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A Study of Irish Linen. 'William Clark and Sons Ltd.' By Briege A. McMullan

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Introduction

"Linen is the Aristocrat of textiles Strong as steel, delicate as silk With an appearance as valued and attractive as an Irish Landscape, It is not surprising that it has been preferred by people of good taste for Well over four thousand years"

Wallace Clark.

'LINEN ON THE GREEN' 1986.

Linen is the most important natural textile material indigenous to Western Europe, produced from the flax plant and spun into yarns.

Linen yarn is used by several distinct types of manufacturers for example; Weavers, sewing thread manufacturers, string and twine manufacturers, webbing manufacturers and knitters.

There are approximately two hundred textile firms in Europe of which twenty two are based in the U.K., these are concerned with the manufacture of products made from linen yarn. Until quite recently, linens share of the textile market was declining as its traditional uses were gradually being replaced by other fibres. In the past ten years however, there has been a great resurgence in the demand for linen particularly in the field of clothing. The industry now intends to consolidate its' successes in the clothing sector and develop these other areas which presently are not expanding at the same time. In this thesis I wish to talk about the production of linen in the six countries, which I will refer to as 'Northern Ireland'. Using the company of 'William Clark and Sons Ltd.', as the main back bone of my information I wish to explain the major changes and stages which have taken place in the development of the textile industry. I will give an outline of how linen is regarded in Northern Ireland and how successful it is seen in the linen market of the World.

I shall explore the industry of William Clark and Sons Ltd from 1700 to the present day showing how the firm has established itself and how it has continually succeeded throughout many upheavals and competition especially political strife and economic depression.

There have been many changes in the production methods used in the linen industry as a whole and many firms have had to re-establish themselves with new equipment and have had to employ new methods for production. Also the development of new fibres and various mixes have had to be taken into account, as demand for these new fibres grew and changes have had to take place in order for firms to develop.

Throughout my thesis I shall refer to William Clark's & Sons Ltd. as 'Clark's' or the 'Clark's Company'. I hope to outline the strength of this firms workforce and the struggle of the 'Clark Company' in their adapting to new technological advances. Due to the loyal and hard working staff the firm was able to achieve high quality products and establish themselves highly on the Irish Linen market.

Chapter five will concentrate on how markets were obtained and the marketing plan which was followed by William Clark's & Sons Ltd to achieve high sales of the products.

In my final chapter I shall compare 'William Clark & Sons Ltd.' to a number of similar firms in the textile industry in Northern Ireland, to show how each has established themselves and how they differ in operation to that of 'William Clark & Sons Ltd'.

Hopefully I shall be able to give an understanding of the linen trade in Northern Ireland and explain how it has successfully achieved its' high quality reputation for Irish Linen in the world market.

Chapter One

Linen has always been associated with the 'Six Counties' henceforth referred to as Northern Ireland, over 200 years ago it was one of the major crops harvested by farmers, today very little is grown in the province, however the manufacturing of linen cloth and linen mixes can be found in many well established firms.

In this the first chapter, I would like to state the basic role of linen which has evolved the last two centuries from a naive cottage industry to the highly equipped and modernised factories of today. Through its history, linen has survived many upheavals and in the last few decades it has been reestablished once again in the fashion industry. I wish to explain these effects to give an understanding of linen in Northern Ireland today.

Linen has been produced in Northern Ireland since the 18th Century. It started as a small cottage industry widely dispersed in rural areas where power was achieved by means of water wheels¹. Most of the small firms were family owned and handed down through generations from father to son.

In the 19th Century with the growth and application of steam power, concentrated in the lower Lagan Valley, more mills were built and factories grew into large companies. Linen was then only used in local areas, but trading and markets were established. Most of Northern Ireland's linen was transported by horse and cart to Dublin, until after 1945, when Belfast became the hub of Northern Ireland's Linen trade.

Throughout these two centuries the 'Irish Linen' name was established for achieving traditional high quality products for which it is still highly regarded today. With the development of new technology most manufacturers adapted and re-equipped their factories. Cotton cost less to produce and had a greater variety of finishes, resulting in linen now being classed as a luxury material.

Demand for linen rose mainly during political strife particularly in the First World War from 1914 to 1918, and the Second World War from 1939 to 1945, as linen has always been regarded as the 'Fighting Fibre' and has been used in combat for centuries, due to its' strength and durability (Wallace Clark, Linen on the Green - p.93). Linen became a vital war material for sails and army equipment, but was used extensively in uniforms. The sleeves were made from lightly beetled linen for added strength and heavier beetled linen was inserted in the pockets^{α}. Chest sections of the uniform were produced in a coarser weave and with the use of starching, the fabric was made much stiffer and acted as a semi-protector against the enemy's weapon. During the twentieth century many companies in Northern Ireland tried to maintain their businesses and, moved into the field of new fibres such as synthetics, rayon and nylon etc. These new inventions were much cheaper and could be engineered more specifically towards their particular enduse. However in the last five to ten years linen has had a revival, for the growth in demand for natural fabrics has brought it back to life.

Many Irish fashion designers began to adapt their operations into linen fabrics. Developing styles and projecting their Irish origins. Linen has many suitable properties for fashion garments as it drapes well on the body, also it is a durable fabric. However, one original drawback had been the element of its continual creasing. This has in recent times become a high fashion hallmark of linen, showing its unique properties and capitalising on them. Paul Costello has achieved numerous success in his use of linen in his collections. The latest of which he has adapted into new high flying styles created for the British Airways Ground and Air staff.

Optimism in the industry began to grow and the ancient craft was moved

into a more modern and forward thinking world. The results were shown through continuous production and growing market demand along with improving technology. In the 20th Century innovation and tradition were combined to maintain the unique properties of linen, new technology gives an increase to production output however the traditional aspects of production were maintained as some production areas were unable to be changed through new machinery i.e. 'Beetling' this traditional method remains the most successful.

