SOUTHWESTERN JOURNAL OF ECONOMIC ABSTRACTS

1994

A selection of the Abstracts of the proceedings of the Southwestern Economic Association.

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Southwestern Economic Association of the Southwestern Social Science

1993-1994 OFFICERS

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Southwestern Economic Association March 19, 1993 New Orleans, Louisiana

MINUTES OF THE ANNUAL BUSINESS MEETING

The Annual Business Meeting of the Southwestern Economic Association was called to order by President Abdul Turay, Radford University, at 6:05 p.m. on March 19, 1993. A motion to dispense with the reading of the minutes was passed.

The Treasurer's report, presented by Charles J. Ellard, University of Texas-Pan American, indicated a balance of \$4,595.75 in the Association's coffers. The Treasurer's report was accepted as presented.

Rose Rubin, Chair of the Nominating Committee presented the following slate of officers for the 1993-94 program year:

President:

President Elect and Program Chair: Alex J. Kondonassis University of Oklahoma, Norman

Richard Sprinkle University of Texas-El Paso

Mississippi State University

Robert Awh

Vice President:

Secretary-Treasurer:

Editor:

Charles J. Ellard, University of Texas-Pan American

Ray Perryman Southern Methodist University

It was moved, seconded, and passed to accept the slate of officers.

Vice President and Student Awards Chair, Richard Sprinkle, University of Texas-El Paso, presented the awards for student papers. These awards went to the following students:

First place:	Shounak S. Sarkar, Rice University
Second place:	Thomas S. Cole, University of New Orleans
Third place:	Shaun Ledgerwood, University of Oklahoma

An announcement was made that the 1994 meeting would be at the St. Anthony Hotel in San Antonio, March 30-April 2, 1994. The meeting was adjourned at 6:35 p.m.

Southwestern Economic Association

CONSTITUTION AND BY-LAWS

Article I. Name

This Association shall be known as the Southwestern Economic Association.

Article II. Purpose

The purpose of the Association is to promote economic theory and analysis within, but not limited to, the southwestern states through the encouragement of research, discussion, conference, and the publication and dissemination of research.

Article III. Membership

Any person interested in the purpose of the Association shall be eligible for membership by joining the Southwestern Social Science Association as set forth in the SSSA By-Laws, Article 1.

Article IV. Officers and Executive Committee

- Section 1. The officers of the Association shall consist of a President, President-Elect, Vice-President, Secretary-Treasurer, and Editor of the SWEA Journal.
- Section 2. Each officer of the Association shall hold office for one year and thereafter until a successor takes office. The officers of the Association shall be elected at the annual meeting.
- Section 3. The Executive Committee shall consist of the President, President-Elect, Vice-President, Secretary-Treasurer, the Editor, and the last two Past-Presidents.

Article VII. Meetings

- Section 1. The annual meeting of the Association shall be held at the annual meeting of the Southwestern Social Science Association.
- Section 2. For the purpose of conducting any business a quorum shall consist of those members who are present at the annual business meeting of the Association, and a majority of the Executive Council shall be deemed to be a quorum for its meeting.

Article VIII. Amendment

The Constitution and By-Laws may be amended by a two-thirds vote of the members by a mail ballot provided the proposal shall have been approved by a 2/3 vote at the annual business meeting, after at least three months prior to the consideration at the annual business meeting.

BY-LAWS

Article I. Membership and Dues

- Section 1. The membership requirements and dues in the SWEA are those set by the SSSA.
- Section 2. Participants in the annual meeting, except for guests of the Association, as determined by the SWEA Program Chair, must pay the SSSA registration fee.

Article II. Duties of Officers and Executive Committee

- Section 1. The President shall preside at all business meetings of the Association and shall also preside at the Executive Committee. The President shall appoint all committees except the nominating committee. The President, along with the immediate Past-President, shall represent the SWEA on the Executive Council of the SSSA.
- Section 2. The President-Elect shall serve as the SWEA Program Chair and publicize and organize the program for the annual meeting.
- Section 3. The Vice-President shall preside at any business meeting of the Association or of its Executive Committee in the absence of the President and shall chair the SWEA Student Paper Awards Committee and shall succeed to the office of President in case of vacancy.
- Section 4. The Secretary-Treasurer shall record and preserve the minutes of all business meetings of the Association and the Executive Committee and shall deposit in an Association account all fees collected for the SWEA and allocations from the SSSA to pay all properly incurred Association expenses, keep a complete and accurate record of all financial transactions and submit those financial records for audit at a time designated by the President or the Executive Committee.
- Section 5. The Editor shall be responsible for all details incident to the publication of the journal of the SWEA but shall be guided by overall publication policies, established by the SWEA.

Section 6. The Executive Committee shall be empowered to act on behalf of the Association during the period intervening between annual meetings, to approve the proposed budget of the SWEA and to conduct other business.

Article III. Committees

- Section 1. The standing committees of the Association shall be:
 - (a) Student Paper Competition
 - (b) Nominating
 - (c) Resolutions
 - (d) Plenary Session
 - (e) Budget and Financial Policies
 - (f) Publications

Section 2. The Nominating Committee shall consist of the three most recent Past-Presidents. Other standing committees of the Association shall be composed of at least three members.

Southwestern Economic Association*

PAST PRESIDENTS

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1967	Lawis Hill Taxas Tashnalaginal University
1000	Lewis mill, lexas recimological University
1000	J. KIIKEI Siephens, University of Oktanoma
1001	Chuck Backer, Taxas Christian University
1007	Rose Rubin University of North Taxas
1994	Abdul Turay Radford University
1004	Alay I Kondonossis University of Oklahoma
1994	AIGA J. KONGONASSIS, UNIVERSITY OF OKTANOMA

*Prior to 1966, this office carried the title of Economic Section Chair, Southwestern Social Science Association.

