Qualification Accredited

OCR
Oxford Cambridge and RSA

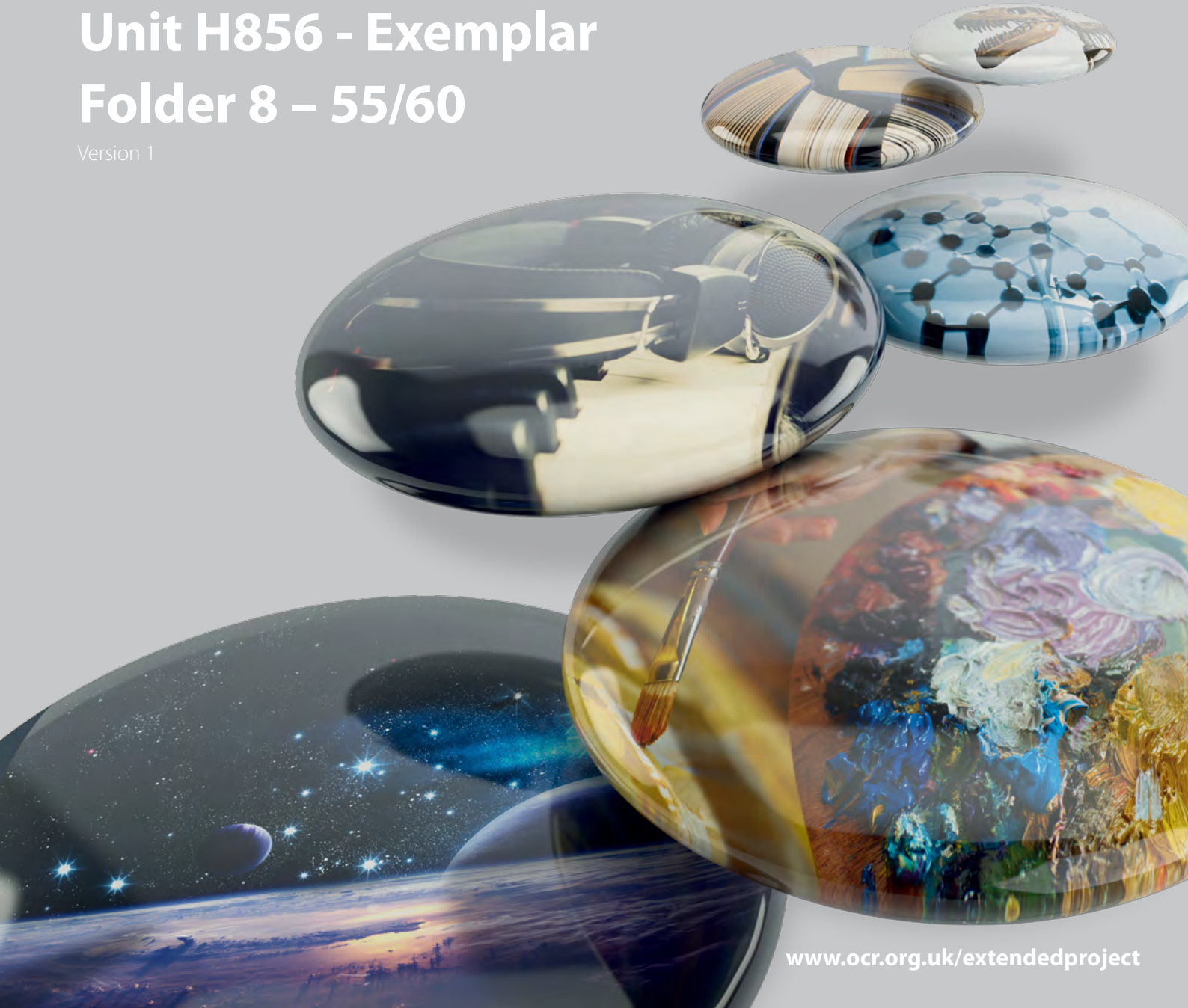
PROJECT
Candidate Exemplar Work

EXTENDED PROJECT

H856

Unit H856 - Exemplar Folder 8 – 55/60

Version 1



www.ocr.org.uk/extendedproject

Introduction

This is one of several live projects that have been marked within OCR centres. Each one, in its own way, provides insights into what makes for an excellent project. However, none of the projects is perfect and each of them provides useful pointers to common errors that moderators encounter. Therefore, both the strengths and weaknesses of each project will be discussed as an aid to teachers and students alike.

The Unit Recording Sheets [URS] used to record both marks and comments on each project have also been included and again some comments on best practice have been made. Teachers put enormous efforts into assessing their students' work fairly, but that effort is better evidenced in some of these projects than in others. Clear, focussed comments on the URS and signposting, within the portfolio can be particularly supportive of a student's efforts. Comments should support elements of the student's work that may not be immediately obvious to the moderator from reading it. This includes reference to the student's individual triumphs, particular difficulties they have encountered, their effectiveness in overcoming obstacles and the level of individual skills development the student has achieved. The watchwords here are know each student well and let the moderator know this is the case through what you write!

Commentary can be found after the portfolio on page 86.

MANUFACTURING – A SOLUTION TO OUR FRACTURED ECONOMY

http://www.currencies.co.uk

BY

1

OCR
RECOGNISING ACHIEVEMENT

Extended Project (Level 3)

Unit H856

Unit Recording Sheet

Please read the instructions printed at the end of this form. One of these cover sheets, suitably completed, should be attached to the assessed work of each candidate.

Unit Code	H856	Year	2014
Centre Name		Centre Number	[redacted]
Candidate Name		Candidate Number	

AO	Criteria			Teacher Comment	Mark
1	• Selected a suitable topic and produced a piece of work that reflects a design formulated with the assistance of their teacher/mentor • Taken an adequate degree of responsibility for their project, planning and managing the work through measures addressing its sequencing, its breakdown into intermediate tasks and monitoring its progress. In a group setting, responsibility will have been taken for closely defined tasks assigned by the group • Developed adequate organisational, IT, decision-making and problem-solving skills necessary to realise the project, responding to changing circumstances • Completed the project within the agreed time schedule [0 1 2 3 4]	• Proposed a suitable topic and produced a piece of work that reflects a design negotiated with their teacher/mentor • Taken substantial responsibility for their project, effectively planning and managing the work including sequencing, its breakdown into intermediate tasks and monitoring its progress. In a group setting, responsibility will have been taken for aspects of group work with active participation in group decision-making • Developed proficient organisational, IT, decision-making and problem-solving skills and used them effectively to realise the project, recognising and responding to changing circumstances • Completed the project within the agreed time schedule, meeting most intermediate goals [5 6 7 8]	• Proposed a suitable topic and produced a piece of work that reflects a design proposed to their teacher/mentor and with limited negotiation/support of their teacher/mentor • Taken full responsibility for their project, skillfully planning and managing every aspect of the work. In a group setting, responsibility will have been taken for directing and monitoring aspects of group work with some leadership of group decision-making • Developed proficient IT and sophisticated organisational, decision-making and problem-solving skills and used them creatively to realise the project, effectively managing changing circumstances • Completed the project within the agreed time schedule, meeting all, or virtually all, intermediate goals [9 10 11 12]	knew from the outset that she wished to research an area of economics for the EPQ. She decided that writing a dissertation was a significant challenge for her, and would aid an application to read Economics in H.E. Due to this high motivation, set to work promptly; she chose a specific area of interest - the importance of manufacturing for economic growth - and was organised and thorough when collecting research. She planned out the task successfully, using online mind maps and charts. One of her interim targets was not met, for example, the research took longer than she had anticipated, but fortunately she had built in ample contingency time for such eventualities and met the final deadline comfortably.	12

URS908 Revised February 2009

Oxford Cambridge and RSA Examinations

H856/URS

2	• A limited range of sources has been used to obtain, select, collate and analyse information and data relevant to the project. Guidance on the choice and interpretation of sources has been given by the teacher/mentor • Some understanding of connections and linkages between different types of resource and the complexities inherent in their project has been developed • A limited range of appropriate technology and related technical skills have been used to aid the collection of information and data. E-learning has been used, where appropriate • Where relevant, some information and/or data has been obtained through working with others in the context of engagement in a business, social-community venture/enterprise or through involvement in a local, regional or international team Extended Project. The learner has participated in a limited way within the context	• An appropriate range of sources has been used to obtain, select, collate and analyse information and data relevant to the project. Some guidance on the choice and interpretation of sources has been given by the teacher/mentor • An effective understanding of connections and linkages between different types of resource and the complexities inherent in their project has been developed • A range of appropriate technology and related technical skills have been used to aid the collection of information and data. E-learning has been used effectively to further the aims of the project, where appropriate • Where relevant, a range of appropriate information and/or data has been obtained through working with others in the context of engagement in a business, social-community venture/ enterprise or through involvement in a local, regional or international team Extended Project. The learner has been an active participant within the context	• A wide range of sources has been used to obtain, select, collate and analyse information and data relevant to the project. Little or no guidance on the choice and interpretation of sources has been given by the teacher/mentor • A sophisticated and perceptive understanding of connections and linkages between different types of resource and the complexities inherent in their project has been developed . • A wide range of appropriate technology and related technical skills have been used to aid the collection of information and data. E-learning has been used skilfully and critically to further the aims of the project, where appropriate • Where relevant, a wide range of appropriate information and/or data has been obtained working with others in the context of engagement in a business, social-community venture/enterprise or through involvement in a local, regional or international team Extended Project. The learner has offered leadership or direction within the context	[redacted] only accessed high-quality sources, found on reputable websites or newspapers or economic books and journals. Nevertheless, she still critically evaluated them to ensure they were reliable, and cross-referenced between them to double-check the facts. She consulted a good number of sources, via a variety of media - the internet, books, journals and documentaries. felt that primary research was not of great value to her final piece, and whilst this is probably the case, she perhaps would have gained some useful insight into her topic had she managed to make contact with someone in the manufacturing world.	10
	[0 1 2 3 4]	[5 6 7 8]	[9 10 11 12]		

2	• Some appropriate skills have been selected and used in relation to the context of the project in order to solve problems, take decisions and achieve the planned outcome. These skills may include problem-solving techniques, analytical techniques, PLTS, functional skills, presentational skills and technical skills of various kinds. There is some evidence of the critical, creative and flexible use of skills in the furtherance of the project's development and realisation • Some appropriate technologies, including relevant new technologies, have been used to assist the process of problem-solving, decision-making and achieving the planned outcome. There is some evidence of the critical, creative and flexible use of technology in the furtherance of the project's development and realisation [0 1 2 3 4 5 6 7 8]	• A range of appropriate skills have been selected and used effectively in relation to the context of the project in order to solve problems, take decisions and achieve the planned outcome. These skills may include problem-solving techniques, analytical techniques, PLTS, functional skills, presentational skills and technical skills of various kinds. There is evidence of the critical, creative and flexible use of skills in the furtherance of the project's development and realisation • A range of appropriate technologies, including relevant new technologies, have been used effectively to assist the process of problem-solving, decision-making and achieving the planned outcome. There is evidence of the critical, creative and flexible use of technology in the furtherance of the project's development and realisation [9 10 11 12 13 14 15 16]	• A wide range of appropriate skills have been selected and used in a sophisticated manner in relation to the context of the project in order to solve problems, take decisions and achieve the planned outcome. These skills may include problem-solving techniques, analytical techniques, PLTS, functional skills, presentational skills and technical skills of various kinds. There is clear evidence throughout of the critical, creative and flexible use of skills in the furtherance of the project's development and realisation • A range of appropriate technologies, including relevant new technologies, have been used in a sophisticated manner to assist the process of problem-solving, decision-making and achieving the planned outcome. There is clear evidence throughout of the critical, creative and flexible use of technology in the furtherance of the project's development and realisation [17 18 19 20 21 22 23 24]	challenged herself to acquire a number of new skills here. As shown in her own list, she greatly widened her extended writing and independent research skills which she had not had the chance to do hitherto in her AS Levels of Maths, Physics, Economics and History. She learnt how to critically evaluate her sources. To improve her note-taking, she learnt how to use the Cornell method. Her IT competence increased; she developed her knowledge of advanced features of word such as footnoting and learnt how to use the Harvard Referencing system. She is very proud too that she taught herself to touch type, knowing that this will always be of great benefit to her in the future.	22

4	• Although limited in scope, a critical, reflective and independent approach to learning has been developed. A limited attempt has been made to present an accurate review of their work covering both development aspects and the eventual outcome of the project. This may relate to the learner's participation and contribution to a group project in a social-community venture/enterprise and/or local, regional or international team project • A limited usage of communication skills and media to present a broadly effective review of the development and outcome of the project	• A critical, reflective and independent approach to learning has been developed. They present a thorough and accurate review of their work covering both development aspects and the eventual outcome of the project. This may relate to the learner's participation and contribution to a group project in a social-community venture/enterprise and/or local, regional or international team project • A broad usage of communication skills and media to present an effective and comprehensive review of the development and outcome of the project • The presentation has broadly met the needs of its intended specialist and/or non-specialist audience* • They have appropriately addressed the issue of personal, academic and career development beyond the confines, but informed by, their participation in the project, including their development of transferable skills	• An incisive critical, reflective and independent approach to learning has been developed. They present a perceptive, thorough and accurate review of their work covering both development aspects and the eventual outcome of the project. This may relate to the learner's participation and contribution to a group project in a social-community venture/enterprise and/or local, regional or international team project • A sophisticated usage of communication skills and media to present a perceptive, effective and comprehensive review of the development and outcome of the project • The presentation has met all the needs of its intended specialist and/or non-specialist audience. The audience was engaged and entertained* • They have addressed clearly and realistically the issue of personal, academic and career development beyond the confines, but informed by, their participation in the project, including their development of transferable skills. They clearly understand what has been achieved and where it can lead them	A perceptive student, showed an evaluative approach throughout. This can be seen in her diary entries, mid-project review, the draft version of her dissertation, and her final evaluation documents. :ti prepared her project presentation meticulously. She is a shy, unassuming student and knew that she would have to be thoroughly prepared so as not to let nerves intrude. This she achieved; the feedback comments she received speak of her clear speech and the fact that she did not allow her notes to hinder communication with her audience. i is hoping to read Economics at University and is delighted that completing this project has not only confirmed this subject choice for her, but also allowed her to develop many transferable skills, such as those of IT and independent research and note-taking.	11
	[0 1 2 3 4]	[5 6 7 8]	[9 10 11 12]		
				Total /60	55

Guidance on Completion of this Form

1 **One** sheet should be used for each candidate.

2 Please ensure that the appropriate boxes at the top of the form are completed.

3 Circle the mark awarded for each strand of the marking criteria in the appropriate box.

4 Add the marks for the strands together to give a total out of 60. Enter this total in the relevant box.

CONTENTS

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OCR

Project Progression Record

Level 3 **Line of learning** (when taken as part of a Diploma) _____

Centre Name _____ **Centre Number**_____

Learner name _____ **Learner Number**_____

Activity	Date	Detail	Supervisor's initials	Comments
1. The date you started your project	09/01/2014	2nd lesson of EP. Build on ideas I'd come up with in the 1st lesson	ZP	
2. First thoughts about topic and working title	25/01/2014	Topic: Economics and Manufacturing Titles: Does manufacturing generate wealth and economic growth? Will China overtake US and England in its economic growth?	ZP	very committed from outset
3. If completing the Diploma, • is topic relevant to Principal Learning? If yes • Does the project complement and develop the themes and topics for learners' principal learning set out in the relevant line of learning criteria?	25/01/2014	N/A		
4. What is the title of the project? This could be phrased as a question,	13/02/2014	'Manufacturing: Essential for Economic Growth?'	ZP	

Activity	Date	Detail	Supervisor's initials	Comments
hypothesis or statement.	01/10/2014	'MANUFACTURING – A SOLUTION TO OUR FRACTURED ECONOMY'		
5. What do you hope to achieve by the time you complete the project?	13/02/2014	Gaining many new skills that will be useful to me in the future; an idea of what independent study is like; gain new insight into a topic I enjoy and find interesting.		
6. What form will the assessment evidence for the project take? (ie design, performance, report with findings from an investigation, artefact, [*dissertation – level 3 only*])	13/02/2014	A dissertation examining the issue. As is no straight right or wrong answer to the topic I am studying, I will come to a general conclusion based on theoretical ideas and research discussed earlier in the dissertation.		
7. Have you produced an outline plan to show your project timeline?	25/02/2014	Yes – it is a guide line of how I will set out my work and how I will tackle the project		
8. What will you need to achieve your project? eg tools, equipment, techniques and technologies	27/02/2014	A computer: to type up the actual dissertation (touch typing)		
9. Will you or have you used a range of sources for your information?	06/03/2014	Research methods: Websites, Journals, Books, Articles, Documentaries		
10. Is the information selected suitable and sufficient to fit the question/task/brief?	06/03/2014	Yes, I have collected a wide variety of information to use in the dissertation from various reliable sources.		
11. Have you identified any links with other areas of study or areas of interest which relate to your project?	18/03/2014	My dissertation touches on part of Geography and History (and obviously Development Economics) it can be linked to English in the way it will be presented: an extended essay.		
12. What skills need to be applied to use the information you have collected?	28/03/2014	I needed to hone my research skill along with my evaluative skill as, once a useful site has been found, I need to make sure it is reliable and dependable. With the amount of typing required, I learned touch typing.		

Activity	Date	Detail	Supervisor's initials	Comments
13. Did you apply the tools, equipment, techniques and technologies to use the information that has been collected to complete your project?	30/03/2014	Yes – I used the internet, books and TV (for the documentary) for the information gathering.		
14. What outcomes/objectives have you achieved so far (mid-term review)?	20/04/2014	See Mid-Term Project Review: I have done the outline for my dissertation and conducted some background research. I have written the introduction for the dissertation.		
15. Evaluation of own learning and performance so far (mid-term review).	20/04/2014	See Mid-Term Project Review		
16. What have you changed after reviewing your work?	29/04/2014	I have added more to my dissertation. I have also attempted to make the writing more engaging and direct – I found that my earlier writing was a little too passive.		
17. Final phase - Do you feel that you have achieved all of the outcomes/objectives of your project?	01/10/2014	I am happy with the outcome of my dissertation. I feel that I have put across my view on the subject of the importance of manufacturing to an economy is a formal and sufficiently succinct enough manner. Despite the key inspiration for this issue being my long-standing interest in it, I have not littered the writing too much with my own opinions, but also infused ample evidence to back my claims. The project also met, and indeed went far beyond, my expectations in what skills I would gain by doing this project.		
18. Presentation of Portfolio • written section (compulsory, even if the outcome is a performance or artefact)	01/10/2014	~~N/A~~ dissertation + accompanying documentation		

Activity	Date	Detail	Supervisor's initials	Comments
19. Describe how you have presented your project to an audience	20/10/14	Power Point Presentation to a group of fellow students and a teacher.	JP	
20. Have you evaluated your project, taking into account any feedback from your audience?	20/10/14	Refer to Self-Evaluation of Presentation.	JP	
21. Date of project submission to teacher	6/10/14		JP	on-time

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Project and Extended Project – Verification of topic and Title

Level 3 **Line of learning** (when taken as part of a Diploma) _____

Centre Name _____ **Centre Number**_____

Learner name **Learner Number**_____

The Project title chosen must allow the learner:

- to be fairly assessed at the standard applicable to the Project level (level 1, 2 or 3).
- the opportunity to meet comparable demands to those made on other learners working at the same level
- to meet all of the Learning Outcomes and Assessment Objectives of the Project.

Project title	MANUFACTURING: A SOLUTION TO OUR FRACTURED ECONOMY
Project Aim	The ultimate purpose of this extended project is to create a written piece, around 5000 words, explaining why manufacturing is essential to economic growth and is the backbone of any economy. I will also explore the idea that countries which are increasingly reliant on imports for all their goods will soon suffer massive deficits and so fall behind in the race to development while the countries who are doing the actual production will soon race ahead and overtake the current world leaders – the US and the UK.
Project Outcome	I produced a dissertation, 4809 word exactly, explaining why manufacturing is integral to the process of economic development. I also talked about its undeniable link and positive correlation with economic prosperity.

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Project - Verification of Topic and Title 08.01

Project related to the Diploma

The Project title, including its aim and outcome, must be reviewed until Yes can be ticked for each question in the checklist below.

Stand-alone Project

The Project title, including its aim and outcome, must be reviewed until Yes can be ticked for questions 3 to 6 in the checklist below.

Verification of Title Checklist	Yes	No	Comments
1. Is the learner completing the OCR Project/Extended Project as part of the Diploma?		✓	If the answer is NO, you are not completing the project as part of the diploma, please move to question 3
2. If the Project is taken as part of the Diploma, is the Project relevant to Principal Learning in either one or both of the following stated ways: - the Project complements and develops the themes and topics for learners' Principal Learning set out in the relevant line of learning criteria? OR - the Project supports learner progression	N/A	N/A	If the answer is NO you must review the title to ensure that it is related to the relevant Principal Learning in one of these two ways.
4. Is there an aim and outcome of the project?	✓		If the answer is No you must ensure that the title is accompanied by a clear aim and outcome.
5. If this a completely new area of study/activity for the learner, does it allow development appropriate to the level?	✓		If the answer is No you must amend the title to ensure that it does.
6. If this is an extension of an area of experience/ study or part of an existing course, does it allow the learner to extend their skills beyond those already developed?	✓		If the answer is No you must amend the title to ensure that it does.

✓

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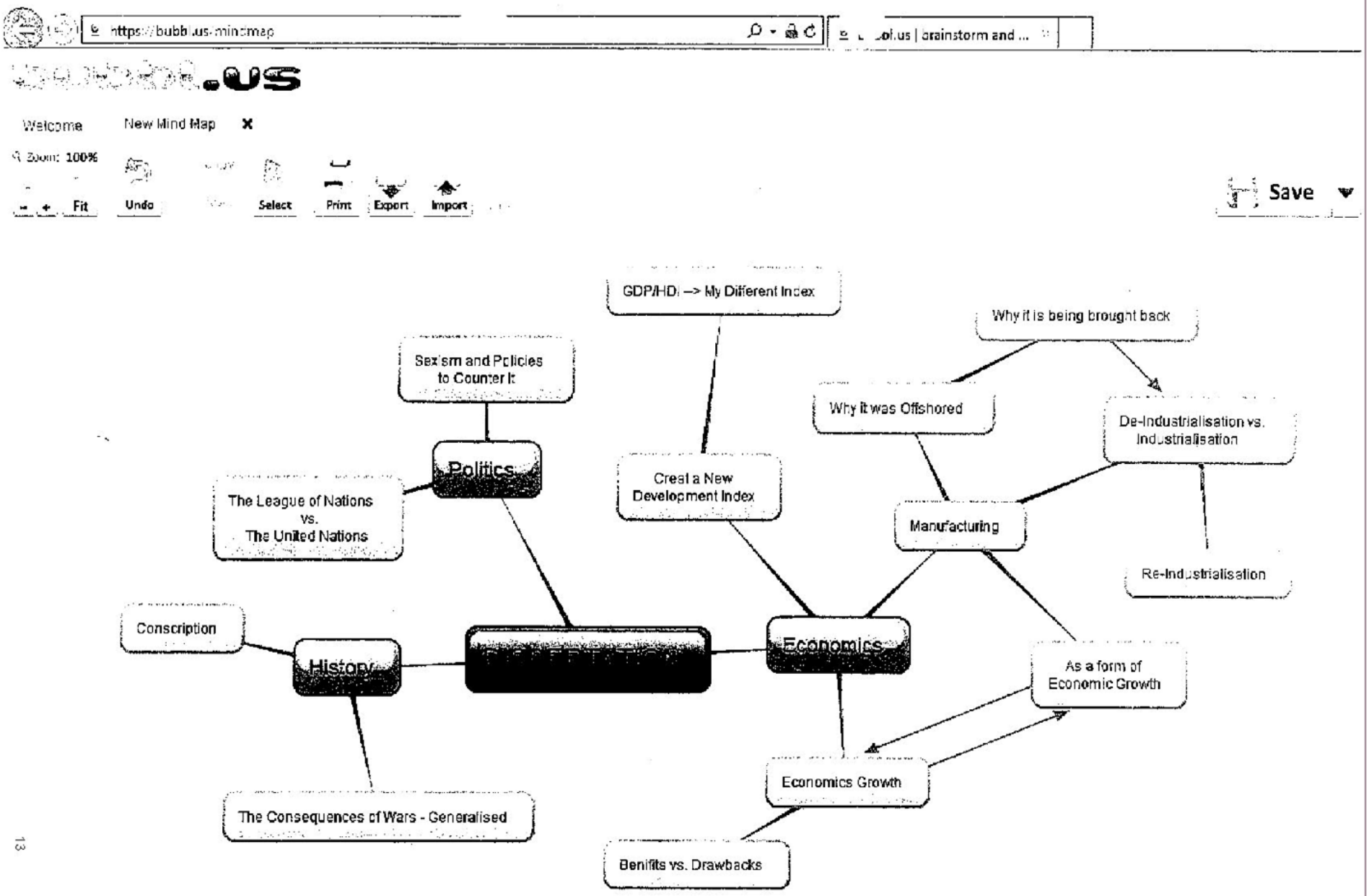
Project - Verification of Topic and Title 08.01


https://bubbl.us-mindmap
bubbl.us | brainstorm and ...
bubbl.us
Welcome
New Mind Map
Zoom: 100%
Fit
Undo
Select
Print
Export
Import
Save
GDP/HDI --> My Different Index
Why it is being brought back
Sexism and Policies to Counter It
Why it was Offshored
De-Industrialisation vs. Industrialisation
Politics
Creat a New Development Index
The League of Nations vs. The United Nations
Manufacturing
Re-Industrialisation
Conscription
History
Economics
As a form of Economic Growth
Economics Growth
The Consequences of Wars - Generalised
Benifits vs. Drawbacks

RATIONALE

I will base the topic of my Extended Project on economics and the subject of economic growth because it is a field I am very interested in and want to read and learn about the topic at a higher and more complex level than the A-Level course teaches it. I am also interested in studying economics at university and doing an extended piece of work on the area will help decided whether I really am interested and committed to the subject. In particular I am fascinated by the concept of economic growth and the idea of generating wealth and how it can be obtained. I find it a remarkable issue and am keen to delve further into the topic and explore the question of creating wealth as opposed to merely trading it. I want to do so by looking at manufacturing as a way of increasing the wealth of an economy. This problem of manufacturing as a form of obtaining economic growth is one I've always found fascinating and want to peruse it further and into more detail; it is an issue I feel strongly about and wish to explore to a greater depth than just an opinion. Inspiration for this choice of project comes from some of the subjects I currently study at college: Economics and History. In history we looked at the great industrialisation of Britain in the 19th century and how that boosted out economy manifold. The radical changes that Britain experienced as a result of this mass mechanisation fascinated me and made me wonder why then there was a more away from the very thing that made Britain great. This interest was furthered by my study of economics in which I learned about economic growth and its causes and consequences. This background I hope will give me a foundation to conduct further research for my project. Other than the broad knowledge of economic laws and models that I have come across in my Economics class, I have no specialist skill in this topic, and my knowledge just barely scratches the surface of this subject. Therefore I hope to really expand my understanding of the real-life applications of economics. Though this project I am hoping to infuse a sense of realism into my study of the past and my reading of what economies aim to do in the future – I would like to takes these classroom theories and be able to apply them to actual, real-world, current issues.