Annually 9000 tonnes of flax fibre is imported into Northern Ireland from Belgium and France. However in 1984, five hundred and fifty acres were grown in the province and production has developed. Retting the flax has been the major problem for growers as it is considered ecologically unacceptable due to the pollution of rivers. Therefore man-made dams and tanks were introduced to overcome this problem. This new method has not affected the quality or traditional aspects of the fibre but with the aid of certain chemicals retting can be achieved quicker and more control is given to the process resulting in a higher quality fibre. In the last five years investment of £50 million has been allotted to the manufacturing of linen in Northern Ireland, through a number of government bodies, mainly the Industrial Development Board, (IDB), and this has been warmly welcomed for re-equipping and modernisation. The turnover is estimated at £20 million, with 4,000 people employed. Exports reached £60 million in July this year.³

The main export markets for Northern Ireland's linen are Italy, America and Western Europe. In Italy, however, linen is used primarily as a high fashion fabric, the demand in America is centred in the ethnic 'Irish Market' where traditional Irish products such as tableware, bed linen and handkerchiefs are popular exports. Some countries in Western Europe Import linen in a smaller capacity for fashion items and household goods.

In conclusion it is clear to see that linen has maintained its popularity not

only in Northern Ireland but in most of the World Markets. It has been highly developed through the years and maintained its quality throughout many changes to its production method. Northern Ireland has always been involved in the production of linen and is likely to do so in the future. Today there are many market areas available to linen products and these can only grow. Linen has always had stiff competition from other natural fibres and highly developed man-made fibres, but has been able to maintain its quality and popularity, allowing for further growth of the Irish Linen fabric in the future ,

FOOT NOTES

1. The water wheel is a

large wooden wheel, which turns under the force of running water.

2. Beetling:

The final stage of finishing linen is to flatten the yarns and close them together to produce a smooth surface and bring up the national lustre of the fibre.

 Figures obained from Ledu's (the small business agency in Northern Ireland) business library index.



Chapter Two

This chapter is based on the history of the Clarks family, and the development of their company. Tracing back to 1700's and the first installation of machinery, such as the 'water wheel', to aid production methods. This chapter will also look at the type of product processed and the family involvement and commitment to the company.

I hope to use the 'Clark company' as an indicator of the linen industry in Northern Ireland, throughout the two centuries, charting the relevant social, political and economic influences and their effect on the linen industry as evidenced by Clarks. This will involve tracing competition from other fabrics such as cotton and the various influence such as political unrest and wars which have been part of the industries history. One aspect of which has been relevant to this companies success has been a strong family involvement from the very beginning.

This chapter will cover the period from 1700 to 1950's, and hopefully show the strength of 'William Clarks and Sons Ltd.' in the wider context of Irish linen. The Clarks family can be traced back to Scotland, from where they fled from in order to escape episcopalian pressure on the Presbyterian Church.

When?

The year 1700 shows the first records of 'Clarks' in Maghera, Co. Derry. John Clark a farmer, brewer and cornmill owner was the first to trade in linen. Most was sold against bills of exchange through agents in Dublin. In 1707 John Clark died and his son Jackson took over the small but growing industry. After his marriage he moved to Upperlands one mile outside Maghera, where he later established the company, and where it stills trades today. In the 1730's he was able to provide enough employment for his three sons, in a period where emigration was high. In due course he expanded his linen trade, by retaining webs of cloth from local weavers and bleaching

them himself. The end of this decade saw the installation of a water wheel on the River Clady, which ran through his land and which give the necessary fall of water for power to be obtained. It wasn't until Spring the following year owing to floods and a harsh winter that the fourteen foot brest Wheel was assembled, and beelting engines made from local Sycamore trees began to echo through Upperlands. Production increased dramatically, however the summer weather dried up the river and work was stopped, enough stock had been produced to be marketed in Dublin. Orders were obtained and the engines began humming again. By the 1750's Alex and John, Jackson's sons were involved in the business.

Silk brought heavy competition but linen maintained its market due to its stiffness and durability and it remained in high demand during many wars for these qualities. Most Irish firms at this time were not finishing the cloth, so it was brought through drapers and sent to England. The drapers would examine the cloth and give a price accordingly, up to a hundred webs¹ could be sold in an hour, some drapers were dishonest and undercut the suppliers by paying lower prices, however the English parliament instructed the cloth to be presented in Lappers² and not rolls and linen had to be officially stamped before it was sold. Alex Clark was a reputable bleacher and became a draper and lapper registrar to enable him to seal his own linen and the linen of neighbouring firms.

The 1760's saw competition from cotton. However, linen as a fabric had better evaporating properties and was able to hold its' place in the market. Belfast had established its own market but Alex still traded in Dublin, through his brother Arthur.

After the death of Jackson, Alex took over the business and expansion took place, however, due to legal expenses and debts left by his father, he lost interest. The brewery was more profitable and Jackson's brother helped to supervise the running of Upperlands. With political unrest in Ireland and the French revolution in 1789, agriculture became the main source of income for the population of the north. On the death of Alex in 1806, the business was taken over by this grandson, also called Alex. With demand for linen high and good prices in the market place, Alex took tight hold of the reigns and began to build up the company. A dam was erected and a water reserve ensured the engines would continue to echo, even through drought.

Travelling to London Alex introduced his goods to new markets, where the response was hopeful but as demand for cotton grew, many linen companies had to invest in other projects, Clarks maintained themselves and did not over expand production methods, on output. With the failure of the banks in 1825, economic disaster struck the production and marketing aspects of the business. Many firms went bankrupt and cheaper competition from England began to take over the Irish market. Clarks struggled through and later that year wet spinning was introduced to the firm with help from the Ulster and Northern banks, allowing Clarks to expand production to English standards.

Improvement to the bleaching houses and employment of fifty men give Clarks an annual output of eight thousand pieces.³ These were mostly exported to the growing American market, 1831 saw the addition of Alex's eldest son, William to the firm, while still young at 15 years, he took over aspects of the business and travelled to England to deal directly with the wholesalers. The 1830's were a steadily fixed period in the market, rather than development or expansion, it also saw the closure of the brewery. Clarks started dyeing cloth after the bleaching process and orders were achieved from the Aghadowney company, who were unable to fulfil their contracts. With the failure of the potato crop in the 1840's, many of the population died and millions emigrated. The result being a lower workforce available. The mark of the famine was left on all aspects of life.

