

How to write an abstract

1. Introduction

What is an abstract?

An abstract is a concise summary of a larger document – thesis, essay, book, research report, journal publication, etc. – that highlights major points covered in the work, concisely describes the content and scope of the writing, identifies the methodology used, and identifies the findings, conclusions, or intended results.

Why are abstracts so important?

The practice of using keywords in an abstract is vital because of today's electronic information retrieval systems. Titles and abstracts are filed electronically, and keywords are put in electronic storage. When people search for information, they enter keywords related to the subject, and the computer prints out the titles of articles, papers, and reports containing those keywords. Thus, an abstract must contain keywords about what is essential in an article, paper, or report so that someone else can retrieve information from it.

A well-written abstract helps others, who may not be studying in your discipline, understand the purpose and value of your work; therefore, it should be comprehensible on a basic level to the educated non-expert.

Types of abstracts

Two types of abstracts are typically used: descriptive abstracts and informative abstracts.

Descriptive Abstracts

- Tell readers what information the report, article, or paper contains.
- Include the purpose, methods, and scope of the report, article, or paper.
- Do **not** provide results, conclusions, or recommendations.
- Are always very short, usually under 100 words.
- Introduce the subject to readers, who must then read the report, article, or paper to find out the author's results, conclusions, or recommendations.

Informative Abstracts

- Communicate specific information from the report, article, or paper.
- Include the purpose, methods, and scope of the report, article, or paper.
- Provide the report, article, or paper's results, conclusions, and recommendations.
- Are short -- from a paragraph to a page or two, depending upon the length of the original work being abstracted. Usually informative abstracts are 10% or less of the length of the original piece.
- Allow readers to decide whether they want to read the report, article, or paper.

The abstract students are required to write for their theses is a type of *Informative Abstract*. Research abstracts (or working paper abstracts) are usually from **180** to **220** words. Dissertation abstract may be longer, up to **350** words. For your final exam, you are required to write a dissertation abstract of around **250** words.

Exercise 1. Look at the abstract samples below and answer the following answers.

- a. Which one is a descriptive abstract?
- b. Which one is an informative abstract?
- c. Which one is a research abstract?
- d. Which one is a dissertation abstract?

Discuss what features differentiate them.

1. Economics with Interacting Agents

Alan P. Kirman

This paper discusses economic models in which agents interact directly with each other rather than through the price system as in the standard general equilibrium model. It is suggested that the relationship between micro and macro behavior is very different than that in the standard model and that the aggregate phenomena that can arise are rich. The models considered include ones with global interaction in which all agents can interact with each other and ones in which agents can only interact with their immediate neighbors. Both static and dynamic models are considered and the latter includes the class of evolutionary economic models.

2. Economics of Organizing Product Development in the Extended Enterprise

Paulo Gomes

Firms are increasingly facing the challenge of organizing product development effort in extended settings, i.e., across the boundaries of several firms. This dissertation looks at the implications of this trend to the development cost structure, in particular to the coordination cost.

The theoretical framework is based on transaction cost economics, design theory and organizational learning. Building on this literature, the dissertation addresses the following questions: what are the indicators of coordination costs for different types of development tasks? Do these help explain the task sourcing decision? And, do firms learn how to coordinate development tasks?

Three empirical models were developed to address these questions. The first model proposes that a set of task attributes derived from transaction cost economics, including a proxy for asset specificity, affect both the task sourcing decision and its coordination cost. Then, I test for differences in the coordination cost of 'generation' and 'test' types of tasks, a classic distinction in design theory. Finally, the dissertation tests a 'learning model' for development task coordination effort. The data was collected from 11 software development projects conducted at a global firm in the medical device industry. The total sample size consists of 71 system development tasks.

The main findings were as follows. The proxy for asset specificity, internal problem solving, is a significant predictor of both the likelihood of outsourcing a development task and the associated coordination cost. Moreover, the impact of internal problem solving on the coordination cost is significantly larger for outsourced tasks. The results also reveal asymmetries in the coordination cost for generation and test tasks. Finally, I find evidence that projects were able to reduce coordination effort over time.

The findings of the dissertation should be useful in several ways. Recognizing indicators of coordination cost and the asymmetric nature of coordination costs for different types of tasks may provide a more principled approach for organizing extended product development. By systematically exploring the ability to reduce coordination effort through competence

development and management of the task dependence structure, we may be able to discover more efficient ways for engaging external partners in development efforts.

3. Hurricane Katrina - Storm Stretches Refiners Past a Perilous Point

Jad Mouawad, *New York Times*, September 11, 2005, Page A27

This article discusses the impact of the storm on the country's oil refining capacity. At one point the article notes that the storm idled 5 percent of the refining capacity in the United States. It then quotes an analyst who comments that this is just 1 percent of world production, and that there is a world market.

Actually, for refined products, like gasoline and home heating oil, to a large extent the market is national or even regional. Many states have very specific rules on emissions of various pollutants. Refineries have to be set up to produce fuel that meets these requirements. In many cases, few, if any, foreign refiners will be set up to meet these standards. While they can change over time, at the moment foreign refiners may have little ability to meet U.S. demand for gasoline or other refined products.

It is also worth noting that major U.S. oil companies may benefit by deliberately keeping capacity off line. The loss of capacity will push up prices and possibly raise profits.

Some initial hints

Here are some other points to keep in mind when writing abstracts. Read and discuss them.

- If an abstract is read along with the title, do not repeat or rephrase the title. It will likely be read without the rest of the document, however, so make it complete enough to stand on its own.
- Your readers expect you to summarize your conclusions as well as your purpose, methods, and main findings. Emphasize the different points in proportion to the emphasis they receive in the body of the document.
- Do not refer in the abstract to information that is not in the document.
- Choose whether to write in first person style (“*I*” or “*We*”) or third person style (“*This dissertation shows...*”). If you prefer first person style, however, avoid using “we” unless your work has more than one author. Likewise, avoid beginning each sentence with “*I*”. In other words, third person style is always preferable.
- Do not exaggerate with passives. “*The study tested*” is better than “*It was tested by the study*”.
- If possible avoid trade names, acronyms, abbreviations, or symbols. You would need to explain them, and that takes too much room.
- Use keywords from the document. For published work, the abstract is “mined” for the words used to index the material--thus making it more likely someone will cite your article.
- Be coherent and cohesive (see *Cohesion* section below).

2. Structure of research and dissertation abstracts

A properly written abstract consists of the *Title* of the study and the *Body* of the abstract.

Title

Make your title concise, but also descriptive. However, if your abstract is the initial summary of your study (e.g., your dissertation), the title is **not** to be repeated.

Body of the abstract

The abstract is a very brief overview of your **entire** study. It tells the reader **what** you did, **why** you did it, **how** you did it, **what** you found, and **what** it means. The abstract is the chief way that scientists decide which research reports to read.

The following *Abstract Worksheet Form* is meant to help you prepare the first draft of your abstract. The sequence of sentences in the worksheet is ordered in a logical fashion, beginning with an introduction and proceeding to your methodology, results, discussion, and conclusions.

Think of the most important items that crystallize each part of your project. Leave out unimportant details. As a first draft (using the worksheet), write one or two sentences that summarize each section.

For your final draft, make sure the abstract “flows” logically (again, see below *Cohesion* section). Give it to friends to read. Ask them to tell you what they think you actually did and what you found. Revise as necessary.

Abstract Worksheet Form

Adapted from *How to Write an Abstract*, online at <http://www.okstate.edu/education/jshs/abstract.htm>

Project/Study Title - Keep it concise, but descriptive.

Body

1. *Topic sentence - Introduction* (optional)
Introduces the topic of the study and the reasons for its investigation.
 2. *Subject/Purpose*
What is this project about? Why is this project interesting or important?
 3. *Hypothesis/Prediction*
What did you think you would find? Why?
 4. *Approach/Methodology*
Briefly explain the approach/methodology you followed in order to test your prediction.
 5. *Findings/Discussion*
What did you find when you performed your test? And are your results consistent with your initial hypothesis and prediction? Why or why not?
 6. *Conclusion*
What do these results mean? Why should anyone become excited or interested in your findings?
-

Exercise 2.

(from *Writing up Research - The Abstract*, online at <http://www.languages.ait.ac.th/e21abst.htm>)

Here is an abstract from a published paper. It is 220 words long. Read it through looking for the main purpose of each sentence (for example, introduction, hypothesis/prediction, methodology, main findings, or conclusion).

