries” (Frone, 1998 p.572). Adequate training is essential in jobs where these factors are in existence, due to the high-risk rate of injury. Younger workers are likely to engage in seasonal, part time or temporary work, which may result in learning gaps and a fragmented safety culture. This may influence younger workers’ perceptions of health and safety, and they may feel as though they do not have to be as concerned with it as those in full-time positions (Smith, 2018 p.192). Smith et. al. (2007 p.39) found that women in medium sized workplaces and men in large workplaces had increased probability of safety training. However, there was no increased likelihood of safety training received by younger workers.

Din (2019 p.344) found that lack of adequate supervision was a major cause of injury among younger workers. “Workplace supervision is necessary as these were young people, energy levels were high... risk taking tendencies were there.” A second study found “young workers who are regularly exposed to supervisors’... injunctive safety norms reported fewer work injuries via less frequent work-related risk taking” (Pek et al., 2017 p.208). Lack of supervision may occur due to the reluctance or idleness of supervisors. Young workers may be new to occupations that require close supervision, such as working in a factory environment and should therefore be monitored closely until they are familiar with the work. “Increasing adult supervisory-to-adolescent worker ratio during the day shift may also be a means by which risk from this effect may be mitigated” (McCall et. al., 2007 p.254).

The rates of injury among young people in the workplace may be dependent on their gender. Safe Work Australia (2013 p.1) found that “young male workers recorded an incidence rate of injury 9% higher than young female workers and 21% higher than older male workers,” however when the hours were controlled, young females “had a frequency rate of injury 13% higher than young males and 44% higher than older female workers. Breslin et. al. (2006 p.108) found, “young males had a higher crude rate of injury... than young females.” This may be due to differences in the nature of the work performed by males as compared to females. Males are more likely to engage in physically demanding work.

Zakocs and Runyan (2000 p.259) proposed that injury rates among younger workers may be higher due to their size and musculoskeletal development. “Musculoskeletal disorders, especially back injuries, may increase younger workers’ vulnerability to further injuries” (Breslin et.

al., 2003 p.3). The European Agency for Safety and Health at Work (2019) highlighted “reports of schoolchildren reporting musculoskeletal pain at earlier stages of life. These findings raise the issue of young workers coming into the workplace with pre-existing musculoskeletal problems that have the potential to be exacerbated by work.” Often younger workers may not be physically competent to engage in physically demanding work. The use of large industrial machines and manual work often involves a physically competent and strong person. This applies particularly to trade and manual work.

The nature of the work carried out by adolescents has an impact on workplace injury. Safe Work Australia (2013 p.32) found that younger workers were injured more often when working in a trade, accounting for 32% of claims. Breslin et. al. (2006 p.108) supported this when it was found that “jobs in trade/transport, farming/fishing/forestry, and process/manufacturing had the highest crude injury rates.” McCall et. al. (2007 p.253) found that workers in the farming, fishing and forestry sector had the highest rate of indemnification days taken per claim.

It may often be the case that injury among young workers occurs due to the carelessness of the employer. The Health, Safety and Welfare at Work Act 2005 outlines several obligations an employer has towards their employees in terms of health and safety. It is the duty of the employer to “ensure the safety, health and welfare at work of his or her employees... To provide information, instruction, training, and supervision where necessary... To manage and conduct work activities in such a way as to prevent any improper conduct or behaviour likely to endanger employees” (Health and Safety Authority, 2020). However, employers sometimes do not recognise the additional protection that is required for young workers.

Damage to one's psychological health may occur due to bullying in the workplace. Bullying exists in physical, verbal, social and cyber forms. Vaez et. al. (2004 p.573) found "for both sexes, threats and violence are relatively more common among younger workers, those with part time employment, those in "service, care, sales" sectors, and in female dominated occupations." A report by Eurofound (2015 p.24) confirmed that the threat of violence was highest in health and social work sectors, which are mainly female dominated occupations. This was due to employees dealing with "their colleagues, superiors and inferiors as well as third parties, and because the management of interpersonal relationships is increasingly complex" (Eurofound, 2015 p.24). Bullying in the workplace can take a significant toll on one's health. Frone (2000 p.254) found conflict with co-workers was a source of depression, low self-esteem and gave rise to somatic symptoms in younger workers. Stress is a major result of workplace bullying (Hoel et. al., 2001 p.6) (Smith et. al., 2000 p.4). Einarsen et. al. (2007 p.214) found that employees who experience bullying have increased suicide risk taking tendencies and may be subject to drug abuse.

It was suggested that bullying and harassment were more likely to occur among younger workers due to the fact that "while adults often differentiate between acceptable behaviour among friends and appropriate workplace behaviour, younger workers may find this distinction difficult, as jobs are sometimes dependant on personal relationships" (McLaughlin et. al., 2008 p.91). Despite this, Runyan et. al. (2007 p.530) reported that adolescents received little to no training on how to deal with workplace aggression, and therefore have no experiences to draw from if it were to occur in the workplace. This may

be a factor which results in them being more susceptible to bullying than their older counterparts.

Although more likely to be injured, Clarkson et. al. (2018 p.121) highlighted the fact that younger workers are less likely to report injury in the workplace, report hazards or claim for compensation when injured. This was mainly due to lack of confidence and a fear of causing problems within the workplace. More than a third were afraid they would lose their job. This contrasted with findings by Safe Work Australia (2013 p.20), who proposed that young employees did not report injuries as they did not feel their injuries were substantial enough to make a claim.

Effects of Workplace Injury

Economic Consequences

Injuries in the workplace have significant economic consequences, both for organisations and employees. Due to the high number of workplace injuries among younger people, young worker compensation may be costly to organisations. As previously mentioned, Jin (2014 p.8) found “crude rates of worker compensation injury are higher among males than among females in all age groups.” This may be because a greater number of males engage in physical work than females, such as work in the construction and trade sectors. Findings by Breslin et al. (2003 p.3) indicated that male adolescents and young adults were more likely to make a claim than their older male counterparts.

O’Halloran (2010) reported that workplace accidents cost the Irish economy at least €3 billion annually. These figures are huge and small/medium sized businesses often do not survive the cost of these claims. In more recent times in Ireland, “total awards for personal injury cases fell 28% between 2014 and 2018 in spite of rising premiums” (The

Journal.ie, 2019). Insurance tends to be the main factor affecting the profitability of firms in recent years.

For employees, particularly those self-employed in a trade, a loss of income was a major effect of workplace injury (Hrymak and Pérezgonzález, 2007 p.10). Employees who are self-employed often do not receive pay for any sick leave or time taken off work. Rickhardsson and Impgaard (2004 p.177) found that where employees had a key function in the organisation that was difficult to replace, accident costs to the organisation were highest. It is likely that young workers who have just completed their college degree may hold key positions within businesses. They are often viewed as innovative with up to date technological know-how and come into the organisation with a fresh mindset.

Psychological Consequences

Employees often suffer psychological consequences due to workplace injuries. Hrymak and Pérezgonzález (2007 p.9) found that accidents in the workplace resulted in high levels of anxiety and stress among those who were injured. For many injured workers, stress may develop due to a loss of income or to physical restrictions caused by an injury which prevent them from working. This may have a negative impact on the concentration levels of young people who are in education. Often students in third level education are already facing financial burdens due to college fees and other costs associated with education, such as accommodation, stationery, and transport.

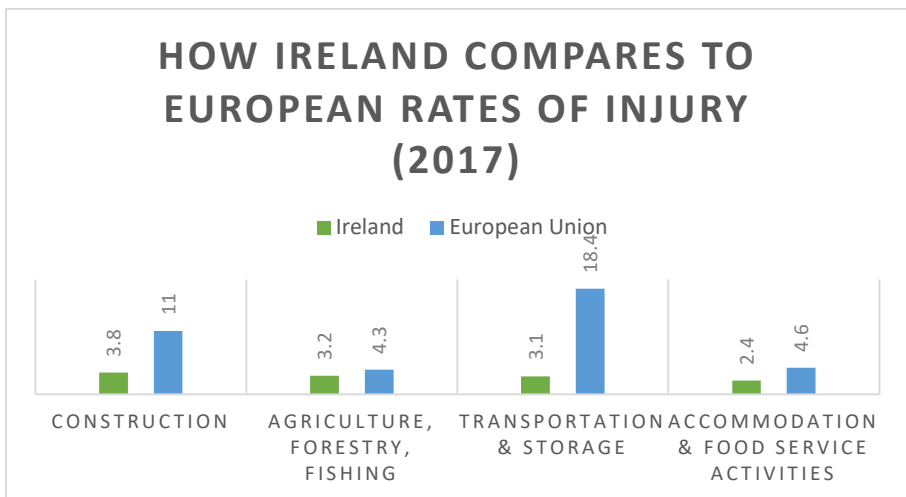
“The stress of having an occupational injury can be a trigger for anxiety or depression” (George, 2017). This may have a negative impact on the productivity and motivation of an employee who has been injured. (Chu

et. al., 2019 p.235) (Rombom, 2011) (Pennachio, 2008 p.1) highlighted the need for psychological support systems for those who are returning to work following an injury in the workplace. Having these procedures in place may reduce the stress and anxiety levels an employee may be experiencing when returning to work.

How Ireland Compares to European Rates of Injury

In **Figure 1**, data is taken from the Health and Safety Authority of Ireland (2019 p.25) regarding Irish injury rates in 2017, and from Eurostat (2017). The data will be used to compare Irish and European injury rates by economic sector. The Irish sample is per 1,000 workers. The European figures were reported by those working in each sector in the framework of ESAW.

Figure 1



Sources:

[file:///C:/Users/Alison/Downloads/hsa_stats_report_2019%20\(2\).pdf](file:///C:/Users/Alison/Downloads/hsa_stats_report_2019%20(2).pdf)(2019)

https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Accidents_at_work_statistics#Analysis_by_activity (2017)

Construction Industry

In Ireland, the construction industry ranked 1st in terms of injured employees, with a rate of 3.8% (Health and Safety Authority, 2019 p.25). In comparison to this, there was a rate of 11% for injuries in the construction industry in Europe (EuroStat, 2017). There are a high number of workers who are joining the construction industry in Ireland, many of whom may be young workers. The Construction Industry Federation (2019) reported that “10,600 extra workers joined the construction workforce in 2018, up 8% year on year and bringing the total workforce to 145,500.” Due to the increasing number of workers it’s important to ensure safety measures are in place to eliminate the possibility of injuries.

The Construction Industry Federation (2019) recognise that this rise in figures “will bring about changes in terms of skills and competence and in terms of supervision.” They also recommend that those who have worked in the industry for some time act as mentors for the newcomers and help to ensure their safety.