I will present my Extended Project in the form of a dissertation as this will give me the change to further my skill set: the subjects I am taking at A-Level are not heavily essay based and so I don't often have the opportunity to write such a long, extended piece of work. Writing this dissertation will be a good way for me to expand my skill set. Although I study economics at A-level, the subject matter I am looking at only brushes what I have covered in class. It poses a much more in depth and complex problem than I have ever looked at in class and so the research I will do for this topic will be far more multifaceted and will be of a much higher level than what I am used to. I will need to learn how to structure, strategize and execute a plan without any supervision. Out of the comfort of a classroom environment, I will gain skills that will translate directly into abilities that I can use in the future and that will land me in good stead at university. I will learn effective research techniques; evaluative skills gained by assessing the credibility of the sources of information researched; IT skills; and writing ability among others.

I intend to use mostly written sources as the main foundations of research. This includes books, scholarly articles and economic journals relevant to my project. Other important sources could involve official (government) reports or statements, due to the fact statistics and figures will be used to back up points I make. I may also use documented debates or lectures as a source of information.

The ultimate purpose of this extended project is to create a written piece, around 5000 words, explaining why manufacturing is essential to economic growth and is the backbone of any economy. I will also explore the idea that countries which are increasingly reliant on imports for all their goods will soon suffer massive deficits and so fall behind in the race to development while the countries who are doing the actual production will soon race ahead and overtake the current world leaders – the US and the UK.

TIMELINE

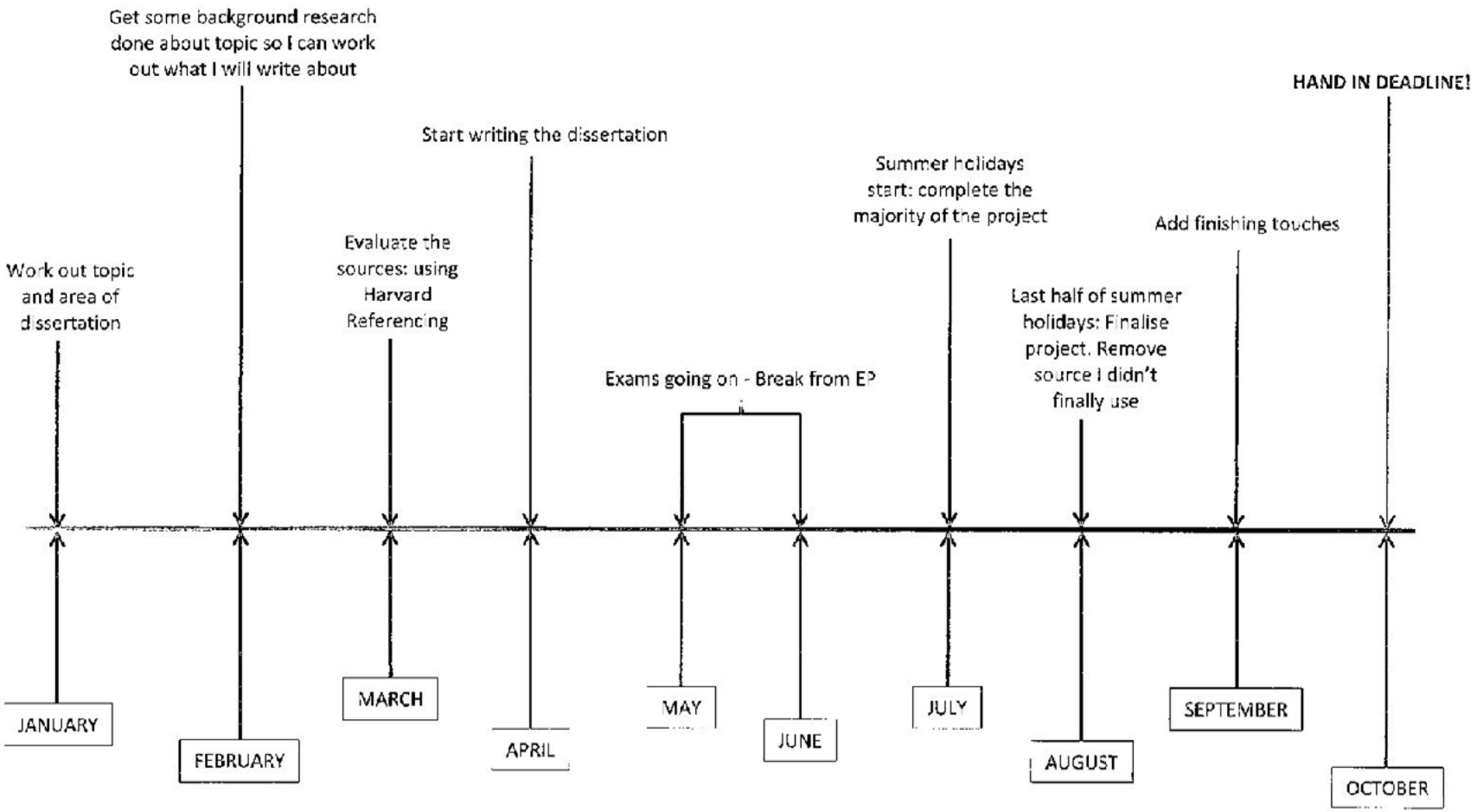

Get some background research done about topic so I can work out what I will write about
Start writing the dissertation
HAND IN DEADLINE!
Summer holidays start: complete the majority of the project
Add finishing touches
Evaluate the sources: using Harvard Referencing
Work out topic and area of dissertation
Last half of summer holidays: Finalise project. Remove source I didn't finally use
Exams going on - Break from E?
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER

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Figure 52: R&D Spend by Country

Graph removed for copyright purposes

R&D as a per cent of GDP

Americas Asia Europe Other

Sources: Dutta, S. ed. (2011) The Global Innovation Index 2011: Accelerating Growth and Development. Available at: http://www.globalinnovationindex.org/gii/GII%20COMPLETE_PRINTVER.pdf. Pg. 18-19

R&D Magazine (2010) 2011 Global R&D Funding Forecast. Available at: http://www.rdmag.com/Feature-Articles/2010/12/Policy And-Industry-Government-Funding-2011-Global-RD-Fund ing-Forecast/

Historically, global innovation has been dominated by developed nations, but the landscape will likely shift, given emerging nations' increased focus and investment levels. China's R&D investment growth is outpacing that of other nations and is expected to accelerate. China and India are pursuing collaborative research programmes that include government, academia, and industrial companies. Meanwhile US, European and Japanese spending is expected to decline.

Previously, it was the more developed nations that dominated innovation.
↳ It's how they became developed.
↳ Innovation is the key to increased productivity which is essential for LONG TERM ECONOMIC GROWTH

But, now it is shifting away: developed countries spending less on R&D (base of innovation) while developing countries are increasing investment in this sector of industry.

The ability to innovate is the future of growth.
Successful innovations lead to better performance → increased output → economic growth.
Innovation will be successful when ideas can be put into practice - difficult in manufacturing base is far away.
→ Offshoring detrimental to innovation
∴ Offshoring detrimental to economic growth.

Competition to Innovate Escalates for Countries & Companies

The ability to innovate, at an accelerated pace, will be the most important capability differentiating the success of countries and companies in the future

Compared to their counterparts, companies regarded as more innovative and countries more successful at fostering innovation perform better, whether looking at market share or profitability for companies or growth in GDP or GDP per capita for nations. Companies must innovate to stay ahead of competition, and must be enabled by infrastructure and a policy environment that better supports breakthroughs in science and technology and investment budgets that permit dedicated pursuits. In the 21st century manufacturing environment that has emerged out of rapid globalization, being able to develop creative ideas, addressing new and complex problems, and delivering innovative products and services to global markets will be the capabilities most coveted by both countries and companies.

Innovation and a country's prosperity are tightly linked

Innovation is becoming increasingly important as the challenges that confront mankind in the 21st century (e.g. increased competition for earth's resources, energy and carbon challenges, rising population and social needs) continue to grow. Innovation is a central driver of economic prosperity, development, and job growth. It is the key that enables firms to successfully compete in the global marketplace, and the process by which solutions are found to social and economic challenges ranging from climate change to disease.[15]

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DOES MANUFACTURING STILL MATTER?

Economic Complexity and Manufacturing

The debate has carried on over the past 30 years regarding the relative importance of manufacturing versus services. The great recession of 2008-2009 caused many policy-makers and business leaders to carefully examine the real value added of "making things" and the impact of manufacturing and manufacturing innovation on economic growth and job creation. Recent research from Harvard and MIT by Ricardo Hausmann and César Hidalgo provides a compelling case that manufacturing does indeed matter. Using export trade data for only manufactured goods from 128 countries over the past 60 years, they can explain a significant portion (over 70%) of the income variations in countries using their definition of Economic Complexity.[2]

For a more detailed discussion of Hausmann's and Hidalgo's research, please see their essay – "Economic Complexity and The Future of Manufacturing" – on the following pages. In their research, economic complexity is directly related to manufacturing knowledge and capabilities and they demonstrate that once a country begins to manufacture goods, thus building knowledge and capabilities, its path to prosperity becomes much easier. Furthermore, they show that the more complex the goods and the more advanced the manufacturing process, the greater the prosperity.

This research looks at both the composition and quantity of a nation's manufacturing. Hausmann and Hidalgo have created a measure of the sophistication of an economy based on how many products a country exports successfully and how many other countries also export those products. They argue that sophisticated economies export a large variety of "exclusive" products that few other countries can make. To do this, these economies have accumulated productive knowledge and developed manufacturing capabilities that others do not have. Manufacturing capabilities can be combined in different ways to produce different products and create different networks, some more sophisticated or complex than others.

Manufacturing is the only way to generate wealth (as opposed to just trading it)
↳ there is real value added in the "making of things"

Manufacturing impacts innovation, econic growth and job creation.
↳ it has many spill over effects
↳ many of which are POSITIVE

Manufacturing makes up a significant portion of national income.
↳ directly and indirectly.

"Once a country begins to manufactu e goods, thus building knowledge and capabilities, its path to prosperity becomes much easier."

HOW TO BRING MANUFACTURING BACK

Government Policy Shapes the Future of Manufacturing

The strategic use of public policy to enable economic development will intensify resulting in a competition between nations for policy effectiveness and placing a premium on collaboration between policy-makers and business leaders to create win-win outcomes.

With competition increasing for so many resources and capa as, and with the prosperity of nations hanging in the balance, policy-makers will be actively looking for the right combination of trade, tax, labour, energy, education, science, technology and industrial policy levers to generate the best possible future for their citizens. Despite many instances of failed industrial policies in history, policy-makers are increasingly turning to intervention in an attempt to influence positive outcomes and accelerate development.

This means that policy-makers will need to carefully pull the right levers, at the right time in a balanced approach while being mindful of unintended consequences. Companies will need to be more sophisticated and engaged in their interactions with policy-makers to help strike the balanced approach necessary to enable success for all.

Manufacturing policy is changing as countries use more sophisticated and assertive policies as a competitive tool

While it remains controversial in many circles, countries are using industrial policy to stimulate specific activities and promote structural change. Broader macroeconomic policies are being used to promote certain domestic industries through tax and subsidy measures. Some of these protectionist measures are meant to be temporary, enforced only until the target industry matures enough to compete on a global scale, while others are being used as competitive tools to intervene with market forces, propping up and entrenching potentially less efficient domestic firms in order to meet short-term job and economic goals or disadvantage foreign rivals.

Policy Makers play a vital role in enabling manufacturing to come back home.
- tax breaks can be put in place
- reduction of corporation tax
- increase labour supply at home
- suggest manufacturing as a valid career option to students
- invest in education on/about industry
  ↳ apprenticeship schemes
- subsidy measures
  ↳ make production process cheaper
- 'PROTECTIONISM' - protectionist measures to be (temporarily) put in place
  ↳ higher tax on imports (e.g.)

BACKGROUND RESEARCH

Case Study #2: India's Industrial Policy Journey[211]

By looking at India's recent history, most notably since the post-economic liberalization of 1991, there is compelling evidence that policy reforms have had a positive impact on the industry and economy as a whole. Figure 62 depicts India's recent journey of policy reformation, where beginning in 1948, the first Industrial Policy Resolution of a newly independent India used policy to develop business regulations and initiate central planning efforts, though it incorporated protectionist measures as a way to develop its infant industrial base. Later, the Industrial Policy statement of 1973 identified high priority industries where institutional and foreign investment was allowed.

A few years later, in 1977, policy emphasized decentralization and the role of small-scale industries. In 1980, further attention was focused on the need for encouraging competition in the domestic market, as well as modernizing and upgrading on the technological front. Through the development and use of these policies, India cultivated a climate for rapid industrial growth.

These early policies encouraged the development of an industrial base, however, India recognized that to achieve further growth and objectives of the industrial sector for the 1990s and beyond it was necessary to make a number of changes in the system. Through the post-liberalization of India beginning in 1991, major policy initiates and reforms were put in place to actively encourage Indian entrepreneurship to be internationally competitive. Tariff and interest rates were reduced, the industrial licensing system was abolished, several public monopolies were ended, and automatic approval of FDI in many sectors was allowed.

As a result, the Indian economy benefited greatly as these policy measures enabled industrial progress through becoming more competitive, efficient and modern, as exhibited by significant increases in FDI, imports, foreign exchange reserves, manufacturing GDP, and overall GDP (Figure 63).

policies to develop domestic

need to reintroduce competition in the DOMESTIC MARKET (SMEs)

Figure 61: Case Study: India: Timeline of Policy Reforms

Image removed for copyright purposes

Manufactur
, is a big
inportion of
GDP of
a country.

Increase
investment
in
SMEs.

Sources:

Indian Ministry of Industry. (1991) Statement on Industrial Policy. Press Release. July 24. Available at: http://india.gov.in/outerwin.php?id=http://siadipp.nic.in/publicat/nip0791.htm

Indian Department of Industrial Policy & Promotion. (2011) National Manufacturing Policy. Available at: http://dipp.nic.in/English/Policies/National_Manufacturing_Policy_250cabinet2011.pdf

Figure 62: India Case Study: Policy reforms have had a positive impact on industry and economy as a whole, as India witnessed an all-round growth post-economic liberalization in 1991

Graphs removed for copyright purposes

Source: WTO; UNCTAD; Reserve Bank of India; Planning Commission of India

70 The Future of Manufacturing

both benifit society in general

cause + consequenc

INCREASED DOMESTIC MANUFACTURING INDUSTRY

IMPROVED INFRASTUCTURE OF COUNTRY

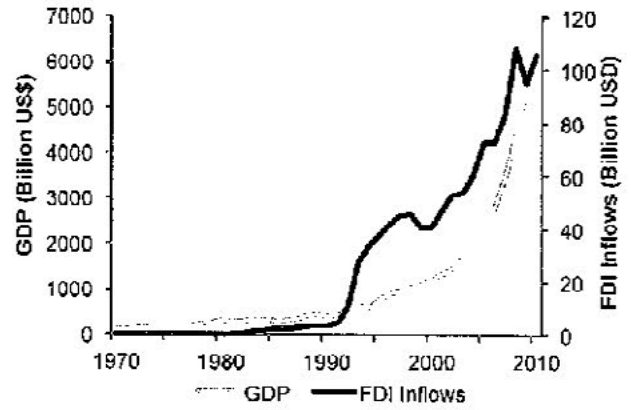
They have a knock-on effect on each other

You improve/increase one, the other also happens as a result

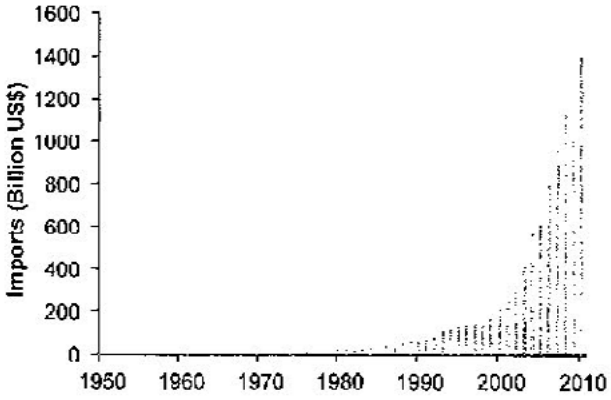
19

Figure 64: China Case Study: Policy Reforms – A Positive Impact on Industry and Economy as a Whole

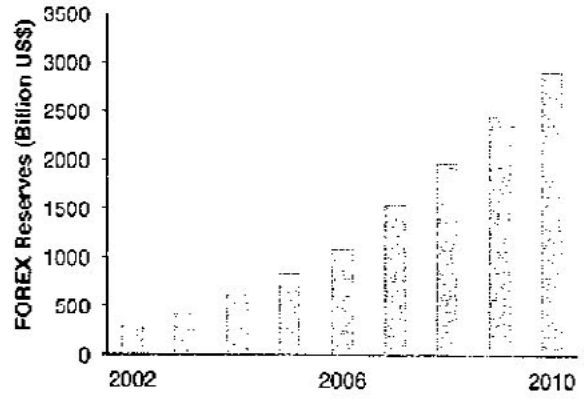
GDP and FDI Inflows



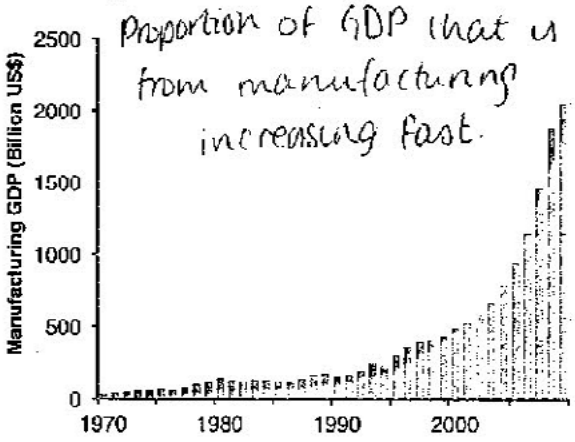
Imports



Foreign Exchange Reserves



Manufacturing GDP



Sources:

United Nations Conference on Trade and Development. (2012) UNCTADSTAT: GDP and FDI Inflows. Available at: http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sCS_referer=&sCS_ChosenLang=en

United Nations Conference on Trade and Development. (2012) UNCTADSTAT: Imports. Available at: http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sCS_referer=&sCS_ChosenLang=en

World Bank. (2011) Total Foreign Exchange Reserves. Available at: http://search.worldbank.org/quickview?name=Total+reserves+%28includes+gold%2C+current+US%24%29&id=FI.RES.TOTL.CD&type=indicators&qbc_no=28&qterm=%22foreign+exchange%22

United Nations Conference on Trade and Development. (2012) UNCTADSTAT: Manufacturing GDP. Available at: http://unctadstat.unctad.org/ReportFolders/reportFolders.aspx?sCS_referer=&sCS_ChosenLang=en

Note: Billion USD at current prices and current exchange rates

Manufacturing is a key source of income for any economy.

↳ remove domestic manufacturing base, remove a source of income

↳ country has less money to spend

RESEARCH

economyincrisis.org
http://economyincrisis.org/content/us-manufacturing-the-backbone-of-our-economy-has-been-broken

US Manufacturing: The Backbone Of Our Economy Has Been Broken

For many decades, manufacturing was the backbone of the US economy. Manufacturing allowed people with only high school degrees to become part of the middle class, to buy a home, to buy a new car every five to 10 years, and to even put their children through college.
But over the past three decades, US manufacturing jobs have been steadily outsourced to workers overseas. Millions of good, blue-collar jobs — the kind that grew the middle class in America — have vanished, taking a serious toll on our economy.

In fact, largely due to outsourcing, the number of workers in manufacturing dropped by one-third over the past decade.

The absence of a solid manufacturing base doesn't just mean fewer good jobs for Americans; it also means we have to import more goods and have fewer of them to export. That combination results in billions of dollars leaving the US each and every month.

Manufacturing has declined from 14.2% of GDP in 2000 to just 11% of total output today. According to the Bureau of Economic Analysis, in 2009 US GDP was $14.2 trillion. Manufacturing contributed just $1.5 trillion to the total.

As a result of our shrunken manufacturing base, it's no surprise that the US has led the world in imports for decades or that exports now represent just 12% of our economy. It's a bad combination. The US now has a massive trade deficit and is the world's biggest debtor nation.

A wider trade deficit creates a drag on economic growth because more of the nation's consumption is coming from overseas rather than from domestic production.

So, why have US corporations slashed so many American jobs, only to hire workers in foreign nations instead? It's simple; money.

The average wage in developed economies is about 10 times the average level in emerging economies. That's the inherent flaw in "free trade". Simply put, due to higher wages, it costs a lot more to produce goods in the US than it does in developing countries.

Due to the impact this is having on their economies, last August, the National Conference of State Legislatures called for major reform of US trade pact model. It's now clear that free trade isn't all it was touted to be.

Here's a rather simple formula: No jobs = no spending = no growth = lower tax revenue = higher deficits = higher debt = higher tax rates & interest rates = no growth.

But it's not just manufacturing jobs that have been lost. Millions of workers — like file clerks, ticket agents and autoworkers — have been displaced by technological advances and international trade. Millions of other jobs, such as clerical and administrative positions, printing machine operators and travel agents have all been eliminated.

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Most of these occupations will never come back, regardless of what happens to the US economy. The skills of these workers are now largely irrelevant. Even if the recession hadn't occurred, employers still would have eliminated many of these jobs through attrition or buyouts. The recession only accelerated the process.

Though the federal Trade Act allows workers who've lost jobs to get retraining for higher-skilled jobs, a 2006 federal study found that most workers who do take retraining benefits get lower pay in their new jobs.

That's a truly sad state of affairs. Such a trend will only hasten the shrinking of what remains of the American middle class.

In a 2007 paper, Princeton economist Alan Blinder estimated that 22% to 29% of US jobs are vulnerable to being "off-shored" in the next 10 to 20 years. What may come as a surprise is that many jobs requiring a college education are the most vulnerable.

As the old saying goes, constant change is here to stay. From now on, workers will have to be nimble, adaptable and quick to adjust to employment trends.