- 1 Helwa, N. H. and Abdel Rehim, Z. S. (1997). Experimental Study of the Performance of
2 Solar Dryers with Pebble Beds. *Energy Sources*, 19, 579-591.
- 3 Major problems of the arid region are transportation of agricultural products and losses due
4 to spoilage of the products, especially in summer. This work presents the performance of a
5 solar drying system consisting of an air heater and a dryer chamber connected to a
6 greenhouse. The drying system is designed to dry a variety of agricultural products. The
7 effect of air mass flow rate on the drying process is studied. Composite pebbles, which are
8 constructed from cement and sand, are used to store energy for night operation. The
9 pebbles are placed at the bottom of the drying chamber and are charged during the drying
10 process itself. A separate test is done using a simulator, a packed bed storage unit, to find
11 the thermal characteristics of the pebbles during charging and discharging modes with
12 time. Accordingly, the packed bed is analysed using a heat transfer model with finite
13 difference technique described before and during the charging and discharging processes.
14 Graphs are presented that depict the thermal characteristics and performance of the pebble
15 beds and the drying patterns of different agricultural products. The results show that the
16 amount of energy stored in the pebbles depends on the air mass flow rate, the inlet air
17 temperature, and the properties of the storage materials. The composite pebbles can be used
18 efficiently as storing media.

3. Language Focus

A. Topic sentence - Introduction

The introductory sentence is optional. It allows the writer to focus the reader's attention on the topic of the study and the reasons why that subject is worth investigating.

Here are some examples:

- a. According to recent evidence, racial and ethnic discrimination in housing continues to be widespread. [This paper...]
- b. Central city households who subsidize local public sector goods through local property taxes have an incentive to flee from the city or to change the jurisdiction's boundary. [The authors focus on...]
- c. There is an active debate in transition economies about the extent to which employee and foreign ownership ought to be encouraged or discouraged in privatization, but empirical evidence is scarce. [This paper ...]
- d. Since 1978, China has experienced four episodes of economic fluctuations, during which the government used macro controls to restore stability. [This paper ...]

Exercise 3. Read the examples above and discuss the following points.

1. Are introductory statements general or specific?
2. Are they in first person style or third person style?
3. What tenses are used?

B. Subject/Purpose

- Third person style (see also *Appendix 1*):

The / This	paper article thesis dissertation	analyzes, investigates, explores, examines, re-examines, outlines, describes, shows, introduces, evaluates, considers ...
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- First person style (see also *Appendix 1*):

In this	paper article theses dissertation	I / we*	analyse, investigate, explore, examine, re-examine, outline, describe, show, introduce, evaluate, consider...
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Exercise 4. Read the sentences below and fill in the gaps with one of the following verbs:

develops - calls - argues - provides - looks - consider

- This paper _____ an axiomatic basis for a representation of personal preferences in which the utility of an act can be expressed as an expected value of conditional utilities of the act given any set of mutually exclusive and exhaustive scenarios, under a unique subjective probability.
- The authors _____ a broad class of situations where a society must choose from a finite set of alternatives.
- This paper _____ that the analysis of these games involves a key technical issue.
- This paper _____ at the effectiveness of the Environmental Protection Agency (EPA) in reducing the time that manufacturing plants spend in a state of non-compliance.
- This study _____ into question the established view that lack of information on clean-up cost functions represents a serious problem in designing an optimal charge on polluting waste discharged by N point sources.
- This paper _____ a model of corporate hierarchy in which workers accumulate heterogeneous human capital suitable for different positions within the hierarchy.

C. Hypothesis/Prediction

In an abstract, the founding hypothesis and related prediction can be expressed in several ways. They can also be included in the introductory sentence or in the Subject/Purpose statement. Read the following excerpts and notice how each author has expressed them.

* Only in case the authors are more than one.

1. Henry George (1839-1897) has left an intellectual legacy which is shrouded under a cloak of controversy. Unprofessional economists who focused attention on the single-tax proposal and condemned Henry George's teaching, root and branch, were hardly just to him ..." (Schumpeter 1954). This essay tries to do justice to Henry George from the point of view of economic theory and relevant economic practical questions in 1997. [...]
2. [...] Based on a brief theoretical outline, this paper deals with those two issues. It will be argued in favor of an anti-inflation policy by the ECB, based on monetary targets with securities repurchase transactions (repos) as the central instrument. Rediscount quotas, which should only be available for a market based interest rate, should play a secondary role. To secure and stabilize the need for base money, interest bearing minimum reserves should be held at the ECB, and the ECB should be able to offer banks with temporary liquidity needs collateralized credits for a penalty rate. [...]
3. [...] It is argued that updated preferences necessarily have one affine indifference curve but that other indifference curves are unrestricted. [...]
4. [...] While the model is consistent with some features in the data, we reject the hypothesis that factor markets worked perfectly and find support for the historian's intuition regarding the disproportionate impact of land inequality in the countryside. [...]
5. [...] The hypothesis examined is that the greater the investor's flexibility, the easier it is for him to change his portfolio depending on his results, the more willing he will be to accept risks. [...]

In *Appendix 3*, there are several examples of PhD Dissertation abstracts. Read them through and notice how other students have expressed their hypotheses and predictions.

Online exercise. Use the Web and a major search engine to look for what verbs and/or what adjectives collocate with the terms *hypothesis*, *theory*, *model*, *principle* (and their respective plurals).

See also *Appendix 1* for frequent patterns in the concordance of *model* and *framework*.

D. Approach/Methodology

Sometimes, the Approach/Methodology sentences are expressed in passive form.

Exercise 5. Read the excerpts below and underline all the passive verb forms.

1. The single tax proposal is looked at from the point of view of constitutional economics, and the wider applicability of Henry George's basic notions is emphasized
2. Analysis of data on incorporation and investment decisions, the relative sensitivity of the stock prices of firms with different asset mobility to political events, and the market for office space most strongly support hypotheses about credibility, adaption, and demand augmentation.
3. A model of farm marketing is developed for the period 1913-28 and is embedded in a general equilibrium model for the Soviet economy.
4. We test whether patterns of income inequality were consistent with the predictions of a market-clearing, neoclassical model linking land and labor endowment through factor markets to household income.
5. Building on the work of P. N. Courant (1978), the paper develops a housing search model and measures the cost of discrimination by its impact on the gain a household can achieve through housing search. The cost of discrimination is then calculated for a representative sample of households.

6. A discussion of changes in the organizational structure and legal environment surrounding gold production is followed by a description of state gold purchasing and storage activities.
7. In an application to US GDP, it is found that inferences about the nature of the trend in output are not robust to changes in the specification for short-run fluctuations.

Exercise 6. Complete each sentence below with the present tense, passive voice, of the verb in parentheses.

1. The Malmquist productivity index, constructed using nonparametric linear programming methods, _____ (to employ) for the relevant comparisons.
2. Characteristics of the incidence of employee and foreign ownership and associated firm performance _____ (to examine).
3. Respondents' stated preferences for attributes related to various electricity-generation scenarios _____ (to analyse) using a series of pairwise ratings.
4. In the standard case of "adverse-selection," a firm _____ (to show) to have an unbounded incentive to under-report marginal clean-up costs.
5. First the employment expectations of companies for 1997 and in the medium term _____ (to describe) for eastern and western Germany. This _____ (to follow) by analyses of the personnel inflows and outflows in the first half of 1996, in which the evaluation differentiates between enterprises with expanding employment, declining enterprises and stagnating enterprises.

Exercise 7. Transform the following sentences from passive into active starting with the phrase given.

1. The notion of civil society is initially considered in the light of intellectual history and differentiated into a number of constitutive concepts such as trust, commercial society, and a civil network of interpersonal relationships.

This article _____

2. A simple game-theoretic framework is applied to analyse international cooperation by focusing on the prisoner's dilemma on the one hand and bargaining in the Coasian sense on the other.

We _____

E. Findings/Discussion

Research findings can be communicated in a series of different ways. However, they are often introduced by the terms *result/results* or *findings*. See below how they collocate with verbs and adjectives (see also **Appendix 1** for further patterns in their collocation).

1. With verbs

The results findings	show, state, suggest, uncover, indicate, imply, provide...
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2. With adjectives

Main / partial / empirical	RESULT (are)	striking, contradictory different, consistent with
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Examples

1. The main result states that if the payoff functions are semicontinuous and strongly quasi-concave then an Epsilon-Nash equilibrium in pure strategies exists for positive Epsilon.
2. The results obtained through the estimation of a series of structural VAR models are consistent with this view and indicate also that deflation affected output mainly by increasing real wages.
3. The result holds for a large class of consistent and monotone rules, including the Constrained Equal Award, the Propositional Rule, and many other well known rules.

Results, however, are often supported by some *evidence* (in Italian, *prova/prove*).

1. [...] The evidence suggests that five price series exhibit stochastic trends, while the remaining six price series appear to be stationary around a deterministic trend.
2. [...] Furthermore, quantitative evidence is presented supporting the view that Federal Reserve monetary policy was constrained by international considerations.
3. [...] The authors find, on the contrary, consistent evidence that, first, resources went where the benefits to patients were greatest, and, second, resources were appropriately allocated in terms of their opportunity cost once provision exceeded certain thresholds.[...]
4. We provide new evidence on the effectiveness of disclosure requirements by examining firm behavior in response to disclosures of TRI emissions.

Online exercise. Use the Web and a major search engine to find other occurrences of the term *evidence* and discuss how and in what context it is used. Then check **Appendix 1** for further reference.