According to Hardison and Cochran (2020), injuries in the construction sector may take the form of burns, electrocution, broken bones or back injury. Lack of manual handling training is also considered a key cause of injury in the sector. “Every year manual handling injuries are the most common non-fatal injury- they account for approximately one third of all injuries” (Health and Safety Authority, 2013 p.25). Hrymak and Pérezgonzález (2007 p.9) found that an effect of workplace injuries among construction workers was that their socialising patterns changed. This may be because of increased anxiety and stress.

Agriculture, Fishing and Forestry Industries

Irish figures for injury in the agriculture, fishing and forestry sector ranked second in terms of rates of injury. 3.2% of workers reported injury in this sector (Health and Safety Authority, 2019 p.25). In the EU there was a 4.3% rate of injury (EuroStat, 2017). Agriculture and farming are considered Ireland's primary industries and great number of people work within them. As of 2019 there were approximately 137,000 farms in Ireland (Kiernan, 2019).

Bone fractures are the most common non-fatal injury among farmers in Ireland. The bones with the highest rate of fractures were forearms, wrists, and hands at 29.8% (Lee et al, 2014). Often, farmers are working on their own and this lack of supervision while carrying out dangerous tasks can have a major contribution toward the risk of injury.

The Health and Safety Authority (2017 p.9) conducted a report in which they suggested that farmers who are lone workers should inform someone if they are going working before they do so and to always carry a mobile phone. They should also be aware that some tasks cannot be completed alone and that they may require assistance. According to the Health and Safety Authority (2017 p.100), those who are mainly at risk on the farm tend to be the farmer or farm operator (73.3% of injuries), followed by the farm workers (8.9%) and lastly, spouses (8.6%).

Transportation and Storage Industries

The third highest sector in Ireland reporting injury was the transportation and storage sector with an injury rate of 3.1% (Health and Safety Authority, 2019 p.25). This sector had the highest rate of injury in the EU at 18.4% (EuroStat, 2017). According to Eurostat (2017), "the transportation and storage services sector accounted for 8.1% of the total

workforce in the EU in 2017.” Injury may be prevalent in this sector as it holds such high rates of employment. In Ireland “the most common non-fatal incident triggers are manual handling and slips, trips and falls” (Health and Safety Authority, 2020). Work within the storage and transportation industry is often concerned with manual handling and the movement of stock.

Accommodation and Food Service Industries

In the Irish accommodation and food services sector there were reported injuries of 2.4% (Health and Safety Authority, 2019 p.25). It ranked at 4.6% in European figures (Eurostat, 2017). Injuries in this sector may be prevalent due to the fast and frenetic nature of the work. These figures may also be a result of the pace at which the restaurant and hospitality sector is growing. According to Grad Ireland (2020) there are between 150,000 and 250,000 employed in this sector in the Republic of Ireland. Young people are often employed in this sector as it generally involves low-skilled work. Cafes and restaurants often offer low hour/weekend contracts which are attractive for younger people who may attend college and who may be seeking a part-time job.

Conclusion and Next Steps

There are many benefits to having young workers in a workplace. They may be considered to have high levels of technological knowledge and bring a fresh perspective when analysing given situations. Working during adolescence allows young people to mature and they may gain a sense of responsibility, however it is clear to see there is a problem regarding young workers and workplace injury.

As discussed, there are many causes of young workers having a heightened risk of injury in the workplace including their

musculoskeletal development and lack of training. Young workers are at an increased risk of injury as compared to their older counterparts as they make up a large number of shift-work workers. There are substantial effects of injury on those who have been injured in terms of economic and psychological consequences. The sector in which injury most commonly occurs in Ireland is the construction sector, while the transportation and storage sector yield the highest rates of injury in Europe.

A limitation of this project was that there was a lack of information on injuries in various sectors by age band in Ireland. Where there was information regarding injuries by age band, it was quite outdated. I would recommend the HSA to publish up-to-date reports regarding injury among workers by both age band and sector. This may identify sectors that young worker injury rates are highest in and there could be solutions formed to address these rates. Publishing new reports may also raise awareness of this growing problem and put pressure on governments and employers to ensure the safety of young people in the workplace.

Due to the ever-growing advancement of technology, there are now technological devices that may prevent workplace injury. I would recommend that organisations investigate these technologies and see if they could be used to benefit their workplaces in terms of preventing injuries. The development of wearable devices such as wrist watches are allowing for the collection of “ergonomic data based on the employee’s physical traits and the requirements of their job, gathering worker-specific information that can be used to identify and address ergonomic risks” (Lombardo, 2019). These watches may indicate to employees when fatigue levels are highest, indicating that the risk of injury may be increased.

The implementation of safety measures in the workplace should be viewed by employers as an investment, rather than a cost. Continuous health and safety training should be provided to young workers in employment. They should continuously be informed about health and safety developments to minimise their risk of injury.

“Governments are responsible for drawing up occupational health and safety policies and making sure that they are implemented” (O Alli, 2008 p.21). It is clear to see from the figures that stricter policies and laws need to be developed to further ensure the safety of young people at work. They should also financially support organisations who may incur costs while increasing health and safety measures. They should run free-of-charge workshops to help employers ensure the safety of employees at work and lastly, they should raise awareness of the growing problem of workplace injuries.

Young workers must also try to ensure their own safety within the workplace. They must ensure they wear any protective gear required of them while in the workplace, such as hard hats and protective goggles. They should report any known hazards to a higher authority to minimise the risk of injury for everyone in the workplace. They have a duty to avoid ‘horse play’ or any dangerous behaviour that may put themselves or others at risk.

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A critical review of Emotional Intelligence in the workplace from a managerial perspective: Does EI affect organisational performance?

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Abstract

This project will critically review the literature on Emotional Intelligence (EI) to investigate how essential it is for modern managers to be emotionally intelligent in the workplace.

Generally, most researchers find the concept of EI extremely useful and applicable in a workplace context as it is perceived to improve organisational performance. Studies suggest that high levels of manager EI can result in higher levels of employee productivity and consequent improved organisational performance including better communication, problem-solving, and internal relationships. However, EI by itself will not guarantee increased profits or improved organisational performance as organisations are simply too complex. People can learn to be more emotionally intelligent and studying EI can be beneficial to both present and future managers. It is recommended that manager training include content on EI.

Keywords: Emotional intelligence, manager training, graduate skills

Introduction

Theoretical studies relating to the psychological aspects of human resource management (HRM) have significantly increased in recent years (Masaldzhiyska, 2019). Interestingly, scientists and researchers have been focussing on the feelings and thought processes of employees in the workplace. Masaldzhiyska (2019) argues that work productivity is linked to a particular type of employee behaviour. He proposes that emotional intelligence is a major influencing factor in relation to the work behaviour of organisational managers.

In the workplace today, organisations rely heavily on their employees to achieve a competitive advantage over other firms (Altındağ & Köseadağı, 2015). A high level of emotional intelligence can help a manager to gain a better understanding about his/her own emotions as well as the emotions of others in their immediate surroundings (Goleman, 2014). Emotional intelligence could potentially allow managers to improve employee productivity which as a result, increases the performance of the organisation (Meloney, 2016). For this review, organisational performance is referred to as the consistent quality of results from tasks completed by managers and employees.

The purpose of this research is to explore the topic of emotional intelligence and to investigate if it is essential for managers to be emotional intelligent in the workplace. The previously presented information may indicate that organisations should hire managers with high levels of emotional intelligence as it will increase the performance of employees and as a consequence improve organisational performance (Altındağ & Köseadağı, 2015). However, there are many critics of emotional intelligence and their arguments will be presented in the literature review.

In the near future, many students currently studying business in Ireland will become managers or work as part of a team in a wide variety of organisations throughout the country or maybe even abroad. This research is useful for students moving into the workplace to understand

how managers can become more emotionally aware and understand how to deal with their personal emotions and the emotions of others around them in the workplace. Furthermore, this research may be beneficial to managers currently working within the workplace.

This research will address the following questions:

How does emotional intelligence influence managers in the workplace and consequently; does it impact the managers subordinates?

Can emotional intelligence make the organisation more productive and efficient?

Is emotional intelligence a neglected component in conventional management training?

Defining Emotional Intelligence

In recent years, the phenomena of emotional intelligence has become increasingly popular and it has been at the centre of many theologians, psychologists, philosophers and scientists work (Gayathri & Meenaksh, 2013). Each studying the topic from different perspectives. The term emotional intelligence was first made popular in the 1990s by Daniel Goleman in his bestselling book simply titled “emotional intelligence” (Ball, 2017). Goleman defined emotional intelligence as *“the capacity for recognising our own feelings and those of others, for motivating ourselves and for managing emotions well in ourselves and in our relationships”* (Goleman, 1998). However, the first people to formally identify the term “emotional intelligence” were two psychologists in 1990. They defined it as *“the subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions”* (Salovey & Mayer, 1990).

Defining emotional intelligence has proven to be a considerable challenge amongst researchers and definitions vary immensely. There is simply no correct, established or distinctive definition that is widely used. However, Daniel Goleman has been one of the most influential people

on this topic and his five components of emotional intelligence are; self-awareness, self-regulation, motivation, empathy and social skills (Goleman, 2014). It is through these components that Goleman (2014) argues that as a leader, one can manage each of these areas to increase one's emotional intelligence. Furthermore, he argues that emotional intelligence can be measured similarly to intelligence quotient (IQ) and that emotional intelligence is a more precise indicator as to who will be more productive, work more efficient in team scenarios or be an exceptional leader. As a manager, having a high emotional quotient (EQ) will distinguish how well one understands and manages one's relationships with colleagues, suppliers, distributors, customers, etc. A high EQ is a crucial factor in differentiating between the most effective managers (O'Higgins & San Lam, 2012). On average IQ accounts for approximately 20% of the reasons that influence life success. This leaves 80% open to different potential impacts (O'Higgins & San Lam, 2012). Goleman (1998) has gone to the extent of claiming that emotional intelligence is responsible for the remaining 80% of factors that influence life success. However, it is crucial to consider, that such claims are repeatedly stated by Goleman (1998) yet, they are not supported by any empirical evidence and often act as a marketing claim for the concept (Murphy, 2007).

Emotional Intelligence in Relation to Management

Goleman (1998) was the first to apply the theory of emotional intelligence to the business industry. He claimed that effective leaders had a relatively high EQ. Additionally, he argues that good technical knowledge and a good IQ are "entry level requirements". However, good interpersonal, social and team building skills help an individual to develop within an organisation and these skills are essential in building good relationships with colleagues and higher officials which is crucial to an individual's success (Masaldzhyska, 2019). Goleman (1998) claims that if IQ got a person a job, it was emotional intelligence that

helped the individual be successful and allow that individual to retain his or her position in the workplace. Certain studies have examined whether emotional intelligence acts as a buffer between types of job stressors and stress reactions. In a study by Troy *et al.* (2010), researchers found that the correlation between stressful life events such as job loss and depressive symptoms was weaker among individuals with high emotional intelligence in comparison to their lower emotional intelligent counterparts.