Southwestern Journal of Economic Abstracts

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- 2. Continue your text on the same page as the title, single space.
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- 6. Send ABSTRACT or COMMENTS on diskette (either 3 1/2" or 5 1/4") in ASCII text format along with two copies to be mailed with your remission. Acceptance deadline is September 15, 1995.

PUBLICATION INFORMATION

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- 2. Additional individual copies are available at \$5.00 each.
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EDITOR'S COMMENTS

by Ray Perryman

Thank you for the opportunity to once again bring you this year's edition of the Southwestern Journal of Economic Abstracts. As I consider the pace and content of the worldwide market, I am continually impressed by the value academic research and expression offers to participants in the global economy.

The past year was a busy one for me, as I am sure it was for you. I have taken a new post as Business Economist-in-Residence for Southern Methodist University in Dallas. While my headquarters remain in Waco, I am increasingly on the go between cities and countries around the world. I continue to enjoy and learn from both my consulting practice and my academic endeavors. The highlight of my research this year is a detailed economic analysis of the economic impacts of exports sent from Texas to over 200 countries.

As with each year, I welcome any suggestions you have concerning the content or production of the Journal; the resources of The Perryman Group, the firm's new name, are available to serve our association. To remain within the publication schedule for next year, please submit abstracts or comments by September 15, 1995. Procedural information is enclosed with this issue.

I appreciate your help in preparing this year's Journal. Those who submitted papers as well as those who served as discussants are to be commended for your contributions. In addition, my thanks goes to all of you who support the overall goals and objectives of the Southwestern Economics Association. Best wishes for a productive 1995.

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1994 DISTINGUISHED PAPER AWARD Time Preference and Debt in a Consumption Model

Fathali Firoozi University of Texas at San Antonio

A number of studies have indicated that one of the consequences of a development process is a rise in the consumers' subjective time preference rate (discount rate). This study first shows that many of the adverse economic observations in developing countries can emerge from a rise in the discount rate. It then demonstrates that the extent of such adverse effects is related to relative shares of the tradable and nontradable sectors in aggregate consumption. To establish the existence and significance of such relations, a two-period-twosector model of consumption is developed for a small, open, and market-oriented economy with tradable and nontradable sectors and an endogenous price index. The analysis focuses on the intertemporal consumption substitution effect of a rise in the discount rate and the implications for debt, price index, and interest rate. A result is that the aggregate dissaving generated by a rise in the discount rate is smaller when the economy's nontradable sector is relatively larger. The results add new dimensions to the allocation policies applied by international lending institutions in developing economies.

Key words: time preference rate, intertemporal substitution, consumption share.

1. Introduction

Two aspects of the conditions faced by the indebted developing countries have been noted in recent studies. The first aspect is concerned with the lending requirements that led the borrowers to undertake allocations that channel resources toward the traded-goods sectors. Traditional sources of lending for the less developed countries (LDCs) are the developed countries official lending institutions and the official international financial institutions, mainly the International Monetary Fund (IMF) and World Bank. The lending policies of such institutions require commitments on the part of borrowing countries to implement specific reforms that involve export-oriented and import-competing allocations, as in the World Bank's (1986, 1988) structural adjustment lending. It has been the World Bank's (1960, p.4-5)

traditional policy that prospects for total export earnings of investment projects are of major importance in determining credit-worthiness of the borrowing countries. Commercial banks, which became major international lenders in the early 1970's, gave the highest priority to quickyielding export-oriented projects (Friedman, 1977, p.75). Clearly, such conditions require resource allocation strategies that lead to substantial rises in the size of the tradable sector relative to the nontradable sector of a borrowing economy.

The second aspect of the conditions faced by the borrowing economies is related to changes in social behavior, preferences, and consumption that emerge from development. Early stages of development are marked by a variety of new socio-cultural trends which are seen by both creditors and planners as complementary to restructuring the economy's path. This process is reinforced by the open market-oriented economic policies that are promoted by the official adjustment programs. Such factors inevitably bring about substantial shifts in preferences, expectation of higher living standards, and changes in consumption behavior, which include a rise in the consumers' time preference rate (discount rate). A number of authors have indicated a rise in the discount rate emerging from development and studied certain implications of such a rise [Note 1].

The present study is devoted to an examination of the relationships between the negative impacts of rising time preference rates in developing countries and the sectoral allocation policies applied by the international lending institutions. Several studies, including IMF (1989) and World Bank (1990), have identified the adverse effects such as the rapid rises in consumption, dissavings, prices, and interest rates as the primary sources of failure of the development programs in highly indebted countries. Specifically, the objectives of the present study are to: (i) show that such adverse effects can be generated by a rise in the time preference rate, and (ii) demonstrate that the extent of the adverse effects produced by a rise in the discount rate is a function of patterns of resource allocations (relative sizes of tradable and nontradable sectors). In Section 2, we develop an ad hoc two-period-two-sector model of consumption to evaluate the effects of a rise in the time preference rate in a small, open, and market-oriented economy with tradable and nontradable sectors and an endogenous price index. The analyses in Sections 3-5 focus on the demand side and the intertemporal consumption substitution effects of a rise in the discount rate. The results identify the role that

the nontradable sector plays in determining the adverse effects of a rise in the discount rate on savings, price index, and interest rate. Summary and some policy implications for lenders and development planners are presented in the last section.

