ECO-4444 | Independent Study

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Calculus for Federal Taxes

DIRECTIONS OF RESEARCH

- Explore current tax code for federal income and capital gains.
- Highlight distortions in both actions by citizens and taxes collected due to issues of discontinuity in tax rate schedules based on income and time.
- Propose a new model focused on continuity to resolve these issues.
- Compare new model results with the current tax system, using income distribution data and crafting anomaly examples.

DEPTH

- Acquire primary resources of income distribution data (FED, FRED, Bureau of Labor Statistics, etc.).
- Review literature on the formation of income tax brackets and capital gain tax law.
- Review economists accounts of distortions created by these discontinuities.
- Combine literature review with results of direction research.
- Create explicit functions for federal income and capital gains taxes.
- Model these functions and overlay them with the current system.
- Compare the new system with the old system.
- *Write a final paper with these findings, the purpose, and applications of the new model vs. the current system.*
- *Submit paper to research journal.*

LIMITS AND RAMIFICATIONS

- Cannot empirically test how citizens would actually respond to the proposed model.
- Political considerations would limit the public favor of the recommendations because elegance is not as likeable as simplicity.
- Statistical analysis of the discontinuity in the current tax system is limited to reading the work of others, rather than analyzing myself through econometrics.

RAMIFICATIONS

- This fresh model could open progress on the tax code that considers what we as citizens value in taxation, how the simplicity of the current bracket system actually causes complex issues, and a more elegant although seemingly complex model would lead to more simple, consistent, and comprehensible behavior.

METHOD AND MEETINGS

- I will remain in regular contact with Dr. Hall through email, a shared dedicated channel on the High Point University Economics Association Slack, along with meeting every Tuesday morning.