Furthermore, in relation to performance, a study completed in 2001 on 358 managers across the Johnson & Johnson Consumer Group by Cavallo & Brienza (2001) reviewed if there were any particular leadership attributes that differentiated between high and average performing managers. Results showed that there was a strong correlation between high performing managers and emotional competence. The study also supported theorist's suggestions that emotional intelligence, was a differentiating factor in leadership performance. Participants who received high performance ratings of 4.1 or more on a 5-point scale, rated considerably higher than other participants in the five components of emotional intelligence (Cavallo & Brienza, 2001). From a managerial perspective, leadership is a crucial trait (Cooper & Sawaf, 1997) and is extremely relevant to emotional intelligence in the workplace. Kerr *et al.* (2005) argues that leadership is fundamentally an emotional process whereby leaders recognise the emotional states of followers and attempt to stimulate and manage their emotional responses. According to Humphrey (2002), leadership is a process of social interaction where the leader's ability to influence the behaviour of their followers may significantly impact performance outcomes. Additionally, Kerr *et al.* (2005) claims that by creating shared emotional experiences leaders can increase group morale and solidarity. The ability of a competent leader to influence the emotional climate within an organisation can strongly influence performance (Humphrey, 2002). Rao (2006) argues that each of Goleman's five components carry equal importance in relation to

leadership. However, it is important to note that the table in “Appendix I” is missing one component – this being motivation. According to Goleman (1998), motivation has become so critical to leadership that in the future it may cease to be listed as one of the five components as it is relevant and included amongst the other components. Furthermore, Bar-On (2006) claims that mature managers are more emotionally and socially intelligent than younger managers. He claims that as one gets older, one becomes more emotionally and socially intelligent. It is also important to note gender differences amongst managers. Females tend to be more aware of their emotions than males while, males are more proficient at managing emotions (Bar-On, 2006; Bellemare, *et al.*, 2009). Current research within the field of emotional intelligence has divided the theory into two different approaches; Goleman and Bar-On’s “mixed method” model which is further divided into Goleman’s competency model and Bar-On’s trait model and then Salovey and Mayer’s “ability” model (Gayathri & Meenaksh, 2013). Goleman built on the earlier findings of Salovey and Mayer and proposed a four-branch model (later this turned into a five-branch model) which he then further classified into 20 emotional competencies. Goleman differed his model from Salovey and Mayer’s by adding personality traits such as innovation, trustworthiness, team player, etc. which Locke (2005) criticised him for claiming it was “*preposterously all encompassing*” (Gayathri & Meenaksh, 2013).

Components of Emotional Intelligence

As previously mentioned, Goleman’s (1998) model of emotional intelligence is comprised of five key components, three of which relate to personal competence and two of which relate to social competence. The first of the personal competencies is self-awareness. Bar-On (2002) claims that self-awareness is the most essential component of emotional intelligence for individuals in the workplace. Goleman (2014) describes self-awareness as “*Self-awareness means having a deep understanding*

of one's emotions, strengths, weaknesses, needs, and drives. People with strong self-awareness are neither overly critical nor unrealistically hopeful." If an individual is aware of their current state of emotion; it will lead to more self-control and allow for more empathy in others (Bar-On, 2002). Cherniss *et al.* (2006) supports Bar-On's (2002) statements and claims that the five components are interconnected and that one component can impact the other. In the workplace, self-aware managers can be more open and honest with themselves and their employees (Jordan & Ashkanasy, 2006). This undoubtedly also works vice versa (Goleman, 2014). Self-aware managers have a clear vision for the organisation and understand the values and goals for themselves but also for their employees (Altındağ & Köseadağı, 2015). This is particularly relevant for middle managers. Middle managers find themselves reporting to top management and supervising their subordinates. They act as a crucial linkage between senior management and frontline employees. Furthermore, middle managers are closer to day-to-day operations than senior managers however, they are still "*far enough away from frontline work that they can see the big picture*" (Ahearne, *et al.*, 2013).

Goleman (2006) proposes that the second component of emotional intelligence – self-regulation is a crucial trait needed in a healthy business environment. Self-regulation acts as another personal competence. Goleman (2006) claims that self-regulation is the ability to handle one's feelings appropriately. He argues that the skill to manage one's emotions in stressful situations, and to ignore rampant anxiety and pessimism is vital. A failure to do so could leave individuals constantly fighting feelings of distress which will significantly impact performance. A study conducted by Langhorn (2004) on approximately 100 general managers in the hospitality sector in the United Kingdom, produced evidence that there was a correlation in key areas of profit performance in relation to the emotional intelligence patterns of the general managers. Additionally, the findings indicated that the performance of the general managers

depended on their ability to be mindful of and regulate their own emotions which can be linked to self-awareness and self-regulation amongst Goleman's (1998) model of emotional intelligence. The study was completed using the before mentioned "mixed method" model by Goleman (1998) and Bar-On (2002).

Motivation is the third component of emotional intelligence and is the final personal competence. Goleman (2014) argues that people are often easily motivated by external factors such as a high paying salary, a high status job or an impressive title. Here, it is crucial to consider gender differences. According to Bellemare *et al.* (2009), men tend to place more value than women on things such as a basic salary and bonuses. Alternatively, women tend to value interpersonal relationships, respectful treatment by the employer and place more emphasis on the family unit and work life balance (Bellemare, *et al.*, 2009). However, regardless of gender, individuals with leadership potential such as – one would like to assume – most managers "*are motivated by a deeply embedded desire to achieve for the sake of achievement*" (Goleman, 2014). Thus, they can be seen to be highly motivated individuals with leadership attributes, lifelong learners and take pride in a job well done. The ability to delay gratification and stifle impulsiveness is known as emotional self-control. People who tend to excel in this component tend to be more productive and effective in whatever they may embark on (Goleman, 2006).

From a managerial perspective it is crucial to be aware of others' feelings, needs and concerns (Sadri, 2012). This is what Goleman (1998) describes as empathy. Empathy acts as one of two social competencies amongst the five-component model. Empathy can be closely linked to effective communication skills and it builds on the before mentioned component of self-awareness. Empathic people are able to notice and understand subtle signals that indicate the needs and wants of others (Sadri, 2012). Consequently, this makes such individuals better at positions such as teaching, sales and management in general. In relation to management,

the ability to read one's nonverbal channels such as the tone of voice, gestures and facial expressions can be extremely useful when negotiating for example (Goleman, 2006). In a workplace setting, empathy allows individuals to understand the power dynamics that often influence social relationships (Sadri, 2012). People who are led by empathic managers tend to feel more unity within the organisation. They are inclined to feel that the manager understands their emotions better and will always consider their needs and wants (Meloney, 2016).

The final component of emotional intelligence is what Goleman (1998) expresses as "social skills" or the "*adeptness at inducing desirable responses in others*". The social skill component acts as the second social competency amongst the five-component model. During the previously mentioned study in the Johnson & Johnson Consumer Group, Cavallo & Brienza (2001) found that high performing managers were competent in each of the five components. Moreover, they found that one's social skills were particularly useful for managers. From a managerial perspective, managers who perform highly in this trait found it easier to build relationships and interpersonal connections with employees (Cavallo & Brienza, 2001). This is due to their ability to actively listen, be persuasive, have strong verbal and nonverbal communication skills and have leadership attributes.

Interestingly, Goleman (2006) argues that each of these components can be trained and improved individually. This claim is widely supported by countless academics. Sadri (2012) supports these claims and argues that individuals interested in developing leadership and emotional skills can improve all five competencies and increase their EQ. However, he argues that training should not be attempted in a single program, but rather one should consider focusing on the development of competencies that need immediate improvement on an as needed basis (Sadri, 2012). People's skill level will differ amongst the five competencies. For example, a manager might be highly competent and self-aware in understanding his/her own emotions however, they may lack the empathy and social

skills to impact other people in their immediate surroundings (Cherniss, *et al.*, 2006).

The EQ of employees may also have an impact on a manager's effectiveness in motivating and supervising staff. For example, a study completed by O'Hara *et al.* (2006) based on 187 employees in the hospitality industry, analysed the relationship between manager's emotional intelligence, employees' emotional intelligence, and employees' job satisfaction and performance. Amongst their findings they noticed that managers had a positive correlation with job satisfaction for employees with low emotional intelligence in comparison to employees with a high EQ. Furthermore, employees' emotional intelligence was positively associated with job satisfaction and performance.

Criticism of Emotional Intelligence

The information presented above, suggests that there is a strong relationship between successful individuals and emotional intelligence within an organisation. Emotional intelligence claims to affect a wide range of work behaviours, including employee commitment, teamwork, development of talent, innovation, quality of service and customer loyalty (Zeidner, *et al.*, 2004). Research by Cooper & Sawaf (1997) suggests that individuals with high emotional intelligence will experience more successful careers, build stronger personal relationships and be more effective leaders. Locke (2005) however, presents an alternative argument to the concept of emotional intelligence. He argues that emotional intelligence is invalid as it is not a form of intelligence and that it is so broadly defined that it has no logical meaning. He differentiates the concept of emotional intelligence from actual intelligence and from rationality. The ability to understand your emotions and read the emotions of others' is not an issue of intelligence (Locke, 2005). He claims that it could simply be an issue of paying attention to others' emotions and being aware of one's own emotions.

Furthermore, he argues that the topic of emotional intelligence has now become extremely broad and that no one concept could possibly comprise or incorporate all the elements presented. Zeidner *et al.* (2004) has gone to the extent of claiming that the literature surrounding emotional intelligence is replete with unsupported and unproven generalisations that are based on anecdotal or indistinct unpublished in-house research. This is supported by Murphy (2007). Additionally, in relation to the impact emotional intelligence has on performance, the evidence is often extremely limited and contradictory (Zeidner, *et al.*, 2004). Similarly, Waterhouse (2006) argues that emotional intelligence should not be taught in schools as there are “*many conflicting constructs of EI*” and that “*the claim that EI determines real-world success has not been validated*”.

Some of the biggest criticisms of emotional intelligence have come in relation to leadership. Goleman (2014) defines leadership as follows; “*The fundamental task of leaders is to create good feelings in those they lead.*” Locke (2005) argues that this is simply not true and that the primary purpose of organisations is to achieve long-term goals. In the case of private organisations, the main goal is to achieve sustained profitability (Locke, 2005). Thus, employee morale may be important however, organisations are not in the “feel good” business. Goleman (1998) argues that leadership is an emotional process. By doing so, Goleman denigrates the role that rational thinking and actual intelligence play in the leadership process (Locke, 2005). Bearing such criticisms in mind, it is important to consider that basic questions such as: “*Do emotionally intelligent employees produce greater profits for the organisation?*” or “*Does emotional intelligence affect organisational performance?*” largely remain unanswered hitherto (Zeidner, *et al.*, 2004).