The days of going straight from high school to a lifetime job at the factory, followed by a decent pension upon retirement, are long gone. Most workers will have numerous jobs, and perhaps even multiple careers.

The oft-repeated claim that the average American worker will have seven different *careers* in his or her lifetime is unfounded. The U.S. Bureau of Labor Statistics, the Labor Department's data arm, doesn't track lifetime careers. In fact, the BLS website notes that "no consensus has emerged on what constitutes a career change."

However, BLS economist Chuck Pierret has been conducting a study to better assess U.S. workers' job stability over time, interviewing 10,000 individuals, first surveyed in 1979, when group members were between 14 and 22 years old. So far, members of the group have held 10.8 jobs, on average, between ages 18 and 42, using the latest data available.

According to the U.S. Census Bureau's Current Population Survey, the typical American worker's tenure with his or her current employer was 3.8 years from 1996 to 2008, the latest available data. Given that a person may work for 45 years, or so, it's easy to assume that he or she may have 10 or more jobs in their lifetime.

It's one thing if this is the result of personal choices. However, in many cases it isn't. Regardless, is not the hallmark of worker stability.

Free trade has been a double-edged sword for the US. Though it has brought American consumers lower prices, it has also cost many of them their jobs. Being an import-driven, consumption-based economy is not working. It has led to a massive trade deficit, massive debt, and millions upon millions of outsourced American jobs.

range raw! jobs outsourced huge moletary problems!

If Americans are willing to pay more for American-made goods, US manufacturing could begin again in earnest. We could consume what we produce and recirculate our money back into our own economy, instead of sending it overseas. Such a transition would shrink the trade deficit, though much of it is driven by oil imports.

reshoring?

Clearly, the status quo isn't working. At present, we are on the road to nowhere, or perhaps even worse.

If this situation doesn't change soon, the US will be facing multiple and uncorrectable crises of rampant and unyielding unemployment, greater poverty and income disparity (already the highest in the developed world), plus the eventual and inevitable bankruptcy of our nation.

facing crisis

After all, given its relatively low export base, where will the US continue getting all that money for all those imports?

☆ SITUATION AT PRESENT - UNSUSTAINABLE!

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RESEARCH

Case Study

How Can America Create Wealth If Our Industrial Base Is Destroyed?
50,000 Manufacturing Jobs Have Been Lost Every Month Since 2001

By Michael Snyder, on March 25th, 2011

Any economy that constantly consumes far more wealth than it produces is eventually going to be in for a very hard fall. Many point to relatively stable GDP numbers as evidence that the U.S. economy is doing okay, but the truth is that we have had to borrow increasingly massive amounts of money to keep GDP numbers up at that level. The U.S. government is going to run an all-time record deficit of about 1.65 trillion dollars this year and average household debt in the United States has now reached a level of 136% of average household income. But borrowing endless amounts of money and consuming massive amounts of wealth with that borrowed money is a road that leads to economic oblivion. The only way to have a healthy economy in the long run is to create wealth. But how can America create wealth if our industrial base is being absolutely destroyed? According to Forbes, the United States has lost an average of 50,000 manufacturing jobs per month since China joined the World Trade Organization in 2001. Hundreds of formerly thriving industries in the United States are being totally wiped out. China uses every trick in the book to win trade battles. They deeply subsidize their domestic industries, they openly steal technology, they blatantly manipulate currency rates and they allow their citizens to be paid slave labour wages. So yes, the products coming from China are cheaper, but in the process tens of thousands of factories in the U.S. are shutting down, millions of jobs are being lost and the ability of America to create wealth is being compromised.

In 2010, the U.S. trade deficit was just a whisker under $500 billion. Much of that trade deficit was with China.

During 2010, we spent $365 billion on goods from China while they only spent $92 billion on goods from us.

Does a 4 to 1 ratio sound like a "fair and balanced" trade relationship to anyone out there?

Our trade deficit with China in 2010 was the largest trade deficit that one country has ever had with another country in the history of the world.

In fact, the U.S. trade deficit with China in 2010 was 27 times larger than it was back in 1990.

Needless to say, that is not a good trend.

Our industrial base and our ability to create wealth is being wiped out so rapidly that it has now become a very serious threat to our national security.

According to Forbes, there is only one steel plant inside the United States that is still capable of producing steel of high enough quality to meet the needs of the U.S. military, and even that plant has been bought by a European company.

Meanwhile, China produced 11 times as much steel as America did last year.

Not only that, China is now the number one supplier of components that are critical to the operation of U.S. defense systems.

How in the world did we let that happen?

So what happens if we have a conflict with China someday?

But of more immediate concern is the loss of jobs that the destruction of our industrial base is causing.

For example, the Ivex Packaging Paper plant in Joliet, Illinois just announced that it is shutting down for good after 97 years in business. 79 good jobs will be lost. Meanwhile, China has become the number one producer of paper products in the entire world.

But China is not just wiping the floor with us when it comes to things like steel and paper.

The truth is that China has now become the world's largest exporter of high technology products. Back in 1998, the United States had 25 percent of the world's high tech export market and China had just 10

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percent. Ten years later, the United States had less than 15 percent and China's share had soared to 20 percent.

So how is China doing it? Well, as noted above, they are pulling every trick that they can think of.

Most Americans think that we have "free trade" with nations such as China. That is a complete and total lie and anyone that believes that we have "free trade" with China does not know what they are talking about.

China subsidizes their domestic industries to such an extreme extent that many global industries no longer even come close to resembling "free markets" as a recent story in Forbes noted....

According to a story in the January 20, 2009 New York Times, government subsidies so thoroughly disrupted pricing in the global market for antibiotics that many western producers had to either move facilities to Asia or exit the business entirely. The reason this might matter to intelligence analysts is that the last U.S. source of key ingredients for antibiotics — a Bristol-Myers Squibb plant in East Syracuse, New York — has now closed, leaving the U.S. dependent on foreign sources in a future conflict.

Our politicians and our business leaders have pursued economic policies that are so self-destructive that it defies explanation.

How in the world could anyone be so stupid?

Since 2001, over 42,000 U.S. factories have closed down for good. Millions of jobs have been lost. The ability of the once great American economic machine to create wealth has been neutered.

The business environment in America is completely and totally pathetic at this point. The number of small businesses that are being created is also way, way down.

According to the U.S. Census Bureau, only 403,765 small businesses were created in the 12 months that ended in March 2009. That was down 17.3% from the previous year, and it was the smallest number of small businesses created since records began being kept in 1977.

The truth is that the U.S. economy is dying.

We continue to consume about the same amount of wealth that we always have, but our net worth is declining.

According to the Federal Reserve, more than two-thirds of Americans have seen their net worth decline during this economic downturn. In fact, the Fed says that between 2007 and 2009, the wealth of the average American family declined by 23%.

So if it seems like your family and everyone around you is getting poorer, that is because it really is happening.

We really are becoming poorer as a nation.

We can see evidence of this all around us. Just consider a few of the examples that have been in the news in recent days....

*One school district in the Chicago area is laying off 363 teachers.

*The U.S. Postal Service is offering $20,000 buyouts to thousands of workers as they attempt to slash 7,500 good-paying jobs.

*The city of Detroit, once a shining example of middle class America, is now a rotting cesspool of economic decline and it saw its population decline by 25 percent over the decade that recently ended.

Americans are not feeling the full impact of America's industrial decline yet because we have been filling the gap in wealth creation with massive amounts of debt.

In the years since 1975, the United States had run a total trade deficit of 7.5 trillion dollars with the rest of the world. That 7.5 trillion dollars could have gone to support U.S. businesses and U.S. workers, but instead it left the country and went into the hands of foreigners that do not pay taxes.

Therefore, the U.S. government, state governments and our local governments have had to borrow massive amounts of money to make up the difference.

HOUSE OF LORDS: MANUFACTURING

THURSDAY 3RD JULY, 2014.

KEY POINTS	NOTES
Manufacturing is ESSENTIAL to economic growth. vital (!) the way (of the) of actually GENERATING WEALTH as opposed to only trading it.	• Manufacturing 1 of the growth areas of the future in its form of innovative manufacturers w/ potential for high growth and that capture global markets. • Manufacturing makes up 11% of UK GVA and 54% of UK exports & directly employs 2.6mil people. • Manufacturing contributes £6.7 billion to the global economy.
economic progress/ growth = increased productivity = better quality goods. Quality over Quantity Cheap labour = short cut; will add costs indirectly elsewhere.	• Real means of economic progress is not just GDP but growth in GDP/work unit. ↳ Productivity isn't raised by cutting wages & sweating the assets (that's a race to the bottom. ↳ The principle source of growing productivity is our capacity to learn to do things better - not necessarily cheaper. ~ Lord Young of Norwood Green : Shadow Business, Innovation & Skills Minister. (opinion)
Current Account Deficit (!!) Increase investment of local banks in local industries. Home country bred advertised.	• Need now to REBALANCE the ECONOMY - the manufacturing sector was what made the country great - need to use it again. ↳ Recently been relying to heavily on services & too little on goods. ↳ "We must begin to make things again and reevaluate our manufacturing capabilities" ↳ SMEs (Small Manufacturing Enterprises) are the backbone of the manufacturing sector so we need to invest more in them and support them. ~ Lord Sheikh : Conservative. (opinion)
UK has gone trough the process of de-industrialisation (!!) loss of jobs loss of innovations + creativity ∴ lagging behind Current Account Deficit (!!)	• In terms of Manufacturing as a proportion of national economic output the UK has fallen from 15th in the world in 1970 to 114th by 2012. • The manufacturing share of the UK's economic output had halved from ≈ 40% post war 2 to less than 20% with > 1mil skilled workers out of work for over a year. ~ Lord Chidgey : Liberal Democrat (stated) • German companies submitted >47,000 patent applications in total in 2012 Vs. the 15,000 in the UK ↳ G submitted 3x as many as the UK ↳ G places more value on R&D • Manufacturing exports still failing to grow at the proportionally acceptable level. The UK is also still importing far too much of what it consumes ↳ US seasonally adjusted trade deficit in goods in April was £8.7bn Vs. the £8.2bn in March. * Roughly double what it had been for the same period in 2012. ~ Lord Chidgey : Liberal Democrat (stated)

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KEY POINTS	NOTES
• Need to attract investment. Make it easier ?	• Main pitch facing the manufacturing sector is lack of financial investment and support. ↳ In the 1st ¼ of 2014, net lending to business from banks participating in the Govt's Funding for Lending' scheme rose by £2.7 bn.
Gov. policies required to implement + regulate DS. State finance • loosening of regulations	• The Govt can play a vimp. role in stimulating investment in advanced manufacturing. ↳ tax relief on R.D means that companies can afford to spend more on it, thereby f innovation leading to increased productivity -> ↑ profit. ↳ lowering corporation tax (lowered to 28% in 2010) boosts business confidence : they more likely to invest ↳ ESP true for capital intensive industries • Shipping out bureaucracy + cutting tax + increasing subsidies are the quickest + best ways of strengthening this sector
• Long term solution to increase sector at home. • manufacturing needs to be perceived as a worthwile career.	• long term : need to increase student interest in manufacturing ↳ increase labour supply ↳ increase apprenticeship programmes + quality of trainings apprenticeships. ↳ increase practical experience ↳ increase young people's interest in the manufacturing sector ↳ engineering students paid very little - less attractive / need greater incentive to choose it as a career path.
• Future frame of mind / way of thinking. Re shoring production.	• Our focus should NOT be to produce goods the cheapest or quickest but in fact to produce the best quality, technology and product reliability. ↳ : customers willing to pay premium prices. ↳ advocate UK brand.

SUMMARY

—▷ Off shoring all production to less developed countries where labour is cheaper is NOT FEASIBLE. UNSUSTAINABLE

—▷ Manufacturing at home essential to any economy for it to progress.

—▷ Banks reluctant to finance industry ; ∴ being shipped off-shore. BAD.

—▷ Need to introduce governmental policies to increase financial support for the manufacturing sector

—▷ Need to increase labour supply : interest more students in studying and then working in manufacturing + engineering.

LESS DEVELOPED —▷ INDUSTRIALISATION —▷ MORE DEVELOPED —▷ DE-INDUSTRIALISATION —▷ PARTIAL —▷ ?

DISSERTATION PLAN

INTRODUCTION:

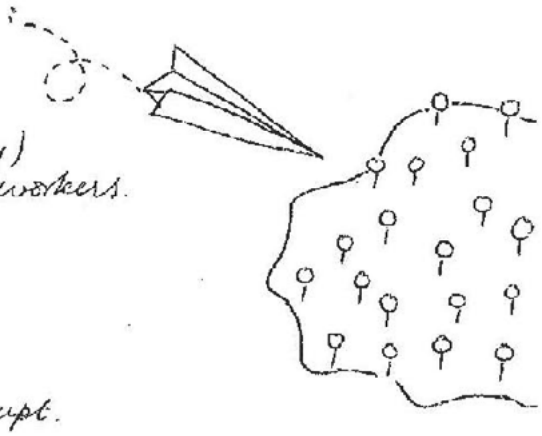
- What is 'deindustrialisation'?
  - ↳ define + explain (briefly)
- Pattern of development (stages?)
  - ↳ under developed economy → INDUSTRIALISATION → economy more developed → DEINDUSTRIALISATION

UNSUSTAINABLE ← GDP levels fall (?) ← !?

↳ reshoring production ??

- Deindustrialisation becoming an increasingly controversial issue + more debated recently.

WHY MANUFACTURING MOVED ABROAD



- Cheaper Labour
  - ↳ increased savings for firm
- More labourers (willing to work cheaply)
  - ↳ larger population → more potential workers.
- More output for less money
  - ↳ increasing profits.
- Less safety regulations
  - ↳ cheaper overall process
- Need to compete with firms or go bankrupt.
  - ↳ competition = lower prices
    - ↳ only possible realistically with lower production costs

DRAWBACKS OF DEINDUSTRIALISATION

- Unemployment
  - ↳ manufacturing sector employs large numbers.
    - ↳ not just directly + other sectors link to manufacturing too.
- no exports + increased imports
  - ↳ current account deficit - dangerously high
  - ↳ country borrows to make up gap → DEBT!
- Reliance on an other country - weak position
  - ↳ you are vulnerable to attack
  - ↳ defence systems
- Loss of a means of national income

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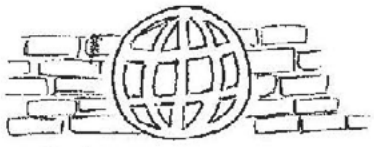
BENEFITS OF MANUFACTURING:

- Only way of creating wealth - engine of growth
- Adds value to primary goods (How it creates wealth)
  - ↳ takes a naturally occuring product and refines it/ changes it/ modifies it - adds value
- Positive externalities - jobs created
  - ↳ increased incomes → more spending → economic growth (SR)
- Increase in productive capacity (aggregate supply)
  - ↳ = economic growth (LR)
- National pride
  - ↳ producing for 'home crowd' - care more about them than foreign overseas clients → put more effort into products for domestic consumption.

THE SOLUTION



- 'PROTECTIONISM'
  - ↳ Government policies
    - ↳ tax cuts (corporation tax); subsidies; anual investment allowance, etc.
- Apprenticeship Programes - more + better quality
  - ↳ increase labour supply
- Increase support for Small to Medium Enterprises (SMEs)
  - ↳ increase Production business at home.
- Encourage investment in industry at home.

CONCLUSION

- Manufacturing is the backbone of the economy
- Quotes?
- Manufacturing creates wealth by taking goods of low value and adds value to them (knowledge + labour) and so creates higher value products.
- De-industrialisation leaves the economy bereft of jobs
- Unsustainable situation

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Problem; Cause; Solution.

no more than 300words

Include abstract before intro. → an general summary/overview

DRAFT

ABSTRACT

MANUFACTURING – A SOLUTION TO OUR FRACTURED ECONOMY

paragraphing! break up points under heading

1st talk about the need to offshore resulting itself

Intro:

In an economy there are many different sectors of employment, e.g. agriculture, manufacturing, services and research & development. Over the past few decades manufacturing as a share of total national employment has fallen dramatically in the more advanced economies of the world - a phenomenon referred to as "deindustrialisation". Deindustrialisation has likely resulted in widening income inequality in the United States and high unemployment in Europe. Some suggest that deindustrialisation is a result of the globalization of markets and has been fostered by the rapid growth of trade between the advanced economies and the developing world. Critics argue that the fast growth of labour-intensive manufacturing industries in the developing world has displaced the jobs of workers in advanced economies (Ramaswamy, 1997). Deindustrialisation is the reduction of industrial activity or capacity in a region or economy. All economies – advanced or not – obviously still have a need for manufactured goods. In fact the developed countries (with high purchasing power) have a demonstrably higher need for material possessions. However, this demand is met by products manufactured off-shore (in less developed economies) and imported over long distances to the shores of the modern consumer. All of this is made economically viable by the low cost of production that offsets transportation costs. – End with a mention/suggestion of problems (e.g. high rate of unemployment)

explain what it is.

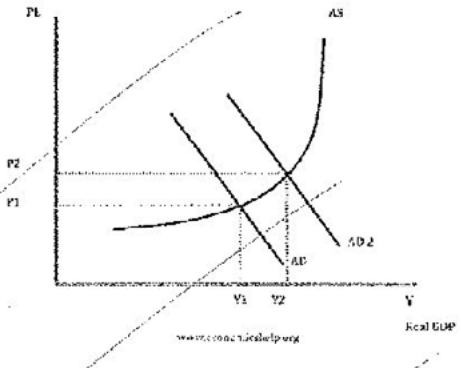
mention earlier

E. in the intro talk about the de-industrial revolution

Causes of economic growth:

Remove this section if necessary

- Economic growth means an increase in Real GDP. Economic growth means there is an increase in national output and national income.
- Economic growth is caused by two main factors:
  1. An increase in aggregate demand
  2. An increase in aggregate supply (productive capacity)



- In the short term, economic growth is caused by an increase in aggregate demand (AD). If there is spare capacity in the economy then an increase in AD will cause a higher level of real GDP.

AD= C + I + G + X - M

- AD can increase for the following reasons:
  - Lower interest a rate – Lower interest rates reduce the cost of borrowing and so encourage spending and investment

Integrate this point (in footnotes) when talking about the gains from manufacturing

NOT REQUIRED!

- Increased wages. Higher real wages increase disposable income and encourages consumer spending.
- Increased government spending (G).
- Fall in value of sterling which makes exports cheaper and increases quantity of exports(X).
- Increased consumer confidence, which encourages spending (C).
- Lower income tax which increases disposable income of consumers and increases consumer spending (C).
- Rising house prices, which create a positive wealth effect and encourages homeowners to spend more

Mention in footnote when talking about the rises of manufacturing.

- Long Term Economic Growth requires an increase in the long run aggregate supply (productive capacity) as well as AD.

(Insert Diagram showing Long Run Economic Growth)

- Potential growth can increase for the following reasons:
  1. Increased capital. E.g. investment in new factories or investment in infrastructure (such as roads and telephones).
  2. Increase in working population, e.g. through immigration, higher birth rate.
  3. Increase in Labor productivity, through better education and training or improved technology.
  4. Discovering new raw materials.
  5. Technological improvements to improve the productivity of capital and labour e.g. Microcomputers and the internet have both contributed to increased economic growth.
- Long Run economic growth is more sustainable and so more desirable.

<u>Why manufacturing was offshored to less developed countries:</u> 1st: historically it has been a trend

GRAPH REMOVED FOR COPYRIGHT PURPOSES

places such as China and India.

- Offshoring means moving work and jobs outside the country where a company is based.
- The original idea behind offshoring was that Western firms with high labour costs could make huge savings by sending work to countries where wages were much lower.
- In the past 30 years the manufacturing sector in the UK has shrunk by two-thirds, the greatest de-industrialisation of any major nation. (Chakrabortty, 2011). Many companies moved their industrial bases offshore to

mention before

either refer directly to diagram or don't include it.

mention introduction of the minimum wage: The National Minimum Wage Act of 1998.

31

savings that can potentially be passed on to customers : lower prices attracting ↑ demand → ∴ greater overall revenue

- This was done for a number of reasons, a key one being to cut costs and maximise profit. Wages in less developed countries are much lower compared to those in the West. → no minimum wage
- Much of the cost involved in the manufacturing sector is in paying for labour. By offshoring production to these less developed countries, firms are able to make huge savings as they drastically reduce their labour costs
- Countries in the East tend to have larger populations than countries in the West. This means that there are more potential workers in the East. By moving production to higher populated areas, companies gain labourers. This increased work force will increase the firm's output: there are more people working and so the quantity produced rises.
- If a firm is unable to lower its prices in line with a competing firm, it will lose customers and so lose out on revenue. If a firm reduced its prices while still paying the same internal costs (for labour), it will lose out of profits and may even suffer a loss. Thus to ensure they retain their profits and perhaps even increase them, the firm must find a way to cut its internal costs: an obvious solution therefore presenting itself in the form of offshoring production.
- Another large cost to firms is meeting regulation standards for things such as working conditions and health and safety protocols. To set up a production line in the West, there are high costs suffered and much legal work required. In comparison, the East has far fewer and far less rigid regulations. Businesses in the East are often subject to fewer laws regarding labour conditions, use and disposal of materials, right-to-work laws and other areas of manufacturing that raise the cost of producing goods in more developed and regulated countries. Thus by offshoring their production to the East, Western companies are able to cut costs and raise their profits further still. → able to cut costs and raise profit
- The increased income for firms mean they have more money to spend on marketing, research and development and other areas that can help maximise their end profit. → mention competitive / comparative advantage ↳ explain theory in footnote

Offshoring results in great savings for firms

Keeping in mind that each worker is also being paid less than a worker in the West, firms incur high net profits: more for less.

Lower costs or go bust → ↓ prices → needed to stay competitive must cut internal costs.

Insert example. ie production involves many industries. bringing together many industries.

LINK

Drawbacks of De-Industrialisation and Offshoring Production:

LINK TO PREVIOUS PARA NEEDED.

- While there are some obvious benefits to offshoring production, in the long run it is not a sustainable situation. There are many disadvantages to this distance. → Briefly mention an original reason for move.
- The original reason for the move away from home based industry was the vast difference in labour costs between the East and West. However, that price gap is no longer so drastic. China is no longer seen as a cheap manufacturing base but as a huge new market in itself.
- The main thinking behind offshoring was greater savings and increased profits. However, a big problem encountered by companies is that of delivery reliability. The cost of shipping heavy goods halfway around the world by sea has been rising sharply, and goods spend weeks in transit. This often results not just in dissatisfied

Include statistics e.g. China's increase wage demand.

customers but in the company having to invest in additional stock to try to cushion these effects, extra stock that will impact on the savings that had been made.

- The increased quantity of goods is no substitute for quality. While at first consumers will be brought in by the lower cost, soon they will become disillusioned by the lack of quality and so the firm will still lose out on revenue. While firms have offshored manufacturing somewhere cheaper, research and development has stayed at home. However, this system can have a negative effect on innovation. One possibility would be to move the research and development sector abroad too, but that has other drawbacks: there is a threat of losing valuable intellectual property to other countries, and so losing out on a long term area of revenue. Thus, offshoring means that companies cannot be close to their markets, making customised products and responding quickly to changing local demand.
- Another very dangerous risk of offshoring is the weakening of a country's defense system. By moving a country's main production line to another country, one becomes reliant on the other country. Along with every day goods being produced in other countries, military equipment and technology is also often produced offshore. This is not only economically debilitating, it is dangerous – if the UK ever has a conflict with China someday it will be at a considerable disadvantage. This is because China produces the majority of the UK's goods and technologies and so would know how many of the UK's advanced security systems work and how to get past them. If they also manufacture the UK's defense machinery, they would know how to destroy it. Thus, it makes a country worryingly vulnerable to offshore the majority of manufacturing to other countries.
- Current account deficit – so increased borrowing to keep up high GDP. (creating yet another problem) By cutting down on manufacturing, an economy reduces the goods it makes and so the amount of goods available for exports. This means that the country has less available to trade with. Exports are a source of income for a country – cutting exports reduces monetary injections into an economy. In 2010, the U.S. trade deficit was just under $500 billion. Much of that trade deficit was with China: during 2010 the U.S. spent $365 billion on goods from China while China spent only $92 billion on good form the U.S. That is a four to one ratio – not a 'fair and balanced' trade relationship. The U.S. trade deficit with China in 2010 was 27 times larger than it had been in 1990.
- A further problem with de-industrialisation is loss of jobs. The manufacturing industry requires and so employs a vast number of workers. As the manufacturing sector moving over-seas, the jobs go with it, especially in low skilled positions. Unemployment and poverty, therefore, are symptoms of stagnation and lack of industrialisation. The long-term solution to mass unemployment is industrialisation - there is no industrialised nation that is poor. The manufacturing sector employs not only manual labourers but also gives rise to many indirectly related positions. According to the Economic Policy Institute, each manufacturing job supports three other jobs in the economy. Without a manufacturing base, a country loses out on

include example of UK

insert diagram : OECD stats

many more jobs than just the low skill manual labour positions. A high unemployment rate is detrimental to any economy. High unemployment has a huge negative impact on government expenditure, taxation and the level of government borrowing each year: higher benefits payments and lower tax revenues mean government ends up spending money it cannot actually afford to, and is receiving less than usual as income tax is not paid by the unemployed.

ancillary industries

What manufacturing adds/Gains from manufacturing:

LINKING SENTENCE

- The influence of manufacturing goes far beyond the direct contribution to production and employment. Manufacturing is a global business underpinning all economic activity. Manufacturing produces goods and spending on goods accounts for more than half of all consumer expenditure. By producing goods at home a country can potentially cut down on imports, saving money as less leaves the economy.

backbone of the economy

LINK

- Manufacturing adds value to a good: it essentially takes a primary good and adds value to it when it turns it into a more usable and useful final product. A company takes a number of inputs including labour, raw materials, capital and other components and has added value to those inputs through design, innovation, production and marketing.

add detail

- A reduction in domestic industry will lead to unemployment which will cause an initial fall in national income, leading to a fall in spending which in turn will lead to a fall in demand. This is bad news for an economy as increases in aggregate demand are a cause of economic growth.

initial point of argument.

include case study data + table from League of Nations.

