

Economics of Conflict

ECO4193 (fall 2023)

University of Ottawa

Mondays and Wednesdays 17:30-18:50

Room FSS 1005

Professor:

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Office hours: Wednesdays 10am-noon
(with prior email notification)

*This course is offered in person only, including all evaluations.
No exception can be granted.*

Prerequisites

Before taking this course, the student must have successfully completed **ECO2145 Microeconomic Theory II** (or an equivalent approved by the Faculty). No exception can be granted. It is the student's responsibility to deregister from this course if they do not satisfy this requirement.

Description

In economics, one typically finds that a good can be acquired through either *production* or *exchange*. In doing so, forceful *appropriation* is being ignored as a third important option. In a large stroke, explicit consideration of this third option is the subject of the economics of conflict.

There is appropriation when A obtains a benefit from B that is *not* the outcome of a *free choice* by the parties. If B resists, conflict may result. The occurrence, intensity and nature of a conflict depends on a host of factors, such as the value of the contested benefit, the laws, norms, and customs of a society, the state's protection services, the technology of production, the technology and cost of private protection, grievances in the face of perceived injustices, etc. Sometimes, those factors combine in such a way that people see the use of destruction and violence as justified or profitable options. Uncovering the role played by those factors is one main object of conflict economics.

Understanding conflict is understanding peace. This course may just as well have been entitled *Economic Analysis of Peace*. Indeed, as economists we are ultimately concerned about people's welfare, which not only depends on whether there is peace or conflict but also about how scarce resources are being allocated. Very often, people choose in the *shadow of conflict* as they try to avoid conflict. This also affects the allocation of scarce resources. Under especially dark conflict shadows, peaceful equilibria may come at a large cost in the form of economic stagnation, poverty, environmental degradation, etc. Those are also the sort of issues that will be covered in this course.

As a sub-discipline of economics, conflict economics preserves the fundamental assumption that agents are (mostly) rational actors who make decisions in order to achieve a goal for which they accord value. The tools of analysis being used are therefore no different from

other fields in economics, as we will alternate between theoretical and empirical work. *Game theory* is a particularly useful analytical tool, given that the parties to a conflict are naturally expected to behave strategically. Empirical studies will often be based on econometric methods for which a brief introduction will be provided.

Learning outcomes

From a conceptual point of view, the student will better appreciate the importance of appropriation issues in explaining the (mis)allocation of resources in the economy. From a methodological point of view, they will acquire a better understanding of how and why theoretical and empirical analysis must complement each other for the advancement of knowledge. They will further learn about the practical usefulness of econometric analysis in the social sciences. In the process, the student will learn how to structure an empirical analysis.

Evaluation

Although a course in economics can be somewhat technical, it remains a course in economics as a **social science**. Much emphasis is thus put on interpreting the results and discussing their implications for society and economic policy. **The evaluations will reflect this.**

The ability to interpret and discuss results can only be properly achieved through long-term maturation of ideas. Students are thus expected to be up-to-date in their weekly material. To this end, exercises and/or readings will be assigned each week and be the subject of a quiz on the following week.

Quizzes (50%) Each Wednesday, the class will begin with a twenty-minute quiz. Each quiz counts for 6.25%. Unless otherwise noted, it will cover the material from the previous *two* weeks (not including the Monday of the same week). There will be a total of ten quizzes but only the student's best *eight* will be used for the final mark. This means that a student can miss two quizzes and still get full marks. However, if you miss three quizzes or more because of a medical issue or other reason (as per Faculty rule), then you will need to provide a medical note justifying all absences, not just the third or fourth one. No quiz will be given on September 6 and September 13.

Final exam (50%) The final exam will count for 50%. Its date will be determined by the Faculty.

The final exam and all quizzes will take place in a classroom.
No online evaluation can be provided.

Attendance

Regular attendance is of course expected. Students who miss more than three classes (with-

out justification as per Faculty rules) will waive the right to meet at office hours and request any sort of exception.

Course notes and material

There is no textbook for this course. The study material is based on class notes and articles assigned to read.