Emotional Intelligence and Conventional Management Training

Since emotional intelligence is a relatively new concept, it is not currently part of a managers' conventional training (Reuben, *et al.*, 2009). Amongst certain college courses, it may be discussed briefly however, these encounters are generally very succinct. As previously mentioned, Goleman (2006) and Sadri (2012) claim that emotional intelligence can be trained and developed over a period of time. Goleman's (1998) five component model of emotional intelligence is a perfect example of this. Each of the five components can be measured individually using the afore mentioned "mixed" method or "ability" models. This is supported by the previously mentioned study by Cavallo & Brienza's (2001) findings who rated 358 managers on a five points scale and found that there was a strong correlation between high performing managers and emotional competence. They also found that individuals could become more emotionally intelligent through training. It is important to consider that emotional intelligence is becoming increasingly popular and in the near future it could become a customary part of conventional management training. For this review, conventional management training relates to the process of prolonged training and upon completion of this, the allocation of a formal qualification. In 2019 in Ireland, 92% of individuals that were hired for professional occupations held a third level qualification (CSO, 2020). These occupations include a wide range of managerial positions. Most-likely, several individuals currently occupying managerial positions have never studied the concept of emotional intelligence as it is only recently becoming part of contemporary management training (Reuben, *et al.*, 2009). In the workplace, employers often seek potential future employees with good teamwork traits as these individuals often show strong leadership, collaboration and communications skills (Sackett & Walmsley, 2014). Thus, according to Jordan & Ashkanasy (2006) an emphasis in training should be placed on "self-awareness" and "social skills" amongst the five component model.

Today, there is an increase in the number of courses offering and lecturing about emotional intelligence (Reuben, *et al.*, 2009). Generally, the concept of emotional intelligence is studied in psychology courses however, it is also taught in business studies and in particular in the field of human resource management (Humphrey, *et al.*, 2007). In Ireland, we are also seeing an increase. For example, IBEC Management Training (2019) are now offering courses to develop and enhance one's leadership effectiveness. Upon completion of this program, IBEC (2019) claims that *"individuals will understand the concept of emotional intelligence, how it relates to performance, recognise and understand one's own emotions and the emotions of others around them and build better relationships"* (IBEC Management Training, 2019).

Conclusion

There is a wide range of literature on the topic of emotional intelligence with many individuals supportive of the concept. However, as the previously presented information suggests, there are also numerous criticisms. Generally, most researchers find the concept of emotional intelligence extremely useful and applicable in a workplace context as it is perceived to improve organisational performance (Altındağ & Köseadağı, 2015). As the studies discussed within this review suggest, emotional intelligence can improve organisational communication, problem-solving, internal relationships and even management as a whole (Goleman, 2014). From a managerial perspective, the basic five component model of emotional intelligence can be beneficial to managers as each of these components can be managed and improved individually through training (Sadri, 2012; Goleman, 2006). The five component model discussed in the literature review can help managers become more aware of their own emotions and help them understand and deal with the emotions of individuals around them (Goleman, 2006). Consequently, this will lead to individuals having a higher EQ which will result in better interpersonal relationships, teamworking skills and employees will repeatedly perform at a higher level and consistently meet

deadlines (O'Hara, *et al.*, 2006). Therefore, organisational performance may be significantly enhanced (Masaldzhiyska, 2019; Meloney, 2016; Altındağ & Köseadağı, 2015; O'Hara *et al.*, 2006; Jordan & Ashkanasy, 2006). However, emotional intelligence by itself will not guarantee increased profits or improved organisational performance (Langhorn, 2004). Organisations are simply too complex. Individuals must work together, combined with good technical knowledge and the ability to form a strong and coherent team will assist the organisation in navigating through bottlenecks and therefore reduce the time required to achieve organisational goals (Jordan & Ashkanasy, 2006)

Some of the critically reviewed literature may also suggest that emotional intelligence should be part of a managers' conventional management training (Humphrey, *et al.*, 2007). As mentioned previously, the concept is becoming increasingly popular and in the near future it could become a customary part of conventional management training (Reuben, *et al.*, 2009). It is increasing in popularity, due to the theoretical foundation of information being supported by studies such as (Troy, *et al.*, 2010; O'Hara, *et al.*, 2006; Langhorn, 2004; Cavallo & Brienza, 2001; Cooper & Sawaf, 1997). However, it is crucial to consider that the concept of emotional intelligence has numerous critics and is loosely defined (Locke, 2005). Furthermore, the concept has become extremely profitable for its founders and many statements made in relation to the concept are often not supported by any empirical evidence and repeatedly act as a marketing claim for the concept (Murphy, 2007). However, such claims often have a reverse effect on the concept and raise more criticisms than commendations. For example, Waterhouse (2006) has gone to the extent of claiming that emotional intelligence should not be taught in higher education. Nevertheless, as with most concepts, there are advantages and disadvantages. In a workplace scenario, research suggests that understanding one's personal emotions and the emotions of others in their immediate surroundings could allow managers to improve employee productivity which as a result will increase the overall

performance of the organisation (Goleman, 2014). Thus, the study of emotional intelligence can be beneficial to both present and future managers' (Ahearne, *et al.*, 2013).

Finally, this review could be enhanced by performing a piece of primary research. The findings will present the reader with an in-depth understanding on the concept and apply the theory to a real-life work scenario. Therefore, two methods of primary research could be utilised. Firstly, a multi-rater survey could be performed on a number of randomly selected individuals within an organisation; measuring a wide range of competencies linked to emotional intelligence. Managers, supervisors and subordinates could rate each other's competencies on a 5-point scale. Secondly, an alternative option would be to invite participants to complete an *EQ-I Test* which will estimate one's EQ. Subsequently, a mono method qualitative study could be completed. This will allow for semi-structured interviews with open-ended questions. Consequently, this will lead to a discussion, rather than a basic interview with questions and quick-fire answers. Upon completion of this, a critical analysis could be produced combining both primary and secondary research.

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Appendices

Self-awareness	Self-management	Social awareness	Social skills
Emotional self-awareness: the ability to read and understand your emotions as well as recognize their impact on work performance, relationships, and the like	Self-control: the ability to keep disruptive emotions and impulses under control	Empathy: skill at sensing other people's emotions, understanding their perspective, and taking an active interest in their concerns	Visionary leadership: the ability to take charge and inspire with a compelling vision
Accurate self-assessment: a realistic evaluation of your strengths and limitations	Trustworthiness: a consistent display of honesty and integrity	Organizational awareness: the ability to read the currents of organizational life, build decision networks, and navigate politics	Influence: the ability to wield a range of persuasive tactics
Self-confidence: a strong and positive sense of self worth	Conscientiousness: the ability to manage yourself and your responsibilities	Service orientation: the ability to recognize and meet customer needs	Developing others: the propensity to bolster the abilities of others through feedback and guidance

Table 1: source: Goleman (1998) p. 95 *Working with Emotional Intelligence*. 1st ed. New York: Bantam Books

An investigation into the realities of adolescent employment, with particular focus on its impact in either aiding or compromising adolescent development

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Abstract

Adolescent employment is a concept which has been researched by scholars from diverse fields for several decades. Much of the literature deems teenage employment to be of significant psychosocial benefit. Teens develop responsibility, resilience, time management skills, organisational abilities, and teamwork skills. However, it also shows many negatives including inexperience and vulnerability, discrimination, and psychological impact. This review indicates employers of adolescents should both understand and consider the ways in which teenagers differ from adult employees. This is necessary to create safer workplaces for teenage employees and can address some of the challenges faced by adolescents in employment. In addition, the adolescent workforce could be educated on their workplace rights and responsibilities in school to improve the levels of equitable and fair treatment. This will undoubtedly translate to positive outcomes for teens and their potential employers alike.

Keywords: Adolescent employment, psychosocial benefit, discrimination, maltreatment

Introduction

Adolescent employment is a concept which has been researched by scholars from diverse fields for several decades (Mortimer, 2010). Nonetheless, opinions around the outcomes of holding a job as an adolescent remain controversial. This literature review therefore seeks to examine the contrasting perspectives that exist and aims to uncover some emerging truths concerning adolescent paid part-time employment.

Fitzgerald & Lai (1995) have defined a working adolescent as an employed individual aged between fourteen and eighteen years. For the purpose of this research Fitzgerald & Lai's definition is adopted, however it must be noted that the European Union's legal age of employment is fifteen. To correspond with the terminology of the relevant literature, the terms "adolescent" and "teenager" will be used interchangeably throughout this paper.

Many scholars consider part-time work as something which can be monitored amongst adolescents (Mortimer, 2010; McMorris & Uggen, 2000; Graves, et al., 2016; Steinberg, et al., 1993; Monahan, et al., 2011). Some scholars argue that employment can assist teenagers in developing their responsibility, resilience to pressure, and time management skills (Hunter, et al., 2013; Mortimer & Staff, 2004; Steinberg & Cauffman, 1995). However, other research has characterised teen employment as "exploitative" and extremely routinised with low compensation and no benefits (Besen, 2006; NSW Commission for Children and Young people, 2005; Smith & Patton, 2009).

This literature review will also investigate the contrasting arguments made both for and against adolescent employment. The conflicting arguments of various scholars regarding the subject suggests that there is a degree of uncertainty around the reality of the situation. This research is motivated by a recognised need for improved awareness and education

around the topic. Furthermore, the issue of adolescent part-time employment seems to have received little attention in European research despite an abundance of relevant literature from North America and a lesser contribution from Australia. For this reason, it is essential that the issue is given further attention in an EU context.

Adolescents are considered to be particularly vulnerable employees due to their inexperience and lack of cognitive maturity (Drobac, 2007). Yet, working during adolescence is broadly considered to be a critical step in the transition to adulthood (Dennehy & Mortimer, 1993; Mortimer et al., 1996). These are important insights given that thirty-five percent of ‘youth’ in the EU (Eurostat, 2019), and fifty-one percent of ‘youth’ in the U.S. (Statistica, 2019) are in some form of employment as of last year. Unfortunately, these statistics classify ‘youth’ as being between fifteen and twenty-four years old, and do not give numbers relevant to adolescents alone (Eurostat, 2019; Statistica, 2019). Nevertheless, these numbers are effective in signifying the volume of adolescents in employment. This review will therefore also seek to explore the impact that employment has on transitioning from adolescence to adulthood.

This research has potential use for anyone seeking to examine the benefits and drawbacks of teenage employment, and similarly for employers seeking to better understand their adolescent workers.

The overarching questions to be addressed in this literature review are:

1. What are the advantages and consequences of holding a job during adolescence?
2. At fifteen years old, do adolescents have the knowledge and maturity necessary for entering the workforce?
3. How can employers shift their practices to better facilitate teenage employees and ensure their safety?