After this period, life slowly began to pick up, 1847 saw the installment of the railway. It was extended to Ballymena, County Antrim, and ran only

seventeen miles away from Upperlands. There was a direct freight and transport line to Dublin and Belfast. Thirty years later, the railway was extended to Derry city and now it only ran one mile from the Upperlands plant. This resulted in reduction of freight costs and allowed expansion and modernisation to take place in the plant.

John, William's brother was taken on as a partner and four more engines were purchased. Civil War broke out in America and markets remained hopeful. Due to the Civil War, cotton from America began to fall in production, linen markets rose, due to the production of war materials and reached £7,000 in 1866. Clarks had to hire equipment in order to keep up with the rising demand.

Once the war was over and cotton production returned to its full capacity demand fell steadily for linen. Those firms who had over expanded found it difficult to keep open. William however travelled extensively promoting Clarks products and opened new markets in England and Scotland.

Between 1874-76 the market plummeted with the growth of cotton reestablished in the United States, the demand for linen fell, and a number of bad debts accorded, resulting in a number of companies going bankrupt. However Clarks maintained the firm with aid from family inheritance.

New agents were obtained in America, Canada and New Zealand, which led to a boost in exports, nevertheless with the extending cold winter the river froze and the water power machines were unable to operate. Harry, William's son travelled to America and found markets, he even gained an invitation to the White House, by President Cleveland. Unable to cope with orders, extra machinery was hired and work was subcontracted to the firm of Bells of Belfast.

Returning again to America in 1889, Harry Clark was able to show the



Americans a better range of samples, and orders were guaranteed, and turnovers of fifty thousand pounds was gained. The installing of steam power to the plant increased turnover by 20% and made the 1890's even more exciting for the company. However 70% of the profit was ploughed back into the firm.

A formal partnership was established in 1894, with the company becoming known as "William Clarks and Sons Ltd.", and a few years later Clarks obtained the land rights from the former landlords, "The Mercern Company", therefore allowing for further expansion. The workforce at this stage was 200, with a production range consisting mainly of interlingings, suitable for clothing. Ireland was now in political turmoil, with The Home Rule issue, and a Rail and Dock Strike in 1911, all which were placing heavy strain on transportation. However, settlement was soon reached in the strikes and demand rose that year as linen was considered a more sophisticated fabric for dresswear. This lead to expansion in Upperlands with addition of turbines and extra engines.

As England reluctantly declared war against Germany in 1914, the working population diminished, many firms were unable to keep up production levels and were forced in some cases to close, others fell under government control. Many of Clarks workforce joined the army and the work was taken over by the remaining female population. The American market feared a shortage of linen, due to the European war and orders for linen in large consignments. The dollar fell however and many were unable to pay, so orders were quickly cancelled. Linen however retained its popularity as the "fighting fibre", and many firms survived as a result of the home and European markets, and the Flax Board tried to keep minimum levels of production growing. There was a brisk demand again in 1919, when Harry visited New York, prices climbed, and new fabrics such as cotton and linen union were designed. This did not last long as Ireland itself was at war, and many firms were on a three day week. Following the coal strike, boilers were only going at half normal time, hence many companies were unable to fulfil orders and bought cloth from other companies to resell, as it was seen as a much cheaper method of production. The industry re-established itself and demand rose. 1921 saw the largest involvement of family members, they numbered 12 in total in the firm.

Clarks had now become a limited company and Upperlands became a recognised postal area and their reputation as a firm established itself, were able to defend themselves against competition. In 1925 the price of linen fell and Clarks replaced washmills with rope washers with the price remaining low, that year Northern Ireland produced only forty per cent of the previous years total and 30 firms closed in the region. Following excessive market research the Scandinavian market was opened and further orders were obtained from America and South Africa. With increasing work, Clarks purchased Mullamore Beething Mill for one thousand, three hundred and fifty pounds. In 1929 a fire almost destroyed Upperlands, repair costs were estimated at eighty two thousand pounds, which was covered by the Northern Assurance Company, in October of that year, repairs of £10,000 were necessary for damage by flooding to an area of the factory.

Clarks could still produce high quality products and the home market allowed for a small turnover, and with World War II, many men joined the forces, linen becoming an important fabric once more, but due to shortage of flax imports, production was limited.

The Irish farmers raised crop levels to a hundred and twenty thousand acres, in 1941, but with government control on contracts of all imported goods, the cost of seed was too high and didn't seem worthwhile. Throughout the war Clarks maintained contact with their customers, through a number of red cross volunteers, part of the factory was taken over to process bullets and created eighty new jobs, which were mainly carried out by female staff who remained at home during the war. As the next generation of Clarks joined the firm, developments in machinery occurred, 1946 saw the installation of stenter frame steam driven looms. Pre war contracts were given a 400% price rise. By the end of the 40's yarn was freely available again, and turnover by many companies including Clark's rose dramatically however by the early 1950's the advent of post war depression brought trading to a normal level.

Through the 200 years or so of production of linen in the north of Ireland, it has seen many harsh periods. The popular demand for cloth and the expense and reequipping factories to achieve faster and more modern production, methods, were difficult to achieve by many, hence closure or heavy losses resulted.

Those firms which had managed to remain open throughout the various wars benefited as a result, because of the use of linen in war materials. Also with the development of new transport links in the Province, ports and access routes were more accessible which also aided the development of those that remained in production. This meant that when the new demand for linen peaked, these firms were in a strong position to capitalise on their investments. Clarks extended their markets extensively throughout this period which also placed them in a strong position. They established and traded as a high quality traditional family business which has remained very much an aspect of the firm today.

FOOTNOTES

- 1. A Web is a length of cloth usually 100 yards long.
- 2. A Lapper makes up line in folds, usually of one yarn, as opposed to rolls.
- 3. A Piece is a length of cloth, shorter than web, usually 50 yards long.

Chapter Three

War time experience with new fibres and fabrics created many new types of cloth which were eagerly developed after the war for commercial use. These new developments in fibres had created new synthetic fibre which threatened the natural fibres.