2. Model

The effects of a rise in the time preference rate in a full general equilibrium model of an open two-sector dynamic environment contain two components: (i) intertemporal and inter-sectoral consumption substitution effects evaluated at constant periodic incomes (substitution effects), and (ii) intertemporal and inter-sectoral production substitution effects (income effects), including factor growth effects. Development of such an extensive and comprehensive model with explicit sectoral sizes involves a large number of specifications with related complications [Note 2]. However, to demonstrate the existence of the relations stated in the objectives of the present study, it suffices to focus on the intertemporal consumption substitution effects and the role of sectoral relative sizes at constant aggregate periodic incomes. In a more general setting, the income effects can be added to the substitution effects evaluated in the present study.

A two-period consumption model is defined for a small, open, and market-oriented economy with tradable and nontradable sectors. The aggregate utility function is defined for period t as:

$$U_t(C_t) = \frac{1}{1-\theta} C_t^{1-\theta}, \ \theta > 0 \tag{1}$$

for t = 0,1, where U'' < 0 and the parameter $\theta = -\frac{U''C}{U'}$ is a measure of concavity (social risk-

aversion) of the function. The aggregate consumption C_t is defined by the distribution:

$$nC_{t} = \alpha \ln C_{mt} + (1 - \alpha) \ln C_{nt}, \quad 0 \le \alpha \le 1$$
(2)

where α is the relative share of the tradable sector in total consumption, and C_{nt} and C_{nt} are the consumption levels for traded and nontraded goods in period t, respectively.

Over the two periods, the economy's resources are fixed and fully employed, and intersectoral factor mobility exists in each period. Since the focus is on the intertemporal consumption substitution effects, the aggregate income Y_t (measured in terms of the traded good, the numeraire) is assumed fixed for each period t. Accordingly, any inter-sectoral production substitution (due to a relative price change) in a period t is attained by a sectoral resource reallocation in the same period such that the aggregate income Y_t remains unchanged [Note 3]. Changes in the trade deficit (surplus) for each period and intertemporal consumption transfers take place by borrowing and lending in the credit market. In the market-oriented economy, non-intervention policy by the authorities regarding aggregate demand and trade is assumed, and equilibrium prevails in the nontraded good market in each period.

Let β be the consumers' time preference rate, r the real interest rate, S_t the savings, and $P_t = \frac{P_{nt}}{P_{mt}}$ the relative price of the nontraded good, all measured in terms of the traded good, where the traded good price in the small economy is given exogenously: $P_{m0} = P_{m1} = P_m$. Hence, P_t represents the economy's price index. Assuming zero initial debt and a two-period life, the optimal consumption path is a solution to the problem of maximizing the discounted welfare such that the discounted debt over the two periods (D) is zero. The consumption problem is:

$$\max_{C_{n0}, C_{n0}, C_{n1}, C_{n1}} W = U_0 + \frac{1}{1+\beta} U_1$$
(3)

subject to:

$$D \equiv S_0 + \frac{1}{1+r} S_1 = 0$$
 (4)

where S_t is defined by:

$$S_t = C_{nt} P_t + C_{mt} - Y_t$$
(5)

The utility function U_t is specified in (1), and the aggregate consumption C_t is defined in (2). The following optimal aggregate consumption path is derived as a function of price path from the 1st-order conditions for a solution to the problem defined in (3)-(5) (see proof in Appendix):

$$\frac{C_0}{C_1} = \left(\frac{1+r}{1+\beta}\right)^{-1/\theta} \left(\frac{P_0}{P_1}\right)^{-(1-\alpha)/\theta}$$
(6)

A consumption path is also derived corresponding to the equilibrium in the nontraded good market. The optimal demand for the nontraded good in period t in terms of aggregate consumption and price is (see proof in Appendix):

$$C_{nt} = \left(\frac{1-\alpha}{\alpha}\right)^{\alpha} C_t P_t^{-\alpha}$$
(7)

We now assume that the supply of the nontraded good is given by $X_{nt} = \sigma_t P_t^{\varepsilon}$, where ε is the supply elasticity (positive and finite), and σ_t is a non-zero shift parameter [Note 4]. Utilizing (7) and the supply function, the equilibrium condition $C_{nt} = X_{nt}$ yields:

$$C_t = \left(\frac{\alpha}{1-\alpha}\right)^{\alpha} \sigma_t P_t^{\alpha+\varepsilon}$$

The corresponding consumption path is:

$$\frac{C_0}{C_1} = \frac{\sigma_0}{\sigma_1} \left(\frac{P_0}{P_1}\right)^{\alpha + \epsilon}$$
(8)

The economy's aggregate consumption path satisfies both (6) and (8), from which the optimal time paths of consumption and price index $(\frac{C_0}{C_1}, \frac{P_0}{P_1})$ are derived.

3. Time preference adjustment

The time path of consumption in the economy is a function of the consumers' subjective assessments of present versus future utilities. Such assessments are aggregated and reflected on the time preference rate β . As indicated earlier, a developing society can experience a surge in subjective preferences toward current consumption, which is shown by a rise in the discount rate β . Such a rise may reflect a behavioral change or rising expectations of higher living standards emerging from development.