This literature review attempts to address each of these questions separately. Though, it is important to point out throughout the relevant literature these questions are on the one hand separate and valid, yet they are also deeply interconnected.

The first question to be addressed concerns both the advantages and consequences of being employed as an adolescent. It has been accepted by many scholars that employment can offer benefits to teenagers (Barling, et al., 1992; Greenberger & Steinberg, 1986). Research suggests that employment can assist young people in developing their time management skills, responsibility, and resilience to pressure (Hunter, et al., 2013; Mortimer & Staff, 2004; Steinberg & Cauffman, 1995). More recent research from Runyan, et al. (2009) examined parents' perceptions on the effects of teenage work. Runyan and her colleagues' research reveals that most of those surveyed were strongly favourable of their adolescent children being employed.

However, both Monahan et al., (2011) and Mortimer (2003) focus on the negative impacts of adolescent employment offering a counter claim based on the negative impact it has on adolescent academic performance. Mortimer (2003) cites fatigue, erosion of leisure time as concerning factors, this thinking is echoed in the work of Monahan et al., (2011). Monahan et al., (2011) suggests that teens who work greater than twenty hours per week suffer poor academic engagement, while those who work less than that show neither positive or negative effects on academic, psychological, or behavioural outcomes.

These conclusions are supported by West, et al. (2005) who determined that when working more than twenty hours a week, teenagers are likely to suffer daytime sleepiness and have an increased use of caffeine. The risks associated with excessive fatigue include an increased risk of both injury and psychological problems such as stress, anxiety, and depression (Davis et al, 2000; Salazar, 1997). These findings indicate that while it is

unwise for teenagers to work in excess of twenty hours per week, working less than this amount is not considered harmful. However, this recommendation is only in the sense of fatigue and academic related issues and does not account for other negative attributes associated with being employed during teenage years.

In addition, teenagers face much more demanding educational requirements in recent years (Thompson, 2017). With the varying pressures of school, work, social media, and adolescent transitioning, it is no surprise that teenagers are under more stress today than their equivalent predecessors would have experienced (Villanueva, 2015). Villanueva further highlights that in modern society, this age group are expected to know what they want to do with their life at a much younger age. Along with this, there is greater expectancy for ‘success’ from adolescents (Villanueva, 2015). When paid part-time work is introduced to the equation, it creates even more pressure and lessens time spent simply enjoying life (Villanueva, 2015). Villanueva’s findings therefore provide a possible explanation as to why teenagers can consider work to be a negative experience.

Contrastingly, a study from Mortimer (2003) claims that working during adolescence can actually foster personal development. He wrote about the following developmental advantages:

“Vocational exploration, the development of responsibility, effective management of time and money, and ‘work readiness’.”

Mortimer (2003) also provides evidence that high-quality work experiences which include learning opportunities can help teenagers to obtain professional ideals, which appears to have *“significant psychosocial benefits”*. However, whilst adolescent employment could offer these advantages, one must challenge their credibility in situations of unfair treatment, age discrimination, and other adverse consequences against teenagers.

Such alternative negative consequences of teenage employment are exemplified in a news media article written by Siddeek (2020). Siddeek examines a recent court case that took place between an Australian teenager and their employer. The teenager was thought by the court to have been treated exceedingly unfairly by their employer. Siddeek mentions that the adolescent had been refused payment for their work, was threatened by their manager upon deciding to leave the job and was forced to use dangerous equipment without a license to do so (Siddeek, 2020). These actions highlight how teenage workers are often mistreated by employers; however, most won't have the courage to bring such matters to justice.

Siddeek (2020) further emphasises the perils of the matter, stating that teenage workers are particularly susceptible to maltreatment of this type, in this case in the form of wage theft. The teenager's lawyer then strengthens this point, mentioning that as the employee was an adolescent; he was naive to his workplace rights and "*more vulnerable to exploitation*". The lawyer further commented that "*There was an element of opportunism to the employer's conduct.*" (Siddeek, 2020). Although the points made here are directly linked to this case, the question arises – is this practice common for many employers of this type.

Age discrimination or 'ageism' is yet another challenge facing working adolescents (Beaton, 2016; Dugan, 2014). Ageism can be defined as the stereotyping and prejudice against others based on their age (Meehan, 2019). Generally, individuals are oblivious to the subconscious stereotypes they hold concerning youth and elders alike. Ageism has therefore been deemed a deceptive human trait, according to Meehan (2019). Beck (2013) notes a commonly held assumption about ageism. The assumption is that ageism is merely a judgement against elders, neglecting to consider the adolescent generations who are also exposed to this discrimination (Beck, 2013).

Furthermore, findings published in the Human Resource Management Journal state that discrimination for being “too young” is at least as frequent as discrimination for being “too old.” (Beaton, 2016). A UK study conducted by Birdwell & Bani (2014) reinforces Beaton’s findings. This study found that almost nine out of ten teenagers held the belief that bad stereotypes [about teenagers] had an impact on their employability (Birdwell & Bani, 2014). Dugan (2014) looked at case studies of adolescents in search of employment which stress the negative impacts of ageism and stereotyping against teenagers.

Dugan’s (2014) study illuminates the power of teenage stereotyping when he cites two examples of teens - one being constantly rejected for work and the other being criticised and accused of only caring for ‘shopping’ and ‘weekend outings’. Unfortunately, the teenagers were given no opportunity to prove the stereotypes wrong.

Returning briefly to the earlier discussion of the positive characteristics of teenage employment, particularly the development of responsibility in adolescents, the topic of money management and financial independence will be reviewed in more detail. Managing money is considered to be an important life-skill (Warren, et al., 2019). According to Warren, et al. (2019), financial skills need to be established from an early age and cultivated into young adulthood. This enables teenagers to practice skills in money management and to make better financial decisions all through their lives (Warren, et al., 2019). Being in employment from a young age allows for this form of skill development, as it is not something that is taught in most schools, according to Bowen (2002).

Morgan (2019) adds to these claims, she says that when teenagers can earn their own money, they can gain a better appreciation of its value. In addition, the responsibility of managing ones’ own purchases helps adolescents in learning to budget and plan their finances (Morgan, 2019). Furthermore, recognising the styles of money management that

adolescents possess may help to mitigate risks such as debt that are associated with economic decision making (Hoeve, et al., 2014; Lusardi, et al., 2010).

Moreover, it has been considered that converting to more independent living is the leading progressive chore of adolescence (Fisher, 2011). Teenagers must discover their world more independently to acquire self-confidence (Rodgers, n.d.). Being employed enables adolescents to obtain this independence, which in turn increases opportunities for exhibiting judgement and winning trust (Fisher, 2011). Additionally, Fisher (2011) claims that working can enhance a teenager's self-esteem and understanding of responsibility.

With the intention of uncovering the reality of the working life of teenagers, it is crucial to assess the perceived benefits in direct contrast to the apparent negatives. Researchers across varying disciplines have been studying adolescent employment for a number of decades (Mortimer, 2010). Nevertheless, the question of whether the benefits of adolescent work outweigh the risks, appears to remain controversial.

Scholars argue that adolescent employment is beneficial to teen character building (Stevens, 1979; Wildavsky, 1989). Many scholars argue further benefits e.g. it facilitates the transitions to adulthood (Dennehy & Mortimer, 1993; Mortimer et al., 1996); it improves workplace comprehension and fosters positive work ideals (Frone, 1999); jobs entailing skills development may curb the damaging impacts of teen employment (Barling et al., 1992); it may improve organisational abilities, and financial management (Greenberger & Steinberg, 1986); it develops responsibility, teamwork and may influence professional preferences for the teen's future (Pollack, 1990).

In contrast, there have also been many negative associations made between adolescents and work as previously discussed. Greenberger & Steinberg (1986) suggest that intensified work requirements on

teenagers' physical and psychological capacities can create stress. This can have further implications on adolescent health and behaviour (Greenberger & Steinberg, 1986). Other negative aspects of adolescent employment include threats to educational advancement and injury (Greenberger & Steinberg, 1986; Pollack, 1990; Steinberg, 1993) along with risks of discrimination and vulnerability (Beaton, 2016; Beck, 2013; Cohen, 2013; Siddeek, 2020).

As the assertions above indicate, the working life of an adolescent is still considered by many to be somewhat bleak in most cases. Despite this phenomenon however, scholars continue to argue opposing viewpoints. While the positive effects of teenage employment are certainly convincing, the possible drawbacks of working during one's adolescent years are rather dissuading. A judgment is called for as to whether the risks of discrimination, vulnerability, and general maltreatment are justified by the gains in character building, time management, and responsibility.

Interestingly, the literature which establishes adolescent work as leading to positive outcomes, tends to have been predominantly conducted in the 1990's (Barling, et al., 1992; Dennehy & Mortimer, 1993; Frone 1999; Greenberger & Steinberg, 1986; Mortimer et al., 1996; Pollack, 1990; Steinberg & Cauffman, 1995; Stevens, 1979; Wildavsky, 1989). Whereas more recent research tends to counter these claims and places emphasis on the dangers and negative consequences of teenage work (Bancroft, 2009; Beaton, 2016; Beck, 2013; Besen, 2006; Cohen, 2013; Dugan, 2014; Drobac, 2007; NSW Commission for Children and Young people, 2005; Smith & Patton, 2009).

Looking at this directional change in published research from a generational perspective, a possible explanation for these changes in the emphasis of the literature emerges. According to Morisi (2017), between fifty-five and sixty percent of teenagers were either working or actively

seeking work between the late 1970's and early 1980's. The adolescents of this era were born under the 'Generation X' or 'Gen X' umbrella (Kasasa, 2019). 'Generation X' are considered to be independent, self-sufficient, and resourceful (Gorman, 2019; Kane, 2019). There was also a vast expectation from the 'Gen X' teenager to be employed during their adolescent years (Disilver, 2015).

Whereas, today's 'Generation Z' or 'Gen Z' teenagers (born 1995-2015) differ in both their upbringing and development. Schroth (2019) suggests that this generation of adolescents have grown up in a culture of overprotective parenting, which interferes with their ability to become autonomous. This means that they are less capable of making responsible decisions and responding to uncertain circumstances (Schroth, 2019). However, 'Gen Z' are also known for their courage in staying true to themselves and are forthright about their life desires (Alter, 2019). Further claims made by Scroth (2019) indicate that this generation is not prepared for the realities of the workplace in comparison to past generations.

These generational characterisations may provide insight as to why the literature of the past portrays positive views of adolescent work, and recent literature depicts the contrary. The literature written in the era of the 'Gen X' teenager may be optimistic as a result of the independence and autonomy associated with them. Therefore, this generation of adolescents were perhaps more likely to be satisfied with their part-time job because they were more capable of fending for themselves. Today, we are seeing far more negative associations between teenagers and the workplace. This could be due to the combination of 'Gen Zers' having more integrity but also being less prepared for the work environment. This combined pair of traits could potentially give cause to more negative work experiences.