- Manufacturing is what allowed the now 'World Powers' to gain their status. Controlling the bulk of the global production of manufacturing technology and the knowledge of how to make the machinery that makes the goods is the key to power. Research shows that about 80% of the world's production of factory machinery had been controlled by the "Great Powers." Until the 1950s, the U.S. had produced about 50%; now it produces less than China's 16% (Rynn, 2011). In May 1927, the League of Nations held an International Economic Conference. As part of that conference, Dr. Karl Lange discussed the state of the mechanical engineering industries. The following table shows Lange's findings (League of Nations 1927):

Table removed for copyright purposes

Thus, the U.S., Germany, and U.K. controlled 82.4% of world machinery production in 1913, and 84.3% in 1925. The U.S., Germany, and U.K. were the Great Powers because they dominated the production of reproduction and production machinery (Rynn, 2011).

- Manufacturing is the key to long term, sustainable economic growth. Global trade is based on goods, not services - services are mostly the act of using manufactured goods. Even education and knowledge almost always require or involve the manipulation of goods in a specific way. According to the World Trade Organisation, 80% of world trade among regions is merchandise trade. Trade is important as it plays some part in increasing the value of a country's currency. Manufacturing creates jobs and reviving the sector could provide a huge number of new jobs, eradicating the debilitating effects of the Great Recession. In 2005, the Japanese manufacturing sector was 20.2% of its economy, in Germany it was 23.2%, and in the U.S. manufacturing accounted for 13.4%, according to the Organisation for Economic Co-operation and Development (OECD). Using 2005 figures, if the U.S. had the same percentage as Japan, they would have 7 million more high-quality, long-term, well-paying jobs. If they were equal with Germany, it would be 10 million more (Rynn, 2011).
- Manufacturing can be seen as a mechanism for driving innovation. Transferring manufacturing work overseas means that a country becomes largely disconnected with the process, only seeing the end product. This means than it is unable to actively apply itself to finding more effective cost saving ways to producing the goods and so loses out in the long run.
- Manufacturing indirectly improves a country's infrastructure. Raw materials and other products required in the manufacturing process will often need to be transported from their site of origin to the manufacturing plant. This will require the development of good road and rail connectivity. Such infrastructure will also benefit the population at large – it will be used not just for manufacturing sector – once put in place these roads and other transportation methods will be used by everybody. The development of infrastructure and manufacturing has a synergistic effect on each other.
- The idea of producing goods for domestic consumption instils a sense of national pride. Workers take more pride in their efforts when they know it for their own consumption and that of people in their neighbourhood/town/city/country as opposed to earmarked solely for faceless overseas consumers. This instils a good work ethic in the labour force.
- Kaldor's Laws: Economist Nicholas Kaldor (1908-1986) proposed that economic growth and enhanced standards of living were positively correlated with national industrial activity. He suggested that growth in GDP was positively related to growth in the nation's manufacturing sector. Productivity in the manufacturing industries was also positively related to growth in this sector. He also suggested that the productivity of the non-manufacturing sector was associated with growth in manufacturing.

link to paragraph on value added.

cut out unrelevant data.

Give example to better explain the point.

Don't include

NOT RELEVANT

The Solution:

MENTION PROBLEM 1st: why a solution is required.

- The economies of the developing world (the countries in the East) are growing at a higher rate than the rest of the world. This high rate of growth is accompanied by rising wage pressure, driving salaries up as well - climbing approximately 15% to 20% annually in China. It will not be too long before labour costs in the East and West will be comparable, erasing one of the most significant advantages to offshoring production. According to consultant AlixPartners, manufacturing costs for China will no longer seem like a bargain by 2015, factoring in currency and shipping costs.
- We need to encourage manufacturing at home. To do this government policies will need to play a big part. Fiscal policies will need to be altered and revised. For example, tax relief on Research and Development (R&D)
- In the UK, in the first quarter of 2014, net lending to business from banks participating in the 'government's funding for lending' scheme fell by £2.7 billion (Green, 2014). The government can lower corporation tax – in was 28% in the UK in 2010 – increasing a firm's confidence as it will increase their savings, this can also be achieved by a raise in the Annual Investment Allowance (AIA). The government can also play a very important role in stimulating investment in the manufacturing sector.
- In order to bring manufacturing back home there is an urgent need to get more young people involved and interested in the field to supply the required labour. There need to be an increase in apprenticeship programs available in the manufacturing sector combined with an increase in the quality of the schemes. So it is imperative that there is a substantial increase in education and training targeted at encouraging more students to enter the fields of engineering and relevant technology and production areas.
- Increased support for small to medium enterprises (SMEs) is also essential to bringing manufacturing back home. We need to start investing more in the small factories that are still run within the country. This includes greater management development support and apprenticeship schemes to help boost the capability of these firms. There must also be steps taken to help modernise these factories to include more technology-enabled smart manufacturing processes, making them more efficient and so aiding the reduction of costs in the long run.
- The focus needs to be not on producing goods the cheapest, quickest or most, but on producing the best quality goods and the most reliable products. It is the argument of quality over quantity. With better quality products comes customer willingness to pay a higher price for the superior quality.
- There also need to be an increased investment in the transport, production and telecommunications infrastructure to improve them and so making them more useable, both by the manufacturing sector and by the general public.

explain / expand

FINE

add example if possible

cut down - only mention briefly.

> Explain who they are in the footnote

> stress imp. of government policies.

Conclusion:

- There are three principal sources of wealth - natural resources, labour and knowledge. Natural resources (oil, minerals and the like) are tied to geography. Service industries and government jobs do not increase wealth - they just circulate money. Manufacturing creates wealth by taking goods of lower value, adding knowledge and labour, and creating higher value (Pinto, 2011).
- As a less advanced economy starts its process of development the share of agriculture in national employment falls and there is a rapid increase in the share of manufacturing. This process is known as 'industrialisation'. Manufacturing has been the path to development. England underwent this process in the 19th century; U.S., Germany, Japan and the USSR in the 20th century, and the newly developing countries like India and China are currently in the process of industrialisation. After a certain point, however, the share of manufacturing starts to fall – this is often described as 'de-industrialisation'. During this stage, the service sector expands as countries reduce their manufacturing base and focus more on advanced technologies.
- There is an explanation for the move of manufacturing away from the more developed nations to the newly developing ones; however this reason is not good enough. An economic practice that is based solely on the profit margin (the current system) is not sustainable in the long run. It results in short term gains for a very limited number of people. And these gains are made at the cost of the economic prosperity of future generations.
- Manufacturing adds value, creating more jobs than any other sector, driving innovation throughout every segment of our society and delivering consumer solutions - all of which are the keys to long-term, sustainable economic growth (World Economic Forum, 2013).
- In conclusion, although there were reasons for offshoring we are now suffering the consequences of such a decision. Manufacturing needs to be brought back.

talk about industrialisation

FINE

talk about greed - question of who it is benifiting & are consumers actually reaping the benifits?

must mention & key point.

economic prosperity

to our shores - Manufacturing is the ONLY solution

needs a definitive conclusive statement summing up my overall view / stand on argument.

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20/04/2014

Mid-Term Project Review

1. What have you achieved in your Project so far?

I have done the outline for my dissertation so that my research can now be more focused and topic specific. Using the background research I had done earlier, I have written the introduction for the dissertation.

2. What have been the main strengths and weaknesses of your planning, organisation and time-management?

I have planned the dissertation well. After I first researched the general topic I what to write about, I drew up an outline for the dissertation with broad headings for the different topics I want to write about within the essay. This helped focus my research and proved an effective, efficient way of going about gathering the information.
However, I spent more time on the research than I had initially thought I would. This meant that I was behind on the time-scale I had set myself as a rough guideline at the start of the project.

3. What problems or difficulties have you encountered? How have you overcome them?

I realised that primary research was not relevant to my area of research and would have added nothing to it. This means I had to work harder to vary my sources. I have use the internet, articles in journals and books. I also found a documentary done by the BBC on manufacturing and watched that as another source for information for my dissertation.

4. What is still left to do on your Project? How will you go about completing it and handing it in on time?

I need to finish writing the rest of the dissertation – I am just under halfway through right now. I will also have to add the finishing touches of an engaging, interesting title and do the final formatting. I also need to evaluate my sources.

globalization of markets and has been fostered by the rapid growth of trade between the advanced economies and the developing world. Critics argue that the fast growth of labour-intensive manufacturing industries in the developing world has displaced the jobs of workers in advanced economies (Ramaswamy, 1997).

Migration of Jobs to Less-developed Economies

In the past 30 years the manufacturing sector in the UK has shrunk by two-thirds (Chakrabortty, 2011). Many companies moved their industrial bases offshore to places such as China and India. This was done for a number of reasons, a key one being to cut costs and maximise profit. Western firms generally face high labour costs due to the introduction of 'minimum wage' by way of The National Minimum Wage Act of 1998. Less developed countries do not have this concept: the wages there are much lower compared to those in the West. Much of the cost involved in the manufacturing sector is in paying for labour. By offshoring production to these less developed countries, Western firms are able to make huge savings as they drastically reduce their labour costs – paying each worker a fraction of what they would have been paying employees at home. By outsourcing assemblies and other expensive processes during manufacturing, firms can dramatically cut the costs of their products and, potentially, pass these savings on to customers.

Furthermore, countries in the East tend to have larger populations than countries in the West. This means that there are more potential workers in the East. By moving production to higher populated areas, companies gain labourers. This increased work force will increase the firm's output: there are more people working and so the quantity produced rises. Keeping in mind that each worker is also being paid less than a worker would be paid in the West, overall the firm has a high net profit. The firm experiences more output for less money. It is due to the cheaper labour and increased output that a firm is able to cut the cost of the product in the market. This lower cost is essential to a business due to the competition that exists between firms as they fight for customers – and it is a well-known fact that the clientele are attracted to low prices. If a firm is unable to lower its prices in line with a competing firm, it will lose customers and so lose out on revenue. If a firm reduced its prices while still paying the same internal costs (for labour), it will lose out of profits and may even suffer a loss. Thus to ensure they retain their profits and perhaps even increase them, the firm must find a way to cut its internal costs: an obvious solution therefore presenting itself in the form of offshoring production.

Another large cost to firms is meeting regulation standards for things such as working conditions and health and safety protocols. Industry produces vast amounts of effluents and emissions. That waste has to be disposed of correctly. The process of waste disposal is very heavily regulated in the West, adding much to the overall cost of production. By moving the assembly line to the East, companies are able to cut a lot of the costs incurred during waste disposal as regulations in the East are much more 'relaxed' regarding such matters. To set up a production line in the West, there are high costs suffered and much legal work required. In comparison, the East has far fewer and far less rigid regulations. Businesses in the East are often subject to fewer laws regarding labour conditions, use and disposal of materials, right-to-work laws and other areas of manufacturing that raise the cost of producing goods in more developed and regulated countries. Thus by offshoring their production to the East, Western companies are able to cut costs and raise their profits further still. Consequently, by offshoring firms incur much lower labour, operational and overhead costs, and so are able to reduce current price levels at home. Based on these savings, realised from outsourcing, firms experience increased sales and so higher profit margins. This

MANUFACTURING – A SOLUTION TO OUR FRACTURED ECONOMY

Abstract

The desire to reduce the cost of commodities in developed economies led to their production being moved offshore. Access to cheap labour and unregulated production facilitated this move of manufacturing to less developed economics like India and China. It is debatable, however, whether the benefits of these saving were actually realised by consumers or whether they went to make the rich richer. It is clear, however, that the loss of jobs consequent to this move hurt developed economies in the long run. The thinly-veiled exploitation of poorer economies that appeared to be profitable eventually proved detrimental to global interests: shifting the problem of industrial CO_2 emissions from Manchester to Beijing did not make the problem of global warming go away. The shift from hands-on work to more cerebral work like research & development and financial services has not realised its proclaimed economic potential. Instead it has resulted in wide-spread loss of livelihood for low skilled workers. Cutting the manufacturing sector has had a dual impact on the economy – increased reliance on imports and a lack of goods to export. Thereby resulting in more money leaving that entering the economy. Long term deficit has severe detrimental effects and will eventually lead to national debt. Manufacturing is the only industrial activity that generates wealth: it takes low value inputs for example raw material, transportation, labour, and production costs and produces goods of higher net value. Thus it is clear that manufacturing needs to be brought back home. In order to achieve re-industrialisation government fiscal policies need to be amended to make domestic production lucrative.

Introduction to the Problem of Deindustrialisation

In an economy there are many different sectors of employment, e.g. agriculture, manufacturing, services and research & development. Over the past few decades manufacturing as a share of total national employment has fallen dramatically in the more advanced economies of the world - a phenomenon referred to as "deindustrialisation" (Ramaswamy, 1997). Deindustrialisation is the reduction of industrial activity or capacity in a region or economy. Furthermore, such reduction of industrial activity from a country results in socio-economic change. This trend is particularly evident in the United States, United Kingdom and Europe. Deindustrialisation has been cause for considerable concern and has given rise to a debate about its causes and likely longer-term implications.

This de-industrial revolution has come about because of the oft touted sentiment "the old days of heavy industry are gone for good. The future lies in working with our brains, not our hands." Yet there is ample evidence that the promised rewards of this post-industrial future have not materialised. What was sold as economic modernisation has led to industrial decay, often with nothing to replace it (Chakrabortty, 2011).

All economies – advanced or not – obviously still have a need for manufactured goods. In fact the developed countries (with high purchasing power) have a demonstrably higher 'need' for material possessions. However, this demand is met by products manufactured off-shore (in less developed economies) and imported over long distances to the shores of the modern consumer. All of this is made economically viable by the low cost of production that offsets transportation costs. And who cares about the cost to the planet.

Deindustrialisation has likely resulted in widening income inequality in the United States and high unemployment in Europe. Some suggest that deindustrialisation is a result of the

increased income for firms mean they have more money to spend on marketing, research and development and other areas that can help maximise their end profit. Often companies are able to strengthen their competitive advantage in a chosen marketplace by means of outsourcing and offshoring production. For example, China's advantage is low cost and abundant labour; the U.S.'s advantage is creativity, technology, and marketing. By moving production to China the U.S. is able to leverage its comparative advantages onto China.[1] This helps improve their bottom line.

Drawbacks of Offshore Manufacturing

While there are some obvious benefits to offshoring production, in the long run it is not a sustainable situation. There are many disadvantages to this distance. The original reason for the move away from home-based industry was the vast difference in labour costs between the East and West. However, that price gap is no longer so drastic. China is no longer seen as a cheap manufacturing base but as a huge new market in itself.

The main thinking behind offshoring was greater savings and increased profits. However, a big problem encountered by companies is that of delivery reliability. Having to transport their products over such distances often poses many difficulties as deliveries often spend weeks *en route* and delays occur do to things such as bad weather and backlogs in customs. This often results not just in dissatisfied customers but in the company having to invest in additional stock to try to cushion these effects, extra stock that will impact on the savings that had been made.

The increased quantity of goods is no substitute for quality. While at first consumers will be brought in by the lower cost, soon they will become disillusioned by the lack of quality and so the firm will still lose out on revenue. While firms have offshored manufacturing somewhere cheaper, research and development has stayed at home. However, this system can have a negative effect on innovation. One possibility would be to move the research and development sector abroad too, but that has other drawbacks: there is a threat of losing valuable intellectual property to other countries, and so losing out on a long term area of revenue. Thus, offshoring means that companies cannot be close to their markets, making customised products and responding quickly to changing local demand.

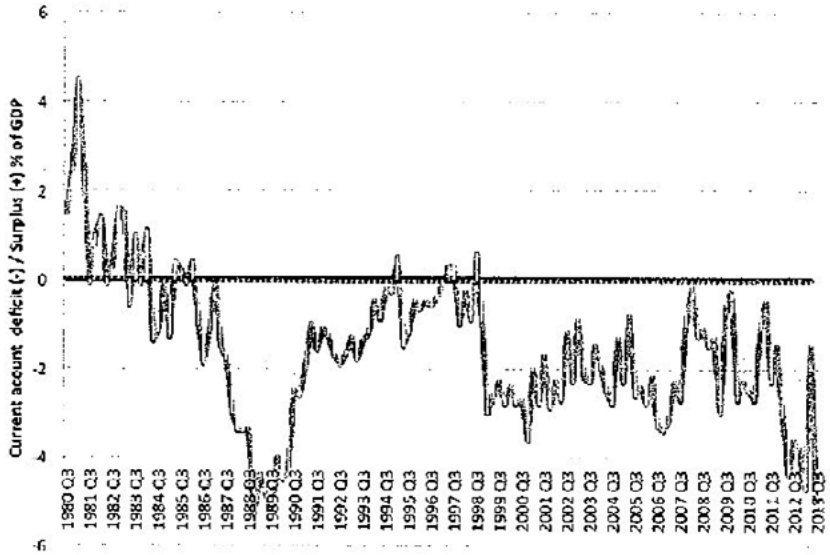
A more sinister problem with offshoring is the weakening of a country's defense system. By moving a country's main production line to another country, one becomes reliant on the other country. Along with every day goods being produced in other countries, military equipment and technology is also often produced offshore. This is not only economically debilitating, it is dangerous – if the UK ever has a conflict with China (someday) it will be at a considerable disadvantage. This is because China produces the majority of the UK's goods and technologies and so would know how many of the UK's advanced security systems work and how to get past them. If they also manufacture the UK's defense machinery, they would know how to destroy it. Thus, it makes a country worryingly vulnerable to offshore the majority of manufacturing to other countries.

By cutting down on manufacturing, an economy reduces the goods it makes and so the amount of goods available for exports. This means that the country has less available to trade with.

[1] The concept of comparative advantage is an economic theory about the potential gains from trade for individuals, firms, or nations that arise from differences in their factor endowments or technological progress. In an economic model, an agent has a comparative advantage over another in producing a particular good if he can produce that good at a lower relative opportunity cost or at a lower relative marginal cost prior to trade.

Exports are a source of income for a country - cutting exports reduces monetary injections into an economy. Since the process of de-industrialisation accelerated in the early 1980s, the UK has had a large deficit in goods. (Pettinger, 2014) By not producing goods within the country, not only does a country cut its exports, it also has less to sell at home, this increasing dependency on imports. An increased reliance on imports means that increasing amounts of money are leaving the economy. This combination of increasing imports and decreasing exports results in a 'Current Account Deficit'.

UK current account % of GDP



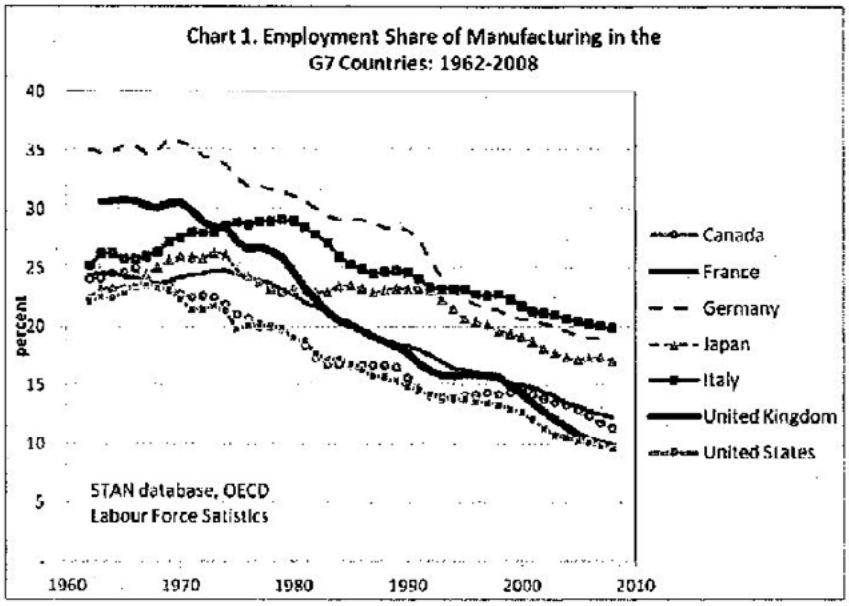
In 2000, the gap between exports and imports of goods surged to nearly £29 billion in the UK. The deficit in finished manufactured goods was over £12.5 billion - twice the scale of deficit compared with 1998 (Pettinger, 2014). In 2010, the U.S. trade deficit was just under $500 billion. Much of that trade deficit was with China: during 2010 the U.S. spent $365 billion on goods from China while China spent only $92 billion on good form the U.S. That is a four to one ratio – not a 'fair and balanced' trade relationship. The U.S. trade deficit with China in 2010 was 27 times larger than it had been in 1990.

The current account, part of the Balance Of Payments[2], will be in great deficit due to next exports being negative – i.e. a country is importing more than it is exporting. This, in monetary terms means there is more money leaving he economy than entering it. A current account deficit is dangerous as it means the economy is losing income and so often had to borrow money to make up the difference and to finance further spending. Borrowing money leads to a whole new problem of incurring huge debt. Borrowing is unsustainable in the long term and continued borrowing will be a burdened, with high interest rates increasing the amount due. Being in debt puts a country in a

[2] The balance of payments is where countries record their monetary transactions with the rest of the world. Transactions are either marked as a credit or a debit. Within the balance of payments there are three separate categories under which different dealings are categorised: the current account, the capital account and the financial account. In the current account goods, services, income and current transfers are recorded. In the capital account physical assets such as a building or a factory are recorded. And detailed in the financial account are government-owned assets, global monetary flows related to investment in business, real estate, bonds and stocks and other funds.

highly vulnerable position as they are then subject to the whims of their lenders. A country in deficit may also result in a loss of confidence by foreign investors. Therefore, there is a risk that investors will remove their investments causing a big fall in the value of the currency of the country (devaluation), taking away yet another source of income for the country. Devaluation of money will affect the exchange rate negatively and further lower confidence for investment. It could also lead the government increase the rate of interest to attract lost foreign interest in the country's currency. Increasing the rate of interest, however, could reduce aggregate demand as borrowing within the country become more difficult. A fall in aggregate demand would mean a whole host of new problems. Thus a large current account deficit is not desirable at all.[3]

A further problem with de-industrialisation is loss of jobs. The manufacturing industry requires and so employs a vast number of workers. As the manufacturing sector moving over-seas, the jobs go with it, especially in low skilled positions.



Unemployment and poverty, therefore, are symptoms of stagnation and lack of industrialisation. The long-term solution to mass unemployment is industrialisation - there is no industrialised nation that is poor. The manufacturing sector employs not only manual labourers but also gives rise to many indirectly related positions. The production process, involved in the manufacturing of goods, gives rise to many occupations such as health and safety regulators, accountants, managers and many more. Manufacturing not only generates employment directly where the production is conducted but also gives rise to ancillary industries. According to the Economic Policy Institute, each manufacturing job supports three other jobs in the economy. Without a manufacturing base, a country loses out on many more jobs than just the low skill manual labour positions. A high unemployment rate is detrimental to any economy. High unemployment has a huge negative impact on government expenditure, taxation and the level of government borrowing each year: higher benefits payments and lower tax revenues mean government ends up spending money it

[3] In the short term, economic growth is caused by an increase in aggregate demand (AD). If there is spare capacity in the economy then an increase in AD will cause a higher level of real GDP.

cannot actually afford to, and is receiving less than usual as income tax is not paid by the unemployed. This may lead to an increase in public sector net cash requirement – i.e. the government has to borrow money. Unemployment can also be linked to lower living standards and increased crime rates.