With the introduction of central heating in homes and work places and the development of the modern motor car, more lighter and softer fabrics were in high demand. Men's clothing was diverted to wool and hair mixtures for interlinings.

In this chapter I wish to explain how William Clark and Sons Ltd and similar firms adapted themselves and their factories in order to obtain a place in the new market areas. Changes in production of some synthetics took place at Upperlands to help fulfil the demand of new products. However dress linen and household products were still popular and stiff competition was experienced from the iron curtain countries who produced their own flax crops and were able to manufacture goods much cheaper.

The marvellous invention of synthetic fibres began to take over the clothing market, where nylon and polyester shirts were constantly bought as they did not require ironing and could drip dry easily. The total world demand of linen did not improve for the linen trade and many firms sustained very heavy losses, including William Clark & Son Ltd. Efforts to produce linen more economically were unsuccessful as the quality was inferior. Prices were slashed by Clark's in order to unload its stock. The Linen Trade Council tried to control prices but co-operation between other firms in Northern Ireland was not forthcoming. Outside bleaching was now a thing of the past and became an inhouse operation and non weavers began to make inroads in the cheaper end of the market. At this stage the firm employed 600 people and exported 50% of its goods outside the United Kingdom. Many machines

began to take over on a large scale resulting in the loss of a number of manual jobs. New product ranges were not forthcoming and technical mechanisms crept into most aspects of production and innovation was low. These factors restricted the markets which the Clark Company were becoming involved in, therefore change of personnel was considered.

Following the death of Harry Clark a board of directors was set up and the chairmanship was rotated annually among the twelve family members. Each took independent responsibilities over specific departments, ensuring the smooth running of the company. With bank rates rising by 7%, the factory once again operated on a three day week basis and recovery was found through production of rayon and hair mixes.

With the drop of the bank rate, Government assistance was sought by the company for the first time, this assistance however was not forthcoming.

The year 1966 saw the diversification of the Clark Company by the setting up of a brand new company named 'Everbond Ltd' who were initially based in London and now have plants in Leed's and Upperlands, Co. Derry. Everbond Ltd has successfully marketed a full range of fusible interlining and became the United Kingdom's leader in high technological production methods. Today Everbond Ltd represent fifty per cent of the total company's turn over, the bulk of yardage finished in Upperlands is sold through Everbond Weaving was produced on faster and wider looms this led to the popularity of household goods for example tablecloths. These were sold to the American ethnic market where trading still remains strong today. Coating techniques were developed where a number of fabrics were given a high quality finish e.g. flame retardancy.

These are still highly popular today, as Everbond have recently completed a contract with the American VISA company - where many of their head offices display high quality wall hangings produced by Everbond Ltd.

With the addition of Everbond to the Upperlands site in Co Derry , weaving has consisted of mixtures of yarns mainly linen and viscose and also acrylic. There also has been the production of reinforced collars for jackets and suiting. This area has been subdivided into two subsidiary groups 'Collpand and Collofuse', and 'Crosscut'. Both of which are based in Leed's.

The population of Upperlands has grown, by 1981 there were over 1000 people dwelling in approximately 380 homes.

The Upperlands site stands on two hundred thousand square feet, on a fifty acre site. Many of the older buildings now house workshops for picture framing, sign writing and book binding all of which are occupied by local artists. The middle house has been converted into a museum dedicated to the Linen Industry. The year 1975 saw another diversification with the amalgamation of the Clark Company and "BWF", a German firm.

This combination of experience, expertise, manpower, technical knowledge and marketing contacts led to the production of polyester filtration fabrics. This fabric consisted of an open weave, made by huge needle machines. The fabric is mainly used for industrial purposes where large consumptions of just particles are removed from the air in factories. This process and product has become very successful commercially for the two companies.

Today little flax is grown in Ireland, once again it has to be imported from France and Belgium. Initial attempts in the early 1980's were made to grow flax in Co. Derry. These were unsuccessful due to the unsuitable weather conditions, however this was rectified in later years and 550 acres were cultivated in 1984. The 80's were well equipped for meeting demands and production was high. Many of the new generation of the Clark family did not enter the business as their forefathers had done, but preferred to enter other professions. Today, sadly there are only three members of the Clark family involved. They are Wallace Clark , Marketing Director, Bob Clark, Everbond Commercial Director and Stephen Clark, Production Manager. New products of woven, knitted and non woven clothes were developed, tested and exports became difficult with the rise of the pound and this resulted with a shortage of work throughout the province.

Assistance however was found through the Industrial Development Board which helped 'William Clark & Sons Ltd' develop technical compotence in finishing,, dyeing and coating, with specialist services, the result being a series of dramatic improvements, 'William Clark & Sons Ltd' celebrated 250 years of business in 1986 however the last 40 years have clearly indicated many major changes in the company. Even with competition from Eastern Countries, 'William Clark and Sons Ltd.' along with Government aid have maintained a high percentage of exports to the world market. The company was flexible to change and willing to try out new technology and were always keen to modernise where necessary. With the formation of the board of directors a more professional approach to the changes has taken place and these changes will hopefully guide the firm through another 250 successful years.

Chapter Four

One of the main reasons for William Clark and Sons Ltd. survival has been the outstanding loyalty of its employees to the company and the devotion the Clarke family themselves have given to their employees. Even though the slumps in the linen market, where the factory was forced into a three day week, and during the many war times where many local men joined the front line, jobs were maintained. The employees were a dedicated strong body of people, who worked hard, enduring poor conditions, which improved slowly with development and industrialisation. In this chapter I will outline the major stages of change to staffing and production methods, which have taken place in all textile firms in Northern Ireland, detailing events on the changes at the Clark company in Upperlands, Co. Derry.

With the first installment of machinery in 1741 of the waterwheel, a number of men were employed to dig a trench and were entrusted with positioning of the large fourteen foot breast water wheel. Men from neighbouring parts, such as the mountains of Slaughtneill and Halfogayne, quick Gaelic talking were even from Gulladuff, jokey boys from Killytoney and even corner boys from Maghera, a total of fifty came to help with payment of sixpence a day.