This section evaluates the effects of a rise in the discount rate on the optimal time paths of aggregate consumption and price index of the economy. The effect of a rise in β is studied through the log forms of the paths for optimal consumption (6) and the equilibrium in the nontraded good market (8), respectively:

$$\ln(\frac{C_0}{C_1}) = \frac{1}{\theta} \ln(1+\beta) - \frac{1}{\theta} \ln(1+r) - \frac{1-\alpha}{\theta} \ln(\frac{P_0}{P_1})$$
(9)

$$\ln(\frac{C_0}{C_1}) = \ln(\frac{\sigma_0}{\sigma_1}) + (\alpha + \varepsilon)\ln(\frac{P_0}{P_1})$$
(10)

There will be no loss in generality in assuming $\frac{\sigma_0}{\sigma_1} = 1$. Hence, set $\ln(\frac{\sigma_0}{\sigma_1}) = 0$. Solving (9)

and (10) simultaneously for $\ln(\frac{C_0}{C_1})$ and $\ln(\frac{P_0}{P_1})$ yields:

$$\ln(\frac{C_0}{C_1}) = (\alpha + \varepsilon)\Phi \ln(1 + \beta) - (\alpha + \varepsilon)\Phi \ln(1 + r)$$
(11)

$$\ln(\frac{P_0}{P_1}) = \Phi \ln(1+\beta) - \Phi \ln(1+r)$$
(12)

where $\Phi = \frac{1}{\theta(\alpha + \varepsilon) + (1 - \alpha)} > 0$. Equations (11) and (12) measure the intertemporal

consumption substitution and change in the price index in response to a change in the discount rate.

A rise in β results in increases in current aggregate consumption, dissavings, and current relative price of the nontraded good (tradable price is constant for the small economy). The price rise leads to a reallocation of resources from the tradable sector to the nontradable sector. The rise in current aggregate consumption will also lead to a rise in current demand for the traded good. The reallocation of resources and the increased demand for the traded good generate a deterioration in trade balance [Note 5].

The optimal consumption path must satisfy the budget constraint (4) where the aggregate income is fixed over the two periods. An implication is that, when β rises, the resulting rises in consumption and dissavings in current period 0 must be matched by a rise in savings in the future, period 1. Hence, in response to a rise in the discount rate, the primary addition to the net debt over the two periods is the fixed-interest service to the resulting dissavings generated in period 0. The size of the dissavings determines the magnitude of the debt.

A secondary addition to the net debt over the two periods can occur due to a rise in the interest rate resulting from a rise in β . Such a rise in the interest rate will be elaborated in Section 5. The service to the dissavings generated in period 0 may be evaluated at an expected interest rate higher than the initial rate. The present study abstracts from such expectation

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complications by assuming that the current interest rate is applied to compute the service to current dissavings.

4. Role of nontradable sector

We now utilize the developments in the above sections to identify the relation between the intertemporal consumption substitution resulting from a rise in the discount rate and the relative size of the nontradable (tradable) sector of the economy. Define E_c as the elasticity of $\frac{C_0}{C_1}$ with respect to $(1 + \beta)$. It is clear that E_c is a measure of intertemporal consumption substitution with respect to the discount rate. Similarly, let E_p be the elasticity of $\frac{P_0}{P_1}$ with respect to $(1 + \beta)$. Such β -elasticities are measured by differentiating the log equations (11) and (12):

$$E_{c} = \frac{d\left[\ln\left(\frac{C_{0}}{C_{1}}\right)\right]}{d\left[\ln(1+\beta)\right]} = \frac{\alpha + \varepsilon}{\theta(\alpha + \varepsilon) + (1-\alpha)}$$
(13)

$$E_{p} = \frac{d\left[\ln\left(\frac{P_{0}}{P_{1}}\right)\right]}{d\left[\ln(1+\beta)\right]} = \frac{1}{\theta(\alpha+\varepsilon) + (1-\alpha)}$$
(14)

Clearly, both E_c and E_p are positive, indicating that a rise in the discount rate leads to rises in both aggregate consumption and price index in the current period.

The relative size of the nontradable sector is measured by the parameter $(1 - \alpha)$ defined in the distribution (2). Differentiating the elasticity defined in (13) with respect to α yields:

$$\frac{\mathrm{d}\mathrm{E}_{\circ}}{\mathrm{d}\alpha} = \frac{1+\varepsilon}{\left[\theta(\alpha+\varepsilon) + (1-\alpha)\right]^{2}} > 0$$

which implies E_c rises when $(1 - \alpha)$ falls. Hence, the β -elasticity of intertemporal consumption substitution is inversely related to the relative size of the nontradable sector. Equivalently, the effect of a rise in the discount rate on current consumption (and the resulting dissavings and debt) is larger for a smaller relative size of the nontradable sector.

Such an outcome can be partially attributed to the dampening price effect associated with the nontradable sector. In a small, open, and market-oriented economy, the supply of the

tradable output (with the price given exogenously) is more price elastic (∞) than the supply of the nontradable output (ϵ). Hence, in response to an exogenous rise in current overall demand (caused by a rise in β), the rise in the economy's aggregate price index will be larger for a larger relative size of the nontradable sector, which yields a larger dampening price effect on aggregate consumption. It follows that the net rise in overall consumption and dissavings will be smaller in the current period. Consequently, the addition to the net debt over the two periods, evaluated as the service to the dissavings, will be smaller for a relatively larger nontradable sector.

In the usual one-sector models where the output is tradable ($\alpha = 1$), the β -elasticity E_c defined in (13) rises to $E_{cm} = 1/\theta$. The result that E_{cm} is larger than E_c is shown by:

$$\frac{E_{cm}}{E_{c}} = \frac{\theta(\alpha + \varepsilon) + (1 - \alpha)}{\theta(\alpha + \varepsilon)} > 1$$

It is clear that, in the one-sector tradable case, the β -elasticity of intertemporal consumption substitution E_{cm} is completely determined by the social risk-aversion (concavity of the utility function), measured by θ . When both the tradable and nontradable sectors are present, the β elasticity E_c is determined by the social degree of risk aversion (θ), the sectoral relative sizes (α), and the nontradable supply elasticity (ϵ), as specified in (13) [Note 6]. The one-sector closed economy case can also be studied by setting $\alpha = 0$.

