

## Media Arts Department

### Undergraduate Coursework Coversheet

### Creative AV Work

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|---------------|-----------------------------------|------------------|------------|
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| Tutor         | Tom Keene                         |                  |            |
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|               |                                   |                  |            |

## **Microeconomic & Macroeconomic Factors affecting economic growth**

Welcome to the comprehensive project report on the diverse macroeconomic and microeconomic factors affecting economic growth. This report serves as an extension of our dedicated website, which is the culmination of our extensive efforts to dissect and present the complex interplay of economic elements influencing nations' growth in a creative manner. The primary aim of this project was to create an informative and accessible online resource that simplifies the complex interplay between macroeconomic and microeconomic factors affecting economic growth. This required in depth research on the microeconomic factors such as consumer behaviour and market structures, as well as distinguishing the difference between macroeconomic factors which focus on international trade and fiscal policies. To achieve the project's goals we had to create a visually enticing and informative website with interactive features that allows users to engage with data visually, helping to bridge the gap between theoretical economic principles and their practical implications.

The main significance of this project is to potentially enhance economic literacy and facilitate informed decision-making, by untangling complex economic concepts and ensuring they are engaging and accessible. Our project includes in depth research and analysis on different macroeconomic and microeconomic factors and their significance to the overall economy. This is all presented through both written descriptions and visualisations that allow users to explore trends and patterns without the complexities of excessive statistical datasets.

For this project our group came together and attempted to utilise the different skill levels between the group members to create a functioning and informative website that reaches our personal and overall project goals. Each member brought specialised knowledge and skills, contributing to the multifaceted nature of the project, as certain group members excelled at coding and creating functioning interfaces while others focused on creating visualisations from the collected data. My personal involvement in the project was focused on background research, including gathering useful datasets that could be used for the visualisations, as well as breaking down the key factors of economic growth and defining them for the website's interface. This required extensive hours of research, in order to find credible sources and adapt the given information into a clear and structured format on the website. Ultimately the website required a group effort to execute to the best standard we could, therefore using our individual strengths to put together an educational webpage that is also visually appealing and easy to navigate.

The research for this project was a constant and extensive process, aimed at identifying the most impactful macroeconomic and microeconomic factors affecting economic growth. The initial stage involved extensive literature reviews identifying key themes and topics within the realms of macroeconomics and microeconomics. The research is the foundation to understanding economic growth relying on factors, such as fiscal policy, monetary influences, market dynamics, and consumer behaviour. This phase was crucial for setting the direction and scope of the project. The literary

research allowed for insight on the factors determining a country's economic stance, for example according to Chirwa and Odhiambo, (2016) we can determine that “human capital, investment, and budget surplus were positively and significantly associated with economic growth, while initial real GDP, inflation and dummy variables for SSA and LAC were negatively and significantly associated with economic growth.” These theories help us understand the fundamental factors that determine the growth or recession of a country or economy.

Our key research for the project was relevant datasets gathered from an array of credible sources such as the rates of unemployment (Europa.eu, 2022), (www.ons.gov.uk, n.d.). Unemployment rates are one of the key macroeconomic factors affecting the growth of an economy, therefore it was one of our main focus points for the research for this project. With the necessary datasets, we moved to conceptualise how best to visualise this information to convey the intended messages effectively. This included coming up with the best approach to visually display the data in a simple, yet aesthetic manner. For unemployment rates, we used a picture graph approach with human icons to represent the statistics of unemployment in the UK from 2000 to 2019. We decided to further approach the data of European countries as part of the background research, allowing us to make comparisons on the economical stance of the UK compared to Europe, allowing us to gather insight on the factors that influence the difference. For this research we used statistical datasets from european countries such as the european unemployment rates of each country from 2012 to 2020, analysing the overlapping dates of both datasets to extract conclusions about the difference in the unemployment rates over the years and comparing it the the countries economic stance that year (Europa.eu, 2024). This approach helped us understand the correlations between the macroeconomic factors and the country's economic environment. My primary role in this project was to gather the necessary theoretical information and statistical data to allow the rest of the group to build the visualisations and code together the interface of the website. Once the key datasets were gathered, my role was to focus on defining each topic of our project detailing the different macroeconomic and microeconomic factors and their impact on the general economy to ensure that the visual data would be correctly interpreted by users.