This first employment was taken up by people from different religious backgrounds, creeds and societies in the area, and they would work successfully side by side, and still continue to do so today.

Once the water wheel was in place, even after weather delays, its power was the beginning of the first phase of industrialisation which William Clark and Sons Ltd. experienced. This new form of engineering supplied power to run the Beelting engines which brought about many labour changes, where the first full time employee, Barney Calison, was taken on. This process which had normally been operated by ten women and could now be carried out by a single operator. With the invention of the 'Spinning Wheel' by 'James Hargreaves' in 1764, and the 'Mule' by 'Samuel Compton' in 1779, women worked from home. The Formed the nucleus of a cottage industry. For these women it was easier to work at home and attend to the family's added income. Although was more often used for rent payments. Bleeching took place outside, on an area of flat grassy had which hence became known as 'The Green'. High qualities were achieved due to the distance of the green the towns and the absence of high levels of smoke and dust in the air. By 1820 their were one hundred and fifty thousand hand looms weavers in Ireland. Production levels increased and Clarks installed four new Beelting engines, and to cope with output another water wheel was installed. With the demand for coloured linen such as black, brown, grey and gold bockrams.¹

Therefore a new dye house was built which allowed for maximum potential production. Once the cloth was treated it was placed into a bath of vegetable dye, logwood for black, marine acid, neutralised for gold. To strengthen the cloth. It was put through a starch machine, then placed on Beelting machines, where many of the wooden rollers became impregnated with colour, so separate machines were used for each different fabric. After being laid flat for a few weeks the cloth was allowed to dry. With the increase for coloured fabrics dyeing utensils became larger.

More beelting engines were installed and for extra power to be achieved the third and largest waterwheel was installed. Even with all the 38 engines in working order production depended on the weather. Despite this disadvantage markets were high and employment grew.

Accommodation was provided in 1880 by the Clark Company, fourteen cabins were dotted around the small hills of Upperlands. There was further employment of thirty men to help build new beelting rooms and install an new waterfall, supplying power to an extra twelve engines. With building stocks, storage, was not available, so a new three storey 'Brown Room', was

built in 1897, from local basalt². The total number of people employed at this time was two hundred and twenty, these were divided into a number of departments. Workers were normally paid every fortnight, and with the new rail line, outings were organised yearly for trips to Portrush, twenty five miles away. If a death occurred among the workforce, coffins were made by box makers and lined with linen. This tradition continued until 1930. With the growth of the workforce more accommodations built by the Clarks company, these were assembled where ever space was available, leaving Upperlands with no focial point, and many houses have their backs to the main road today.

Turbines began to take over power from water in the early 1900's, and the usage of hydro electrics followed. This was seen as a remarkable foresight for faster and easier production, with voltage of 220 volts. Electricity was used mainly for lighting in the beginning as installation was slow, and after twenty years of introduction to the factory many parts of the plant were still powered by water or turbines.

During this period a lot of modernisation and expansion took place in many areas of the company. Gas engines replaced some of the work force and they were more reliable and cheaper to run and in later years they were replaced by diesel power. Extra beelting engines were installed in 1908, 1912, 1916 and 1920 many were second hand, by 1921 a total of ninety seven engines were in full working order, driven by a water generator, achieving two hundred and fifty horse power. Wooden cylinders were replaced by steel and less maintenance resulted, however sycamore wood remained the more superior component for starching the cloth.

1910 saw the opening of the weaving factory, it employed seventy four per cent of the women folk in the area. Children were also employed to refill shuttles when empty. They worked long hours, eight am to six pm, and had to be constantly aware of breaking threads. The main danger however, was of loose shuttles which flew across the room at high speed. On Saturday a half day was given, this time was allocated for the cleaning of machines and prizes were awarded for the best kept and cleanest.

Holidays came once a year and no pay was given for the time off. Social security and national health came into existence in 1911, a levy of four pence a week, from employers and one pence from the state was awarded, resulting in sick and disability benefit being seven shillings a week, amounting to thirty five pence in today's money!

Throughout the companies long standing history only two workers strikes have taken places, and these were due to a shop closure issue, however both were successfully resolved though discussion between management level and staff, and have had very little effect on the company.

1920 saw the largest number of family members in the company most were on low wages but accepted this as twenty five per cent of their fellow county men were unemployed. The last working wheel was removed six years later, sixteen engines and twenty three houses were recorded in full working order, and 1929 saw the take over of 'Mullamore Beelting Mill', adding to Clarks holding. With the second World War in full force in 1939, the number of Clarks employees fell, as many of them mainly men, joined the army. However their jobs were retained for their return. The female population took over the factory tasks. The Clarks company was reported to have manufactured bullets at one stage.

The 1950's looked much brighter, now 69 men and 175 women were employed at the plant. It was a period for investment. A new drying technique was introduced. As the old jigs became out dated they were only used for small specialised orders. Wet spinning was introduced and automatic looms increased speed and production which was needed to fulfil new orders. Out door bleeching was stopped, and operated by the use of lime and chlorine. From 1960-65 a major technical change took place, most machines were placed on computerised equipment. The overall transformation of linking the whole site to one computer was financially aided by the Industrial Development Board in Northern Ireland. The hundred and thirty looms now run seven days a week, twenty four hours a day. Many of the Northorpe Shuttle Looms were replaced by the Rapier looms, which were much faster, more economically run and gave a better quality finish. The beelting engines however have remained the same, one hundred and fifty run on turbine driven power, with eighteen to twenty hours given for the process to be completed. In 1981 the fuel for the boiler changed from coal to oil. However in 1982 with the peak rise in oil prices the boiler changed back, at a cost of half a million pounds, which the company believes has paid for itself over the first five years of the change back.

The company has kept abreast of technology through the years and changes in management have indicated this process. Today's Chief Executive is Mr. Derek Wilkinson, who is recognised for his overall experience in engineering skills, general top management levels. Since joining Clarks in 1985 he has reorganised and streamlined the company into a more professional operation, for its involvement in the 20th century and this achievement has given the company a more sophisticated image which is reflected in its produce.