5. Interest rate response

In this section we study the effects of a rise in the discount rate on the domestic real interest rate r in a more general setting. The aggregate consumption and savings effects are evaluated through a general utility function defined by:

$$U_t = U(C_t) , U' > 0$$

The discounted two-period welfare is:

$$W = U(C_0) + \frac{1}{1+\beta} U(C_1)$$
(15)

The effect of an intertemporal consumption substitution (dC_0, dC_1) on W is derived from the total differential of (15):

$$dW = U' \cdot dC_0 + \frac{1}{1+\beta} U' \cdot dC_1$$

$$= dC_0 \cdot U' \left\{ 1 - \frac{1+r}{1+\beta} \right\}$$
(16)

where the opportunity to lend and borrow at r implies $dC_1 = -(1 + r)dC_0$. The economy is in the steady state in period t if $\frac{dW}{dC_t} = 0$. It follows from (16) that such a state prevails when

 $r = \beta$.

Suppose there is a rise in β in period 0, where initially the steady state $r = \beta$ holds. It follows that $\beta > r$ and:

$$U'\left\{1-\frac{1+r}{1+\beta}\right\} > 0$$

with the implication from (16) that $\frac{dW}{dC_0} > 0$. The resulting rises in consumption and

dissavings lead to a rise in the interest rate. It was shown in the last section that the rises in consumption and dissavings are smaller for a larger relative size of the nontradable sector. Hence, a smaller rise in the interest rate emerges in the early period. Utilizing $dC_0 = -\frac{1}{1+r} dC_1$, a derivation similar to the one leading to (16) shows that:

$$\mathrm{dW} = \mathrm{dC}_1 \cdot \mathrm{U}' \left\{ \frac{1}{1+\beta} - \frac{1}{1+r} \right\}$$

where $\beta > r$ implies $\frac{dW}{dC_1} < 0$. Thus, optimal behavior requires a rise in savings in the later period of the 2-period case.

In an infinite-period formulation, the periodic rises in dissavings, net debt, and the interest rate (resulting from $\beta > r$) continue until the steady state $r = \beta$ is restored. If initially the domestic and the world interest rates are identical, the resulting domestic interest rate will be higher than the world interest rate. Implications of the interest rate differential depend on the economy's credit standing in the international capital markets. For instance, in most open market-oriented economies with average credit standing, the interest rate differential leads to a rise in capital inflows that partially offset the reduction in domestic savings. For the highly indebted countries, capital inflows usually originate from the international financial institutions

with conditions attached to not only restrict consumption but also to redirect resources toward the economy's tradable sector.

6. Summary and policy implications

A number of studies [Note 1] have indicated that the consumers' subjective time discount rate β rises as development leads to changing consumption behavior and rising expectations of higher living standards. We have constructed a two-period-two-sector model and evaluated a number of intertemporal substitution effects of a rise in the discount rate for a small, open, and market-oriented economy with tradable and nontradable sectors and an endogenous price index. The model shows that the β -elasticity of intertemporal consumption substitution is inversely related to the relative size (consumption share) of the nontradable sector (1 – α). An implication is that a smaller relative nontradable sector corresponds to larger adverse effects of a rise in the discount rate on savings, price index, and interest rate (intuitive explanations were given in Sections 3 and 4).

The imposition by the international lending institutions and development planners of policies that channel resources toward tradable sectors was intended to improve creditworthiness of the borrowing economies. However, during the period 1982-1988, inflationary pressures intensified, consumption-output ratio rose relative to investment-output ratio, and dissavings and real interest rates rose in many developing economies (IMF, 1989). According to World Bank (1990), one of the key reasons for the poor growth performance of many indebted countries during the 1980's was that investment rather than consumption was reduced. Such economic observations combined with social and political disturbances have shown that, in many cases, the external debt management programs that include severe suppression of consumption with export-oriented allocations may not be feasible.

The present results show that many of such adverse economic observations can be generated by a rise in the discount rate. In addition, given that a rise in the discount rate emerges from development, the present results show that the export-oriented allocation policies imposed by the lenders may have produced a negative impact on the borrowing economies' savings by reducing the relative sizes of the nontradable sectors (hence, raising the β -elasticity of intertemporal consumption substitution). Such an outcome is reminiscent of the

Lucas (1981, p.109-11) critique of policies emerging from fixed-coefficient models in dynamic environments.

Given the environment of the present study, a sound allocation strategy in a developing economy contains simultaneous expansions of both tradable and nontradable sectors. An objective of such a strategy, among others, is to increase the share of nontradables in real aggregate consumption. The underlying argument states, given that suppression of a subjective surge in consumption is not feasible beyond a limit, a complementary policy to minimize debt is to increase nontradable share of aggregate consumption. Clearly, fulfillment of this objective requires certain support for the industries involved in production of goods that are, by nature or design, nontradable.

Such a strategy in the highly indebted countries requires additional long-term external financing inflows and allocation patterns that fall beyond those supported by the creditor community (Sachs, 1990). Note that the policy arguments here are not to support removing the allocation conditions that favor the tradable sectors when such sectors are generating savings. However, given rises in the discount rate emerging from development (as noted by a number of studies), the resulting dissavings generated by a relatively smaller nontradable sector must be weighed against the savings generated by a relatively larger tradable sector. This issue adds another dimension to the complex problem of lending and growth in developing economies.