Benefits of Manufacturing at Home

While offshoring has its attendant negative impact on an economy manufacturing at home has great benefits. The influence of manufacturing goes far beyond the direct contribution to production and employment. Manufacturing is a global business underpinning all economic activity. Manufacturing produces goods and spending on goods accounts for more than half of all consumer expenditure. By producing goods at home a country can potentially cut down on imports, saving money as less leaves the economy. Furthermore, manufacturing adds value to a good: it essentially takes a primary good and adds value to it when it turns it into a more usable and useful final product. A company takes a number of inputs including labour, raw materials, capital and other components and has added value to those inputs through design, innovation, production and marketing. A deep recession in the manufacturing industry could seriously damage the overall prospects for economic growth as it will lead to unemployment which will cause an initial fall in national income, leading to a fall in spending which in turn will lead to a fall in demand. This is bad news for an economy as increases in aggregate demand are a cause of economic growth.

Manufacturing is what allowed the now 'World Powers' to gain their status. Controlling the bulk of the global production of manufacturing technology and the knowledge of how to make the machinery that makes the goods is the key to power. Research shows that about 80% of the world's production of factory machinery had been controlled by the "Great Powers." Until the 1950s, the U.S. had produced about 50%; now it produces less than China's 16% (Rynn, 2011). In May 1927, the League of Nations held an International Economic Conference. As part of that conference, Dr. Karl Lange discussed the state of the mechanical engineering industries. The following table shows Lange's findings (League of Nations 1927):

Table 7. World Machinery Production in the Early 20th Century

1913 output		1925 output	
U.S.	50.0%	U.S.	57.6%
Germany:	20.6%	U.K.	13.6%
U.K.	11.8%	Germany	13.1%
Belgium	4.1%	France	2.8%
Russia:	3.5%	Russia	1.8%
Austro-Hungary	3.4%	Austro-Hungarian successor states	1.5%
France	1.9%	Switzerland	1.3%
Italy	1.3%	Italy	1.2%
Japan	.3%	Japan	1.0%
The rest	3.1%	The rest	6.1%

Thus, the U.S., Germany, and U.K. controlled 82.4% of world machinery production in 1913, and 84.3% in 1925. The U.S., Germany, and U.K. were the Great Powers because they dominated the production of reproduction and production machinery (Rynn, 2011).

Manufacturing is the key to long term, sustainable economic growth. Global trade is based on goods, not services - services are mostly the act of using manufactured goods. Even education and knowledge almost always require or involve the manipulation of goods in a specific way. According to the World Trade Organisation, 80% of world trade among regions is merchandise trade. Trade is important as it plays some part in increasing the value of a country's currency. Manufacturing creates jobs and reviving the sector could provide a huge number of new jobs, eradicating the debilitating effects of the Great Recession. In 2005, the Japanese manufacturing sector was 20.2% of its economy, in Germany it was 23.2%, and in the U.S. manufacturing accounted for 13.4%, according to the Organisation for Economic Co-operation and Development (OECD). Using 2005 figures, if the U.S. had the same percentage as Japan, they would have 7 million more high-quality, long-term, well-paying jobs. If they were equal with Germany, it would be 10 million more (Rynn, 2011).

Manufacturing can be seen as a mechanism for driving innovation. Transferring manufacturing work overseas means that a country becomes largely disconnected with the process, only seeing the end product. This means than it is unable to actively apply itself to finding more effective cost saving ways to producing the goods and so loses out in the long run. Introducing new factories into an economy will increase its maximum capacity for production, increasing aggregate supply.[4] An increase in aggregate supply is desirable because it is one way to ensure long run economic growth: economic growth means the economy's potential output is rising.

Manufacturing has the indirect effect of improving a country's infrastructure. For example, let us consider the manufacture of a car. In the production of a car, metal is needed to make the main body of the vehicle – thus the mining and metal processing industries will get a boost. Tyres being a necessary component of cars will lead to the involvement of the rubber industry. Lights and sound systems will be needed and so IT services and chemical industries will be required. Raw materials and other products required in the manufacturing process will often need to be transported from their site of origin to the manufacturing plant. This will require the development of good road and rail connectivity. Such infrastructure will also benefit the population at large used not just for manufacturing sector -- once put in place these roads and other transportation methods will be used by everybody. The development of infrastructure and manufacturing has a synergistic effect on each other. The idea of producing goods for domestic consumption instils a sense of national pride. Workers take more pride in their efforts when they know it for their own consumption and that of people in their neighbourhood/town/city/country as opposed to earmarked solely for faceless overseas consumers. This instils a good work ethic in the labour force.

How to Achieve Re-shoring

Being totally dependent on all our manufacturing being done abroad is not tenable in the long run. For one, the UK will be reduced to the status of a nation of shopkeepers. Moreover, we are at the mercy of our trading partners who, at a moment's notice, could turn against us. Thus it is clear that serious thought needs to be given to the idea of re-shoring production and becoming self-sufficient once again. The economies of the developing world (the countries in the East) are growing at a higher rate than the rest of the world. This high rate of growth is accompanied by rising wage

[4] Long term economic growth requires an increase in aggregate supply (productive capacity). Aggregate supply is defined as the total amount of goods and services (real output) produced and supplied by an economy's firms over a period of time.

pressure, driving salaries up as well - climbing approximately 15% to 20% annually in China. It will not be too long before labour costs in the East and West will be comparable, erasing one of the most significant advantages to offshoring production. According to consultant AlixPartners[5], manufacturing costs for China will no longer seem like a bargain by 2015, factoring in currency and shipping costs.[6]

We need to encourage manufacturing at home. To do this government policies will need to play a big part. Fiscal policies will need to be modified and reformed to transform the taxation system and reduce the regulatory and structural costs that add to the burden of manufacturing and impede innovation and new venture creation. Tax relief on Research and Development (R&D)[7] In the UK, in the first quarter of 2014, net lending to business from banks participating in the 'government's funding for lending' scheme fell by £2.7 billion (Green, 2014). The government can lower corporation tax – in was 28% in the UK in 2010 – increasing a firm's confidence as it will increase their savings, this can also be achieved by a raise in the Annual Investment Allowance (AIA)[8]. The government can also play a very important role in stimulating investment in the manufacturing sector.

Furthermore, in order to bring manufacturing back home there is an urgent need to get more young people involved and interested in the field to supply the required labour. There need to be an increase in apprenticeship programs available in the manufacturing sector combined with an increase in the quality of the schemes. So it is imperative that there is a substantial increase in education and training targeted at encouraging more students to enter the fields of engineering and relevant technology and production areas. Investment in the development of human capital is essential to the process of re-shoring production.

Increased support for small to medium enterprises (SMEs) is also essential to bringing manufacturing back home. We need to start investing more in the small factories that are still run within the country. This includes greater management development support and apprenticeship schemes to help boost the capability of these firms. There must also be steps taken to help modernise these factories to include more technology-enabled smart manufacturing processes, making them more efficient and so aiding the reduction of costs in the long run.

The focus needs to be not on producing goods the cheapest, quickest or most, but on producing the best quality goods and the most reliable products. It is the argument of quality over quantity. With better quality products comes customer willingness to pay a higher price for the superior quality. Finally, another action that can be taken in the re-shoring of industry is an increased investment in the transport, production and telecommunications infrastructure to improve them and so making them more useable, both by the manufacturing sector and by the general public.

[5] is a global business consulting firm, best known for its work in work in 'Turnaround management': a process dedicated to corporate renewal

[6] India and Mexico are slightly further behind, but the trend is clear.

[7] R&D is a specific group of activities within a business. The primary function of an R&D group is to develop new products and to discover and create new knowledge about scientific and technological topics for the purpose of uncovering and enabling development of valuable new products, processes, and services.

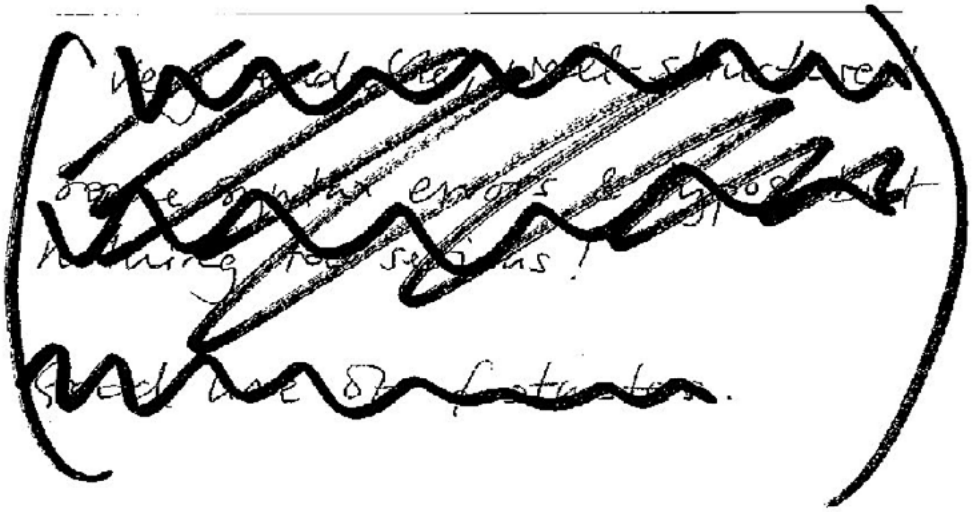
[8] The AIA is effectively a 100% first-year allowance for business expenditure on almost all plant or machinery (apart from cars) capped at £25,000 a year. It is available to businesses regardless of their size or legal form.

The Prescription for Economic Recovery

There are three principal sources of wealth - natural resources, labour and knowledge. Natural resources (oil, minerals and the like) are tied to geography. Service industries and government jobs do not increase wealth - they just circulate money. Manufacturing creates wealth by taking goods of lower value, adding knowledge and labour, and creating higher value (Pinto, 2011).

In the course of economic development most countries seem to have followed a broadly similar trajectory. As a less advanced economy starts its process of development the share of agriculture in national employment falls and there is a rapid increase in the share of manufacturing. This process is known as 'industrialisation'. Manufacturing has been the path to development. England underwent this process in the 19th century; U.S., Germany, Japan and the USSR in the 20th century, and the newly developing countries like India and China are currently in the process of industrialisation. After a certain point, however, the share of manufacturing starts to fall – this is often described as 'de-industrialisation'. During this stage, the service sector expands as countries reduce their manufacturing base and focus more on advanced technologies.

There is an explanation for the move of manufacturing away from the more developed nations to the newly developing ones, and this reason is the desire for lower labour and overall production costs. It is due to this greed and focus on the bottom line that the current generation is able to live in comfort and afford luxuries – lining their pockets with the monetary surplus gained from the exploitation of other countries. This economic practice that is based solely on the profit margin is not sustainable in the long run. It results in short term gains for a very limited number of people – namely the suits at the top of the corporate ladder of firms. These gains are made at the cost of the economic prosperity of future generations. A more holistic approach is thus required – we must not let our manufacturing capabilities wither away and die because by manufacturing we generate wealth. And only then does an economy require a financial industry to manage that wealth. Manufacturing adds value, creating more jobs than any other sector, driving innovation throughout every segment of our society and delivering consumer solutions - all of which are the keys to long-term, sustainable economic growth (World Economic Forum, 2013). In conclusion, although there were reasons for offshoring we are now suffering the consequences of such a decision. It is now high time that economic prosperity was brought back to our shores – and manufacturing is the only solution.



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SOURCE EVALUATION SHEET

Date	Resource Used	Summary of Source	Aim of research	Reliability of Source	Cross-Referencing
28/03/2014	Report by World Economic Forum (USA branch): *Manufacturing for Growth: Strategies for Driving Growth and Employment* (2 May 2013)	Highlights the fact that the manufacturing sector is a "critical driver of growth, prosperity and innovation"	The importance of manufacturing to the economy	The World Economic Forum is an independent, international, non-profit organization that writes about business, political, economic and other agendas. This source is very reliable as is a fairly famous organisation and so would ensure that what they publish is correct as their credibility stand on it. Furthermore, their articles would be peer-reviewed before being published, making it more trustworthy.	The claims of this report are supported by the article *Creating Wealth* by Jim Pinto. Jim Pinto is the founder of Action Instruments. He is a well-known industrial analyst and consultant. He backs the ideas written in the report by the World Economic Forum. Pinto writes "Manufacturing is the foundation of economic growth"
30/03/2014	The book *The Wealth of Nations* by Adam Smith, published by W. Strahan and T. Cadell, London in 1776 More specifically: Book 3 - Of the different Progress of Opulence in different Nations	It talked about the stages of development and that the general trend is first intense agriculture, then a move toward manufactures, and then a move away from industry and toward foreign commerce.	Background research into the topic I am thinking of writing about – economics and manufacturing as a way of generating wealth. I was hoping to gain some insight into the ideas surrounding creating wealth.	This source is very reliable as it is written by famous economist and moral philosopher Adam Smith.	His work is studied in the subject of economics – this book is today a fundamental work in classical economics.
03/07/2014	House of Lords: Manufacturing Debate - BBC News, London (3 July 2014)	The possible solutions to the problems brought about by de-industrialisation.	The importance of industry and solutions to the problem.	This was a fairly trustworthy source as the speakers, all peers, would have ensured their facts were correct before appearing on national television. However, many of the points made were heavily infused with opinions.	The website: http://www.investopedia.com/articles/economics/10/manufacturing-production.asp backs many of the suggestions made in this documentary, suggesting that they are in fact accurate.

05/08/2014	An article from The Guardian: *Why doesn't Britain make things anymore?* (16 Nov 2011)	The process of deindustrialisation and what had driven the de-industrial revolution.	Why manufacturing moved overseas	It was reliable as it is an article in a well-known newspaper that peer-reviews and edits articles before they are published.	The book *How Rich Countries Got Rich And Why Poor Countries Stay Poor* by Erik S. Reinert (published by Constable & Robinson, London) 2007 also reiterates many pints made in this article, signifying that the reasons put forward are likely to be accurate.
06/08/2014	Article: *The end of cheap China* published by The Economist (8 Mar 2012)	The problems with long term de-industrialisation – mainly the problem of labour cost gap decreasing over time.	The disadvantages to offshoring production to places like India and China.	This source is very reliable as it is published in The Economist – a leading newspaper on economic and political issues. Work printed in the newspaper would be thoroughly scrutinised by experts in the field before printing.	The problems mentioned in the article appeal to common sense, signifying that they may be true. They are also further backed by the points main on the CBI (UK's premier business lobbying organisation) site: http://www.cbi.org.uk/about-the-cbi/business-voice/april-2014/made-in-britain/
06/07/2014	A report by the IMF (International Monetary Fund) *Deindustrialization– Its Causes and Implications* published online in 1997: https://www.imf.org/EXTERNAL/PUBS/FT/ISSUES10/INDEX.HTM	It described the phenomenon of deindustrialisation and went on to talk about the importance of manufacturing to an economy.	Reasons for the importance of manufacturing-how it aids a country and why it is the key to economic prosperity.	The authors of this report are bother experts in their fields: Robert Rowthorn is a professor at the Faculty of Economics, Cambridge, and Ramana Ramaswamy is an Economist in the Research Department of the International Monetary Fund. Thus we can place much weight on what they say.	Many of the points made in the repot are supported by arguments in the article *Here, there and everywhere* published in The Economist (19 Jan 2013)
06/08/2014	Article in Forbes: *Who Makes The Clothes On Your Back?* (25 Mar 2005)	It discussed the idea of nation pride that comes about as a result of producing goods yourself for your own people.	The benefits of domestic industry.	This source is very reliable as is published in a very reputable journal that is a leading source for reliable business news and financial information.	Parts of the report by the World Economic Forum: *Manufacturing Future Economic Growth and Job Creation* repeats the idea of the pride felt in producing for 'one's own' and so the increased worth ethic in the labourers.
07/08/2014	An online article from The Guardian: *UK*	It showed different economics and	Reasons for why manufacturing	Despite being published in a generally reliable newspaper's website, this	

	economic growth figures: what the economists say. (28 Jan 2014)	politicians' response to the Office for National Statistics figures showing annual growth was 1.9%	should be re-shored.	article consisted mostly of politicians' reactions on Twitter and littler commentary from the author. Thus this source was not particularly useful as its reliability was fairly questionable.	-
07/08/2014	An online report: *The Deindustrial Revolution: The Rise and Fall of UK Manufacturing, 1870-2010* (Oct 2012)	It considered the evolution of the manufacturing sector in the UK since 1870 and looked at the stages of development	The reasons for the rise and fall of manufacturing	It is a slightly unreliable source despite both authors being economic researchers. This, however, does not guarantee the reliability of the source. There was a clear lack of citation of their statistics that made me question their validity.	I could not find any statics to match the ones in the report. However, this isn't enough to totally disregard the information. The information just needs to be treated with caution. ✓
26/08/2014	Report: Statistics from the World Trade Organisation Report of 2012	According to the World Trade Organisation, 80% of world trade among regions is merchandise trade.	How much income is a country losing out on by removing manufacturing from its economy	This source is fairly dependable as it comes from an official government site and so it likely to be very reliable. ✓ They would have access to a wide range of data, making their results more credible and more believable a representation of reality.	Reports from the Organisation for Economic Co-operation and Development (OECD) also mirror the data got from the report by the World Trade Organisation.
28/08/2014	An online article: *The future of manufacturing – Opportunities to drive economic growth* (Apr 26, 2012)	The solutions to the problems caused by de-industrialisation lies in government fiscal policies.	What steps need to be taken before re-industrialisation can be put into practice	This source was fairly reliable as it was published in collaboration with Deloitee: a globally known consulting & Corporate Finance services. Their fame means they have a reputation to uphold – one they would not risk with bad, factually incorrect articles.	Many of the suggestions made in this article are similar to those proposed during the House of Lords: Manufacturing Debate, BBC News, London (3 July 2014). ✓
02/09/2014	A paper by the Government Office for Science: *De-industrialisation and the balance of payments in advanced economies* (Octr 2013)	I used this site for diagrams to illustrate my point about the deficit that will be incurred due to the imbalance of trade.	Data showing the negative effect on the country's bank balance. The disparity between injections and withdrawals	The paper was published by the Faculty of Economics at Cambridge University. This lends a certain amount of credibility to the paper as they are known for the exceedingly good quality of their work and publications. ✓	The diagrams got from this paper reflect the data and statistics I read on the Office for National Statistics website. ✓

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02/09/2014	Internet: Office for National Statistics <http://www.ons.gov.uk/ons/datasets-and-tables/data-selector>	In 2000, the gap between exports and imports of goods surged to nearly £29 billion in the UK.	Statistics on current account deficit a result of de-industrialisation	This source is fairly dependable as it comes from an official government site and so it likely to be very reliable. They would have access to a wide range of data, making their results more credible and more believable a representation of reality.	Reports from the Organisation for Economic Co-operation and Development (OECD) also mirror the data got from the ONS.
16/09/2014	Report by World Economic Forum World: *Volume 2: Partnering for Competitiveness* (Apr 2012)	Looks at the importance of innovation and technological progress to development.	The drawbacks of manufacturing overseas.	The World Economic Forum is quite a famous organisation and so would ensure that what they publish is correct as their credibility stand on it. Furthermore, their articles would be peer-reviewed before being published, making it more trustworthy.	The page on Manufacturing and Innovation on the Confederation of British Industry (CBI) website backs up the assertions of this report: Investment in R&D and innovation is essential for the UK's economic recovery - while a growing manufacturing base is critical to a rebalanced economy
24/10/2014	An online article: *Six Reasons Manufacturing is Central to the Economy* (23 May 2011) http://www.nextnewdeal.net/six-reasons-manufacturing-central-economy	The main benefits of manufacturing and so why manufacturing should not have been outsourced and why it should not be brought back, post-haste. "Without a robust revival in the manufacturing sector, we can kiss our status as a great economic power goodbye."	An overall answer to the critical question 'Why is manufacturing so important?' Reasons why manufacturing should be brought back and why offshoring it in the first place was a big mistake.	This reliability of this site uncertain as the points made are valid one that I have come across throughout my research, yet the few statistics included haven't been sited and so there is doubt as to where the information has been gotten. The site itself is part of the Roosevelt Institute, an American organisation that is working to restore America's health and security. However, this article is part of the 'Blog of Roosevelt' section – so the author needn't be an acclaimed profession but anyone with an interest in the topic. Furthermore, blogs aren't peer-reviewed and so one cannot be certain that it is factually correct.	Despite its questionable reliability, the points mentioned in the article are common to many points I had read previously. Some arguments are also reiterated in the article *Emerging economies: Arrested Development* in The Economist (Oct 2nd 2014).

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		more detail on each topic and including statistics and case studies to back up my arguments.	progressing. Unsure on how to go about composing the conclusion – one of the most important parts of the writing. Still very under the word count I need (5000)	and reliable the information is and so discern whether to use it or not.
September	7th	Did some more specific, very detailed research and using that added detail to what I have already written.	Still under the word count I need (5000), but by a lot less.	I need to go into more detail on what I have written, thereby increasing the level of the dissertation and also to bulk up the essay.
	15th	I have almost completed the dissertation write up. Added more detail and explanations to my write up. Increased the introduction and added more background information to ensure better understanding of the content later in the essay.	Need to finalise the conclusion. Need a more definite summary sentence and point.	I need to firm up the final title. I want it to be something interesting and engaging. Not as bland as Manufacturing: Essential for Economic Growth?
	22nd	I started thing about what I would mention in the conclusion of my dissertation.	My laptop crashed and I was temporarily unable to access any of my work.	I need to work on some other part of my project which does not require the laptop.
	27th	I did most of the source evaluation.	Still have some evaluation left to do.	Complete source evaluation.
October	1st	I came up with the final title for my dissertation: MANUFACTURING: A SOLUTION TO OUR FRACTURED ECONOMY	I still have to evaluate my sources.	Evaluate the sources used.
	3rd	Completed source evaluation. I ordered and collected all the relevant documents in one file.	Faced technological problems. Was unable to print out all the documents – printer broken.	Need to make a front cover and contents page. Need to print out all documents and file them.
	6th	**FINAL DEADLINE**		