The loyalty of the staff can be clearly seen throughout the years of production, as it is most noticeable when the firm has gone through slumps or rough patches. Many employees were willing to take low wages and less working hours to allow the company to remain in production. Production methods have also changed, sometimes at the expense of jobs, however from the simple water wheel to the highly developed computer systems, they have all been necessary for the growth and strength of the company. Clarks themselves have shown the same loyalty back to the staff, the building of

new homes, allowing workers to live closer to their work, and rise of living standards, retaining jobs for those at war, so their work was guaranteed. Therefore it is clear to see that the harmony and smooth running of the company is achieved mainly through the good relationship built up with the workforce and management.

FOOTNOTES

1. Bockrams are

course linen of plain weave, stiffened with starch, used nowadays in collars or hats. Name said to come from the town of Bakhara, in Afghanistan.

2. Basalt is a

hard durable substance, found in Northern Ireland, used mainly for construction purpose.

Chapter Five

This chapter will follow the marketing aspects of the Clark's company, most other companies follow similar plan's in marketing . Through the marketing and sales team, the basic market plan is followed by all three groups in the Clark's company, 'William Clark & Sons', 'Evenbond' and 'BWC', who pull together to achieve the overall profit or loss for the yearly turnover. Using the four P's strategy, 'Product' 'Price' 'Promotion and 'Place' a suitable pattern has been developed over the years, changing only when necessary. I wish to explain each strategy and show how effective it is towards sales figures.

I have already explained the nature of the product, and the changes which have taken place in the production and output of Clark's products. Split into three smaller groups, a number of different products emerge, change have evolved from 100% linen production to unions and blends, due to the main changes in market demand. Some areas will overlap one another, production may start in 'William Clark & Sons Ltd; and finish in 'Evenbond'. This is an advantage for the company. Cutting costs of employing outside operators.

Perhaps the most important strategy is the 'Price'. If an article is too expensive it will not sell, if too low a price a loss will be sustained, therefore a happy medium must be obtained, where an accessible price will allow for sales and a profit to be achieved. A number of factors are considered when reaching a price, production cost, labour, over heads, raw materials and transportation have to be carefully calculated , addition of a suitable amount will ensure a profit. The major market aimed at is the upper bracket, where fabrics are expected to reach high prices and be of high quality.

With the introduction of linen mixes such as those with cotton and other cheaper fibres, production costs are lowered; even though a high quality is still obtained. The fabric may be sold at a lower price hence many lower range markets are able to be pursued. The companies annual turnover is a reflection on all the three groups of the company. In some areas a high profit is obtained where others may have a substantial loss and others may have a loss at the end of each year, all losses and gains are calculated together to give the overall profit or loss of the company. One will balance out the other and a low profit may result, allowing all areas to remain functional, until such times as the market demands change, and the low profit area becomes a high profit area.

In order to achieve these profits the company has to successfully sell it's goods. Even though Clark's is a long established firm and listed on government records, enabling them to obtain contracts from over seas and other contracts such as those from the military, new ranges have to be launched onto the market. New clients always have to be sought. This is where advertising and promotion takes place . Clark's are seen as a high quality traditional firm, and are respected reliably in the textile market.

Each season sees a new range of products developed for the new ends in the market. An outside agent, 'Design Intelligence' of London is the mastermind behind the designs of the new ranges for the company. They specialise in the formulation of colours, weave patterns, cloth composition and weights based on their prediction of trends for the seasons required, a year ahead. Clark's informs as to the number of yarns, which can be incorporate into the designs and the Clark's sales team can integrate the consideration of bulk production and cost of sampling. These samples are produced and presented on sample cards, with a description and contents of weave structure.

Once the whole range is completed the company will display them at trade shows, which have become very successful and necessary for the company to attend. The two major shows which Clarks takes part in are, 'Premier Vision' in Paris, and 'The Glo-Tech Exhibition' in Manchester. The 'Premier Vision' trade show held in Paris in March every year, for four days is a very popular trade show, the space required is two square miles. This prestigious exhibition is for mainly appeal fabrics and the show is crucial for the company, because it attracts customers from Europe, America, Hong Kong and Australia. Many major designers and manufacturers make initial choices at the show. The importance of displaying at this show is evident by the waiting list of three hundred for a stand space. Clark's believe that they need to display their goods yearly, as it helps to give confidence to the customer that the company is still successful. The Clark company retains the same stand yearly which gives the sense and appearance of establishment.

Prior to the show, Clark's will send ranges and details to agents and customers, this encourages them to allocate viewing time to the companies stand, some customers will arrange times of viewing the stand, allowing agents to be at hand to discuss the range directly with their own clients, other companies only sent out scouts. However all are treated with the same importance. The agents are an integral part of the selling process, providing information suitable to each area of the market. The work orders obtained in the four day show, would normally take two/three weeks to complete, offering the opportunity of showing the new ranges to as many people as possible, with the professional approach by agents. The confessional approach by agents, increases the confidence of the client, towards the company and their products. Although few orders are received through the show, most customers are interested in the small samples, swatches and colour cards. Many base their final selection on the compatibility with designs from other ranges, and after further attention to detail and planning of their own needs, the bulk of orders are placed in Autumn.

The show allows the company to carry out some market intelligence, observing the basic trends. It also allows the agents to meet up with other Irish competitors and develop a greater understanding for the role of Irish Linen in the world market. The aftermath of the show brings the hardwork ensuring all samples requested are delivered quickly. If a good service is not projected then the return of bulk sales will be more difficult to obtain. It was estimated by trainee manager, 'Andrew Huges', that 10% of the total number of samples sent out resulted in bulk business after the 1992 show. The show allows an opportunity for younger members of staff to be educated in sales.

"It gives a general understanding of the nature of the fabrics and an indepth appreciation of the preparation and work involved in setting up at such a show"

> Mr Andrew Huges Upperlands, Co. Derry January 1993

The second show 'Clark's' take part in also falls in March and takes place closer to home, in Manchester, 'The Glo-Tech' exhibition is based on the production elements of 'Evenbond Ltd' for design purposes an outside agent is employed to set up areas of the stand. Again preliminary invitations were sent out prior to the show, to allow major accounts and representatives to verbally invite their customers, as the main market catchment for this show is much smaller. Talking in all regions of the United Kingdom.