F. Conclusions

Read the following excerpts and analyse how conclusions are drawn and discussed.

1. In light of these results, we believe that efforts to eliminate SOES based on volatility considerations are unwarranted.
2. Analysis of the conditions that have to be met, illustrated with examples of attitudes and preferences within Europe, leads to the conclusion that we are unlikely to see the end of the nation state in the near future either in Europe or anywhere else.
3. The main conclusion of the paper is that the Italian depression, comparable to that of other major industrialized countries, was the combined result of a contraction in world demand and of the restrictive monetary policies imposed by the rules of the Gold Standard.
4. Through his careful discussion of the foreseeable problems, the author reaches the conclusion that Hong Kong is "useful pretty much the way it is" to China and doesn't see China disturbing the balance.
5. These conclusions for nine consultant specialties reinforce similar conclusions for two other services, whose allocations were made by central government (the Scottish Home and Health Department) and general medical practitioners.

4. Cohesion

Using Repetition and Reference Words to Emphasize Key Ideas in Your Writing

Cohesion is the glue that holds a piece of writing together. In other words, if a paper is cohesive, it sticks together from sentence to sentence and from paragraph to paragraph. Cohesive devices certainly include **transitional words and phrases** (see below *Appendix 2*), such as *therefore*, *furthermore*, or *for instance*, that clarify for readers the relationships among ideas in a piece of writing. However, transitions aren't enough to make writing cohesive. Repetition of keywords and use of reference words are also needed for cohesion.

Repetition of Keywords

We can tie sentences or paragraphs together by repeating certain keywords from one sentence to the next or from one paragraph to the next. This repetition of keywords also helps to emphasize the main idea of a piece of writing.

For example, in the following paragraph, notice and how many times the words *owned* and *ownership* are repeated (underline them):

“Nobody owned any part of the land. Sotopo's father owned many cattle, and if the cows continued to produce calves, he might as well become the next chief. Old Grandmother owned the beautifully tanned animal skins she used as coverlets in winter. And Sotopo owned his polished hard-wood assegais. But the land belonged to the spirits who governed life; it existed forever, for everyone, and was apportioned temporarily according to the dictates of the tribal chief and senior headman. Sotopo's father occupied the hillside for the time being, and when he died the older son could inherit the loan -- land, but no person or family ever acquired ownership.”

From *The Covenant* by James Michener.

By repeating the words *owned* and *ownership* throughout the paragraph, the writer has tied each sentence to each other and has clearly indicated what the main idea of the paragraph is. In this case, the main idea is *ownership* of something. And what exactly is being (or not being) *owned*? By repeating the word *land*, the author shows us that the entire main idea is *ownership of land*.

Use of Reference Words

Another way of tying sentences and paragraphs together involves using reference words that point back to an idea mentioned previously. Among the many reference words that can be used to tie one sentence to another or one paragraph to another are words like *this*, *these*, *those*, *such*, and *that*.

These reference words should not be used by themselves but should be combined with the important words and phrases from previous sentences or paragraphs. In the following paragraphs, we can see how reference words are used not only to tie sentences and paragraphs together, but also to emphasize the main idea. Underline all the transitional words and phrases and all the reference words you can find in the following paragraph.

Writing a paper is often difficult and many times rewarding. First, I don't always know what to write about, so I often need to research, talk to people, and think about what I know before I come up with a strong topic. In addition, writing a paper takes time and energy. Time is needed to select and narrow a topic, to generate information and structure ideas, to knock out draft after draft, and to edit for my usual typos and mechanical errors. Besides the time involved, energy (and lots of food to produce it) is needed so I can produce my best work. Although writing a paper is sometimes difficult, it can be very rewarding. I enjoy seeing words which say exactly what I want them to. I also feel proud when everything "clicks." Finally, knowing that I've done my best work and earned a good grade too are strong personal rewards.

Many words are repeated from one sentence to the next and from one paragraph to the next as well. Can you identify the main ideas of each paragraph based on the words that are often repeated?

5. Some final suggestions

- Write the abstract only when the document is finished. Abstracts written before then are just previews.
- If you are forced to write an abstract before the document is completed, think about its purpose and write a topic sentence. Keep in mind that you'll need to rewrite the abstract when the document is finished because it will no longer accurately reflect the contents of the document.
- Before starting the abstract, list your thoughts on the document. Group related items together. Prioritise the list and put the most important group first. The first few groups form the core of the topic sentence. The rest lead to supporting sentences.
- If you can't create a topic sentence (i.e. the introductory statement), write the supporting sentences first. The topic sentence may then become obvious.
- Write for an audience not necessarily up to speed in your subject area. This is important because you never know who will read your abstract.
- Choose acronyms, abbreviations, and technical terms carefully as they may confuse many readers.
- Define the scope of the project in the abstract.
- Reread your abstract after several days have passed. Remove all superfluous information.

Appendix 1 - Concordances

Frequent patterns in the concordance of *paper* (cf. MB Abstracts)

In this paper we provide a ranking of European economics institutions
We se a unique enterprise level random survey of 150 firms
We study the effect of certain types of public compulsory insurance
We present a summary of recent microeconomic results
We study renegotiation in procurement auctions
We develop a stochastic dynamic general equilibrium model
We consider the organisation of international antitrust as an issue

The authors examine whether homeownership benefits children
The author investigates J.C. Harsanyi's utilitarianism aggregation
The authors show that a non-cooperative game with a finite set of
The authors analyse the impact of uncertainty on the level and
The author considers the principal multiple agents problem
The authors use an implementation approach to see whether
The authors test the effectiveness of the arbitrage pricing
The authors study a large market in which sellers compete
The authors question the validity of using TFP growth rates as a

This paper reviews the literature discussing historical patterns in defense
This paper reviews estimators for multiple regime selection models, which in
This paper reviews and appraises UNCED and outlines some of the developments
The paper reviews some recent theoretical contributions on the modelization
This paper reviews existing studies of the role of emerging market business
The paper reviews the main findings on individual decision making under

This paper summarises a few useful methods, and shows how they can be
suggests a plausible microstructural connection between

This paper reports new estimates of the elasticity of substitution between
This paper reports an experiment designed to separate these considerations,
This paper reports on an empirical examination of this proposition, by linking
This paper reports the first analysis of the structure of Russian cities after 70
This paper reports quarterly ex ante forecasts of macroeconomic activity for

This paper reexamines the popular assumption that real estate commissions
This paper reexamines the empirical evidence on the degree of spatial spillover
This paper revisits the proposal to use options in corporate bankruptcy that

This paper reconciles the different results by showing that they depend in large
This paper reconciles some conflicting interpretations of recent literature on

This paper studies a broad class of infinite-horizon economies that are
A large class of bounded-rationality, probabilistic learning
The welfare effect of foreign investment into an economy
The effects of regional integration on the location of labour

The simplest formulation of the general screening model
 Three price-based policies for solid waste reduction: (1)
 The impact of profit sharing and bonus payment on
 The relationship between the degree of regional integration
 Whether the price charged to a competitor for the use of
 The provision of environmental quality in
 The intertemporal allocation of funds through demand
 The implications of buyer's liquidity constraints
 Coverage extension in a simple general equilibrium model

the paper shows that integration may turn an honest country into an evading
 This paper shows how the model can be solved and the optimal escape clause
 This paper shows generic determinacy of equilibria for sender-receiver cheap-
 This paper shows that if, the consumption good production function is alpha-
 this paper shows that it can be characterized in terms of restrictions on play
 This paper shows that asymmetric information between lenders and borrower
 This paper shows that additive purchasing power parity (PPP) methods, such

This paper starts by discussing the goals that should guide the design of

This paper uses a dynamic agency model to offer a resolution of the
 A precise formalism to state and prove the following result:
 Census evidence from mid-nineteenth century France to investi-
 Uses the Panel Study of Income Dynamics to provide some of
 A simultaneous model of census tract population and employment
 Firm level data to examine the effectiveness of agreements

This paper provides a motivation for public involvement in internal improvement
 This paper provides evidence that the common factor restrictions (CFR) play
 this paper provides an introduction and overview on the economics of international
 This paper provides a utility-theoretic interpretation of "Don't-Know" (DK)
 This paper provides an axiomatic basis for a representation of personal prefer
 The paper provides a theoretical insight into the causes of a recession and a
 This paper provides a theoretical model of waste management which is dynamic
 This paper provides a theory of diversification and financial structure of banks
 This paper provides a simple model to discuss the financing of network

The paper proposes a new method for computing these probabilities, and
 This paper proposes a signaling model that offers a new perspective on why
 This paper proposes a conceptual framework to investigate the effects of

This paper presents an approach to such multilateral bargaining problems. A
 This paper presents a model of the beef sector of the Greek economy.
 The paper presents an overview of state trading activities in Russia in light of
 The paper presents a new social accounting matrix (SAM) for Argentina and
 This paper presents a data system that gives consistent, complete and detailed
 This paper presents a general equilibrium model of a multi-city economy where