List of themes and their sequence¹

1. Introduction

What is conflict? ◦ Types of conflicts ◦ How can economics contribute to our understanding? ◦ Production, exchange and appropriation ◦ Replicability and appropriability

References: (Hotte 2013)(Danielsen 1975)(Coase 1937)

2. Property rights and conflict

A) Basic concepts

◦ On the concept of property rights ◦ Ownership rights in the French Civil Code ◦ An example: The open-access fishery (Gordon 1954) ◦ The Coase theorem ◦ The smoking factory example ◦ The pigovian tax (non)solution ◦ The noisy airport example ◦ Bargaining and transaction costs ◦ Property rights as exclusion ◦ A synthesis: Exclusion, coercion and transaction costs

B) Games and strategic behavior

◦ The two goat herder free access model (Cheung 1970) ◦ The Nash equilibrium concept ◦ The reaction function ◦ The n goat herder free access model (Dasgupta and Heal 1979) ◦ Common property resources, transaction costs and coercion (Ostrom 1990;2000)

References: Gordon 1954; Coase 1960; Cheung 1970; Dasgupta and Heal (1979); Penner 2000; Umbeck 1981; Hotte (2005); Ostrom (1990;2000)

3. Empirical paper 1: An introduction to empirical work with econometric tools

Banking on the Household: Gender Bargaining and Other Crime Stories, unpublished manuscript, Louis Hotte, 2017

How to interpret a regression table ◦ A typical format for an empirical paper ◦ General questions - Methodology - Theoretical arguments - Context - The data - Summary statistics - Dependent and explanatory variables - Empirical strategy - Main results - Regression tables - Robustness checks - Conclusion

References: Hotte (2017); Meier et Rauch (2000; Appendice)

4. Empirical paper 2: Mining and Conflict in Colombia

Land Conflicts in the Wake of Gold Mining Expansion: A Study on Forced Displacement and Murders of Social Leaders, Work-in-progress, Paola Jaimes (PhD student), 2023

References: Paola Jaimes (2023)

¹Themes, references, readings and their sequence are subject to change.

5. Three microeconomic models of conflict
 - A) A barebones model of conflict**
 - Representation of a technology of conflict
 - Reaction functions with fighting efforts
 - Concept of fighting intensity
 - B) A model of conflict with natural resource use (Hotte 2001)**
 - Equilibrium concept with sequential moves
 - Asymmetric fighting productivities
 - Un-sustainable resource use as a substitute for conflict
 - C) A model of conflict with production (Hirshleifer 1995)**
 - Productive vs non-productive activities
 - Decisiveness of the conflict technology
 - The paradox of power

References: (Hirshleifer 1995)(Skaperdas 1996)(Hotte 2001)(Hotte 2013)
6. **Empirical paper 3:** Ethnic violence and cultural norms in Germany
Persecution Perpetuated: The Medieval Origins of Anti-Semitic Violence in Nazi Germany, Quarterly Journal of Economics, Voigtländer and Voth, 2012
7. Reasons for interstate wars
 - (a) A survey
References: Levy (2011); Fearon (1995);
 - (b) Models of bargaining failures
 - The settlement opportunity set
 - The potential settlement region
 - Asymmetric information
 - Commitment problems
 - Indivisibilities
 - Benevolence
 - Political bias**References:** ; Kennan and Wilson (1993); Jackson and Morelli (2007); Acemoglu and Robinson (2001, 2006); Esteban and Ray (2001); Fearon (1995); Skaperdas (2006); Powell (2002, 2006), Hirshleifer (1995), Blattman (2010)
8. **Empirical paper 4:** Natural resources and crime
Resource booms and crime: Evidence from oil and gas production in Colorado, Resource and Energy Economics, Gourley and Madonia, 2018
 References: Gourley and Madonia (2018); James and Smith (2017)
9. Trade, property rights, and conflict
 - A trade model with ill-defined property rights
 - Institutions and the apparent comparative advantage
 - A trade model with endogenous property rights**References:** Chichilnisky (1994); Brander and Taylor (1997); Hotte, Long and Tian (2000); Garfinkel, Skaperdas and Syropoulos (2008); Hotte (2013)
10. State creation, war and coercion
 - War making and the evolution of state forms
 - The state as a monopoly of violence
 - Protection as shelter or racket
 - The European history of state creation
 - Lessons for today's developing world
 References: Tilly (1985)