The major clientele in this area was garment technicians and major purchasers. The aim of the show is to seek an opportunity to show the companies existing range of fusible interlinings. Such meetings give rise to a discussion on matters of a technical nature and involve the promotion of technological ideas and the launch of new ranges. The show was a mixture of selling to new customers and public relations towards existing customers. Major ranges were highlighted and the agents responsible for these accounts, were present to deal directly with their client's needs. At the show, all the major competitors were present. Each taking care in the displaying of their stands in order to attract as many visitors to their area as possible. Clark's obtained a spacious area, which allowed for personal communication between agents and interested clients.
Both shows are different, but very important in their own right. The Manchester show is more technically orientated, with a smaller market area. Many more world wide customers visit the Paris Stand. The emphasis was more than representation of the companies image and the quality of the products available.

The final strategy represents 'Place'. This is were the market is to be found. Due to development over the year of new transportation means, markets have been well established. Clients travel to the above shows from all areas of the world, allowing Clark's to make vital contacts and eventually establishing agents in all parts of the world. This factor is a long established element of the marketing plan. Changes only taking place if orders are stopped or new clients appear at the shows. Today however with modern and fast transportation and communication links, Clark's is not isolated from any market in the world. With all the four P's working together they ensure the company maintains it's high place in the market. 'Promotion' is the most important aspect of these strategies, however with out the other three elements, Price, Product and Place, the market plan would not work successfully.

This chapter has discussed the market plan followed by 'William Clark & Sons Ltd', However it is only an indication towards the basic plan used by most manufacturing firms in Northern Ireland. Many firms participate in Trade Shows, not all as large as 'Premiere Vision' although they are important in projecting the company image and product. Marketing can make or break a firm, if careful planning is not followed a product will not survive in today's highly competitive market. Clark's have achieved success through the level headed thinking and serious planning of their highly knowledgeable sales and marketing team.

Chapter Six

This final chapter will look at a number of other textile firms in Northern Ireland, and I hope to show the differences and similarities between them and 'William Clark and Sons Ltd'.

Each firms specialises in it's own range of products, and methods of production may alter. Many firms in Northern Ireland have changed and developed their factories equipment but also their products. Like 'William Clark & Sons Ltd' many began with 100% Linen production but with the change in market demand had to reconstruct and introduce new yarns into production, however unlike 'William Clark & Sons Ltd' many have been taken over by large international co-operations who's financial aid and management skills have allowed for further production and expansion to take place. I have obtained all my figures from Ledu's Business Library.

"Lamont Holdings" and the "Linfield Group" are the two major cooperations who have taken over a number of small firms in Northern Ireland, this has allowed for the investment of capital to re-equip firms and to aid in production. They are internationally known and have brought trade to the region allowing not only for production increase but also employment for many.

These co-operations have placed a threat on 'William Clark & Sons Ltd' as they have a dramatic turnover and can afford to loose more in sectors, where as 'William Clark & Sons Ltd' must obtain a higher percentage of profit in all sectors to continue in operation.

Lamont Holdings turnover was £52,648 in 1992 and allows for every opportunity to be taken to develop high quality equipment to enable products of a higher standard. The code activity of the Group is in England however they have established headquarters in most capital cities where they have holdings. Their staff total is 24,000 people and these are positioned in over 37 countries around the world.

One of their Northern Ireland companies is Moygashel in Dungannon, Co. Tyrone, it was taken over in 1986 for £4 million. This allowed for investment and modernisation of the factory and a new company image was created. Moygashel's production methods are of a similar standard to W. Clark & Sons Ltd, however Moygashel aims for the furnishing sector of the market and great care is taken in the finishing of flame retardant fabrics, which resulted in the achievement of the 'BS 5750' quality assurance award from the British Standards Institute in 1991. They operate in similar markets to William Clark & Sons Ltd such as America, Europe and Australia, and have participated with 'William Clark & Sons Ltd' in Ledu's trade fares in Canada and America, to represent the textile industry in Northern Ireland.

The second firm in Northern Ireland I wish to look at is also owned by Lamont Holdings. It is located in Co. Down and trades under the name 'Crepe Weavers'. Similar to 'William Clark & Sons Ltd' and Moygashel the firm is involved in weaving production however it's production is primarily based on a water jet method. This particular method weaves nylon and polyester. They operate within the same market sector of fashion fabrics as 'William Clark & Sons Ltd', however the products are developed into the sports field for water proof garments like wet suits, sleeping bags and coating fabrics but their major market is for military application.

'Crepe Weavers' were the first company to install the water jet loom even though there was a high demand for the waterproof products managerial problems led to the closure of the firm in 1982. Lamont Holdings came to the rescue a year later and expanded and modernised the factory with government aid of £2.8 million and reinstated 100 of the original employees. Today production is non-stop and the employment level has grown to 460 people.



With the takeover of these two companies, modernisation has increased quality and production methods, even though Maygashel produces the same products as 'William Clark & Son Ltd' they have enhanced the levels of production and widened the market field for Northern Ireland textiles. The second co-operation involved in the Northern Ireland Industry is the Linfield Group, which has been involved in the production of Irish linen for about 150 years. Their products range from bask yarn to sophisticated luxury goods which gives them a wide market catchment area. Production of fashion cloth, industrial fabrics and household items are achieved through their small firms. An annual turnover of £15 million was achieved in 1988 and half of the firms production was exported to over 40 countries in the world.

One such small firm which the Linfield Group incorporate is the 'Ulster Weavers'. This company was established in 1898 after the split from its former partnership 'The Ulster Spinning & Weaving Company'.