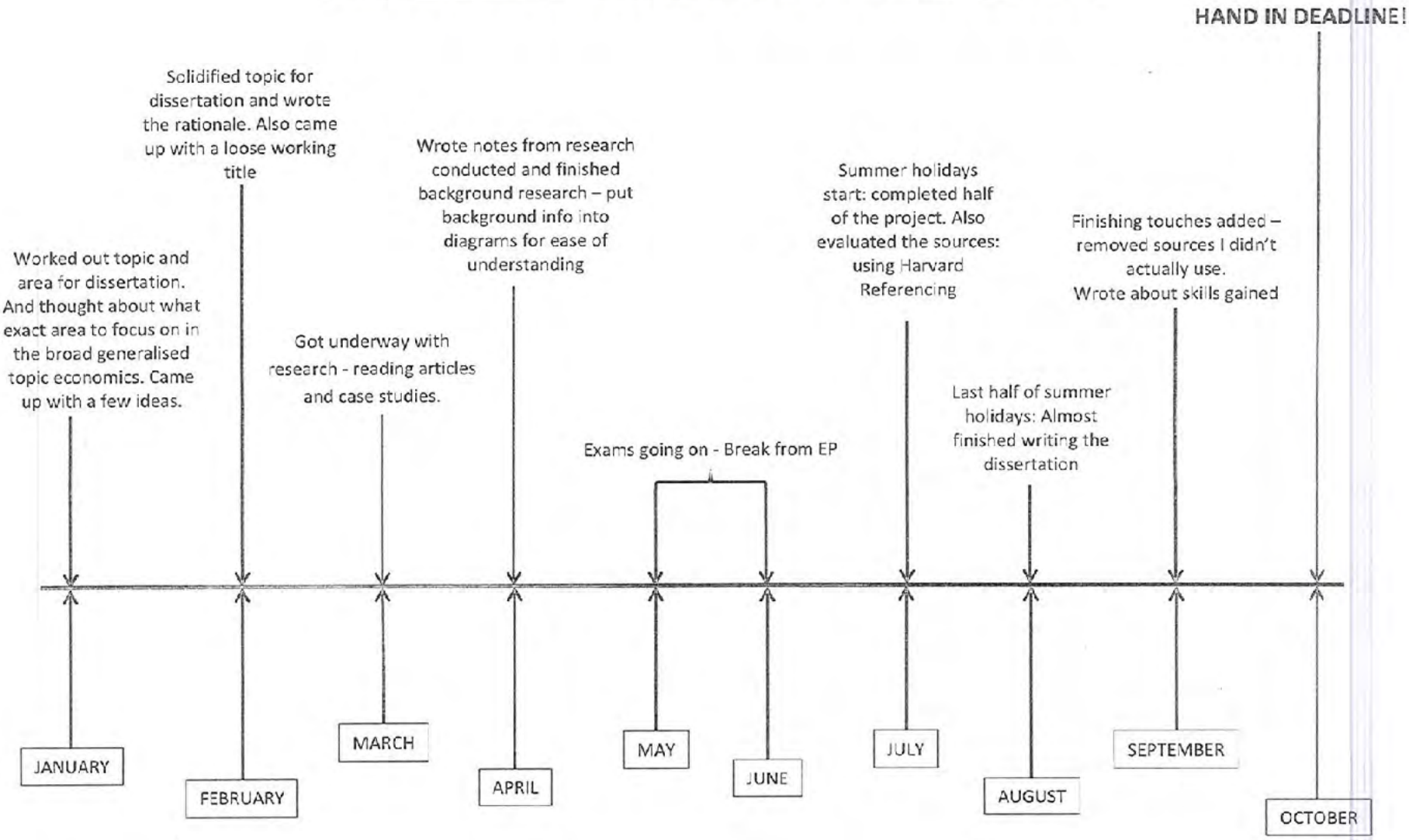
		strengthening the UK's manufacturing sector, on 3 July.		
	10th	Jotted down a basic outline for the dissertation, with a few lines under each heading.	Still unsure of how to actually start the writing properly.	Realised I still haven't got any primary research and so I need to think about whether that is a realistic endeavour – trying to attain primary data and information.
	25th	I came to the discussion that primary research is not a realistic undertaking and would not benefit my dissertation in any way. My topic isn't really one which requires or lends itself to this type of research.	Not sure how to now vary my sources from just the internet and journals.	Look for more varied sources of information.
	30th	I did an online course on touch typing so that I could improve my typing skills and so that I would be able to type quicker when it comes time to type up the dissertation.	I realised that touch typing is not easy. At all.	I need to practice touch typing to train my mind to be able to type without looking at the keyboard. There is also a considerable reliance on muscle memory for touch typing. Thus practicing it is imperative to be able to effectively touch type.
August	5th	I read a very useful article on why manufacturing moved overseas. I have collected a lot of useful research to help me with the writing of the dissertation.	I need to start writing more of the dissertation – slowing down too much	To write a more firm plan for the actually dissertation. Finalise the introduction comprising of the background research I had done earlier.
	16th	I wrote a lot more and I have gotten well underway.	The main bulk of the dissertation is still a bit empty – struggling on how best to write that section.	Think about what skills I have and will gain form this project.
	23rd	I thought about what skill I would have gained and what skill I can acquire though doing this project. I wrote about these and in which aspect of the project will I gain each specific skill.	I haven't yet finished the writing of my dissertation, so I don't know yet all the skills I will gain from it.	Write the main section of the dissertation.
	30th	Added more to the dissertation. I have filled out the write up by going into	Feeling more confident about how the dissertation is	To do some source evaluation and look at how useful and credible

				that affect the economy.
	28th	Did some research on the background of manufacturing, related to my topic of interest (the economic relevance)	There was a lot of information about manufacturing but I struggled to find material related to my area of interest.	Do some further research on manufacturing and try and find information applicable to me.
	30th	Found some stuff related to my topic – I read up about the 'value added' during manufacturing and what it does for an economy.	The level of information out there was either at a level I had already studied it at or at post-grad level which I found difficult to understand.	Now that the background research is more or less done, I need to firm up what I want to talk about in the rest of the dissertation and start more focused research.
April	5th	Got a rough idea of where I will go with the dissertation and what areas I will talk about – helping to direct my research. Started the more focused research.	Realised that a lot more research is required – need to get a deeper, better understanding of the problem I will be writing about.	Reads more articles, get a better feel for my topic. Start a bibliography.
	17th	I have read a few more articles to do with the area I am interested in. Getting a better idea of what I want to write.	Having trouble finding relevant case studies.	Do more research, collect some more information. Also find some case studies and data to support my theories.
	20th	I did a mid-project review, evaluating my progress so far. I noted my strengths so far and also the weak points of my whole project.	I realised I need to start really thinking about how to start writing the dissertation.	Start on the dissertation – at least the plan.
	25th	Started the outline plan for my dissertation so I know exactly what I need to research rather than general research.	Still a lot more research needs to be done. Nowhere near getting all the information I will need.	Carry on reading more articles and journals.
May	EXAMS (last paper is on the 16th)			
June	28th	Started a timeline (what really happened) and compared it to the timeline I had drawn up at the start as a guideline for me to follow.	Realised I as a little behind, the background research took longer than anticipated.	Start writing down some ideas so that I can slowly start the actual writing process of the essay.
July	3rd	Saw a documentary on BBC News: **'House of Lords: Manufacturing Debate'**. Members of the House of Lords, including business people and manufacturers, debated the case for	I need to start the writing of the dissertation now. Need to get started.	Write down a basic plan for dissertation – layout and sections.

DIARY

Dates:		Achievements of the session	Problems Encountered	Plan for Next Session
January	9th	Decided on the topic and type of project I want to do. I started my diary and started thinking about the timeline.	Not yet certain of what specific title I should have and write about.	Finalise specific area to focus on and write the dissertation about.
	30th	Worked out what exact topic I want to write about: manufacturing and its economic consequences.	Not sure how I will gather enough information to write a dissertation on my chosen topic.	Do some research to see if this topic is a valid one which will give me enough points to talk about.
February	6th	Did some brief research on the topic and found that there was plenty I could write about for this topic.	Can't see how to incorporate primary research into this. The topic doesn't exactly lend itself to primary research.	I need to start writing the rationale.
	13th	Firmed up a working title for my dissertation: Manufacturing: Essential for Economic Growth?	Not sure how I should start with the dissertation.	I will begin research to start getting ideas for what to write.
	21st	Got an initial timeline down. Got a rough plan for who I will go about doing the project.	Not sure how to start with the research. What to start looking for.	Gather research aimed on getting information related to the main point of my dissertation.
	27th	Started some general research on economic growth in general and why manufacturing moved out of the big economies	I realised how vast the topic was and how many factors are involved. It's a lot more complex than I first thought it to be.	I need to work out what exactly within my title I want to write about, what general arguments and topics I want to delve into.
March	6th	Did some more research to try and sketch out some basic headings for the different parts of my dissertation. E.g. Why Manufacturing Moved Away; The Economic Objectives; Pros of Manufacturing; Cons of Manufacturing.	There are lots of possible headings. Not sure which ones to include, which ones are crucial to the understanding of the dissertation and which are generally irrelevant.	Think about the basic background information I will need to give to then be able to properly explain the rest of the essay.
	18th	Did some revision on the economic objectives and then read up about them in greater detail than we had studied in class. Realised that it is more than just economic growth that is affected by manufacturing.	Not all the economic objectives will be relevant so unsure whether to mention them briefly anyway or not at all.	Now that the background on the economic objectives is mostly done, do some research into the contextual information of manufacturing and the processes involved

TIMELINE – What Actually Happened



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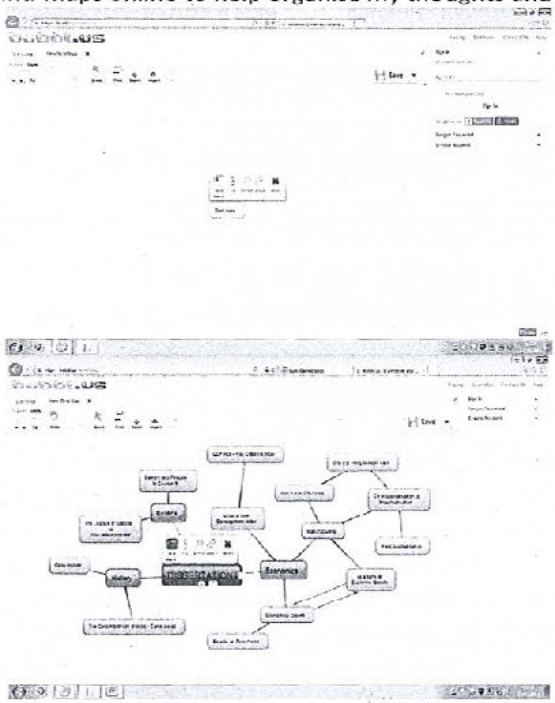
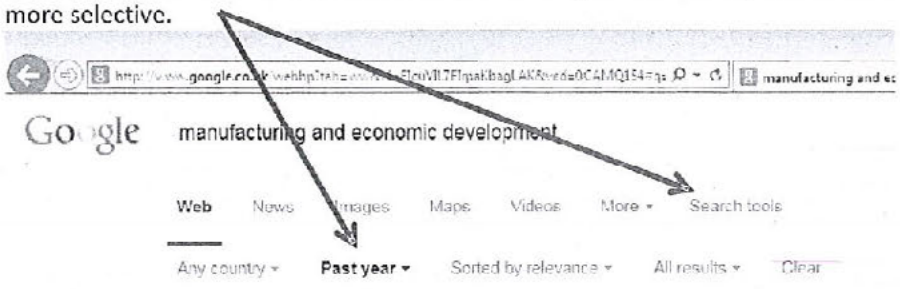
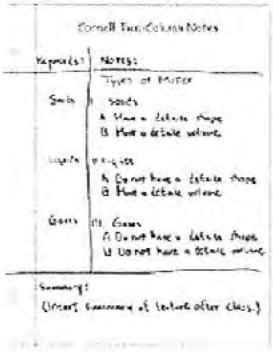
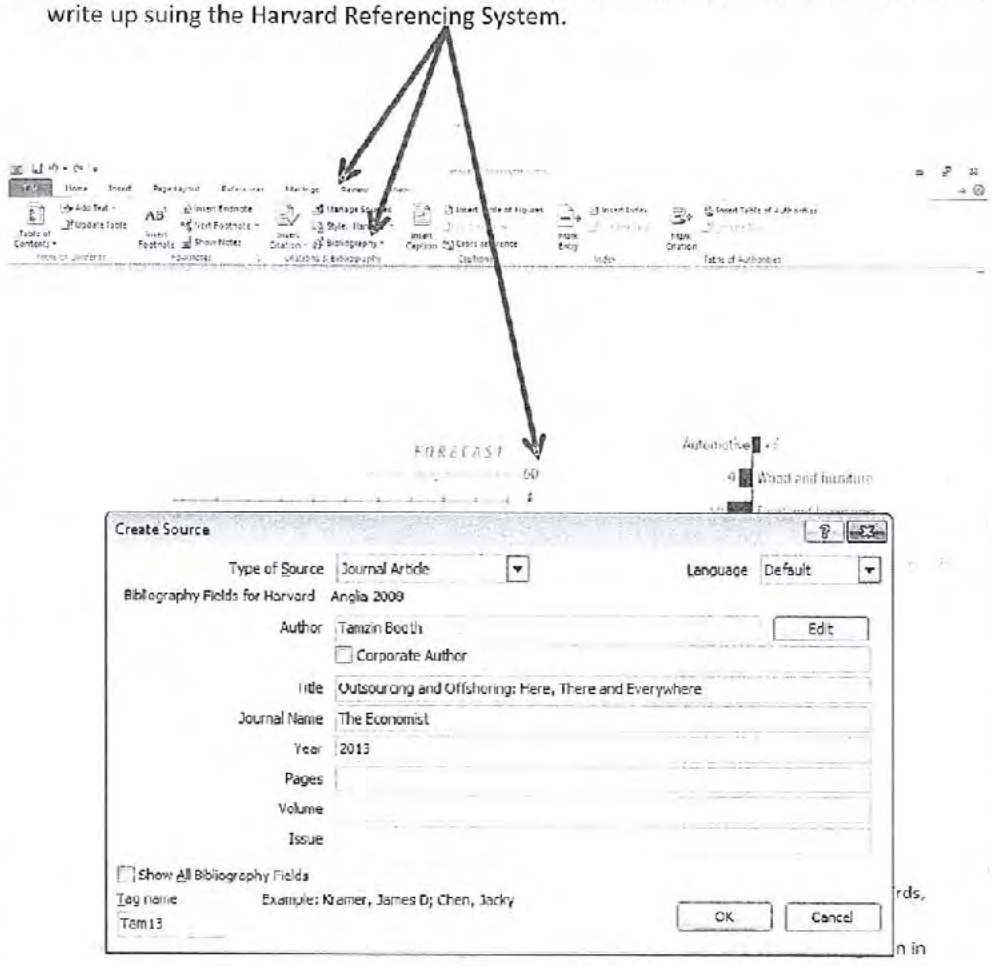
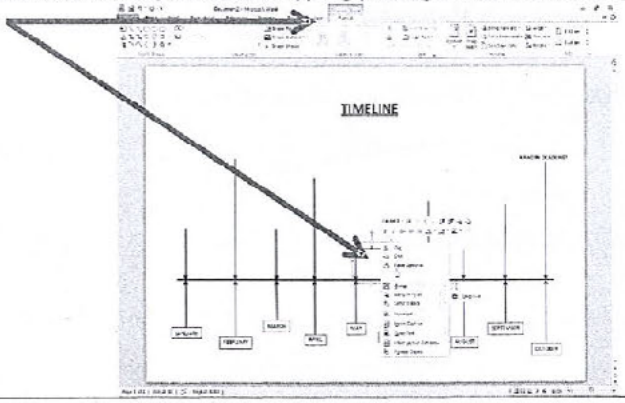
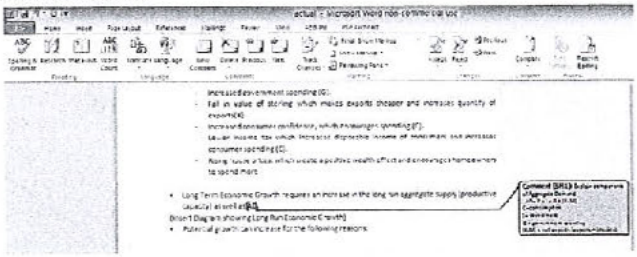
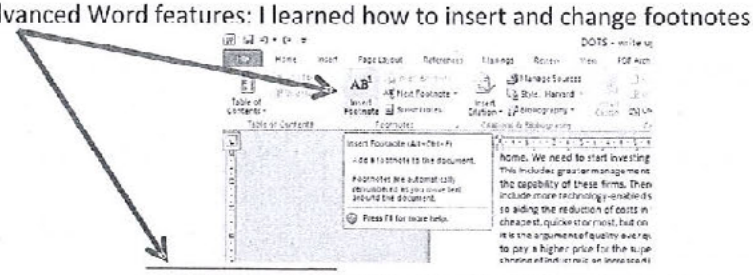
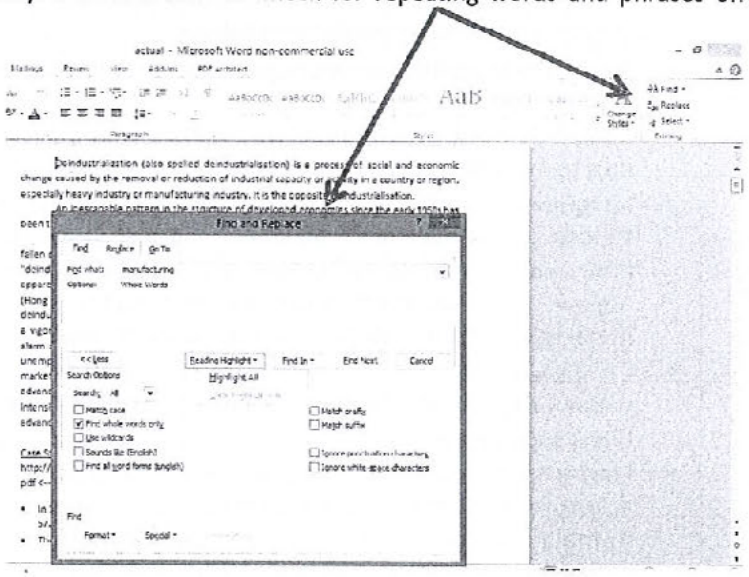
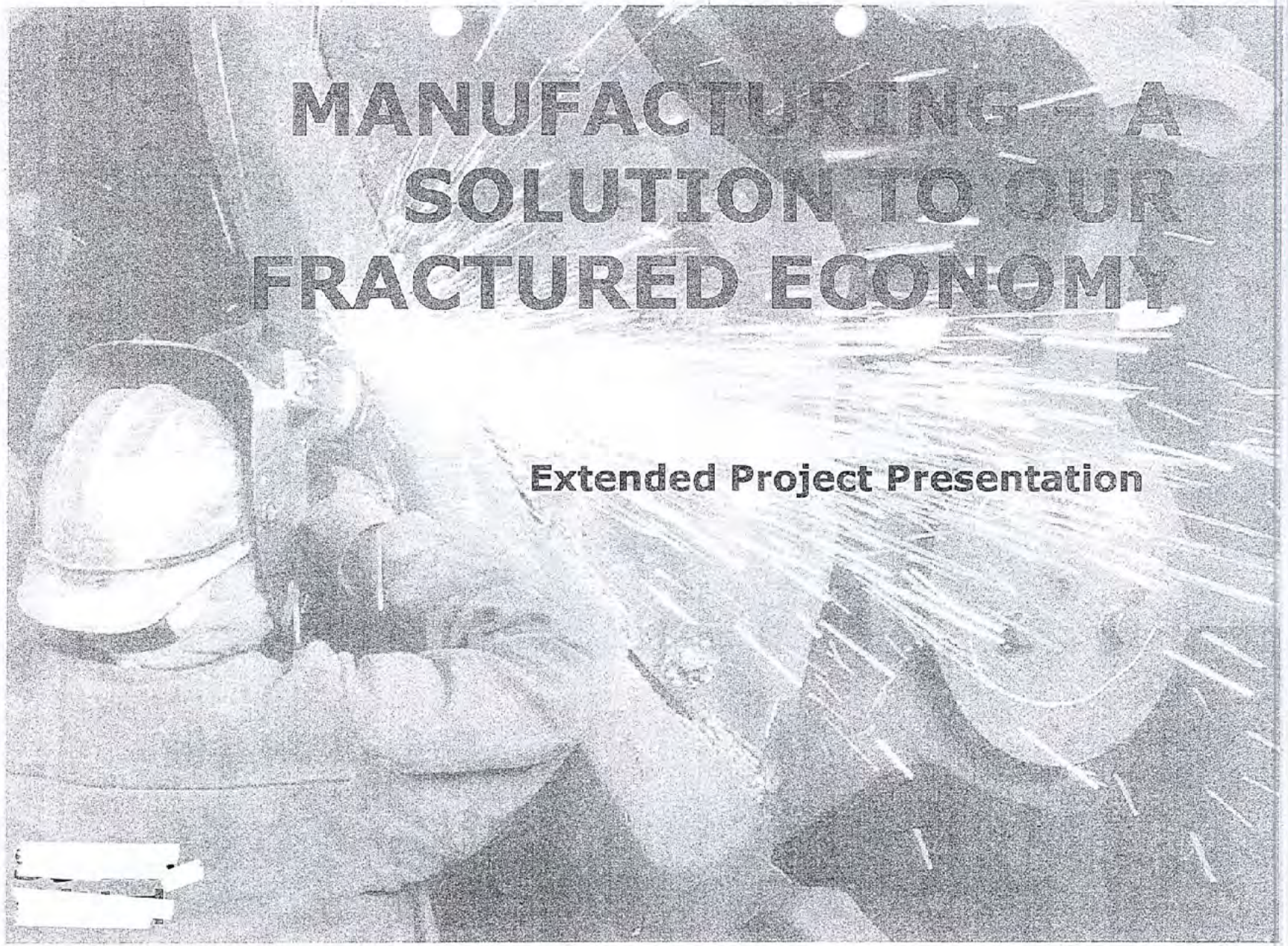
SKILLS GAINED

Activity	Skills expanded/gained
Deciding what topic to write about	• IT skills: I learned how to use an online site (https://bubbl.us/) to make spider diagrams and mind-maps online to help organise my thoughts and ideas.  • This was the first time I was given such an open ended task where I had to think of the topic of my dissertation with absolutely no input from anyone else. This helped me realise what I was interested in. At first I struggled to pick a topic that I found sufficiently interesting enough to write a decent dissertation on. This taught me to think practically and in advance as I had to think about the word limit before starting the writing: I had to ensure that I picked a topic which was broad enough to write 5000 words about and at the same time be structured enough that I would still make a specific point by the end of the essay.
Conducting and gathering research	• Once I had chosen my field I had to research the topic to gather information as it was an issue that went beyond my curriculum and so I didn't know much about the matter at the start. I learned how to go about gathering information about something I knew very little about. I had to learn the background behind my topic, despite not necessarily including it directly in my final write up, just to ensure I fully understood the subject I was going to write about. • I learned how to pick and choose the relevant information from the vast amount available. I learned to be selective over the material I chose to read to ensure it was vaguely relevant and not leading me off-topic. • I learned how to use the advanced features in Google to refine my search and so be more selective. 

Evaluating the sources of the information collected ✓	• Once I had found some useful sources I couldn't starlight away assume them to be fact and use them - I had to decide how reliable and accurate they were. I learned how to critically evaluate and analyse the sources to determine their credibility.
Using documentaries as a source for research ✓	• While watching/listening to the programme I had to take notes. I learned how to take notes quickly while a person spoke. I also learned how to use the Cornell Note Taking System. 
Using researched information	• The dissertation topic required extensive research and so I learned how to find and use sources effectively and how to understand the information and so use it without plagiarising. • I learned how to create a bibliography in Microsoft Word 2010 • I also learned how to effectively summarise the information and then credit it in my write up suing the Harvard Referencing System. 

Creating a timeline	• I created a timeline to help structure my work and to help me with time management. • Making the timeline meant that I really tried to stick to it. This meant that I learned how to plan and work towards a deadline. • I vastly improved my time management skills • I gained some skills in the actual making of the timeline: I made the time line on Microsoft Word 2010; using tools I'd never come across before as my previous use of Word had been strictly limited to typing passages and not making diagrams. 
Creating a plan for the structure of the dissertation	• I created a rough outline for how I was going to structure my essay. This was new to me as I had never written such an extended piece of writing before. I learned how to plan such an extended write up. • I also learned how to creating and **following** a plan – I learned the importance of preparing the structure before sitting down and writing it. • As I had planned the structure of the dissertation and worked out what sections I was going to write I had to anticipate problems
Writing the dissertation	• Having never written such an extended piece of writing before, I greatly improved my essay writing skills. • I also developed my written communication skills as I had to put across a point, fairly new to me, in a readable and clear way. • I improved my ability to think analytically immensely as my dissertation required me to look at two sides of an argument and then come to a distinct decision. While I have written such essays before, this was the first time I had to go into each argument into such depth. And I have never had to come to such a distinct decision – meaning that I had to analyse the two points of view in great detail. • I also gained the ability to go into great detail on one subject and learn on my own without the help of a teacher. I gained the ability to work autonomously - with little direct supervision. • I had to gather, assess, filter and synthesise complex information and present difficult academic arguments in a form accessible to a variety of audiences – an exercise new to me at this level. I learned how to understand complex arguments and theories without having them explained to me in a classroom environment. • I had to edit my writing and polish it all indeper ntly. Something I've previously had help with (by teachers' marking my work) • I learned how to use the 'Comment' feature on ord and used it when going over my background information. 

Typing the dissertation	• In writing this essay, to maximise efficiency, I learned touch typing - I took an online course to learn the techniques and how to touch type.  • Advanced Word features: I learned how to insert and change footnotes  [3] is a global business consulting firm, best known for its work in work in 'Turnaround management': a process dedicated to corporate renewal [6] India and Mexico are slightly further behind, but the trend is clear. [7] R&D is a specific group of activities within a business. The primary function of an R&D group is to develop new products and to discover and create new knowledge about scientific and technological topics for the purpose of uncovering and enabling development of valuable new products, processes, and services.
Word limit	• Having a word limit to work toward meant that I learned how to plan my work so as to not fall too short or go too far over the limit. To ensure I didn't go too far over I had to make sure I wasn't repeating myself unnecessarily. I learned how to check for repeating words and phrases on Microsoft Word: 
Presentation	• I have gained formal presentation skills and how to explain - in front of an audience - what I have done in an easy to understand way. • I also had to acquire the ability to plan the presentation and ensure it wasn't too long it became boring and not so short that it was meaningless.
Overall	**The Extended Project helped me be flexible, open-minded, self-disciplined, and self-motivated.**


MANUFACTURING- A SOLUTION TO OUR FRACTURED ECONOMY
Extended Project Presentation


The Project Title, Aims and Objectives
Initial Title
'Manufacturing: Essential for Economic Growth?'
Final Title
'Manufacturing – A Solution To Our Fractured Economy'

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The Topic and The Research

Choosing the Topic:

- Why a dissertation
- The Writing of the Dissertation
- Possible Topics
- The Topic I Finally Decided On

Researching:

- Reports
- Books
- Online/Paper Articles
- Documented Debates

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Drafting and Writing the Dissertation

Using the Research:

I grouped the findings into sections based on their usefulness and the area of information supplied.