The paper presents a model which allows identification of long-run response
 This paper presents a simple game-theoretic model in which players decide
 This paper presents new evidence concerning the importance of poor relief as

This paper presents the first attempt to explore recent changes in office-com
 The following paper presents a simple neoclassical growth model where corruption is
 This paper presents an amenity-based theory of location by income.
 This paper presents the results of a political stock market in the Netherlands
 This paper presents a simple model of the links between education, democracy
 This paper presents an extension of the Alesina and Drazen (1991). American

This paper offers a model of the allocation of funds in Chinese state-owned
 the paper offers insights into the transition from a socialist economy into a
 The paper offers a refined version of the procedure, and it also responds to
 This paper offers a counter-argument to Friedman's (In: Essays in Positive
 This paper offers a short survey of recent contributions about the information-
 This paper offers an alternative analysis that relates voting outcomes to the

The main conclusion of the paper is that the Italian depression, comparable to that of other

The main finding of the paper is that the desirability of an electoral area between two

The hypothesis examined in this paper is that the greater the investor's flexibility, the easier it is for

The aim of this paper is to evaluate whether structural change is a key element in acco

The contribution of this paper is to identify the presence of a profit-sharing system and an infor

The purpose of this paper is to consider what determines the differences between the combi

The purpose of this paper is to consider the effect of the composition of economic activity o

The objective of this paper is threefold. First, to estimate the productivity performances realiz

A further distinguishing aspect of the paper is its attempt to incorporate the impact of unobservable

The purpose of the paper is to reconcile the willingness to pay technique as a means of coll

The novelty of this paper is twofold. First, it defines a range of competition policy implemen

The purpose of this paper is to assess the importance of spatial variability in physical param

The aim of this paper is to construct theoretical models which help to shed light on the

The purpose of this paper is to explain empirical observations concerning the impact of exch

The objective of this paper is to use input-output analysis to examine the resource allocation

This paper investigates the empirical significance of underwriter reputation ca
 This paper investigates the knowledge that people have of the spatial distribu
 The paper investigates one aspect of party governance, namely the allocatio
 This paper investigates the relationship between agglomeration and specializ
 This paper investigates the impact on company behaviour of increases in fina
 The paper investigates the optimal provision of public goods in the presence
 This paper investigates institutional reasons for the soft-budget constraint pro
 This paper investigates convergence for a group of seven countries during the
 The paper investigates the impact of financial integration on asset return, ris

This paper explores **the possibility** of using the classical concept of 'civil soci

This paper explores **the hypothesis** that high tax rates can distort the decisio

This paper explores two sets of potential determinants of this decision. One

this paper explores **the connections between** the distribution of land, factor

This paper explores **some relationships between** promotion of competition an

The paper explains **why** bank loans and grants coexist with self-financing, w

This paper examines **the effect** of the MFC rules adopted by Medicaid on bot

This paper examines **the quantitative effects** of the transitional system of value

This paper examines the intertemporal optimal consumption and investment
This paper examines an evolutionary model in which the primary source of
This paper examines the access of small private-sector firms in Hungary to
This paper examines **the relationship between** community-level exposure to a
This paper examines issues that senior human resource management execu
The paper examines a local public goods economy where individuals' tastes
This paper examines **the effects** of age, occupation, population size of place
The paper examines a large population analog of fictitious play in which play
This paper examines **how** profit maximizing fishers respond to different types
This paper examines **incentive and valuation effects** of debt financing on land
This paper examines some general notions relating to the comparison of Cou
This paper examines **how** a public wastewater treatment plant balances obje
This paper examines the empirical validity of this explanation using data on o
this paper examines to what extent licence contracts can internalize the bus
This paper examines **the impact** of the various reform measures on the produ
This paper examines **the hypothesis** of Harold Innis (1894-1952) that there is
this paper examines **the roles** of transportation policy and demographic chan
This paper examines the spatial evolution of computers across 317 metro are
This paper examines **the implications** of tax evasion for fiscal competition an
This paper examines **the argument that** the availability of collateral rules out
This paper examines **the effects** on technology transfer and spillovers derivin
This paper examines **the consequences** of falling transport costs for intermed
This paper examines **the evolution** of the role of income distribution in the pro
This paper examines **how** the presence of a non-negligible fraction of reciproc

This paper discusses some analytical and practical **questions raised by** MCI
This paper discusses **the structure of** the individual AMT and examines the lo
This short paper discusses **recent insights of** multitask agency theory. It considers
The paper discusses **the history of** the plans beginning in the Soviet period, t
This paper discusses **some problems posed by** foreign currency debt for em

This paper develops an estimable **model** of recreation behavior in which the r
This paper develops an econometric **model** that incorporates all three compo
the paper develops a housing search **model** and measures the cost of discri
This paper develops a general-equilibrium model of a system of core-peripher
This paper develops a positive theory explaining pollution tax policy outcome
This paper develops a model of price determination in insurance markets. Ins
The paper develops conditions under which clusters of activity emerge. Auth
This paper develops an analytical framework to assess these effects. Circum
This paper develops a model of regulated open access resource exploitation.
This paper develops and discusses a two-sector general equilibrium growth
This paper develops a model of corporate hierarchy in which workers accumu
This paper develops a model of the choice between bank and market finance
This paper develops a dynamically consistent model of search, matching and
This paper develops a particular technique for extracting market expectations
This paper develops an interpretation of the Asian meltdown focused on mora
This paper develops a model of an unregulated banking system based around

This paper deals with the problem by specifying an endogenous regime-switch
This paper deals with company expectations for 1997 with regard to employment
this paper deals with those two issues. It will be argued in favour of an anti-inf

This paper considers how cooperative solutions to games of sharing fish resources
This paper considers the 'weak announcement proofness' criterion of S. A. M
the paper considers dynamic allocation in an altruistic overlapping generatio
This paper considers model worlds in which there is a continuum of individual
this paper considers Australia's post-July 1997 regulatory regime for telecom
The paper considers international per capita output and its growth using a pa
This paper considers the optimal selling mechanism for complementary item
The paper considers economic processes that may lead to the consolidation
This paper considers a school choice plan, open enrollment, that allows stud
This paper considers interjurisdictional tax competition in a two-period model
This paper considers the implications of the decision of the Australian Industr
This paper considers a smooth and noisy version of the statistical prediction
This paper considers a fixed normal-form game played among populations of
This paper considers why firms often ban monetary exchange between their
This paper considers bidding behavior in a repeated procurement auction sett

The paper concludes by examining welfare issues. This paper examines ho
The paper concludes by explaining the relationship between the options appr

This paper compares Bertrand and Cournot equilibria in a differentiated duopo
This paper compares four equilibrium business cycle models with increasing
This paper compares the two societies which have encouraged the study of e
This paper combines statistical with economic equilibrium analysis in the co

This paper attempts to show how the International Bank for Reconstruction a
This paper attempts an analysis of the impact of migration on the scale and
The paper attempts to reconcile some views on the Piccione-Rubinstein abs

This paper argues that the analysis of these games involves a key technical i
This paper argues that successful states in the ancient world depended on th
This paper argues that while both technological opportunity and appropriabilit
This paper argues that the way fiscal redistribution has managed to countera
This paper argues that the sign of external effects of coalition formation provi
The paper argues that in centrist parties, the high congruence of interest bet
This paper argues that risk is related to long-run volatility of income and there
This paper argues that the liberalisation of foreign direct investment (FDI) has
This paper argues that unemployment insurance increases labor productivity

This paper analyzes competitive allocations of an exhaustible resource in an
the paper analyzes the role of crises and foreign assistance in bringing abo
The paper analyzes the highlights of the country's economic recovery, explor
The paper analyzes the effects of central bank independence on the position
The paper analyzes a simple discrete-time noncooperative coalitional barga
This paper analyzes the formation of trading groups in a bilateral market wher
This paper analyzes repeated games with private monitoring where in each p
This paper analyzes the relationship between unemployment duration and th
This paper analyzes D. Pearce's (1984) notion of extensive form rationalizabil
This paper analyzes the theory that Soviet farm marketing was so price unre
The paper analyzes the institutional conditions under which policymakers ca
This paper analyzes the effects of information on participation and time-of-us

This paper analyzes the deadweight loss of delegated auditing in a three-tier
 This paper analyzes the deadweight loss of delegated auditing in a three-tier
 This paper analyzes the optimal interest rate policy in currency crises. Firms
 The paper analyses the welfare effects of these taxes as well as to what ext
 This paper analyses the employment effects of revenue-neutral green tax refo
 . This paper analyses the impact of modifying this assumption by allowing for
 The paper analyses the switch from pay-as-you-go to funded pensions \bar{p} pen
 This paper analyses the decision by firms under Cournot oligopoly as to reco
 This paper analyses the factors determining the scale and location of Japane

this paper addresses the effect of rent control laws on two groups considere
 In addition, the paper addresses the effects of open enrollment on competition between
 this paper addresses the formalization and implications of the hypothesis th
 This paper addresses two general questions. First, what is the effect of mark

Purpose

The purpose of this paper is to consider what determines the differences between the combinations of financial and labour systems observed in some large market economies.