Like William Clarks & Sons Ltd the Ulster Weavers company imports its flax from France and Belgium and this is woven into high quality linen cloth on rapier looms. The cloth is bleached on conventional bleaching equipment which has been modernised to cope with rise of demand. The company pays particular attention to product development ensuring a high standard is achieved and have showrooms all over England. Unlike William Clarks and Son Ltd the Ulster Weavers Company aim at the middle range market sector. They were taken over in 1985 by the Linfield Group who introduced their own plans and created new jobs. There are currently 700 people employed by this firm. With refurbishing and reorganisation of the firm, Linen production dropped to 7%, 28% cotton yarns and 2% synthetic yarns were introduced.

The 'Ulster Weavers' move in to these fields was necessary in order to maintain a place in the market and in this they followed the lead of William Clark & Sons Ltd. They have successfully obtained a turnover of £13 million annually with export to 40 countries and they have an added advantage over other firms as the main rail link from the Belfast Port to the Dublin Port travels directly through the plants site hence transport costs are kept to a minimum.

Established in 1984 'Spence Bryson' was set up by Henry Spence and John Bell Bryson and is located at two sites in Bangor and Downpatrick both in Co. Down. This firm is similar to William Clark & Sons Ltd as it is a classical linen industry, concentrating on weaving and finishing. Their production consists of finer linen pieces which includes boxed handkerchiefs and they export to the main fashion markets, giving an international reputation for 100% linen, linen blends and cotton production.

At the cost of £8.2 million this firm was also taken over but by the Scottish firm 'Richard' PLC and turnover has increased to £3.5 million in 1990, 4% up on 1989's figure. Modernisation has also taken place with computer systems establishing a higher rate of productions and new blends of viscose and wool have been introduced with development of a softer weave, plain clothes and computer aided design equipment, production levels have increased.

Financial aid has been given through the government body Ledu to help modernise the company. Spence Bryson has also been selected by Ledu to participate in World trade shows with William Clark & Sons Ltd and Moygashel to represent the high quality and production of Northern Ireland's textile Industry. Spence Bryson also exports to America, Italy and France where there products are used for fashion articles. The company specialises also in tufted carpets and since their takeover, investment has aided in the development of this sector of the company.

It can be clearly depicted from the information on the numerous companies mentioned that production in the textile industry in Northern Ireland in 1992 is thriving with help from government funding and the takeover by international co-operations, survival of the Industry has been achieved and developed with new machinery, which has enhanced the output and turnover of many firms.

Production now ranges from 100% linen cloth to various mixes and blends with other fibres to produce sophisticated luxury fashion cloth, sportswear and war/militarian materials. Flax fibre is imported from Italy and Belgium by all firms involved in Northern Ireland's linen trade. William Clark & Sons Ltd however remains the oldest firm and in this comparison the only company under its own management in Northern Ireland. Self development of finance and government financial assistance has helped William Clark and Son Ltd increase production and change to new fibres and forms of technology. Other firms had to depend on take over bids and financial assistance from other sources. Support from international co-operations was also sought.

This has allowed for the textile Industry in Northern Ireland to flourish, develop and maintain its success in today's world Market. Exhibiting together in trade shows organised by Ledu many companies have stood together to represent a strong body and high quality industry, that is present in the small province and has obtained high recognition in the textile industry of the world.

Conclusion

The linen industry in Northern Ireland has developed from a small rural, naive cottage industry to a high powered technological one over the past two hundred and fifty years.

The growth of the flax crop has been reduced in Northern Ireland, and is now imported from European countries. Political strife and periods of war ironically resulted in a demand for linen, mainly because fashion crept in and more household items came into use. Many companies in Northern Ireland have had to face diversification into new mixes of natural and manmade fibres partly because they are much cheaper to manufacture and can be used for a wider range of uses.

Yet with so many mixes in fibres and fabrics, lines has remained an important fabric for many firms. Unfortunately some companies were not able to retain a profit and this resulted in them having to close or they were taken over by other larger international firms.

Market places were easy to maintain as more capital could now be invested by large firms to re-equip or modernise factories.

The province of Ulster which includes all six counties became more accessible with the development of transportation. Later developments led to exportation to other countries. The linen industry was by this time contributing to the economy and in turn the government has assisted in promotional campaigns. Northern Ireland has gained recognition worldwide for its linen production and textile industry. I have discussed 'William Clark and Sons Ltd.' as an indicator of the industry throughout its history in the north of Ireland. This firm reflects the influence of economic, political and competition on the industry at large.

Clarks has become a highly established and respectable firm and has

survived the various upheavals in the industry. This is due to the combination of loyalty displayed by employees and the determination by the firm to succeed has contributed to the success that the firm has gained.

The province of Ulster is clearly well represented in the linen industry. It is an industry which holds an individualism for Northern Ireland and it can only continue to succeed even further.

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'Lint and Linen'

I

Directed by Dr. John Kerr.

Production by Mr. John Thompson, Garvagh, Co. Derry, 1992.







Air view of the Upperlands plant and surrounding countryside.





Alec Clark in 1914, he spent sixty five years in the business and was Chairman from 1914 until 1936.









Wallace Clark, 1986, Marketing Director.









Bob Clark, 1986, Everbond Commercial Director.

11









Everbond coating plant created in 1980, providing 25,000 square feet of single span production space.

11

PLATE 10





Alec Arburthnot beaming linen and cotton yarns from a warper's to a

weaver's beam.

PLATE 11





Miss Violet Cassidy, who worked in the factory from 1911 to 1980, drawing yarn into a set of heddles.

PLATE 12




Quality - Leitrim 25p Composition - 60% Linen/40% Cotton. Width - 150/152 cms. Weight - 160/175 glm square.





Quality - Limerick Composition - 45% Linen/55% Cotton. Width - 150/152 cms. Weight - 110/125 glm square.





Quality - Erne Composition - 100% Linen Width - 150/152 cms. Weight - 110/125 glm square.





Quality - Cavan Composition - 100% Linen Width - 150/152 cms. Weight - 200/215 glm square.





Quality - Cavan Composition - 100% Linen Width - 150/152 cms. Weight - 200/215 glm square.





Quality - Leitrim 28p Composition - 60% Linen/40% Cotton Width - 150/152 cms. Weight - 160/175 glm square.