Dissertation Structure:

- Abstract
- Introduction
- Reason for Offshoring
- The Problem
- Why there is need for change
- The solution
- Conclusion

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Summary of findings

How Can America Create Wealth If Our Industrial Base Is Destroyed?
50,000 Manufacturing Jobs Have Been Lost Every Month Since 2001
By Michael Snyder, on March 25th, 2011

Any economy that constantly consumes far more wealth than it produces is eventually going to be in for a very hard fall. Many point to relatively stable GDP numbers as evidence that the U.S. economy is doing okay, but the truth is that we have had to borrow increasingly massive amounts of money to keep GDP numbers up at that level. The U.S. government is going to run an all-time record deficit of about 1.65 trillion dollars this year and average household debt in the United States has now reached a level of 135% of average household income. But borrowing gigantic amounts of money and consuming massive amounts of wealth with that borrowed money is a road that leads to economic oblivion. The only way to have a healthy economy in the long run is to create wealth. But how can America create wealth if our industrial base is being absolutely destroyed? According to Forbes, the United States has lost an average of 50,000 manufacturing jobs per month since China joined the World Trade Organization in 2001. Hundreds of formerly thriving industries in the United States are being totally wiped out. China uses every trick in the book to win trade battles. They deeply subsidize their domestic industries, they openly steal technology, they blatantly manipulate currency rates and they allow their citizens to be paid slave labour wages. So yes, the products coming from China are cheaper, but in the process tens of thousands of factories in the U.S. are shutting down, millions of jobs are being lost and the ability of America to create wealth is being compromised.

In 2010, the U.S. trade deficit was just a whisker under $500 billion. Much of that trade deficit was with China. During 2010, we spent $365 billion on goods from China while they only spent $92 billion on goods from us. Does a 4 to 1 ratio sound like a "fair and balanced" trade relationship to anyone out there? Our

Creating Wealth By: Jim Pinto (San Diego, CA., USA)

America must get back to creating wealth, but not by borrowing to buy more offshore "stuff". Manufacturing is the foundation of economic growth, the key to higher living standards and the future of the middle class. In the United States, this recognition is generating the re-birth of manufacturing.

Politicians keep insisting that America must get back to creating wealth. But they want to do it by getting Americans to borrow more money to buy more "stuff", most of which is made offshore. Increasing consumer debt to increase consumption does not create wealth. It's consumption of wealth, without replacing it.

There are only three sources of wealth - natural resources, labour and knowledge. Natural resources (oil, minerals and the like) are tied to geography. The largest transfer of wealth in human history occurred within the past half-century - from countries that had generated wealth through productive knowledge, innovation and enterprise, to areas that had little else than their oil. Service industries and government jobs do not increase wealth - they just circulate money. Manufacturing creates wealth by taking goods of lower value, adding knowledge and labour, and creating higher value. Mining and farming create wealth for the same reasons.

Knowledge generates wealth

Labour is a commodity, the value of which keeps increasing with education and training. Knowledge and innovation are the key ingredients for productivity and wealth generation. Through inexpensive, universal communications, knowledge-based work is migrating worldwide to the highest-quality, lowest-cost providers. Productivity has become a fierce, head-to-head competition between regions and nations for the single reason that it is the source of the wealth, the key to improvements in living standards. Those who can produce cheaper, faster, better - they win!

America has begun to create more jobs than it eliminates for the first time in more than a decade. The economy was supposedly recovering and big companies began upgrading old factories or building new ones. But, economists' projections for this year - a gain of about 2.5 percent or 330,000 manufacturing jobs - won't come close to making up for the nearly 6 million jobs lost since 1997.

U.S. manufacturers that survived the brutal 2008-09 recessions are now very competitive, with much lower labour costs and debt burdens. While they will keep building factories overseas to address demand in emerging markets, they are also investing in U.S. plants, and manufacturing job growth is expected to average about 2 percent a year through 2015. This is to be expected as companies replace aging equipment, take advantage of government incentives, seek energy savings and rediscover that it makes sense to produce some products at home rather than shipping those long distances.

What Went well

- Planning
- Research
- Writing

I have put across my views on the subject of the importance of manufacturing to an economy in a formal and focused manner.

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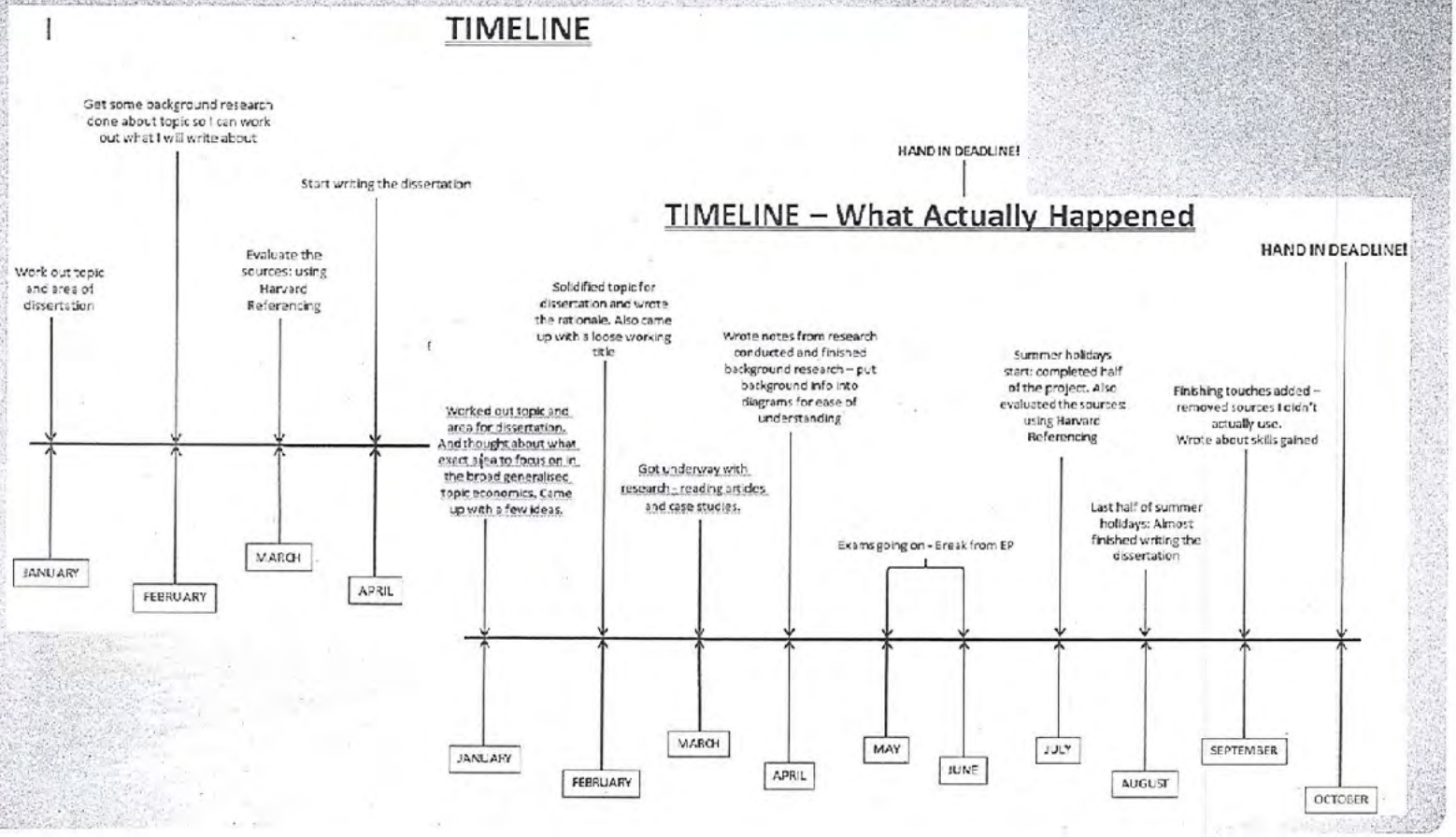
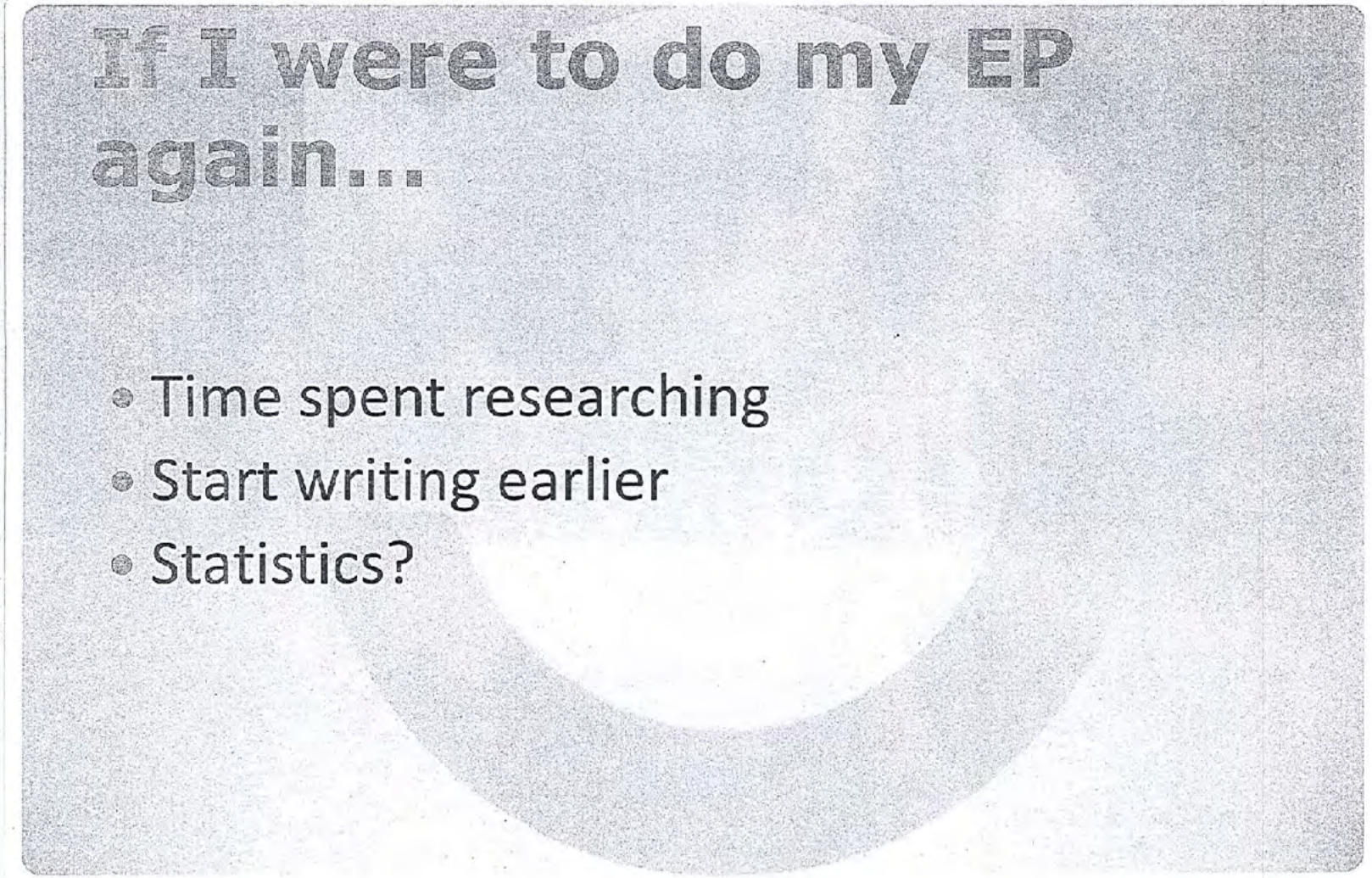
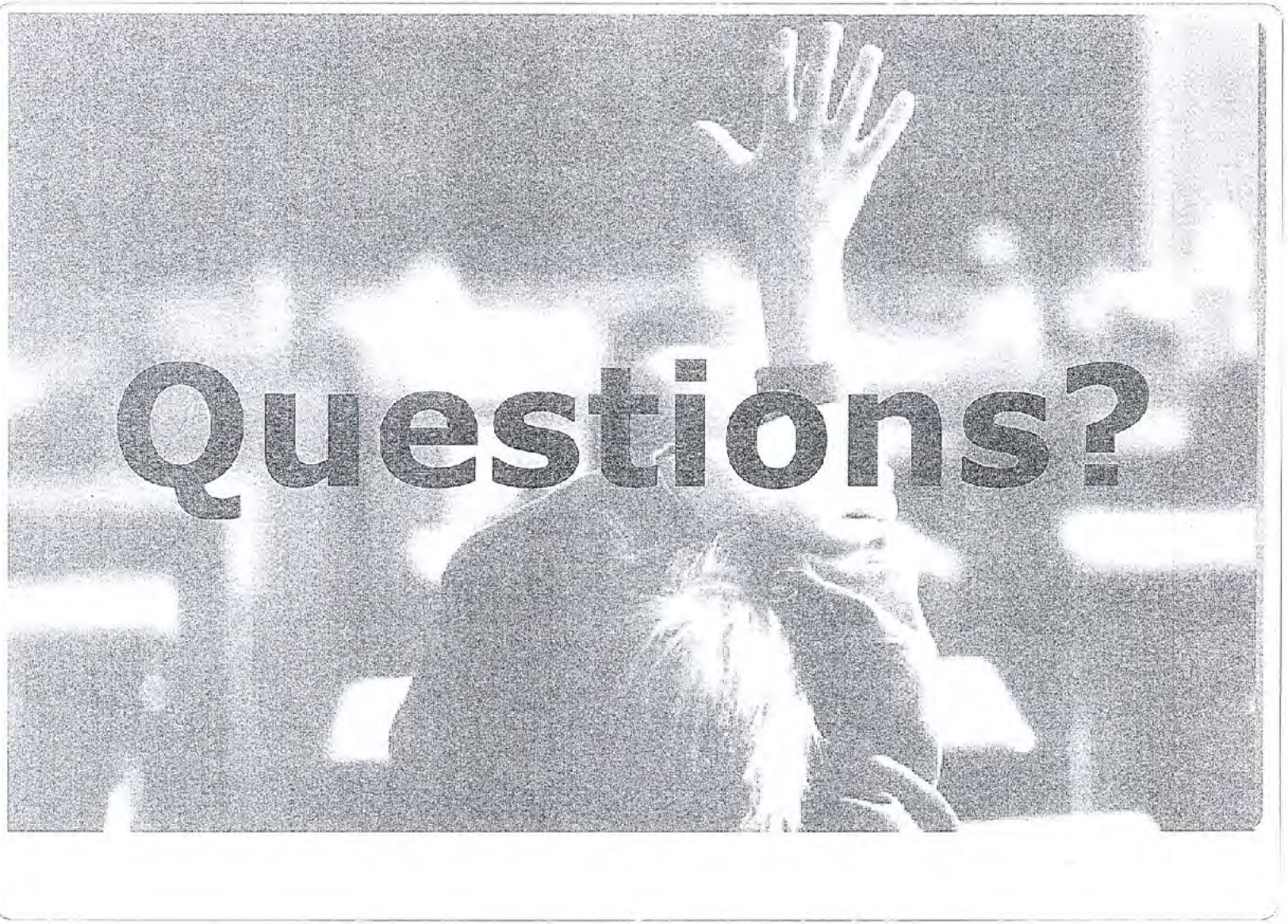
Skills I Gained

What was Difficult




If I were to do my EP again...
Time spent researching
Start writing earlier
Statistics?
70



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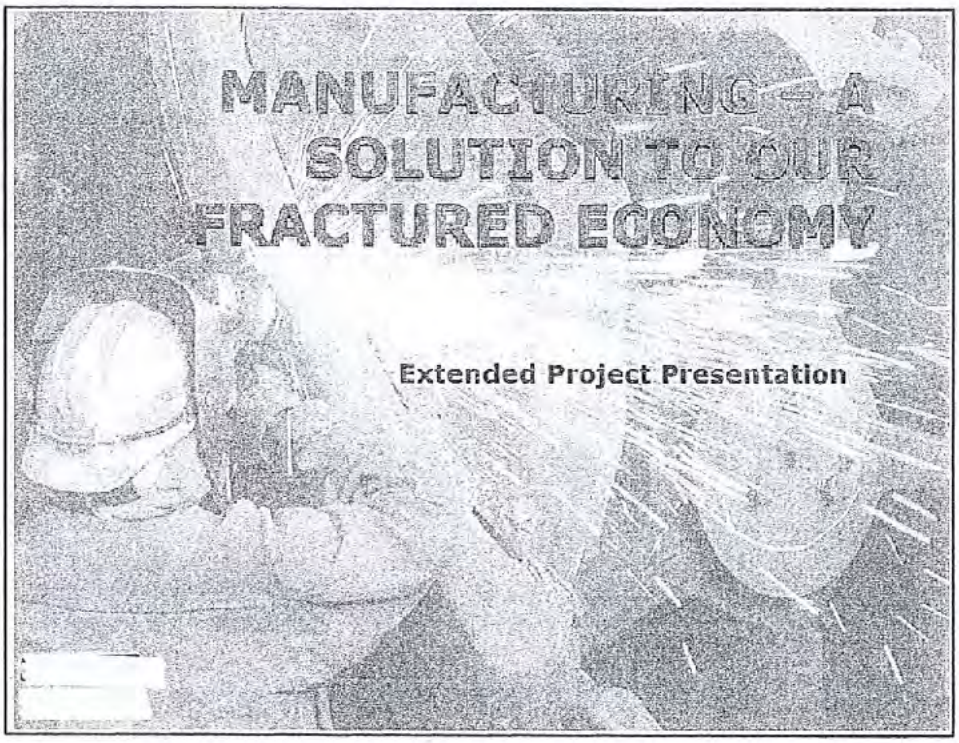
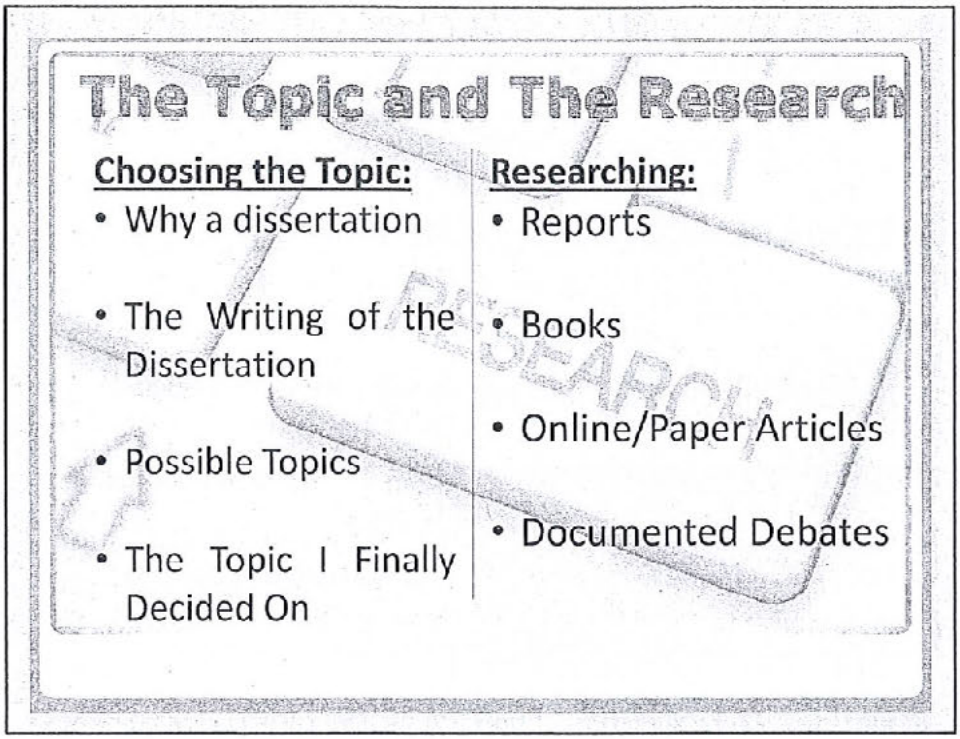

MANUFACTURING – A SOLUTION TO OUR FRACTURED ECONOMY
Extended Project Presentation

1

I changed my title at the end of my project, after I had finished writing the dissertation completely so that I would be able to better summarise my argument in the title. I wanted my title to make my stance on the topic clear right from the start.

Aims and Objectives:

- Expanding my opinion on the issue of offshoring manufacturing beyond just common sense reasoning
- Backing by opinion and validating it with credible information and data
- Putting my view and final judgement across in a balances and factual way (not based totally on my opinions but not totally devoid of opinion either)



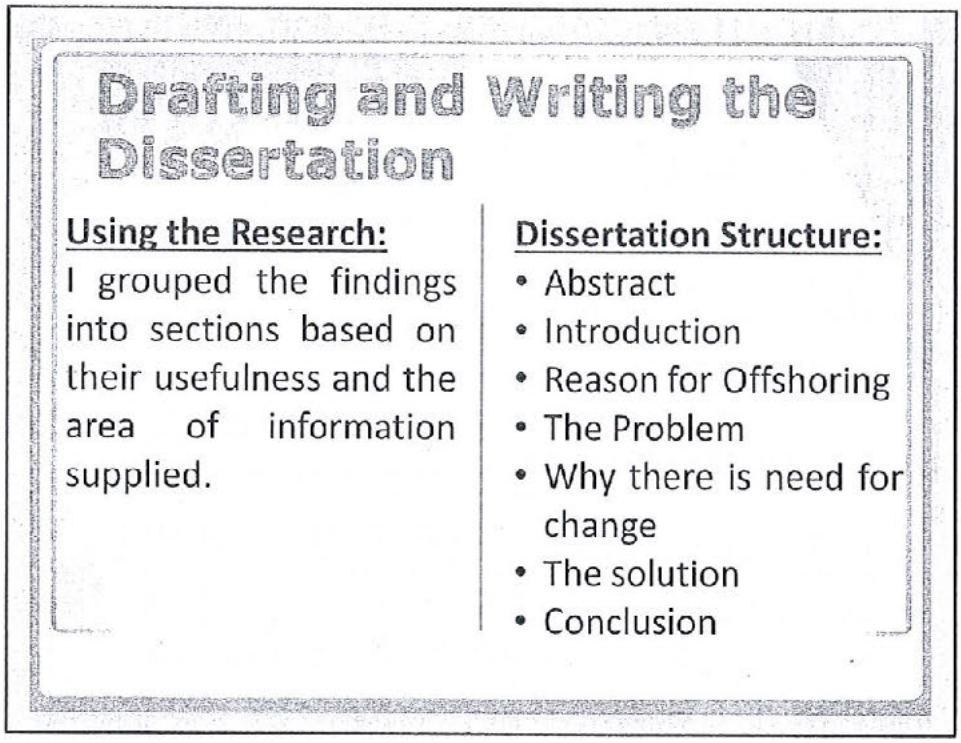
Why a dissertation: I wanted my EP to take the form of a dissertation as the subjects I take at A-level aren't heavily writing based and I have never had the opportunity to write such and extended piece of writing. I felt writing a dissertation would help me gain many vital skills that would stand me in good stead at university

Possible Topics: the first thing I did was to create a mind-map of all the possible topics I am interested in and that I could write about before

The Topic: I chose to finally write about manufacturing and economics as I was eager to further my insight into the topic beyond just my theoretical ideas and see if there was a genuine problem surrounding this issue. As I am considering studying economics at University I thought that doing my extended project on an economic issue would help me recognise if I have the interest it takes to work in such detail on the subject of economics.