We have posed and provided an analysis of the fundamental question regarding the relations between adverse effects of rising discount rates and sectoral relative sizes in developing economies. The present model demonstrates the existence and significance of such relations. Clearly, the specific forms of the present relations are subject to adjustments when the specifications in Section 2 are extended to a full general dynamic equilibrium environment where factor growth and specific sectoral and intertemporal production responses (hence, the income effects) are incorporated. The consumption substitution effects (measured at constant aggregate income) and the corresponding role of sectoral relative sizes evaluated in this study continue to hold in the general environment. However, when income effects are present, the results will depend on the net of the substitution and income effects.

Notes

- 1. A number of authors have studied the sources and structure of variations in the time preference rate. Heijman (1988) presents certain underlying arguments regarding the relation between changes in needs, expectations, and behavior on one side, and changes in the time preference rate on the other. In one-sector growth models, Uzawa (1968) and Obstfeld (1990) define the time preference rate as an increasing function of consumption. Epstein and Hynes (1983) give some applications of the Uzawa model. Benninga and Protopapadakis (1990) and Kocherlakota (1990) discuss the extreme cases where the discount rate can rise above unity. Buiter (1981) and Weil (1989) evaluate the argument that long-term trade imbalances can be attributed to differences in the subjective time preference rates between countries.
- 2. Such specifications include optimal behavior of the firms regarding intertemporal and inter-sectoral production responses (due to changes in the time path of relative price) and changes in capital growth (due to changes in the time paths of savings, interest rate, and investment) resulting from intertemporal consumption substitution effect of a rise in the time preference rate.
- This condition is equivalent to the case of period-specific factors where an intersectoral factor movement due to a relative price change generates no change in the period's aggregate income.
- 4. By the assumptions, a rise in the nontradable output X_{nt} (due to a rise in its relative price) is generated by a resource reallocation and a fall in domestic production of the tradable sector in the same period t such that the aggregate income in period t remains fixed.
- 5. This result is consistent with the Buiter (1981) argument that, in a two-country model, the country with higher time preference rate experiences long-term trade deficit.
- 6. The society's degree of risk aversion plays a significant role in determining the intertemporal effects of a rise in the time preference rate. To show this, note that the social risk aversion is reflected on the utility function (1). The degree of risk-aversion (concavity) of the function as measured by θ is a determinant of the β -intertemporal elasticities E_c and E_p defined in (13) and (14). Two possible cases are: (i) For

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consumption levels where the utility function is near linear, the value of θ is small (small risk-aversion) indicating large values for the β -intertemporal elasticities E_c and E_p . (ii) For consumption levels where the value of θ is large (large risk-aversion), the values of E_c and E_p will be relatively small.

Appendix

Equations (6) and (7) are derived in this Appendix. The Lagrangian for the problem defined in (3)-(5) is given by $L = W - \mu D$, where μ is the Lagrange multiplier. Using definitions (3) and (4), L is written as:

$$L = \{U_0 + \frac{1}{1+\beta} U_1\} - \mu\{S_0 + \frac{1}{1+r} S_1\}$$

Define $U_t^j = \frac{\partial U_t}{\partial C_{jt}}$, j=n,m, t=0,1. Utilizing the definition (5), the four 1st-order conditions

 $\frac{\partial L}{\partial C_{jt}} = 0$ are:

$$U_0^n - \mu P_0 = 0 \tag{A-1}$$

$$U_0^m - \mu = 0 \tag{A-2}$$

$$\frac{1}{1+\beta} U_1^n - \mu \frac{1}{1+r} P_1 = 0 \tag{A-3}$$

$$\frac{1}{1+\beta} U_1^{\ m} - \mu \frac{1}{1+r} = 0 \tag{A-4}$$

Division of (A-1) by (A-3) yields:

$$\frac{U_0^{n}}{U_1^{n}} = \frac{1+r}{1+\beta} \frac{P_0}{P_1}$$
(A-5)

The above statement for $\frac{U_0^n}{U_1^n}$ is in terms of P_t derived from the 1st-order conditions. Another

statement is derived in terms of C_t from the definitions. Rewrite (2) as:

$$C_{t} = C_{mt}^{\alpha} C_{nt}^{1-\alpha}$$
(A-6)

and substitute in (1):

$$U_{t} = \frac{1}{1-\theta} \left[C_{mt}^{\alpha} C_{nt}^{1-\alpha} \right]^{1-\theta}$$
(A-7)

Partially differentiating (A-7) with respect to C_{nt} and C_{mt} yields:

$$U_{t}^{n} = (1-\alpha) C_{t}^{-\theta} \left(\frac{C_{mt}}{C_{nt}}\right)^{\alpha}$$
(A-8)

$$U_t^m = \alpha C_t^{-\theta} \left(\frac{C_{mt}}{C_{nt}}\right)^{\alpha - 1}$$
(A-9)

It follows from (A-8) that:

$$\frac{U_0^{n}}{U_1^{n}} = \left(\frac{C_0}{C_1}\right)^{-\theta} \left(\frac{C_{m0}}{C_{n0}}\right)^{\alpha} \left(\frac{C_{m1}}{C_{n1}}\right)^{-\alpha}$$
(A-10)

The equality of (A-5) and (A-10) leads to:

$$\frac{C_0}{C_1} = \left(\frac{1+r}{1+\beta}\right)^{-1/\theta} \left(\frac{P_0}{P_1}\right)^{-1/\theta} \left(\frac{C_{m0}}{C_{n0}}\right)^{\alpha/\theta} \left(\frac{C_{m1}}{C_{n1}}\right)^{-\alpha/\theta}$$
(A-11)

A statement is now derived for $\frac{C_{mt}}{C_{nt}}$ in terms of P_t. Division of (A-8) by (A-9) yields:

$$\frac{U_t^n}{U_t^m} = \frac{1-\alpha}{\alpha} \frac{C_{mt}}{C_{nt}}$$
(A-12)