The purpose of this paper is to consider the effect of the composition of economic activity on innovation.

The purpose of this article is to explain the major changes made by the Basle Committee to its previous set of proposals (Basle Committee 1995) which were outlined in Hall 1995.

The purpose of the paper is to reconcile the willingness to pay technique as a means of collecting information, put forward in earlier studies, **with** the growth theoretical approach to social ac

The purpose of this study is to compare the performance of the public sector **with that of** the private sector for the various sub-sectors of manufacturing in Turkey.

The purpose of this paper is to assess the importance of spatial variability in physical parameters in the design of efficient pollution regulations.

The purpose of this paper is to explain empirical observations concerning the impact of exchange rate changes on industrial prices.

Framework

- 1 The optimum currency area analysis **is reexamined in a Mundell–Fleming framework** with local-currency pricing.
- 2 The authors consider Amartya Sen's familiar paradox of the Paretian liberal **in a framework where individual rights are represented as a game form.**
- 3 **Using a three-period framework,** we provide approximate solutions for optimal consumption choices
- 4 **This paper proposes a conceptual framework to investigate the effects of** central bank independence, of the degree of centralization of wage bargaining and of the interaction between those institutional variables, on real wages, unemployment and inflation,
- 5 The present paper **extends the standard framework to cover the case of** labour-augmenting technological progress.
- 6 This paper **develops an analytical framework to assess these effects.**
- 7 This paper **applies this framework to an exchange-rate escape clause** but is unable to solve his model given a triangular distribution of the supply shocks.
- 8 In order to understand **how self-fulfillment can be realized in a dynamic framework,** the authors investigate the relationship between

- 9 **Using this bargaining framework**, the paper analyzes the role of crises and foreign assistance in bringing about a settlement to the distributional conflict.
- 10 Nonconvexities are not fundamental **in this framework**.
- 11 **We use a framework that** nests an increasing returns model of economic geography featuring home market effects' with that of Heckscher-Ohlin.
- 12 **We introduce a framework that** has known models of oligopolistic competition with differentiated products (the circle, the logit, and the CES) as limit cases.
- 13 the pros and cons of these different approaches **within a coherent conceptual framework that applies** contract theory to the regulation of banking.
- 14 Conversely, it is shown **in a general framework** that any convex (thus progressive) tax function satisfies the principle of equal sacrifice.
- 15 o show that the most important predictions of the standard theory **hold in the general finite framework studied here**.
- 16 **In this framework**, prescription drug discounts appear to make some consumers (those in the managed care sector) better off and other consumers (those outside the managed care sector) worse off.
- 17 This paper analyzes the theory that Soviet farm marketing was so price unresponsive that rapid industrialization **within the framework of the NEP** would have been choked off by rising farm prices and inadequate sales.
- 18 We first point out that **the current framework of public international law** allows for wide discretion in the assertion of jurisdiction.
- 19 The analysis is carried out **in the framework of a general equilibrium model of a mixed economy with production**.
- 20 We find that **in this framework**, much of the scope for conflict disappears.
- 21 Although seldom modeled **outside the monopolistic competition framework**, market incompleteness and imperfect competition are central to the new growth theories.
- 22 **A simple game-theoretic framework is applied to analyse** international cooperation by focusing on the prisoner's dilemma on the one hand and bargaining in the Coasian sense on the other.
- 23 The model provides **a simple theoretical framework** in which the level of corruption as well as the effects of corruption on income, consumption, and growth are identifiable.
- 24 This is modeled **in the context of a political economy framework** in which social cohesion reduces wasteful rent seeking, and thus strengthens incentives for investment in human capital.
- 25 recently demonstrated a potential conflict between stability and efficiency **in this framework**.
- 26 **Based on the principal-agent framework** I develop a simple model of policy loans, which are granted by the government on non-market terms, to formalize this important banking phenomenon in both China and other developing countries.
- 27 **The model serves as the framework for an econometric study** of participation in the Conservation Reserve Program by Northeastern landowners.
- 28 **In the absence of an institutional framework** facilitating more dispersed ownership,
- 29 Studies of optimal growth **in a multisector framework** are generally addressed in reduced-form models, defined by an indirect utility function which summarizes the consumer's preferences and the technologies.
- 30 Instead, **an incentive framework** and legal environment should be created for the major nongovernment creditors to initiate restructuring.
- 31 The authors develop **this conceptual framework** and assess the findings from three studies of major commercial banks undergoing privatisation

Result in (Vb)

- 1 Ruggiero et al- (1997) argue that the 'Pythagorean Theorem' is an inappropriate basis for evaluating baseball managers and has an illogical arithmetic property that **can result in** a manager's evaluation being dependent upon the strength of his team.
- 2 Olewiler (1993 and 1995) describe a model in which some competition **can result in** suboptimal Nash equilibrium.
- 3 Rather, they **may result in** the formation of a megalopolis that consists of large core cities that are connected by an industrial belt, i.e., a continuum of cities, where economic activities are dispersed over an interval on the location space.
- 4 Violation of (ii) **may result in** cyclical behaviour of actions on each sample path.
- 5 Violation of (i) **may result in** an 'anything is possible' result: any stochastic process of actions is consistent with maximizing behaviour and Bayesian updating.
- 6 and how the soft-budget constraint problem creates conditions which **may result in** a financial crisis.
- 7 empirical finding suggests that the missing common factor restrictions **may result in** a quite different and perhaps misleading inference.
- 8 In our benchmark, small reductions in working time, starting from the laissez-faire equilibrium solution, **always result in** a small increase in the equilibrium employment, while larger reductions reduce employment.
- 9 a one unit increase in (subsidized) free parking **will result in** more than one additional parker, adding to neighbourhood spillovers.
- 10 says that the Board believes that this bill would improve the efficiency and competitiveness of the financial services industry and **result in** better service to consumers
- 11 programs converge to a fixed point or to a cycle of finite period, and hence **result in** the conservation of the resource.

As a result

- 1 some of these payments are made **purely as a result of asymmetry** in bargaining power and have nothing to do with
- 2 increased parcel sizes would be associated with lower unit prices **as a result of the concavity of the land price function.**
- 3 1.8 million defense-related jobs in the private sector would be lost **as a result of the actual and proposed cuts in spending**
- 4 yields the corresponding consistent bankruptcy rule **as a result of a unique outcome of Nash equilibria.**
- 5 **As a result**, international bodies such as the EU, ITU, OECD and WTO are
- 6 **As a result**, his finding undermines the credibility of the existing conclusion
- 7 **As a result**, Geary-Khamis comparisons tend to underestimate

Result (N)

- 1 **The main result** states that if the payoff functions are semicontinuous and strong
- 2 **The main result of this study is that** a financial constraint may serve as a discipli
- 3 **The main result obtained from the simulation** of the theoretical model is that, alt
- 4 **The main result is that** regional integration, in the form of a reduction in transport
- 5 **The main result is that** if we take a certain order is greater than or equal to
- 6 **The main result is** convergence with probability one to a fixed pattern of pure
- 7 **This result is consistent with** suggestions that agricultural districts where t
- 8 **This result is obtained by** using martingale techniques to reformulate the in
- 9 **This result is applied to** game theory to obtain a natural interpretation of co
- 10 **This result is shown to be consistent with** available evidence on working
- 11 **This result has implications for** empirical work. Moreover, this negative effect

13 However, **the fundamental reason for this result has nothing to do with** vintages; rather,
14 **This result follows the presumption that** women are poorly motivated by
15 An example shows that **this result does not carry over to** stationary stochastic environments.
16 Their result is robust to a variety of specification tests. **Using panel data**

15 The importance of the result is exemplified by **the graduate tax**.
16 The result holds for a large class of **consistent and monotone rules, including**
17 The result does not come from **an effect of instability on investment**.

