# Sample LaTeX Document

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## 1 Introduction

This is a sample LaTeX document that demonstrates various features, including math equations, referencing, figures, and tables. We have used here the hyperref package to enable clickability.

# 2 Body

#### 2.1 Math

LaTeX is great for typesetting math equations. Here's an example of an inline equation:  $E = mc^2$ , and here's a display equation:

$$\int_0^\infty e^{-x^2} dx = \frac{\sqrt{\pi}}{2} \tag{1}$$

#### 2.2 Referencing

You can reference sections, equations, figures, and tables using labels and the ref command. For example, in Section 3, we will see how to include figures.

#### 2.3 Citations

For this Math course, we use some materials from Simon and Blume (1994). The book is praised by many researchers as a must-have math book for economists (Sydsæter et al., 2008).

Please use package natbib because it is compatible with the package hyperref. To cite text, use citet{key1}, to cite with parenthesis, use citep{key2}. Make sure the keys match what you declared in the .bib file.

At the end of the document, to print the reference list, use the command \bibliography{bibliography.bib}. You can choose the style of the document by stating \bibliographystyle{style} before printing the bib. There are many styles. Here, we use apalike – the most commonly used.

# 3 Figures

Figures can be included using the graphicx package. Below is an example of a figure – the screenshot of a .bib file:

```
@book{jones2002introduction,
    title={Introduction To Economic Growth 2nd Edition},
    author=(Jones, Charles),
    year=(2002),
    publisher={New York: WW Norton & Company}
}

@article(galor1989existence,
    title=(Existence, uniqueness, and stability of equilibrium in an
    overlapping-generations model with productive capital},
    author=(Galor, Oded and Ryder, Harl E),
    journal={Journal of Economic Theory},
    volume=(49),
    number=(2),
    pages=(360-376),
    year=(1989),
    publisher={Elsevier}}
}

@book(ds2002theory,
    title={A theory of economic growth: dynamics and policy in
    overlapping generations),
    author=(del a Croix), David and Michel, Philippe),
    year=(2002),
    publisher=(Cambridge University Press)
}

@article{farmer:2021growth,
    title={Growth and international trade: introduction and stylized
    facts),
    author=(Farmer, Karl and Schelnast, Matthias),
    journal=(Growth and International Trade: An Introduction to the
    Overlapping Generations Approach),
    pages=(1--27),
    year=(2021),
    publisher=(Springer)
}
```

Figure 1: Bibliography format

As shown in Figure 1, you can refer to figures by their label.

#### 4 Tables

Tables can be created using the tabular environment. Here's an example:

Name	Age
Alice	25
$\operatorname{Bob}$	30
Charlie	28

Table 1: Example table

You can reference tables by their label, just like figures. Table 1 shows an example table.

## 5 Conclusion

This concludes our sample LaTeX document. It demonstrates how to include math equations, referencing, figures, and tables. Happy LaTeXing!

## References

Simon, C. P. and Blume, L. (1994). *Mathematics for economists*. Norton New York

Sydsæter, K., Hammond, P., Seierstad, A., and Strom, A. (2008). Further mathematics for economic analysis. Pearson education.