Dividing (A-1) by (A-2), and (A-3) by (A-4) shows that:

$$\frac{U_t^n}{U_t^m} = P_t \tag{A-13}$$

It follows from the equality of (A-12) and (A-13) that:

$$\frac{C_{mt}}{C_{nt}} = \frac{\alpha}{1 - \alpha} P_t$$
, $t = 0, 1$ (A-14)

Utilizing (A-14) in (A-11) leads to:

$$\frac{C_0}{C_1} = \left(\frac{1+r}{1+\beta}\right)^{-1/\theta} \left(\frac{P_0}{P_1}\right)^{-(1-\alpha)/\theta}$$
(A-15)

which is the optimal consumption path (6) in the text. To derive Equation (7) in the text, (A-6) is written as:

$$C_{nt} = C_t \left(\frac{C_{mt}}{C_{nt}}\right)^{-\alpha}$$
(A-16)

An application of (A-14) in (A-16) yields (7).

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ABSTRACT <u>NAFTA and the U.S. Horticulture Industry:</u> <u>Separating Facts and Fiction</u>

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With the implementation of the North American Free Trade Agreement (NAFTA), the United States and Mexico have begun an unprecedented experiment in economic integration, i.e., the creation of a single market spanning an industrialized country and a developing country which has over one-third the population but only one-tenth the per capita domestic product of its industrialized neighbor. Disparity in the level of economic development between the two countries has led to a serious debate on the likely effects of the formation of a free trade area (FTA) on the U.S. horticulture sector. While agreeing with the benefits of allocative efficiency and economies of scale generated by free trade, NAFTA opponents challenge the distributional aspects of those benefits. They argue that the Mexican horticulture sector stands to gain from the FTA at the cost of its counterpart in the U.S., Mexico has a relatively cheap and abundant supply of labor.

Therefore, given its competitive advantage in the production of horticultural products due to lower labor costs and favorable climatic conditions, the opponents of NAFTA implicitly assume that Mexico will, under the FTA, significantly expand its horticultural exports to the United States and thus undercut production and income levels of U.S. growers. But how reasonable is this assumption? The answer will depend, in part, on the potential physical production capacity and domestic demand for these products in Mexico, the nature of U.S. import demand, and the macroeconomic policies pursued by the two countries. These issues have received little attention in a large majority of the studies on the horticulture sector. By focusing on these overlooked issues, this paper analyzes whether NAFTA will help or hurt the U.S. horticulture sector. Five vegetables - tomatoes, bell peppers, dry onions, cucumbers, and squash - are analyzed because, together, they accounted for 82 percent of the total \$889 million spent by the U.S. on fresh vegetable imports from Mexico in 1990.

Production Potential And Demand In Mexico

To expand its production potential, Mexico must bring either more land under horticultural crops, more land under irrigation, and/or increase yields from the existing acreage under horticultural crops. Mexico has two options to bring more land under horticultural crops. The first option is to convert some pasture land into crop land. However, given a shortage of water and a lack of funds for maintenance and repairs of the existing on-farm water distribution systems, much needed investment to convert pasture land into crop land is financially not feasible. The second option deals with shifting irrigated land now planted to other crops into horticultural production. But this is unlikely because Mexico is now a food deficit nation. Given the Mexican government's commitment to self-sufficiency in food, a shift away from irrigated principal crops may not be possible. Moreover, due to the Mexican government's push toward a free market economy, subsidies to export crops have started to disappear. This may change the comparative advantage in favor of other principal crops for which the domestic demand has been continuously increasing.

The scope for expanding irrigation in Northwestern Mexico, the region exporting competitive horticultural crops to the U.S., is limited. Annual pumping exceeds annual recharge rates and, as a consequence, seawater encroachment into coastal aquifers has become a serious problem. Also, rapid industrialization and the accompanying urbanization are already beginning to compete for available water in the region. They are imposing and will continue to impose constraints on irrigated agricultural expansion.

Increasing yields on existing horticultural acreage has a greater potential for increasing horticultural output in Mexico than bringing more land or water into production. This can be accomplished through the use of improved technology. However, Mexico's expenditures on research, already a fraction of those in the U.S., have experienced further cuts during the last decade. If the current situation with respect to research continues, then Mexico's low cost advantage will be offset by higher yields in the U.S.

Mexico's Demand For Horticultural Products

Domestic demand for horticultural products, in addition to their production and supply, will affect Mexico's export potential of vegetables to the U.S. As Mexico's population and income continue to rise, more produce from Northwestern Mexico will be shipped to the domestic market. This means a reduction in or no expansion of exports, given the limited growth potential of horticultural production discussed earlier.

Nature of U.S. Import Demand

Most of the U.S. import demand for Mexican horticultural products is complementary rather than competitive with domestic products. Mexico directly competes with Florida because northern Mexico and Florida have similar growing seasons. California crops come in later. However, despite the cost disadvantage, Florida has maintained its market share for tomatoes and cucumbers, gained for bell peppers, and lost for squash during the previous decade. The FTA will have little effect, if any, on trade because tariffs on these crops are already low.

Government Policies

The impact of NAFTA on the U.S. horticulture sector will depend, in part, on whether the agreement results in trade diversion or trade creation. If it results in trade diversion, then the FTA will have almost no effect on U.S. vegetable producers. Under trade creation, Mexican exports to the U.S. will increase and should displace higher cost domestic products. But this will depend upon Mexico's production growth potential.

During the 1980's, Mexico's horticulture sector gained from an almost incessant free fall of the Peso. But now a return to foreign capital inflows under the FTA will lead to an appreciation of the real exchange rate which will have an adverse effect on Mexico's horticultural exports.