Evidence

1. New evidence is presented that reaffirms **the predominance of local-currency pricing**
2. Evidence is found of **local spatial externalities between university research and**
3. Evidence is presented that **it was the Ford Motor Company that first develope**
4. Evidence is presented showing that **job-finding probabilities of the unemployed**
5. **First**, detailed historical evidence is studied. **Second**, Innis's ideas are translated into a **formal**
6. Evidence is lacking on the extent to which **groups facilitate rent-seeking or**
7. Evidence is then presented showing that **inflation is positively correlated with**
8. Evidence is also lacking on the extent to which **groups hamper the future deve**
9. **Furthermore**, quantitative evidence is presented supporting the view that **Federal Reserve**
10. Empirical evidence is found in favour of **a stable long-run M2 money demand function**

11. Evidence from **the French experience Thomas Piketty* CEPREMAP, 142 ru**
12. **It provides** evidence from **British and German data that is consistent with this view**.
13. Evidence from **industrial and developing countries: Francesco Giavazzi,**
14. **This paper uses** census evidence from **mid-nineteenth century France to investigate how and to**
15. **Insider power and wage setting in transition: Evidence from a panel of large Polish firms,**
16. **The effects of wage distortions on the transition: Theory and evidence from China Roger H.**
17. Our evidence supports the finding that **the social security system has substantially**
18. The evidence suggests that **migration between industry and agriculture was quite**
19. **I then argue that** the existing evidence suggests that **the performance effects of group affiliation**
20. The evidence suggests that **five price series exhibit stochastic trends, while the**
21. Empirical evidence strongly supports this finding **for industrialized countries and Europe**
22. Evidence shows that **firms build their market position by accumulating knowledge**
23. **However**, other evidence shows that **general training is financed by firms, especially in**
24. The evidence provides considerable support for **the diversity thesis but little support**
25. The evidence provides ways for **the People's Bank of China to improve the effective**
26. **There exists** evidence of a sizable shift of **elderly households away from homeownership**.
27. **The author finds** strong evidence of MAR (Marshall-arrow-Romer) (**own industry, or localization**)
28. **The model is consistent with** the empirical evidence of **SOEs restructuring in transition**
29. We find strong evidence of **significant dynamic own industry externalities for single plant firm**
30. Evidence of superior forecasting skill **would imply that U.S. monetary authorities**
31. **found to provide** strong evidence of local spillovers **at the state level. At the MSA level, a**
32. **and** little evidence of urbanization-Jacobs-knowledge type externalities. **Corporate plant**

33. **With individual country tests, we find evidence of stationarity in only four of the thirteen countries.**
34. **there is evidence of diminishing marginal productivity gains for both forms of ownership**
35. **present empirical evidence of significant spillovers from inward investment on technical progress**
36. **The economic literature provides empirical evidence of the existence of technological cartels,**

Collocates of *evidence*: empirical (*) , strong (**), recent, existing, systematic, experimental, direct, substantial, abstract, available, new, quantitative, historical.**

Given (A + given)

1. **We identify conditions such that for a given rationality parameter range the path of choices over**
2. **If households sort efficiently across locations, then at a given location families receive the same**
3. **Novel comparative statics show that debt value May increase for a given increase in asset volatility**
4. **as the probability of entry increases, expected profit for a given firm, conditional on entry, increases over some initial range.**
5. **to the event that a country joins the European Monetary Union at a given date.**
6. **signals a higher probability of joining EMU at a given date, or simply reflects improved**

(given + the/that)

7. **At equilibrium, each player uses appropriate choice probabilities, given those used by the others.**
8. **with private information about their types, choose utility-maximizing signals given these prices.**
9. **It also shows that, given the observed matrix of subsequent tenure transitions, these impacts**
o
10. **Given the meager amount of informal assistance available to them, most**
11. **Given the strong theoretical presumption that state enterprises are less efficient**
12. **The equilibrium is second best, given the imposition of the revenue constraint on the**
13. **Second, given that essential local inputs are vulnerable to monopolization and**
14. **Given that the cities within an economy constitute some form of hierarchical**

Appendix 2 - Transition Cues

Adapted from LEO, Literacy Education Online, <http://leo.stcloudstate.edu/style/transitioncues.html>

Transitions help readers connect the ideas in a piece of writing; they're the glue that shows how pieces of your text fit together. Often all you'll need is a word or phrase to lead readers through your text.

There are words and phrases which help you...

1. lead readers forward from information they've already read to new information
2. move readers into specific examples
3. lead readers through a sequence
 - a. from one time-frame to another
 - b. draw readers' attention to a particular location or place
 - c. let readers know that a digression is about to begin or end
4. draw readers' attention to cause and effect relationships
 - a. to emphasize a cause or reason
 - b. to clarify the purpose of something
5. make readers stop and compare what they've just read to what they're about to read
6. lead readers into statements that clarify or emphasize
 - a. to clarify a point that readers have just read
 - b. to emphasize a point that readers are about to read
7. lead readers into concessions, reservations, dismissals, or conditions
 - a. to concede a point that readers are likely to think of
 - b. to clarify for readers the writer's reservations
 - c. to dismiss a point that readers are likely to think of
 - d. to establish a condition or conditions affecting the subject
8. lead readers into a summary or conclusion
 - a. To repeat a point you've already made
 - b. To summarize what you've already said
 - c. To introduce readers to a conclusion or conclusions

Here are some examples.

Old Information	Transition		New Information
	ADDITION		
	<i>Actually,</i>	<i>Further,</i>	
	<i>Additionally,</i>	<i>Furthermore,</i>	
	<i>Again,</i>	<i>Incidentally,</i>	
	<i>Also,</i>	<i>Indeed,</i>	
	<i>And</i>	<i>In fact,</i>	
	<i>Besides</i>	<i>Lastly,</i>	

	<i>Equally important,</i>	<i>Moreover,</i>	
	<i>Finally,</i>	<i>Not only this, but this as well</i>	
	<i>First, Second, Third, etc.</i>	<i>What's more,</i>	

Generalization	Transition		Examples
	EXAMPLES		
	<i>As an illustration,</i>	<i>Namely,</i>	
	<i>Especially,</i>	<i>Notably,</i>	
	<i>For example,</i>	<i>Particularly,</i>	
	<i>For instance,</i>	<i>Specifically,</i>	
	<i>Including</i>	<i>To demonstrate,</i>	
	<i>In particular,</i>	<i>To illustrate,</i>	

One time	Transition		Another time
	TIME		
	<i>After a few hours,</i>	<i>Immediately following,</i>	
	<i>Afterwards,</i>	<i>Initially,</i>	
	<i>At last</i>	<i>In the end,</i>	
	<i>At the same time,</i>	<i>In the future,</i>	
	<i>Before</i>	<i>In the meantime,</i>	
	<i>Before this,</i>	<i>In the meanwhile,</i>	
	<i>Currently,</i>	<i>Last, Last but not least, Lastly,</i>	
	<i>During</i>	<i>Later,</i>	
	<i>Eventually,</i>	<i>Meanwhile,</i>	
	<i>Finally,</i>	<i>Next, Soon after,</i>	
	<i>First, Second, Third, etc.</i>	<i>Previously,</i>	
	<i>First of all,</i>	<i>Simultaneously,</i>	

	<i>Formerly</i>	<i>Subsequently,</i>	
	<i>Immediately before,</i>	<i>Then,</i>	

One place	Transition		Another place
	PLACE		
	<i>Adjacent,</i>	<i>In the background,</i>	
	<i>Alongside,</i>	<i>In the distance,</i>	
	<i>At the side,</i>	<i>In the front,</i>	
	<i>Here/There</i>	<i>In the foreground</i>	
	<i>In the back,</i>	<i>Nearby,</i>	

Digression	Transition		Main point
	back to		
Main point	Transition		Digression
	begin		
	DIGRESSION/RESUMPTION		
	<i>Anyhow,</i>	<i>Incidentally,</i>	
	<i>Anyway,</i>	<i>To change the subject,</i>	
	<i>As I was saying,</i>	<i>To get back to the point,</i>	
	<i>At any rate,</i>	<i>To return to the subject,</i>	
	<i>By the way,</i>	<i>To resume,</i>	

An effect	Transition		Cause/Reason
	move in to		
	CAUSE/REASON		
	<i>As</i>	<i>Because</i>	
	<i>Because of</i>	<i>Due to</i>	
	<i>For</i>	<i>For the simple reason that</i>	

	<i>Since</i>		
--	--------------	--	--

Cause/Reason	Transition		An effect
	move in to		
	EFFECT/RESULT		
	<i>As a result</i>	<i>So</i>	
	<i>Because of this,</i>	<i>So that</i>	
	<i>For this reason,</i>	<i>Therefore,</i>	
	<i>Consequently,</i>	<i>Thus,</i>	

Something	Transition		Its purpose
	move in to		
	PURPOSE		
	<i>For fear that</i>	<i>So</i>	
	<i>In the hope that</i>	<i>So that</i>	
	<i>In order to</i>	<i>With this in mind,</i>	

Just read	Transition		About to read
	equal or not equal		
	COMPARISON/CONTRAST		
	<i>Although/Although this is true</i>	<i>Meanwhile,</i>	
	<i>And yet</i>	<i>Nevertheless,</i>	
	<i>At the same time,</i>	<i>Nonetheless,</i>	
	<i>But</i>	<i>Notwithstanding,</i>	
	<i>Conversely,</i>	<i>On the contrary,</i>	
	<i>For all that,</i>	<i>On the other hand,</i>	
	<i>In comparison,</i>	<i>Similarly,</i>	
	<i>In contrast,</i>	<i>Still,</i>	

	<i>In the same manner/way,</i>	<i>While this is true</i>	
	<i>However,</i>	<i>When in fact</i>	
	<i>Likewise,</i>	<i>Whereas</i>	