References

- Acemoglu, D., and J. A. Robinson (2001) 'A theory of political transitions.' *American Economic Review* 91, 938–963
- Acemoglu, Daron, and James S. Robinson (2006) *Economic Origins of Dictatorship and Democracy* (New York, NY, USA: Cambridge University Press)
- Anderton, Charles H., and John R. Carter (2009) *Principles of conflict Economics* (Cambridge University Press)
- Blattman, Christopher, and Edward Miguel (2010) 'Civil war.' *Journal of Economic Literature* 48, 3–57
- Brander, James A., and M. Scott Taylor (1997) 'International trade and open access renewable resources: The small open economy case.' *Canadian Journal of Economics* XXX(3), 526–552
- Cheung, Steven N. S. (1970) 'The structure of a contract and the theory of a non-exclusive resource.' *Journal of Law and Economics* XIII, 45–70
- Chichilnisky, Graciela (1994) 'North-south trade and the global environment.' *The American Economic Review* 84(4), 851–874
- Coase, R. H. (1960) 'The problem of social cost.' *The Journal of Law and Economics* III, 1–44
- Coase, R.H. (1937) 'The nature of the firm.' *Economica* pp. 386–405
- Danielsen, Albert L. (1975) 'A theory of exchange, philanthropy and appropriation.' *Public Choice* 24, 13–26
- Dasgupta, P. S., and G. M. Heal (1979) *Economic Theory and Exhaustible Resources* (Wiley, England: James Nisbet and Co. Ltd and Cambridge University Press)
- Esteban, Joan, and Debraj Ray (2001) 'Social decisions rules are not immune to conflict.' *Economics of Governance* 2, 59–67
- Fearon, James D. (1995) 'Rationalist explanations for war.' *International Organization* 49, 379–414
- Garfinkel, Michelle R., Stergios Skaperdas, and Constantinos Syropoulos (2008) 'Globalization and domestic conflict.' *Journal of International Economics* 76, 296–308
- Gordon, H. Scott (1954) 'The economic theory of a common-property resource: The fishery.' *Journal of Political Economy* LXII, 124–142
- Gourley, Patrick, and Greg Madonia (2018) 'Resource booms and crime: Evidence from oil and gas production in Colorado.' *Resource and Energy Economics* 54, 37–52

- Hirshleifer, Jack (1995) 'Theorizing about conflict.' In *Handbook of defense economics*, ed. K. Hartley and T. Sandler (Elsevier Science) chapter 7, pp. 165–88
- Hotte, Louis (2001) 'Conflicts over property rights and natural-resource exploitation at the frontier.' *Journal of Development Economics* 66, 1–21
- (2005) 'Natural-resource exploitation with costly enforcement of property rights.' *Oxford Economic Papers* 57(3), 497–521
- (2013) 'Environmental conflict and natural resources.' In *Encyclopedia of Energy, Natural Resources and Environmental Economics*, ed. Jason Shogren (Oxford: Elsevier Science) pp. 261–270
- (2017) 'Banking on the household: Gender bargaining and other crime stories.' Manuscript
- Hotte, Louis, Ngo Van Long, and Huilan Tian (2000) 'International trade with endogenous enforcement of property rights.' *Journal of Development Economics* 62, 25–54
- Jackson, Matthew O., and Massimo Morelli (2007) 'Political bias and war.' *American Economic Review* 97, 1353–1373
- Jaimes, Paola (2023) 'Land conflicts in the wake of gold mining expansion: A study on forced displacement and murders of social leaders'
- James, Alexander, and Brock Smith (2017) 'There will be blood: Crime rates in shale-rich u.s. counties.' *Journal of Environmental Economics and Management* 84, 125–152
- Kennan, John, and Robert Wilson (1993) 'Bargaining with private information.' *Journal of Economic Literature* 31, 45–104
- Levy, Jack S. (2011) 'Theories and causes of war.' In *The Handbook on the Political Economy of War*, ed. Christopher J. Coyne and Rachel L. Mathers (Cheltenham, UK: Edward Elgar) pp. 13–33
- Meier, Gerald M., and James E. Rauch (2000) *Leading Issues in Economic Development*, seventh ed. (Oxford, U.K.: Oxford University Press)
- Ostrom, Elinor (1990) *Governing the Commons: The evolution of institutions for collective action* (Cambridge, England: Cambridge University Press)
- Ostrom, Elinor (2000) 'Collective action and the evolution of social norms.' *Journal of Economic Perspectives* 14, 137–158
- Penner, James (2000) *The Idea of Property in Law* (Oxford University Press)
- Powell, Robert (2002) 'Bargaining theory and international conflict.' *Annual Review of Political Science* 5, 1–30