The issue of teenagers potentially being unprepared for the work environment, and the possible risks associated with it, introduce the second topic to be addressed. This section considers whether teenagers have the expected knowledge and maturity required to enter the workforce at the young age of fifteen. Smith & Patton (2009) have identified that teenagers often display an absence of knowledge regarding their workplace rights and potential safety risks. Drobac (2007) also highlights the dangers of such a knowledge deficit. Drobac mentions that inexperience and naivety can often cause adolescents to acknowledge the most seemingly obvious misrepresentations as true. Drobac (2007) further notes that this can result from the tendency for adolescents to see their adult supervisors and co-workers as role models, who they must obey even in situations of unfair treatment.

The dangers of the type of vulnerability and naivety described by Drobac (2007) and Smith & Patton (2009) are supported by the work of Siddeek (2020), outlined earlier. Some other authors have also uncovered potential risks associated with the knowledge inadequacies of adolescents' regarding their workplace rights. Cohen (2013) states:

“The failure to account for teenage workers’ level of experiences and their vulnerability...make teenagers specifically vulnerable workers.”

In addition, Bancroft (2009) wrote:

“Because they work part time, teen workers may be more likely to miss trainings and information sessions.”

However, Besen (2006) contradicts these claims with two interesting findings. Firstly, she found that teenage workers had a sufficient comprehension of their right to a safe workplace. Secondly, that adolescents recognised their right to raise concerns of unsafe environments to their employer and understood the employer's responsibility to act on such concerns (Besen, 2006). The potential

weaknesses of Besen's study, however, are that her research only represents one sector of teenage jobs and the conclusions made are derived from a limited pool of interview candidates. However, her findings may indicate that issues of immaturity because of age can impact an adolescent in a part-time work situation.

Also worthy of note is the complexity surrounding the issue of legal standards for teenagers in general. The adolescents regularly face diverse legal guidelines depending on the context in question (Plaisance, 2008; Hanisco, 2000).

“Their rights to free speech may depend on whether or not they are at school; their rights to choose medical treatment may depend on the type of treatment they are requesting; whether they will be charged as an adult or a minor in criminal proceedings depends on the particulars of the crime committed.” (Plaisance, 2008)

These legal complexities frequently centre on the perception that adolescents do not have the cognitive capability, proficiency, and maturity required to make reasonable decisions (Hanisco, 2000). If this perception of teenagers is true, then we must question whether they have the maturity of mind and knowledge required to enter the working environment in the first place. On the other hand, if this perception is false, we should be able to trust in this age group to make rational decisions of their own accord.

An important example of how risks are created from teenagers' lack of comprehension surrounding their workplace rights is the case of Chipotle Mexican Grill fast-food chain. The restaurant was recently found to be in violation of approximately thirteen-thousand child labour laws across fifty U.S. states (Yaffe-Bellany & Zaveri, 2020). It is documented that the chain had often allowed numerous teenage employees to work in excess of the maximum hours authorised by law in this jurisdiction (Yaffe-Bellany & Zaveri, 2020). The risks that have been identified by

Yaffe-Bellany & Zaveri (2020) are further strengthened by similar findings in the aforementioned work of Siddeek (2020).

According to Pappert (2020) there are now approximately 2.5 million teenagers working in the restaurant industry. This illustrates the potential for adolescents to be exploited because of their recognised inadequate knowledge (Drobac, 2007; Smith & Patton, 2009) about their rights and their employers' responsibilities to them in the workplace. If such breaches in law go unnoticed, the teenagers bear the risk of being taken advantage of to the extent outlined in the Chipotle case, and possibly to further degrees.

In terms of teenage development, it is imperative to mention the transformations taking place for an individual during these years. From a psychological perspective, adolescents undergo significant cognitive changes in the course of their teenage years (World Health Organisation, 2020). Throughout these years, adolescents are developing skills in reasoning, logical thinking, and rational decision making (World Health Organisation, 2020). This increase in intellectual ability happens over the course of time, working adolescents aged between fifteen and eighteen therefore cannot be expected to produce the types of reasoning and judgement required to be a professional worker.

However, there are ways in which employers can better facilitate their adolescent workers, which is the third topic that this literature review addresses. Ginsburg et al. (2014) highlight that professionals (such as managers and supervisors) can be most effective with this age group when they can understand the cognitive developments of adolescents. These working teenagers are obliged to undertake adult responsibilities, without having the same skills that adults display in coping with job-related stressors and managing numerous responsibilities (Greenberger, 1988). Moreover, Hutchinson, et al. (2006) suggests that the ways in which adolescents cope with stress is crucial to their health and

wellbeing. Accordingly, employers of the adolescent age-group must consider these developmental factors and strive to teach their teenage workers how to cope with stress-related issues.

Moskowitz (2000) also makes an argument relevant to these issues. The author indicates that in every aspect of a teenagers' life they are protected, but when it comes down to discrimination in the workplace, they are only shielded by securities aimed at protecting adults (Moskowitz, 2000). Moreover, Plaisance (2008) sheds light on the matter in a discussion on how employment bias had become increasingly frequent against teenagers in the U.S, so much so that the Equal Employment Opportunity Commission were obliged to introduce an initiative for educating teenage employees on their workplace rights. Employers can therefore seek to better assist adolescent employees by recognising the levels of discrimination teenagers can face and finding ways to mitigate such occurrences in their individual organisations.

This review has examined some of the various factors associated with adolescent employment. The phenomena has been researched from an objective perspective, considering both the positive and negative attributes associated with adolescent work. The literature that has been critically assessed creates a somewhat balanced argument both for and against the issue in question.

Much of the literature deemed teenage employment to be beneficial in terms of developing responsibility, resilience, time management skills, organisational abilities, and teamwork skills. Further research found that work experience that incorporates learning opportunities can have psychological benefits and aid a teenager in obtaining professional standards. Additionally, as claimed by Dennehy & Mortimer (1993) and cited again by Mortimer et al. (1996) being employed during teenage years is thought to be a critical step in progressing to adulthood.

In conjunction with these findings, this literature review has also explored conflicting research which has observed significant drawbacks to adolescent employment. The issues identified can be looked at in three categories: (i) Inexperience and vulnerability, (ii) discrimination, and (iii) psychological impact. The first category demonstrates how the naivety of adolescents can position them in particularly vulnerable situations. Teenagers are unfamiliar with the workplace and can therefore be easily misled or unfairly treated, as seen in the Chipotle (2020) case. Along with this, adolescents are not yet competent in dealing with work-related stressors or handling adult responsibility.

The second category reveals how ageism is exhibited against teenagers, contrary to the common belief that ageism is merely an obstacle of the older population. Age discrimination is predominantly observed in terms of teenagers' employability, and in the stereotypes held against them. This was validated in Dugan's (2014) case studies which addressed teenage victims of age discrimination and stereotyping. Within this category, this literature review also investigated how protection against discrimination in the workplace is synonymous for both adolescents and adults.

The third and final category of the drawbacks to teenage employment focuses on the psychological influence that may be provoked. Research on this aspect suggested that work, particularly intense work, can cause stress, anxiety, and depression in teenagers. In addition, adolescents who hold a job may find it difficult to sustain academic ability and will have reduced time for leisure, which in turn can give rise to the aforementioned psychological problems.

With respect to adolescents, the topics of complex legal standards, developmental changes, academic pressure, and the importance of independence have also been reviewed in detail. These themes focused on the challenges of being a teenager in general, and how these burdens

may translate in the workplace setting. Ultimately, a need has been recognised for employers of adolescents to both understand and consider the ways in which teenagers differ from adult employees. This is necessary in aiding the creation of a safer workplace for teenage employees and in addressing certain adversities associated with adolescent employment.

The existing body of literature, although comprehensive, is somewhat limited because it is predominantly concentrated on North American-based studies. While other geographic areas have received some attention, they seem to be under-explored in terms of adolescent employment. This gap is notable given that every country has differing standards and laws for the employment of teenagers. Potentially, this means that the realities of adolescent employment will presumably vary in each country. In order to reach a full and evaluative conclusion around this topic, one must be able to draw on research from a variety of contexts and cultures. In Ireland for example there are over fifty-thousand teenagers employed (Central Statistics Office, 2019), yet there is a notable scarcity of Irish published research on the topic of adolescent part-time work. Therefore, the current state of conditions for teenage employees cannot be determined in the Irish context.

However, the issues identified by researchers of North America and other locations are likely to be somewhat relevant in other cultural contexts. In reality, teenagers of all nationalities undergo similar developments and changes. As a result, one could infer that teenagers are not only exploited in the countries where research has already uncovered the evidence, but similarly in many other regions. Hence, this literature review could be of use to employers seeking to understand their adolescent employees. Additionally, it may be used by parents or teachers of adolescents in assessing the risks and benefits of teenage employment, and potentially by governments attempting to introduce laws and regulations to protect this young vulnerable section of society pivotal to a countries' future

My recommendation is that our adolescent workforce could be educated on their workplace rights and responsibilities in school when they reach legal employment age. This is a crucial requirement as identified by this literature review. From this research, I believe that if teenagers are made more aware of their entitlements and what acceptable workplace behaviour is, they will be far more capable of fighting their corner for equitable and fair treatment. This will undoubtedly translate to a positive result for teens and their potential employers alike.

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An exploration of customer loyalty in the Irish grocery industry

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Abstract

The purpose of this literature review is to more deeply understand the phenomenon of customer loyalty in the Irish grocery industry from a customer's perspective. Focusing primarily on largescale Irish grocery stores, the project will highlight the benefits generated by customer loyalty and suggest how managers can construct a marketing strategy to develop maximum levels of customer loyalty. The literature review identifies that non-economic benefits, such as feedback and reputation, are as important as economic benefits, such as increased revenue. Managers of Irish grocery stores can adapt their marketing strategy to maximise customer loyalty by focusing on intangibility, offering a wide product selection that include branded goods, practicing strategic targeted promotion, reducing concentration on price elements and increasing concentration on process.

Keywords: Customer loyalty, Ireland, Grocery industry, Intangibility

Introduction

The Irish grocery industry has excelled in recent years, with its value increasing by 2% to €2.4 billion in 2019 (Percival, 2019). There was €10.85 billion spent on groceries in 2018 (Quinn, 2019), with the average grocery spend per household equating to €5,400 (Kantar Worldpanel, 2013). Although the grocery industry has proven financially successful, the grocery industry has undergone unprecedented change due to many reasons including distribution practices, internationalism and indigenous labels (Collins, et al., 2001). These changes are reflected in consumer attitudes as less than 50% of grocery consumers say that they are satisfied with the in-store shopping experience (PWC, 2019). Despite the biggest interest on loyalty formation within the retail sector being in grocery retailing (Pilelienė & Zikienė, 2017), Irish customer loyalty has been negatively affected in recent years. This has ultimately affected the customer loyalty of Irish consumers. This is evident as 64% of Irish customers switched a provider in 2017 (Pope, 2017).