Point just read	Transition		Clarification
	meaning		
	CLARIFICATION		
	<i>In other words,</i>	<i>That is to say</i>	
	<i>In this case,</i>	<i>Under certain circumstances</i>	
	<i>I mean</i>	<i>Up to a point</i>	
	<i>Put another way</i>		

Point just read	Transition		Emphatic point
	!!!!		
	EMPHASIS		
	<i>As a matter of fact,</i>	<i>In fact,</i>	
	<i>In any case,</i>	<i>Obviously,</i>	
	<i>In any event,</i>	<i>That is</i>	
	<i>Indeed,</i>	<i>Undoubtedly,</i>	

Point just read	Transition		Concession
	but maybe		
	CONCLUSION		
	<i>Accordingly,</i>	<i>In short,</i>	
	<i>As a result,</i>	<i>In summary,</i>	
	<i>Consequently,</i>	<i>On the whole,</i>	
	<i>Finally,</i>	<i>So</i>	
	<i>Hence,</i>	<i>Therefore,</i>	

	<i>In brief,</i>	<i>Thus,</i>	
	<i>In conclusion,</i>	<i>To conclude,</i>	

Point just read	Transition		Reservation
	even so		
	RESERVATION		
	<i>Admittedly,</i>	<i>Indeed,</i>	
	<i>As a matter of fact,</i>	<i>Nevertheless,</i>	
	<i>Even so,</i>	<i>Notwithstanding,</i>	
	<i>Even though</i>	<i>Regardless</i>	
	<i>Despite this</i>		

Point may be true	Transition		Dismissal
	BUT		
	DISMISSAL		
	<i>All the same,</i>	<i>In either case,</i>	
	<i>At any rate,</i>	<i>In either event,</i>	
	<i>Either way,</i>	<i>Whatever happens,</i>	
	<i>In any case/event,</i>	<i>Whichever happens,</i>	

The subject is true	Transition		This condition is met
	IF		
	CONDITION		
	<i>Although</i>	<i>Although this is true,</i>	
	<i>But</i>	<i>Even though,</i>	
	<i>However,</i>	<i>In spite of</i>	
	<i>Nevertheless,</i>	<i>Since</i>	

A point	Transition	Point stated
----------------	-------------------	---------------------

	=		differently
	REPETITION		
	<i>As I have noted,</i>	<i>In brief,</i>	
	<i>As indicated above/earlier,</i>	<i>In short,</i>	
	<i>As I stated,</i>	<i>In summary,</i>	
	<i>As mentioned,</i>	<i>On the whole,</i>	
	<i>As noted earlier,</i>		

Points made	Transition		Summary
	nutshell		
	SUMMARY		
	<i>All in all,</i>	<i>In summary,</i>	
	<i>All together,</i>	<i>On the whole,</i>	
	<i>As I mentioned,</i>	<i>Overall,</i>	
	<i>As I stated,</i>	<i>Since</i>	
	<i>Briefly,</i>	<i>So</i>	
	<i>By and large,</i>	<i>Summing up,</i>	
	<i>Finally,</i>	<i>Then,</i>	
	<i>Given these facts,</i>	<i>Therefore,</i>	
	<i>In brief,</i>	<i>To conclude,</i>	
	<i>In conclusion,</i>	<i>To put it briefly,</i>	
	<i>In short,</i>	<i>To summarize,</i>	

Points made	Transition		Conclusion
	the end is coming		
	CONCLUSION		
	<i>Accordingly,</i>	<i>In short,</i>	

	<i>As a result,</i>	<i>In summary,</i>	
	<i>Consequently,</i>	<i>On the whole,</i>	
	<i>Finally,</i>	<i>So</i>	
	<i>Hence,</i>	<i>Therefore,</i>	
	<i>In brief,</i>	<i>Thus,</i>	
	<i>In conclusion,</i>	<i>To conclude,</i>	

Appendix 3. Other sample abstracts

Working paper abstracts

Complexity and Empirical Economics

Steven N. Durlauf

This paper explores the state of interplay between recent efforts to introduce complex systems methods into economics and the understanding of empirical phenomena. The empirical side of economic complexity may be divided into three general branches: historical studies, the identification of power and scaling laws, and analyses of social interactions. I argue that, while providing useful “stylized facts,” none of these empirical approaches has produced compelling evidence that economic contexts exhibit the substantive microstructure or properties of complex systems. This failure reflects inadequate attention to identification problems. Identification analysis should, therefore, be at the center of future work on the empirics of complexity.

A Theory for Long-Memory in Supply and Demand

Fabrizio Lillo, Szabolcs Mike, and J. Doyne Farmer

Recent empirical studies have demonstrated long-memory in the signs of orders to buy or sell in financial markets [2, 19]. We show how this can be caused by delays in market clearing. Under the common practice of order splitting, large orders are broken up into pieces and executed incrementally. If the size of such large orders is power law distributed, this gives rise to power law decaying autocorrelations in the signs of executed orders. More specifically, we show that if the cumulative distribution of large orders of volume v is proportional to $v^{-\alpha}$ and the size of executed orders is constant, the autocorrelation of order signs is asymptotically proportional to $\tau^{-(\alpha-1)}$. This is a long-memory process when $\alpha < 2$. With a few caveats, this gives a good match to the data. A version of the model also shows long-memory fluctuations in order execution rates, which may be relevant for explaining the long-memory of price diffusion rates.

Two-Factor Model of Income Distribution Dynamics

Makoto Nirei and Wataru Souma

This paper analyzes empirical income distributions and proposes a simple stochastic model to explain the stationary distribution and deviations from it. Using the individual tax returns data in the U.S. and Japan for 40 years, we first summarize the shape of income distribution by an exponential decay up to about the 90th percentile of income and a power decay for the top 1 percent. We then propose a minimal stochastic process of labor and asset income to reproduce the empirical characteristics. In particular, the Pareto exponent is derived analytically and matched with empirical statistics.

Tools of the Trade: The Socio-Technology of Arbitrage in a Wall Street Trading Room

Daniel Beunza and David Stark

Our task in this paper is to analyze the organization of trading in the era of quantitative finance. To do so, we conduct an ethnography of arbitrage, the trading strategy that best exemplifies finance in

the wake of the quantitative revolution. In contrast to value and momentum investing, we argue, arbitrage involves an art of association – the construction of equivalence (comparability) of properties across different assets. In place of essential or relational characteristics, the peculiar valuation that takes place in arbitrage is based on an operation that makes something the measure of something else – associating securities to each other. The process of recognizing opportunities and the practices of making novel associations are shaped by the specific socio-spatial and socio-technical configurations of the trading room. Calculation is distributed across persons and instruments as the trading room organizes interaction among diverse principles of valuation.

The Network Topology of the Interbank Market

Michael Boss, Helmut Elsinger, Martin Summer, and Stefan Thurner

We provide an empirical analysis of the network structure of the Austrian interbank market based on a unique data set of the Oesterreichische Nationalbank (OeNB). We show that the contract size distribution follows a power law over more than 3 decades. By using a novel “dissimilarity” measure we find that the interbank network shows a community structure that exactly mirrors the regional and sectoral organization of the actual Austrian banking system. The degree distribution of the interbank network shows two different power-law exponents that are one-to-one related to two sub-network structures, differing in the degree of hierarchical organization. The banking network moreover shares typical structural features known in numerous complex real world networks: a low clustering coefficient and a relatively short average shortest path length. These empirical findings are in marked contrast to interbank networks that have been analyzed in the theoretical economic and econo-physics literature.

Dissertation Abstracts

Investigating Credit Card Debt: The Rationality of Consumers and The Effect on Consumption

Tufan Ekici

My dissertation focuses on two critical issues in the United States’ credit card market: (1) the determinants and the rationality of credit card borrowing and (2) the extent to which household consumption can be accounted for by credit card debt.

The first part analyzes the usefulness of price expectations and consumer confidence measures in predicting consumer borrowing on credit cards. It has been argued that there are irrational elements in the credit card market since consumers borrow on cards at very high interest rates. Previous empirical investigations have used the nominal interest rate as a determinant of borrowing. To investigate the issue of rationality, I use a new set of survey data (Ohio Economic Survey) that has information on both price expectations and credit card use. Thus, I can construct an *expected real interest rate* variable to test for consumer rationality. Censored regression estimation results show that when price expectations are taken into account, consumers adjust their credit card borrowing to the *expected real interest rate*, which is a rational economic behavior. Credit card borrowing is also found to be significantly related to two key income components of consumer confidence. Thus the behavior of credit card users is shown to be more complex and rational than what has been argued in previous research.

The second part of my work investigates the effect of credit card debt on household consumption. The Permanent Income Hypothesis predicts that debt should have no effect on consumption growth.