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- Skaperdas, Stergios (1996) ‘Contest success functions.’ *Economic Theory* 7, 283–290
- Skaperdas, Stergios (2006) ‘Bargaining versus fighting.’ *Defence and Peace Economics* 17, 657–676
- Tilly, Charles (1985) ‘War making and state making as organized crime.’ In *Bringing the State Back In*, ed. Peter B. Evans, Dietrich Rueschemeyer, and Theda Skocpol (Cambridge University Press) chapter 11
- Umbeck, J. R. (1981) ‘Might makes rights: A theory of the formation and initial distribution of property rights.’ *Economic Inquiry* 19(1), 38–59
- Voigtländer, Nico, and Hans-Joachim Voth (2012) ‘Persecution perpetuated: The medieval origins of anti-semitic violence in nazi germany.’ *Quarterly Journal of Economics* 127(3), 1339–1392

Policy on the EIN grade (incomplete)

In all economics courses, students who fail to complete work (either a single piece of work or a combination of work) worth a total of 25% or more of the final grade will receive a grade of EIN in the course. The EIN grade is equivalent to a failure mark (F). See Regulation A-3 (<https://www.uottawa.ca/about-us/policies-regulations/academic-regulations/a-3-grading-system>) for details. Please note that a denied request for a deferral may therefore lead to failing the course.

Missed exams and requests for deferral

An absence from an evaluation that is not excused will result in a mark of 0. Students can ask to be excused from attending an exam/test or to write an exam/test/assignment at a later date. To do so, they must complete and submit online a request for deferral form, along with a medical certificate and any other supporting documents within five working days of the evaluation. Only one deferral can be granted per course. Students whose request is approved will be required to write a deferred evaluation, except where the professor offers a re-weighting scheme. (If available, such a scheme is described in this syllabus.) A deferred evaluation must be taken as soon as possible after the original date, but in any case no later than six (6) months after the end of the term (Academic Regulation A-8).

Deferred final examinations will take place on **Saturday, January 13th, 2024, at 9:00 a.m.**

Students should reflect deeply before requesting a deferred evaluation, since they can only receive one deferral per course. Students who are struggling to keep up with their schedule may find it worthwhile to withdraw from the course and take it again at a later date. In Fall 2023, the deadline to withdraw from this course (without financial reimbursement) is November 17th. For further information on withdrawing from the course, consult the link <https://www.uottawa.ca/course-enrolment/withdrawing-from-a-course>.

Exam conflicts

Any conflict with a midterm exam schedule should be reported to the Professor at the beginning of the term. This request is especially applicable to the type 3 conflict (two in-class exams back-to-back) for students with special learning needs.

Any conflict with a final exam schedule should be reported to the Faculty's undergraduate office as soon as the final examination schedule is released.

Intellectual Property Rights of Course Content

If you would like clarification regarding the intellectual property right of course content, please visit the Copyright Office webpage or consult your professor.

Institutional Policies and Academic Regulations

It is very important to know the institutional policies and academic regulations associated with your academic success. This information is available on the Faculty of Social Sciences website, on the Student Hub webpage under the "Institutional policies and academic regulations" tab.

Academic Fraud Regulations

If you would like clarification regarding academic integrity and misconduct, please consult Academic Regulation A-4 or consult your professor.

Academic Regulations A-1 on bilingualism at the University of Ottawa

Per Academic Regulation A-1 : “Except in programs and courses for which language is a requirement, all students have the right to produce their written work and to answer examination questions in the official language of their choice, regardless of the course’s language of instruction.”

Student help resources at uOttawa

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Getting help for students