The content is deeply embedded in economic theory, utilising concepts from both macroeconomics (e.g., GDP growth, inflation, monetary policy) and microeconomics (e.g., consumer behaviour, price elasticity). By integrating these theories with real-world data, the project provides a theoretical framework that helps users understand the key factors affecting our economy. Furthermore, understanding the historical framework of the study of economy allows for the project to be used to develop the user's understanding of economic development and could potentially be used as research in further theory developments. As initially “Economists implicitly assumed that either markets were in equilibrium—such that prices would adjust to equalise supply and demand—or that in the event of a transient shock, such as a financial crisis or a famine, markets would quickly return to equilibrium. In other words, economists believed that the study of individual markets would adequately explain the behaviour of what we now call aggregate variables, such as unemployment and output” (Rodrigo,

2022). However, at the time of 'The Great Depression', economists at the time, focusing on the classical paradigm of markets always being in equilibrium, had no plausible explanation for the extreme "market failure" of the 1930s. This led to The General Theory of Employment, Interest and Money, in 1936. Then further the theory of "disequilibrium economics," which is the explicit study of departures from general equilibrium, that was later used as a framework for developing what we now know as macroeconomics (Rodrigo, 2022). The website takes into account historical economic crises and progressions, providing a backdrop that enriches the understanding of current data and trends. Technically, the project focuses on visualising the data through the use of imagery and graphics such as picture graphs, charts and graphs, to create a visually appealing website and allow for users to easily interpret the data.

The website is designed to engage a diverse audience, from students and educators to policymakers and economic professionals. Therefore, the aesthetic approach was to create a formal and straightforward web page highlighting the key areas of the topic so that it may cut down research time for users, as well as giving insight to individuals wanting to learn more about the economy and how it functions. The visualisations are crafted to convey insights clearly and effectively, developing the general aesthetic from a written text format to an interactive and enticing website. The effectiveness of these visualisations lies in their ability to simplify complex relationships and trends without oversimplifying the underlying economic principles.

To conclude, through this project, we have uncovered a multitude of insights into the macroeconomic and microeconomic factors that influence economic growth. Our research showed, macroeconomic determinants significantly associated with economic growth include physical capital, fiscal policy, human capital, trade, demographics, monetary policy and financial and technological factors. However, determinants such as foreign aid, population growth, human capital development, fiscal policy variables, geographic location, and reforms, among others, show mixed results. This suggests that the genuine growth effects of these determinants are not homogeneous between economies (Chirwa and Odhiambo, 2016). Market structures, consumer behaviour, and regulatory frameworks, known as microeconomic factors also significantly impact economic growth. This branch of economics focuses on the individual choices, typically consumers and firms, and the impacts those choices have on individual markets. Highlighting the impact of choices on the total, or aggregate, level of economic activity. Creating questions on why the macroeconomic factors affect the economy in such a way, such as price differentiation for 'better' concerts or how the danger of global warming affects real estate in coastal regions. Additionally, we could see that microeconomic reforms in socialist countries have diversified economic institutions and policies. Reforms have focused on resource reallocation and enhancing resource efficiency. However, the extent of resource reallocation remains debatable, and improvements in resource efficiency often require institutional reforms that necessitate government intervention (Svejnar, 1991). This proves that understanding both microeconomic and macroeconomic factors is crucial in understanding the development of the economy. Therefore this project's main focus was to highlight the significant areas of both branches, by visualising the

subcategories of micro and macro factors relating to the growth of the economy. Finally, there are a few ways that this project could be developed further, such as more in-depth analyses of specific economic sectors, regions, or historical periods to provide a more comprehensive understanding of economic growth dynamics.

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## References

- Chirwa, T.G. and Odhiambo, N.M. (2016). Macroeconomic Determinants of Economic Growth: A Review of International Literature. *South East European Journal of Economics and Business*, 11(2), pp.33–47. doi:<https://doi.org/10.1515/jeb-2016-0009>.
- Europa.eu. (2022). Unemployment By Sex and Age. [online] Available at: [https://ec.europa.eu/eurostat/databrowser/view/une\\_rt\\_a/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/une_rt_a/default/table?lang=en).
- Europa.eu. (2024). Available at: [https://ec.europa.eu/eurostat/databrowser/view/tps00203/settings\\_1/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/tps00203/settings_1/table?lang=en) [Accessed 23 Apr. 2024].
- Rodrigo, G.C. (2022). Micro and Macro: The Economic Divide. [online] IMF. Available at: <https://www.imf.org/en/Publications/fandd/issues/Series/Back-to-Basics/Micro-and-Macro>.
- Svejnar, J. (1991). Microeconomic Issues in the Transition to a Market Economy. *Journal of Economic Perspectives*, 5(4), pp.123–138. doi:<https://doi.org/10.1257/jep.5.4.123>.
- World Bank. (n.d.). Macroeconomics. [online] Available at: <https://www.worldbank.org/en/topic/macroeconomics#:~:text=Macroeconomics%20focus%20on%20the%20performance>.
- www.ons.gov.uk. (n.d.). Search - Office for National Statistics. [online] Available at: <https://www.ons.gov.uk/search?q=uk+unemployment+rates+> [Accessed 23 Apr. 2024].