The existing literature offers evidence for the effect of some aggregate debt measures on aggregate consumption growth. I first show that a new index specifically designed to capture credit card indebtedness is able to explain up to 14 percent of aggregate durable consumption growth. The index utilizes data from a monthly household survey (OES) and incorporates some variables which have generally been unavailable to researchers. I then combine two micro data sets, the Consumer Expenditure Survey (CES) and the Ohio Economic Survey (OES), to test for the extent to which individual households' spending decisions can be accounted for by credit card debt. The results will provide insight about the macroeconomic effects of credit card debt and should be useful for the policy-makers.

An Economic and Financial Analysis of the Latin American Model of Pension Intermediaries Rafael Romero-Meza

In both developed and developing countries, there is currently a great level of public and political awareness about the topic of mandatory pension systems. In the early 1990s, several Latin American countries, facing problems with their pay-as-you-go pension systems, introduced defined-contribution pension models, where participants have individual accounts managed by private pension intermediaries. This dissertation develops policy recommendations to improve the operation of private pension intermediaries as implemented in several Latin American countries. Governments in these countries offer two types of guarantees, on the minimum pension income, and on the rate of return of the funds managed by pension intermediaries, which can offer only one fund per intermediary. Based on both theoretical and empirical analysis, I conclude that the regulation that guarantees a rate of return on workers' pension funds, as it is applied in these countries, is incompatible with a competitive industry of private pension intermediaries. If a government believes that some guarantee must be provided, I recommend both allowing pension intermediaries to offer more than one fund and providing a guarantee only to the low risk portfolio. Moreover, I propose that workers save in the low risk portfolio a fixed amount of money, which should be enough to fund a lifetime annuity that pays the minimum pension income. Any excess over the required saving (10% of income) could be allocated in a portfolio without any guarantee on the rate of return. In addition I propose to allow private pension intermediaries to offer additional services and products. New products with option like features can be created using the techniques developed by financial engineering.

Differential Impact of Information Technology on Cost Driver Relationships in Selected Banking Functions Jamshed Mistry

A central question in management accounting is the relationship between overhead costs and cost drivers. Management accounting information systems, such as cost driver models, are essential to provide information necessary to support managerial decision-making and control (Kaplan, 1983, 1984, 1993). This dissertation has two primary objectives. The first objective is to develop and estimate a context-specific model of the effect of three categories of cost drivers (volume, operational, and product-design based) on revenues and costs for commercial banking, which can be used to examine the differential effects of the drivers within and between banking functions.

The increasing use of Information Technology (IT) has resulted in the creation of another important cost category (IT investment and operating costs) that contributes to overhead costs. Although increases in IT spending are expected to increase productivity and profitability, research examining these effects has yielded mixed results. A number of researchers have labeled this "the productivity paradox" (Brynjolfsson, 1993). Hence, the second objective of this study is to examine the role of IT in moderating the relationship between costs and cost drivers and revenue and revenue drivers.

The cost driver model enables examination of how the moderating effect of IT differs within and between bank functions. Specific hypotheses regarding the moderating effect of IT are developed by drawing on Weill's (1990) framework to disaggregate IT investment into Strategic and Transactional uses of IT.

The model and hypotheses are empirically tested on a cross-sectional sample of 59 banks from the Functional Cost and Profit analysis data set collected by the Federal Reserve Banks. While the sample is small, the data set is particularly useful because it provides both financial and operating data, including direct and distributed costs of separate banking functions, and enables the allocation of support costs, including IT, to functions. Multivariate regression analysis with interaction terms is used to estimate the model. Despite the relatively small sample size and collinearity, the results are generally consistent with the predicted hypotheses regarding: a) the moderating role of Transactional IT on the cost driver relationships in the cost functions and the moderating role of IT on the revenue driver relationships in the revenue functions, and b) the differential impact of IT on the cost and revenue driver relationships in the two separate banking functions.

Money and Knowledge: Sources of Seed Capital and the Performance of High Technology Start-ups

Susanna Khavul

As countries compete in the knowledge economy, investment in high technology entrepreneurial startups often becomes a national priority. High technology startups, however, operate in turbulent high-risk environments, which makes raising funds from traditional market sources difficult. As such, equity seed capital for high technology entrepreneurial startups originates from multiple sources, including personal finance, private investors, venture capital, government, and corporations. This study examines how different sources of seed capital and the levels of ownership control impact the performance of knowledge-intensive new ventures in high technology industries.

Building on previous research, the study argues that through their ownership positions, sources of financial seed capital may generate a de facto meso-institutional environment around the start-up firm, affecting its resource position and performance. The study compared the differences in the dimensions of the meso-institutional environment, resource positions, speed to product and speed to market of startup firms with either institutional control, non-institutional control, and mixed ownership. The strength of directional hypotheses was tested in the context of Israel's emergent entrepreneurial high technology sector. The first part of the study was grounded in qualitative case interviews of fifty-two founders/CEOs of Israeli high technology new ventures and twenty-nine intermediaries in the startup process, including venture capitalists, placement agents, and administrators in government funding agencies. The second part of the study surveyed a randomly sampled cross-section of founders/CEOs in Israeli high technology startups who have received financing from multiple sources.

The main findings were as follows. Firms where institutions had controlling interest in equity reported significantly higher overall resource positions than either firms with non-institutional control or mixed equity. Firms with institutional control perceived their meso-institutional environments as significantly more legitimizing than either firms with non-institutional control or mixed equity. Firms with mixed equity perceived their meso-institutional environments as significantly more munificent than firms with non-institutional controls; however, there were no significant differences between firms with institutional and non-institutional control. There were also no differences between the three groups in the reported concentration of power and authority. Finally, firms with mixed control of equity had significantly faster times to product than either firms with institutional or non-institutional control of equity.

Mitigating the Economic Impact of Refugees in Rwanda and Uganda

Richard Alec Jones (PhD in Post War Recovery 2004)

This study is concerned with advocating a constructive approach for mitigating the economic impact of refugees in Rwanda and Uganda. The research is underpinned by three main parameters: 1) Poverty/economics 2) Socio-historical factors that prove the link between poverty and conflict within Rwanda and 3) Refugee dynamics in the Great Lakes, particularly from the outfall of the Rwandan genocide in 1994. These show that the main problem to be addressed is that disjointed refugee resettlement and repatriation programmes and poverty reduction strategies mean that impoverished refugees are returning to impoverished communities, where poverty further increases leading to tension and eventual renewed displacement. This phenomenon is known as the Refugee Continuum.

The aim is to advocate a project process with accompanying recommendations that are specifically relevant to the realities at the micro and macro level within Rwanda, based on the following hypothesis:

The integration of poverty reduction strategies with refugee resettlement and repatriation programmes within Rwanda can be undertaken through a process which eases the transition between immediate returning refugee impact in the short term (promoting relief), with the need for the returnees and established locals' longer term coexistence (promoting development). This is achieved through the integration of the primarily macroeconomic driven priorities of the Rwandan Poverty Reduction Strategy Paper (PRSP) with the need to increase the capacity of the communities to absorb returning refugees at the micro level through a Transitory Integrative Project vehicle. Thus linking refugee resettlement and repatriation programmes and poverty reduction strategies. Such an approach minimises the Refugee Continuum and increases prospects for stabilisation and development.

The study sets out to understand the nature of poverty, its relationship with conflict and the complexity of poverty reduction in areas of extreme poverty exacerbated by population flows. By linking the theory with practical research in Uganda and Rwanda it attempts to show how people can increase their financial, social, physical, natural and human assets by addressing common livelihood priorities through a specific type of project, set within the ultimate PRSP objective of gradual structural transformation.

Exercise Key

Exercise 1. *a.* 1 and 3, *b.* 2, *c.* 1, *d.* 2.

Exercise 2. *Title* (1-2); *Topic sentence* (3-4 - This sentence gives the general problem the research is attempting to help solve - rather than the specific research problem - in order to provide a rationale for the research); *Subject/Purpose* (4-6 - up to “The drying system is designed to dry a variety of agricultural products.” included); *Expansion* on the research problem (“The effect of air mass flow rate on the drying process is studied.” - Here the authors give the parameter they will be focusing on in order to measure the effect of air mass flow rate on the drying process. Their research problem, therefore, is to find out the effect of air mass flow rate on the drying process), *Methodology* (7-13 - up to “processes”), *Results presentation and findings* (13-17 - up to “materials”), *Main conclusion* of the research (17-18).

Exercise 3. 1. General, 2. Third person (impersonal) style, 3. In examples a., b., c. present tense. In example d. present perfect and past (discuss why).

Exercise 4. 1. provides, 2. consider, 3. argues, 4. looks, 5. calls, 6. develops.

Exercise 5. 1. ... is looked at... is emphasized, 3. ... is developed ... is embedded, 5. ... is then calculated, 6. ... is followed by.

Exercise 6. 1. is employed, 2. are examined, 3. are analysed, 4. is shown, 5. are described... is followed.

Exercise 7. 1. This article initially considers the notion of civil society in the light of intellectual history and differentiates it into a number of ... 2. We apply a simple game-theoretic framework to analyse international cooperation by focusing...

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