The purpose of this literature review is to further investigate the phenomenon of customer loyalty in the Irish grocery industry. It is accepted that a major goal of most industries, inclusive of the grocery industry, is to develop and maintain customer loyalty. The main candidates in the Irish grocery industry are Dunnes with 22.3% market share, SuperValu with 22.3%, Tesco with 22.3%, Aldi with 12.3% and Lidl with 12.3% market share (Kantar Worldpanel, 2020). Most of these candidates have displayed efforts in ensuring loyalty through various means including Tesco's Clubcard point system (Tesco, 2019), Dunnes Stores' €5 off €25 promotion (Dunnes Stores, 2019), along with SuperValu's Real Rewards loyalty system which is Ireland's first multi-partner digital rewards programme (SuperValu, 2019). In addition, SuperValu's loyalty programme won the (Irish Loyalty Awards, 2019), which further adds to the level of rivalry existing in the Irish grocery industry.

The battle to sustain and develop customer loyalty is especially evident in recent times due to the outbreak of Coronavirus, resulting in increased demand for grocery products. Many Irish grocery stores have gone beyond minimum requirements, and now provide supplementary and enhancing services to do so. Such measures include amended opening hours and priority shopping hours for carers and the elderly which have been implemented by retailers including Lidl, Aldi, Tesco and Supervalu (Gataveckaitė, 2020).

This research aims to explore the factors that develop loyalty in the grocery industry from a customer's perspective, in order to add an incremental contribution to the research already carried out in this area. This research also sets out to be practically utilised by managers, with a primary focus on largescale Irish grocery stores. This research will not only highlight the benefits that customer loyalty generates, but also to demonstrate how managers can construct a marketing strategy to ensure maximum loyalty. A deeper understanding of what engenders store loyalty would be beneficial to retailers in developing appropriate strategies to satisfy loyal customers and to maintain a competitive advantage (Bhat, 2017).

In particular, the questions I want to address include:

1. What are the factors that influence customer loyalty towards grocery stores?
2. How does customer loyalty benefit Irish grocery stores?
3. How can Irish grocery managers adapt their marketing strategy to ensure maximum customer loyalty?

Factors That Influence Customer Loyalty Towards Grocery Stores.

With respect to the first question, the aim was to identify the main factors that have been identified that influence customer loyalty to grocery stores. Due to the extensive research carried out in this area, varying factors were identified in abundance by researchers across the globe. This

literature identifies the most relevant factors that are specific to Irish grocery stores.

Customer Satisfaction

Customer satisfaction has been identified as a core antecedent of customer loyalty (Jones & Suh, 2000), with particular associative links to its initial formation (Hyun, 2010). Through enhancing customer satisfaction, it can improve customer perception and ultimately lead to increased customer loyalty (Martinelli & Balboni, 2012). A large questionnaire-based study supported this view, as customers stated that customer satisfaction was a central factor in which influenced their loyalty to a particular store (Martinelli & Balboni, 2012). Opposing this, a more recent study found significant differences to earlier findings. Through a mail intercept survey, Bhat (2017) found that there was no direct relationship between customer satisfaction and customer loyalty, especially in the presence of strong brand image. This suggests that customer satisfaction only acts as a direct antecedent of customer loyalty if there is an absence of strong store image.

Loyalty Programmes

Loyalty programmes are often a popular means of capturing customer loyalty, in particular within the grocery industry. The two most used tools within these programmes include loyalty cards and rewards programmes. It has been argued that the benefits associated with such loyalty programmes, can influence customer loyalty to the store (Omar, 2015). A 2006 quantitative analysis concluded that there was a positive relationship between the possession of loyalty cards and customer loyalty (Turner & Wilson, 2006).

However, in an in-depth focus group study conducted in various areas within Italy, there was no mention of loyalty programmes from participants when asked to discuss customer loyalty (Maggioni, 2016). In addition to this, a recent survey concluded that loyalty programme members did not reveal higher loyalty levels, when compared to non-

members (Filipe, et al., 2017). These hypotheses reflect the thoughts of Reichheld, who is a well-established thinker in this area. Reichheld (1993) argues that loyalty programme members purchase the items they would have anyways, with a discounted price being the only difference. According to ACNielsen, cited in Waarden & Benavent (2009), European households possess three grocery loyalty-programme cards. The excessive promotion of grocery loyalty programmes may have delivered unprecedented results regarding customer loyalty, therefore providing an explanation for the reduced impact of them.

Functional Store Associations

There have been significant findings in the relationship between functional store associations and customer loyalty. Functional store associations include merchandise selection, stock availability, store performance and ad service (Maggioni, 2016). Many customers perceive a wide product choice to be critical in the development of customer loyalty, with many stating it is the first determinant of grocer choice (Briesch, et al., 2009). An Irish based mail correspondence survey concluded that product innovation and choice was one of the top six most important criteria to buyers, in order to develop customer loyalty (Collins, et al., 2001). A more recent study further reinforced this view, as respondents stated that having a wider choice of products was the most important factor to develop loyalty towards a store (Pilelienė & Zikienė, 2017). This reflects the recent trend of the emergence of grocery store as a brand, which has been noted to be one of the most significant trends within retail (Grewal & Levy, 2009). This involves the retailer integrating backwards to generate more choice for the consumer. Successful retail branding can be extremely influential in increasing customer loyalty (Allaway, et al., 2011).

Physical Characteristics

Physical characteristics include tidiness and organisation of a grocery store has emerged as an important factor in the development of customer loyalty. Focus group members, who varied in age, gender and

geographical location, mentioned tidiness and organisation of a grocery store 27 times over a two-hour period when asked to discuss the contributors to customer loyalty (Maggioni, 2016). A more recent and extensive study conducted by Facebook, further investigated physical characteristics of stores. This study concluded that although cleanliness and tidiness is an important factor for all customers, millennials were “2.50 times more likely to cite a store’s level of hygiene” in a grocery setting, when compared to the baby boomer generation. This can be viewed as a generation specific contributor to customer loyalty (Facebook for Business, 2016)

Perceived Service Levels

Considerable links between perceived service levels and customer loyalty have been established. An Irish mail correspondence survey, which included customers from the five largest grocers, concluded service levels to be the one of the top factors in cultivating customer loyalty (Collins, et al., 2001). A European study echoed such findings as it reported that perceived service quality plays a crucial role in developing customer loyalty (Martinelli & Balboni, 2012). A more extensive and recent study conducted by Facebook reinforces the importance of service levels. To examine customer loyalty, Facebook surveyed 15,000 US consumers across various industries including grocery. Such findings suggested that loyal customers not only expect basic needs to be met, but value experiential qualities including service levels (Facebook for Business, 2016). Collectively, these studies provide evidence that there is a relationship between customer loyalty and service levels of grocers.

Store Image

The importance of store image in developing loyalty from customers has been established in the last decade. Giovanis & Tsoukatosb (2017) has concluded that store image is a core antecedent of customer loyalty. Further research in this area support this. A recent mail intercept study composing of 300 participates, identified a direct relationship between a

positive store image and customer loyalty (Bhat, 2017). Together, these studies indicate that store image is of growing importance in developing customer loyalty.

Gender

A key finding in the research of customer loyalty relates to the gender of consumers, with several lines of evidence suggesting that females are more loyal customers. A comprehensive study measuring customer's relative attitude to grocery stores identified a difference between men and women's behaviour (Møller Jensen, 2011). This study concluded that "women tend to have a higher relative attitude towards grocery products than men do" (Møller Jensen, 2011), along with identifying that the proportion of loyal customers is higher in women than men. A comparable study further highlights the difference in men and women's behaviour regarding customer loyalty, in particular to the use of loyalty programmes. It was established that women were more attached to the novelty of loyalty programmes, whereas men were more attached to the perceived advantages of loyalty programmes (Vitches-Montero, et al., 2018). Collectively, these studies outline the critical role that females have in developing and retaining customer loyalty.

Advertising

There is a strong link between advertising and the development of customer loyalty. A 2011 study found that when customers were exposed to grocery advertisements frequently, their relative attitude increased, ultimately leading to customer loyalty (Møller Jensen, 2011). This is a long-established link, as Biong (2003) states that customer loyalty is influenced directly by "marketing mix components". This hypothesis was further supported in a more recent study by Maity & Gupta (2016) who concluded that advertising strengthened the bond between a customer and grocery store but was not a strong enough factor to induce purchase behaviour. The evidence provided thus far suggests that

advertising can be used to remind customers of the benefits of a store, rather than encourage buying behaviour.

This study set out to identify the factors that contribute to customer loyalty within the grocery sector. Although there are copious factors in existence, the results of this investigation discuss the most prevalent ones. This investigation explores evidence of factors, of which some are specific to Irish grocery stores, whilst others can be applied internationally. Therefore, the analysed contributors to customer loyalty will be of interest to a large cross section of grocery retailers.

The Benefits Of Customer Loyalty For Irish Grocery Stores.

The second question in this study sought to determine the benefits associated with the development and attainment of customer loyalty within the grocery industry, which have proven to be indisputable. An increasing amount of research reflects the views of Yang, et al. (2018) who describe loyal customers as “the most important asset for companies in today's competitive environment”. The benefits ensued from customer loyalty within the grocery industry can be loosely categorised into economic and non-economic benefits (Yang, et al., 2018).

Economic benefits

Profitability

A large and growing body of literature has investigated profitability as a benefit of customer loyalty. Customers who are loyal to a grocery store buy more items and pay higher prices (Reichheld, 1993). This thought is echoed in a more recent study, where a correlation between organisations with highly loyal customers and increased profitability was identified (Bhat, 2017). A recurrent suggestion in many studies links such profitability to the savings organisations make as a result of retaining customers, opposed to attracting new ones. As Nunes & Dreze state, “a current customer retained is more valuable than a new customer recruited” (2006). A mirrored conclusion can be seen by Pilelienié &

Zikienė (2017) who states that the savings from retaining a customer, along with the reduction of marketing costs are key contributors to the profitability of grocery stores who possess loyal customers.

Reduced price sensitivity

A great deal of previous research surrounding profitability as an outcome of customer loyalty, has focused on savings. However, several studies have begun to examine profitability from different perspectives. Through a questionnaire-based study, Pilelienė & Zikienė (2017) concluded that price insensitivity is a major opportunity to increase profitability in relation to loyal customers. It stated that grocery stores can “receive price premiums as loyal customers are less sensitive to prices”. This hypothesis supports the of previous studies (Von Freyemann, 2002; Reichheld, 1993).