Once I'd chosen the topic for my dissertation I went about gathering research. As I was gathering information I made sure to cross-reference each source in order to validate the claims made and to lend weight to their arguments before I used the information. I used a variety of sources:

- **Reports** (e.g. by the International Monetary Fund, the World Trade Organisation and the Office for National Statistics among others)
- **Books** (e.g. The Wealth of Nations by Adam Smith)
- **Online and Paper Articles** (e.g. from The Guardian and The Economist – I subscribe to The Economist)
- **Documented Debates** (House of Lords: Manufacturing Debate - BBC News, London, 3 July 2014)



Using the Research:

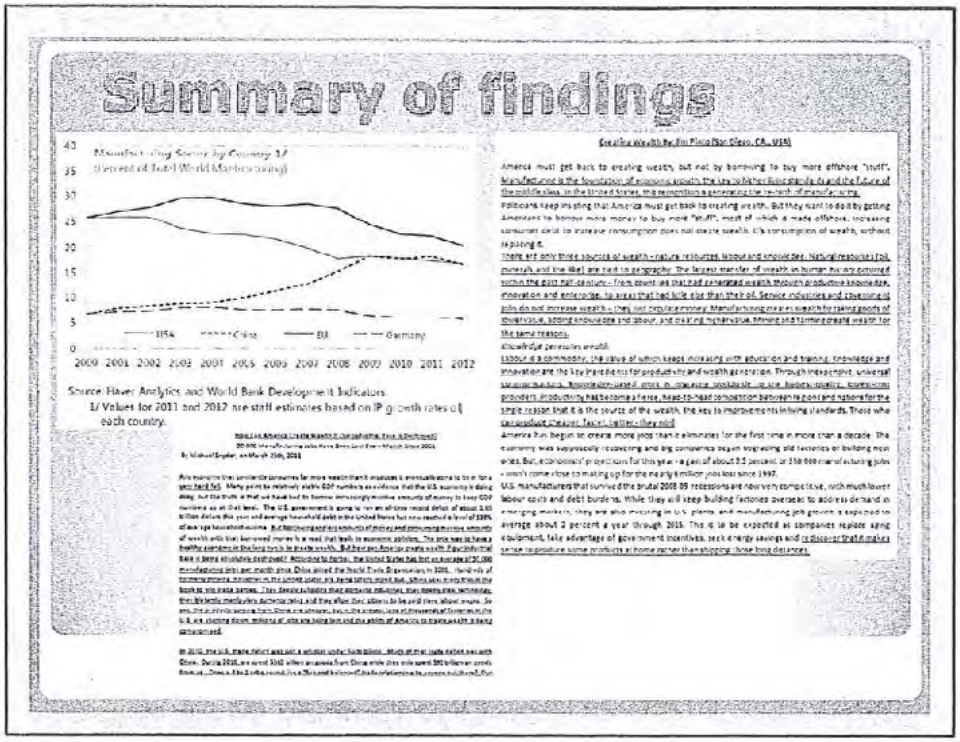
Once I collected my material and confirmed the reliability of my sources I grouped the findings into sections based on their usefulness and the area of information supplied.

i.e. they were grouped according to whether I was using the information in my 'Solutions' section or the 'Problems' section.

A lot of the research I didn't directly use in my dissertation but to ensure I correctly understood each point. Often the sources were used as a way to backup my own knowledge and ensure I was on the right lines. This was requires as I was writing about a topic I had not previously studies or had any real understanding into, except for the basics. I had to teach myself a lot about the subject.

Dissertation Structure:

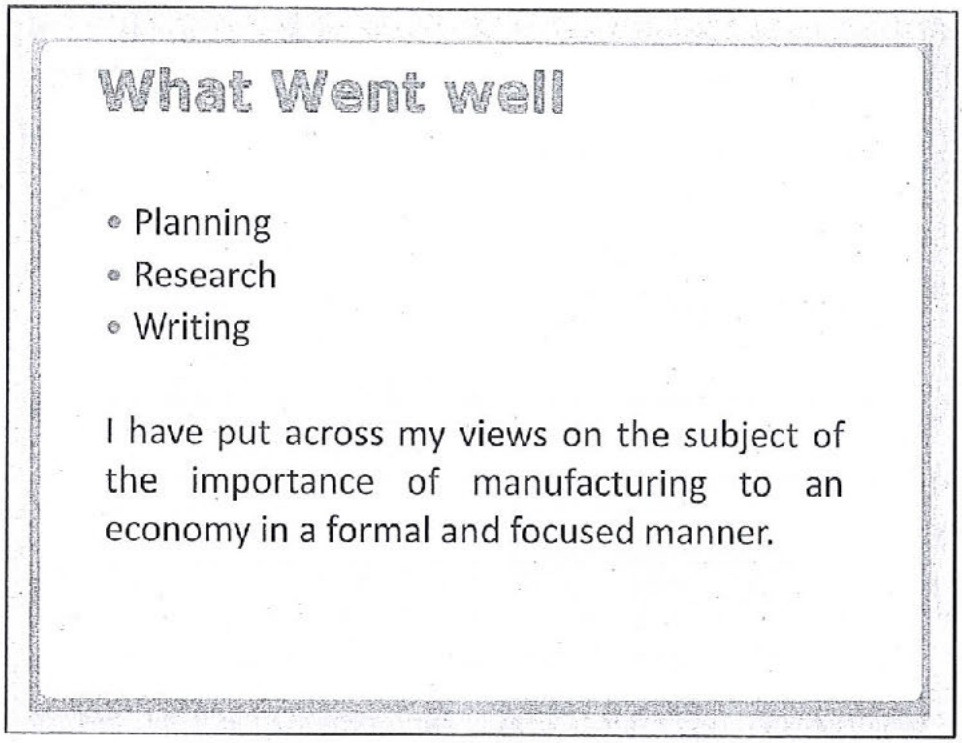
- **Abstract:** I gave a brief overview of what I would be talking about in the rest of the write up. I introduced my the argument and my stance on it.
- **Introduction:** *Introduction to the Problem of Deindustrialisation*
- **Reason for Offshoring:** *Migration of Jobs to Less-developed Economies*
- **The Problem:** *Drawbacks of Offshore Manufacturing*
- **Why there is need for change:** *Benefits of Manufacturing at Home*
- **The solution:** *How to Achieve Re-shoring*
- **Conclusion:** *The Prescription for Economic Recovery*



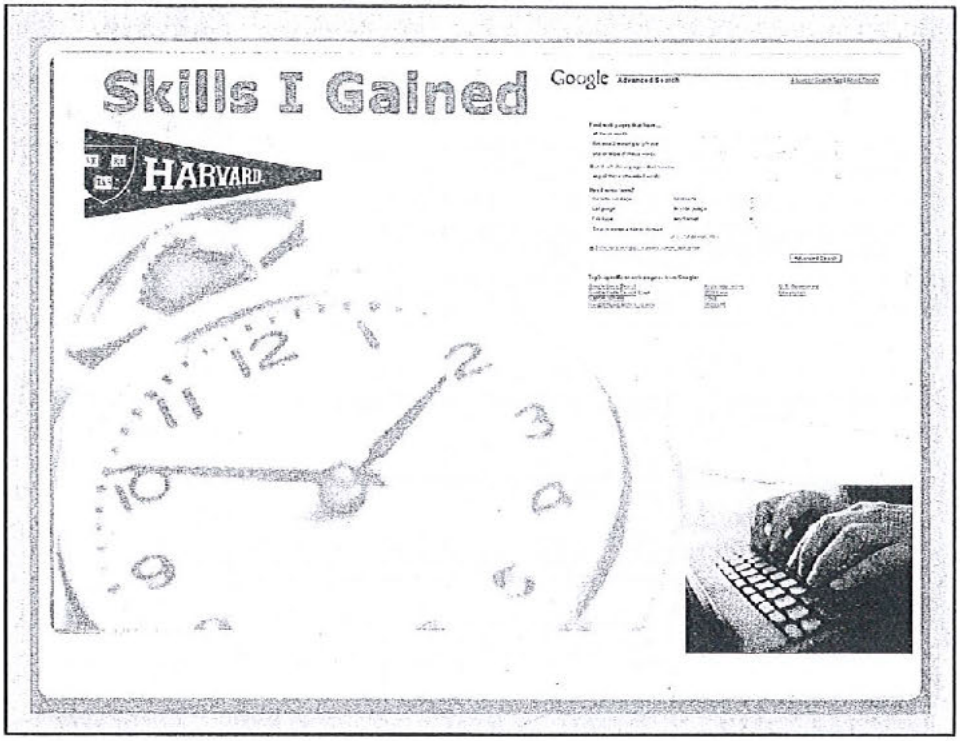
I found that the issue of offshoring manufacturing is a mush more current and controversial issue than I realised and that this problem I was writing about wasn't just dreamt up by me but is a very relevant issue. Many economists are worried about the impact offshoring is having on western economies.

I realised that the debilitating longer term effects of deindustrialisation that I planned to discuss in my dissertation are being felt and experienced now.

Research showed me that many countries are discussing the idea of "re-shoring" or "re-industrialising" after finding that the process of deindustrialisation wasn't as beneficial as fist thought.



- I planned the dissertation well. First I conducted some background research on the general topic I was going to write about so that I understood the topic before I attempted to write about it.
- I ensured all my sourced were valid, creditable sites and that the information I was using was genuine fact not someone else's opinion.
- Once I started writing I found that I had a lot more to say on the topic than I realised and I reached the 5000 word limit with ease. I was not struggling for words and so did not need to put in pointless sentences just to bulk up my writing – I was able to stick to my argument throughout the dissertation.
- I was able to successfully put my opinion and stance on this issue across, backed with credible information and data



As part of my extended project I had to take into consideration time management, leaving enough time in case something went disastrously wrong.
I learned how to use the advanced features in Google to refine my search. This allowed me to be more selective in my research material – refining my search by categories such as date (I used mostly recent articles).
I learned how to evaluate sources using the Harvard Referencing System – something I had never come across till now
While listening to programme and podcasts during my research I had to take notes. I learned how to take notes quickly while a person spoke. I also learned how to use the Cornell Note Taking System. Another totally new technique to me.
A very fundamental skill I improved was my writing skills: never having written such an extended piece of writing before, I greatly improved my essay writing skills. I have never written over 2000 words for any subject before.
I also had to edit my writing and refine it all myself. Something I've previously had help with (by teachers' marking my work)
In writing this essay, to maximise efficiency, I learned touch typing - I took an online course to learn the techniques and how to touch type.

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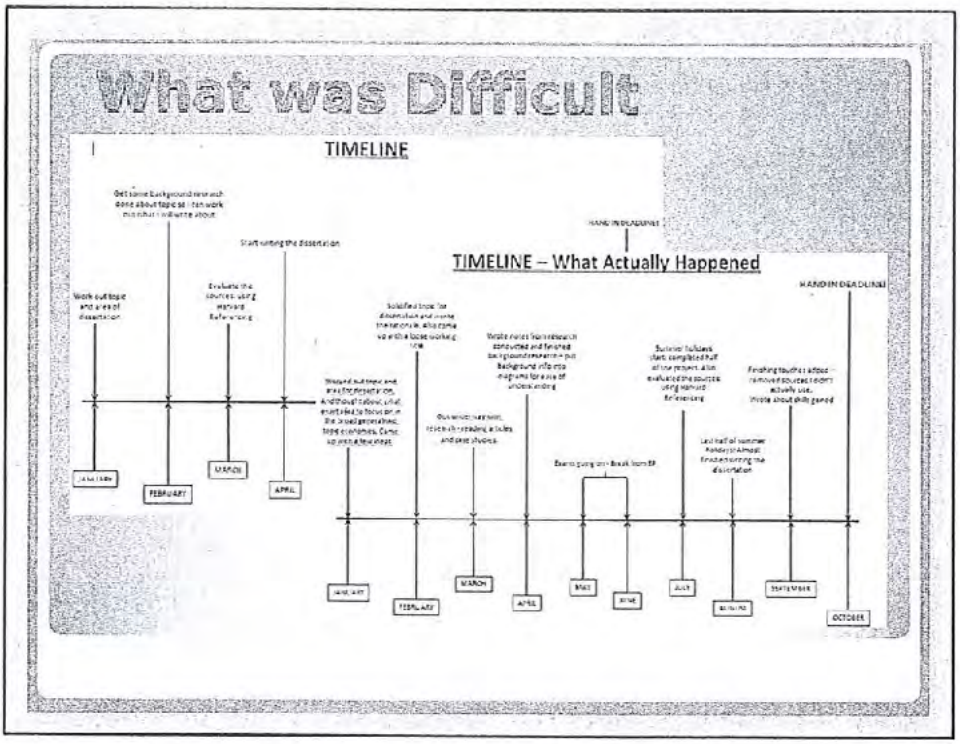
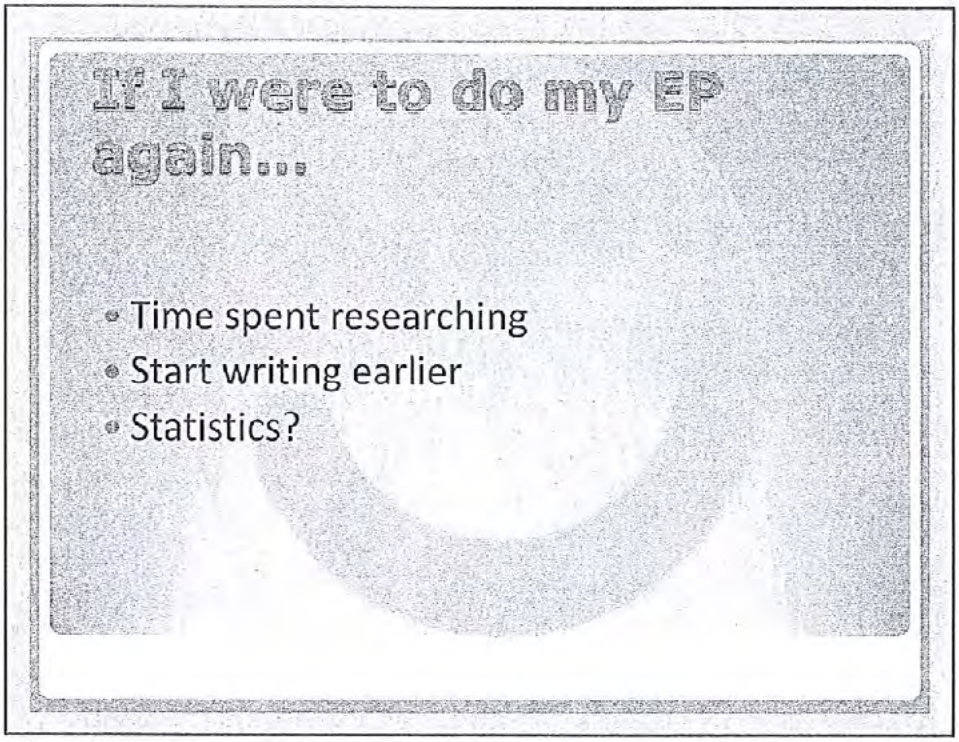


I found that I had underestimated the time it would take me to carry out all the research. When comparing my first timeline (the plan I was going to follow) with the one I made as I went along (what I actually did) it is clear that I spent more time or research than I had originally planned for. This meant that I had less time to write up my project than I had initially organised for.



If I were to redo my EP I would cut down on the time I spent researching – I realised that most of the background research I had gathered I didn't need in the end.
I also found that I was often repeating the same reference throughout my dissertation and not varying my sources in the final write up much.
I would also start writing a lot earlier – I was so hung up on how to start the dissertation I put off the writing. Next time I would start writing my sections first rather than worry about the introduction.
I would also maybe try to use more data in my write up – my dissertation was very theoretical with perhaps not enough data and statistics backing my points.

9

EVALUATION SHEET

Project Title: **Manufacturing – A Solution to our Fractured Economy**

What were the main strengths and weaknesses of the Project?	I had planned the dissertation well. I had organised the write up into sections so that it would be easier to write and to read. It is easier to read paragraphed subdivisions than long continuous pieces of writing. Preparation for the dissertation was well done. First I conducted some background research on the general topic I was going to write about so that I understood the topic before I attempted to write about it. I also ensured all my sourced were valid and creditable and that the information I was using was genuine fact not someone else's opinion. Once I started writing I found that I had a lot more to say on the topic than I realised and I reached the 5000 word limit with ease. I was not struggling for words and so did not need to put in pointless sentences just to bulk up my writing – I was able to stick to my argument throughout the dissertation. I feel that I have put across my view on the subject of the importance of manufacturing to an economy is a formal and sufficiently succinct enough manner. However, I did face some difficulties in doing this Extended Project. I found that I had underestimated the time it would take me to carry out all the research. When comparing my first timeline (the plan I was going to follow) with the one I made as I went along (what I actually did) it is clear that I spent more time or research than I had originally planned for. This meant that I had less time to write up my project than I had initially organised for. This meant that I had less time to polish the write up and that I wasn't able to edit the write up as thoroughly as I would have liked. This also meant that I was only able to produce one draft before my final write up. But as I was typing up the write up rather than handwriting it I was able to edit it as I wrote, so the reduced time did not impact too badly on the level of my writing.
What new skills did you learn/what new technologies did you use?	As part of my extended project I had to take into consideration time management, leaving enough time in case something went disastrously wrong. I learned how to use the advanced features in Google to refine my search and so be more selective. As part of my research process I learned how to use the Cornell Note Taking System. I also learned how to use the researched information in my final write up: how to effectively summarise the information and credit it using the Harvard Referencing System. I also learned how to use advanced Word features: I learned how to insert and change footnotes and how to change and choose what the word counter takes into account in its calculations (i.e. how to include footnotes in the count). In writing this essay, to maximise efficiency, I learned touch typing - I took an online course to learn the techniques and how to touch type. (for more detail look at the 'Skills Gained' document)
In doing the Project, what did you learn about yourself and the way in	This was the first time I was given such an open ended task where I had to think of the topic of my dissertation with absolutely no input from anyone else. This helped me develop my independent learning techniques. In carrying out the extensive exploration into the topic I realised that I enjoyed the open ended nature of the task. Although the self-taught aspect of the project was difficult

which you learn?	initially, I found that I learn well when teaching myself. I also found that once I had a plan/outline drawn up for the write-up I was good at targeting my research to each sub-heading within the essay – helping giving structure to both the final write up and the research process leading to the end result. I learned that I am an independent learner.
Has the Project helped you in terms of your future plans? (e.g. study at university)	As I am considering studying economics at University I thought that doing my extended project on an economic issue would help me work out if I have the interest it takes to work in such detail on the subject of economics. . I had to conduct the research and do the learning all myself thus I dedicated a lot of time and effort to the project. By my being able to focus so totally on this topic and staying committed to it till the end I realised that I was interested in this topic enough to purse it to a higher level (i.e. study economics at university).
If you were to start your Project again, what would you do differently and what would you keep the same?	If I were to do the project again I would still draw up a rough plan for the write up before I start the research so that I know how to focus my research. The general plan for how I would proceed with the project as a whole, not just the dissertation (i.e. planning how long I would spend on research and writing) was very useful in helping me manage my time – so I would draw up such a plan again if I were to repeat the project (or if I were to do another project such as thing in the future). While the research was essential, I would spend less time on it next time. I did so much research many of my sources overlapped and so I didn't need to use most of my initial research – it was superfluous. Next time, I will start writing as soon as some little initial research has been done, and then research further based on what I need next. Thereby making it an iterative process rather than a sequential one (where I did all the research first, then wrote). I also found that I put off the writing of the dissertation too long - I was so unsure of how to start the dissertation I didn't write any part of it for a long time. Next time I will start writing a lot earlier - start writing my sections first rather than worry about the introduction. I will write the middle sections (the bulk of the write up) first then come back to the introduction at the end. I would also maybe try to use more data in my write up – my dissertation was fairly theoretical with perhaps not enough data and statistics backing my points.
Any other thoughts and comments?	

PRESENTATION SELF-ASSESSMENT

Strengths:

My presentation took the form of a PowerPoint presentation. The PowerPoint was simple and easy to follow – each slide was minimalistic and not text-heavy. This meant that I was not just reading off the slides but was able to engage with the audience. Text heavy slides would have made for a boring presentation as well as being distracting to the audience. As each slide had very few words on it, if any, I elaborated each point, using the notes I had written. However, I was very careful to not just read off my notes either but only referring to them briefly. I included pictures in my presentation – a relevant picture on each slide. This made the presentation more interesting. When creating the PowerPoint I found that the pictures were often detracting from the slides, making the overall look much less smooth and professional. So I formatted the pictures to make them the background of each slide - giving it a much more attractive look. It also made the slides more engaging. To make sure that the PowerPoint was easy to follow I used no over-the-top use of colour or distracting animations that would detract from the presentation. I also made the font size large enough to be able to be seen by a person sitting farthest away.

I also ensured that I spoke clearly and enunciated properly so that the audience would understand what I was saying. I also tried to make sure that I made eye contact with everyone in the audience. Being relaxed and confident about the presentation meant that I spoke clearly and at a good pace.

I made sure that I aimed the presentation at a non-specialised audience – i.e. one that did not know anything about the specifics or the technicalities of the topic I wrote about for my dissertation. So I was careful to keep it general and to fully explain technical terms when I used the (though I tried not to use technical jargon). I also explained in detail why I chose to do my Extended Project in the form of a dissertation as opposed to an artefact or event. I explained fully my title and the reasoning behind the title: going into detail about the choice of topic (explaining that I wanted to see if I would have the commitment and dedication it takes to study economics at degree level). I kept the presentation to just under 10 minutes – not dragging it out and making it too boring, neither did I rush through it and not cover my points in enough detail. At the end of the presentation there was an opportunity for the audience to ask questions – these I feel I answered confidently and with easy, answering the questions clearly and in sufficient detail.

Weaknesses:

At first I was nervous and so spoken slightly too quickly. However, I soon grew more relaxed as I got over my nerves and fell into the rhythm of my presentation – having rehearsed it before helped. As I grew more confident I spoke more clearly and slowed down to a better pace. Because of my familiarity with the topic I didn't explain some key phrases but took for granted that the audience would know what they meant. In retrospect, I should have been thinking from the listeners' point of view and should have explained the jargon earlier. I could have concluded my presentation with a summary slide: a brief recap of the end results of my findings and dissertation. I also didn't have any other visual aids to go along with the PowerPoint – I could perhaps have had a hand-out with my conclusions on it, making it easier for the audience to get the take-home message (even if the details would not be remembered, the take-home message would be).

Commentary

Marks awarded

A01	A02	A03	A04	Total
12	10	22	11	55

What it is about

In this dissertation based project focussing on a challenging area of Economics not covered in the student's Economics A Level, she argues for a return to a strong manufacturing base for the UK economy in order to ensure prosperity. The topic was chosen to support the student's university application.

General comments on strengths and weaknesses

This is a very good project that has some excellent elements, but also some significant limitations. The project provided a good level of challenge for a student whose only essay based subject was A Level History and who had not attempted an extended Economics essay before. Her portfolio was well-ordered and supporting evidence has been pulled together in a clear and logical manner. There is a very good rationale and clear objectives. The monitoring is fairly thorough. The research shows evidence of initial systematic planning. However some of the planning and monitoring looks retrospective and the PPR is not well used. The dissertation lacks depth of analysis and contains a lot of unexplained terms.

Use of the URS and annotation

The teacher's comments on the URS are thorough and specific and give very effective support to the marking. However, it is arguable that it is the teacher's comments that carry this project well into A* territory rather than the substance of the project itself which probably hovers somewhere on the border of the A* / A grades. Annotation in the portfolio would have been helpful to further signpost the marking.

A01

Why the marks were awarded

Full marks were given for this AO and the planning does have some clear strengths including the effective use of on-line planning tools, some carefully planned research and the inclusion of a dissertation draft with annotations to show development of the work. There is strong evidence of contingency planning to aid time management.

Any weaknesses

The mark of 12 is over generous in the light of poor use of the PPR and a lack of really incisive responsive planning. The PPR seems to have been completed retrospectively and gives the impression that it was completed as a bit of a form filling exercise. It is worth ensuring that students really understand the importance of effective use of this required document. The planning for the dissertation lacks a little sophistication.

A02

Why the marks were awarded

The comments on the URS are very helpful in supporting marks towards the top end of the mark band. The quality and variety of the secondary sources is excellent. There is some effective critical evaluation of these.

Any weaknesses

The project might have benefitted from some primary research. The bibliography is a trifle muddled and although selection of sources demonstrates skill, the collation of these is not sophisticated. The conclusion to the argument is well-framed, but the information supporting it is chunked together rather than being skilfully synthesised. Source evaluation of secondary research is fairly thorough, but fails to recognise political bias.

A03

Why the marks were awarded

The mark of 22 for this AO is justified by both the teacher's comments and evidence in the portfolio. It is clear that there has been substantial development of skills during the course of the project and the student has gone out of her way to acquire some of these, for instance teaching herself the Cornell method of note-taking. The evidence to support the A03 mark has been pulled together with skill.

Any weaknesses

The project sometimes lacks the sophisticated application of analytical, decision making and problem solving skills. For example, although the outcome is reasonably successful, the dissertation contains many unexplained technical terms and would have benefitted from proof-reading.

A04

Why the marks were awarded

There is good evidence of ongoing evaluation in the diary. The presentation offers a very good evaluation of the project and appears to have been very successful. The student has made a thorough evaluation of her own presentation performance using feedback from her audience.

Any weaknesses

The mid-project review lacks evidence of depth of analysis of progress and responsive planning based on the brief evaluations made. Some of the evaluation of the project appears to have been produced on pro formas that guide the student's efforts to evaluate their work. This practice can undermine the impression of truly independent management and evaluation of the work.

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