Non-economic

Creation of database

The creation of a customer database is an indirect benefit of loyalty programmes in the grocery industry. “Loyalty cards provide retailers with the ability to create specific databases that contain information about each customer, customers’ purchasing habits, frequency and amount of purchase, preferences for a particular brand, mobility, frequently asked questions and complaints” (Koncar, et al., 2019). This data serves as an important source of information, which enables grocery stores to exploit such information and improve the customer experience. This ultimately acts as a source of competitive advantage (Martinelli & Balboni, 2012) whose importance cannot be overestimated (Reinartz & Kumar, 2000).

Forecasting

An extended benefit of the creation of a customer database, is the enabling of a grocery store to forecast future demands and trends based on current customer behaviour. This allows grocery stores to analyse the current situation with the aim of aligning it with their long-term strategic plan. This is also viewed as a competitive advantage (Martinelli & Balboni, 2012).

Relationship with customer

It is well established from a variety of studies, that the resulting relationship between a grocery outlet and its customer, is an advantageous intangible consequence of customer loyalty. It has been found that many managers have increased their emphasis on long term customer relationships (Meyer-Waarden, 2007), as a result of an observed correlation between the length of a customer's interaction with a store, and the profitability of the said store (Gupta, et al., 2004).

Feedback

A by-product of a long-term customer relationship has proven to be an increase in the level of feedback between the grocery outlet and the customer. Participants in a recent quantitative study described themselves and their grocery stores as “reliable partners” in relation to information exchange, which they viewed as a symbiotic relationship (Yang, et al., 2018). Although, many studies focus on the value of feedback in a general sense (Yang, et al., 2018; Lovreta, et al., 2010), the work of Umashankar, et al. (2017) focuses on the advantageous contribution of negative feedback. This study concludes that loyal customers not only express feedback more often but are more confident in giving negative feedback where necessary. Umashanker, et al.'s (2017) findings explain that “complaining after a service failure generates both behavioural and attitudinal loyalty”, which can be used as an opportunity to gain competitive advantage.

Word of Mouth

Loyal customers play a part in maintaining the overall image of the company through sharing positive attitudes, advice and information with other users (Koncar, et al., 2019). This is a long-established rationale, as Reichheld (1993) concluded that loyal customers generate effective word of mouth. This informal communication ultimately results in a positive reputation being built for a grocery store (Irina & Zait, 2016) which influences external stakeholders (Balmer, et al., 2011). These findings

help us to understand the positive implications that word of mouth plays for grocery stores, which is generated from customer loyalty.

In this study, the aim was to determine the benefits associated with the development and attainment of customer loyalty within the grocery industry. It is beyond doubt that various benefits emerge from customer loyalty in every sector. However, this research has shown that the grocery industry possesses a unique set of benefits.

It is widely accepted that economic benefits, such as increased revenue is a critical result of customer loyalty. This study has proven such a theory, along with identifying non-economic benefits such as feedback, reputation etc., as equally important, neither of which should be overlooked by Irish grocery stores.

Irish Grocery Store Managerial Implications, In Regard to Their Marketing Strategy.

The proven factors that contribute to customer loyalty, can be efficiently interpreted, and used in such a way to improve the marketing strategy to capture maximum potential benefits. A services marketing strategy generally consists of seven elements including product, price, place, promotion, people, process and physical evidence (O'Neill, 2018). This is an extremely important process, which is growing in complexity due to the competitive nature of the current grocery industry. "Low prices are no longer enough for retailers to prosper, they must develop branding strategies to bring more value to consumers (Troiville, et al., 2019).

The initial step for grocery managers, is to design and construct a marketing strategy to capture customer loyalty. This is a crucial element in the process, as marketing managers must understand customers and their needs to develop a relationship with them. It is essential that managers achieve a strategic fit when designing a marketing strategy for a grocery store, as "one reward structure of loyalty programmes that fits a group of customers may not be equally attractive to another" (McCall

& Voorhees, 2009). Therefore, a deeper understanding of what generates customer loyalty would be advantageous for grocery stores in the construction and development of market strategies to gain such competitive advantage.

It has been identified that customer loyalty is influenced by tangible and intangible factors. Although both tangible and intangible factors result in valuable benefits for grocery stores, the level of risk associated with tangible factors is something of concern. If loyalty “is tied to something tangible, than it can evaporate if this factor is no longer present” (Palmatier, et al., 2007). For example, if a customer’s loyalty is tied to a grocery store’s salesperson, and that salesperson leaves their job, it results in the loss of the customers loyalty. This thought is echoed in a study conducted by Facebook which identified that grocery stores must develop intangible factors in order to maintain customer loyalty (Facebook for Business, 2016). This information can aid grocery managers in the designing phase of a marketing strategy, as it informs them of the risks and opportunities associated with tangible and intangible factors. The most significant elements of the service marketing mix are detailed below.

Product Selection

‘Product’ is one of the core elements in a marketing mix (O’Neill, 2018), with its significance to customer loyalty being proven by many domestic and international studies (Maggioni, 2016; Briesch, et al., 2009; Collins, et al., 2001). A prevailing trend in the last 20 years is the rise of a retailer as a brand, with evidence of implementation by many established Irish supermarkets e.g. SuperValu’s ‘Daily Basics Range’ (SuperValu, n.d.). This has been noted to be a crucial trend within retail, with significant profit potential (Grewal & Levy, 2009). However, a return in the popularity of branded goods was observed in 2017 by David Berry, director of Kantar Worldpanel. Sales of private branded goods surpassed sales of own brand goods for the first time in four years (Pope, 2018). These statistics are in line with the results of a study carried out by

Facebook, which concluded that millennials are more inclined to be loyal to particular brands, when compared to baby boomers (Facebook for Business, 2016). Therefore, managers can use these findings to manage their product offering and assortment, to ensure that it satisfies their target markets preferences, which in turn maintains customer loyalty.

Price

The pricing strategy of a grocery store is also a core element of their service marketing mix (O'Neill, 2018). It has been found that pricing is one of the most important factors for customers when choosing a store (Tsolakis, 2015). However, a comprehensive study including customers of major retail chains concluded that price is of less importance to EU countries, when compared with non-EU countries (Koncar, et al., 2019). This signifies that Irish grocery store managers could raise overall prices, without having a significant negative consequence due to its reduced importance. This data is of major significance for Irish grocery store managers, as it allows them to design a more appropriate and optimising pricing strategy, with the potential to increase profit levels.

Promotion

Promotion is a key element within the service marketing mix, which “involves all the methods a business uses to inform consumers about their products and persuade them to buy” (O'Neill, 2018). This includes the promotional activity of advertising which has previously been analysed in its effectiveness in promoting customer loyalty. Results prove that although advertising is extremely effective in reminding customers of the store, it is not a strong enough factor in influencing purchase behaviour (Maity & Gupta, 2016). In addition, it has been found that females are more attached to the use and perceived benefits, in comparison to males (Vitches-Montero, et al., 2018). Together, these studies have important implications for grocery store managers when developing the promotional aspect of a marketing strategy. It allows them to assess the trade off between the price of advertising and actual sales. In addition, it

implies that targeting their grocery advertising towards females may be more prolific, rather than ineffectively focusing on males.

Process Convenience

The ‘process’ element is part of the extended marketing mix, which is unique to service industries (O’Neill, 2018), which includes grocery stores. It refers to the ease and convenience of a customer’s shopping experience with a store. Evidently, process is a prominent factor for customers as it has been proven to increase loyalty to a firm by 19% (Miller & Washington, 2010). To achieve a satisfying process, “retailers must assist customers and make their shopping trip easier and more convenient” which can be “achieved if the interior of the outlet is well designed and facilitates the customers’ shopping trip” (Troiville, et al., 2019). These findings can be unconditionally used as a reference in the construction of a process within a marketing strategy for Irish grocery stores.

To conclude, there are various ways that managers of Irish grocery stores can adapt their marketing strategy to ensure customer loyalty. Established methods include having a focus on intangibility, offering a wide product selection containing branded goods, practicing strategic targeted promotion, reducing concentration on price elements, along with increasing concentration on process. Although many factors are generalised, they can be transferred into individual grocery market strategies, enabling customer loyalty.

Conclusion

One of the main goals of this investigation was to identify the factors that contribute to customer loyalty from a customer’s perspective. There is extensive knowledge in existence within this area, with both expected and surprising findings gathered. Many identified factors are widely accepted as contributors to customer loyalty, such as service levels and advertising. Furthermore, this study identifies many recent findings

which test the norms in this area, which is evident from the increasing questions surrounding the effectiveness of loyalty programmes in engendering customer loyalty. Therefore, further research needs to be carried in the area of loyalty programmes to conclude their validity in developing customer loyalty.

In addition, new trends including the rise in importance of physical characteristics of a store and store image, suggests that the current generation have higher, and more complex expectations than previous generations. Although many factors have been identified, they are largely based on international studies, as a limited number of studies specific to Irish consumers exist. Therefore, I would suggest further study on Irish consumers to fill this research gap, which would produce more accurate findings for the domestic grocery market.

The second aim of this investigation was to determine the benefits associated with the development of customer loyalty within the grocery industry. It has found that a vast amount of research has been carried out in this area, conducted consistently since the 1990's. This has proven to be a strength of the study, as it enabled the selection of findings specific to the grocery industry. A common theme was the classification of benefits into economic and non-economic (Yang, et al., 2018).

The results of this investigation indicate that more non-economic benefits of customer loyalty exist than economic ones. This is beneficial for grocery stores, as although economic benefits are critical to grocery stores, non-economic factors have been proven to provide security in the long term (Palmatier, et al., 2007). Throughout this investigation, it was observed that many non-economic benefits were facilitated by technology i.e. the creation of a database. It could be argued that the creation of a database is one of the most prevalent benefits due to its expansive scope, with potential to be developed in the future.

The final aim of this investigation was to identify how Irish grocery managers can adapt their marketing strategy to ensure maximum customer loyalty. The first major finding was the sheer importance that the construction and design of a marketing strategy has in ensuring success in many areas, inclusive of customer loyalty. The methods of adaption were suggested by identifying the most important elements of the marketing mix, which have proven to be product, price, promotion, and process.

Although all elements of the marketing mix pose their own abilities to be constructively used by managers, the investigation of price emerged as a core element, as a recent study concludes that European consumers are less price sensitive (Koncar, et al., 2019), in comparison to non-Europeans. These findings are of interest to Irish grocery managers, as it implies that higher prices may be charged, whilst still achieving customer loyalty from Irish consumers. This study could be repeated using the same country specific parameters on other elements of the marketing strategy i.e. product, promotion, process. This would result in a more accurate domestic analysis of marketing strategy elements, which the current body of knowledge lacks.

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The potential of snail farming as one alternative farming solution
for elderly farmers in the West of Ireland
Winifred Olivia Sherlock-Presinal and Miriam McSweeney

A review of the literature on the impact of decision-making on
fluctuations of the economic cycle
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