Conclusions

Mexico's ability to expand future agricultural exports will depend upon its long term commitment toward massive investment in research, marketing, transportation, and the environment. Given its meager domestic resources, foreign investment in Mexican agriculture becomes crucial. But that foreign capital inflow, even under the FTA, will largely depend upon the political environment in Mexico. Meanwhile, even if Mexico increases its horticultural exports to the U.S., it is not going to hurt U.S. growers of these crops. The sheer size of the U.S. market for horticultural products is going to give growers a lot of protection.

ABSTRACT

An Analysis of the Transition to a Market Economy: Results of the Surveys of Moscow EconomicOfficials

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This study examines the economic perspectives of the participants in the reform process in the former Soviet Union. The data is based on two surveys of Moscow economic bureaucrats. The first survey is conducted during the Spring and Summer of 1990 and contains 552 observations. The second survey is carried out in the Spring of 1992 and contains the interviews with 233 economic bureaucrats. The Institute of Sociology of the USSR Academy of Sciences conducted these interviews in person. The respondents held key economic positions in the ministries, state committees, government committees, and industrial concerns. Respondents of both surveys were middle aged, technically educated, and predominantly male.

The finding of this paper shows that, after the radical reform of 1991, the role of ministries in meeting the technical and material supply of enterprises has fallen significantly while the means of the market oriented economic method have increased dramatically (at least 425%). Our investigation shows that the industrial concern has more independent power than the other bureaucratic groups. Nevertheless, the industrial concern respondents do not have the decisive edge of knowledge of how a market system functions and, therefore, they are not able to manage and lead as they ought to.

Even though respondents in 1990 said that some cuts had taken place in the bureaucracy, the 1992 respondents think that at least 20% more cuts are possible without a loss of effectiveness. In realizing the technical and material support of the enterprises by means of direct links with suppliers and consumers, barter transactions received the highest percentage support among the respondents in the 1992 survey. The conclusion is that the previous centralized delivery system is no longer as essential as it used to be and the basic means of allocating the resources of capitalistic production are growing.

The 1992 respondents thought that local authorities hamper the transition to a market economy. Also, we find that the percentage of the respondents that stated that they decided independently was higher in 1992 compared to 1991. Our findings show that more than 80% of the respondents in 1992 thought that the state orders are necessary at present. Bureaucrats strongly believed that the state was the primary purchaser of the goods and the private market share was not that significant yet. We find that there was a lack of support for the promotion of privatization among Moscow economic officials.

Reluctance in supporting privatization could be due to the ambiguity about the concept and the effect of privatization on their jobs and future earnings.

ABSTRACT <u>Clintonomics at the One Year Point:</u> <u>A Preliminary Assessment</u>

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On January 20, 1994 the results of the *Wall Street Journal*/NBC News poll revealed the growing popularity of President Clinton. That poll, coming at the end of the President's first year in office, showed that 60% of those surveyed approved of Clinton's job performance. In reporting these results the *Wall Street Journal* stated that the President's growing popularity resulted partially from "general economic trends." In confirmation of that notion, the results of the Federal Reserve's regional economic survey were made public the same day, showing an expanding economy.

In light of the glowing economic news, the purpose of this paper is to undertake an analysis of the economy within a slightly longer term perspective. Specifically, I am interested in the question of whether the recent economic news is merely a continuance of trends established during the final year of former President Bush's term of office or whether President Clinton can legitimately claim credit for the improving economy.

Like Reaganomics, Clintonomics will be judged both for its aims and its accomplishments. Ultimately the true test of success or failure will be the overall health of the economy, rather than the passage of specific pieces of an economic plan. In practical terms this means that numbers are the bottom line. While everyone applauds a President presiding over a vigorous, expanding economy, it is not at all clear that the policies of the President alone are always an important causal factor. The gap between what Presidents ask for and what they get is sometimes too great; the inherited economic conditions are too important a determinant of early economic results. Nonetheless, it is useful to explore the course set for the economic ship of state by the President. It is clear from the 1992 and 1993 editions of the *Economic Report of the President* that some of the major themes of the Clinton agenda were already apparent as issues during the Bush presidency. The 1993 *Report* includes an entire chapter on "The Economics of Health Care." Also echoing Clinton is a chapter on "Economic Growth and Future Generations." Indeed, it is differences in the appropriate role of government in devising solutions to problems rather than the problems themselves which suggest that Clintonomics is much more than an evolutionary version of Bushonomics.

Further insight into the Clinton economic agenda may be had by examining the function of Vice-President Gore. Early on, Clinton and Gore released the details of a plan for the creation of a high-tech America built at the direction of the federal government. *Technology for America's Economic Growth: A New Direction to Build Economic Strength*, was released on February 22, 1993, barely one month after Clinton-Gore took office. The 36-page document bears both their names as co-authors. In contrast, former Vice-President Quayle's name is attached to a 56-page document: The Legacy of Regulatory Reform: Restoring America's Competitiveness. Apparently Gore is to preside over the creation of a national industrial policy while Quayle was to preside over the dismantling of a significant part of the federal government's regulatory apparatus. Both documents focus on making America more competitive in world markets, but the difference in approach can best be summarized by restating the two positions as follows: Get the government out of the way of the market. The government must lead the market into the future, albeit in a partnership, with government as the senior partner.

The Clinton expansion appears to be a continuation of growth which began before the President took office. Gross Domestic Product shows a strengthening economy throughout 1992 and the first three quarters of 1993.

Politically, especially during a Presidential election year, the unemployment rate is the single most important economic indicator. The data show the unemployment rate failed to buttress George Bush's effort to be reelected. The rate moved upward during the first half of 1992, and by election day had still not fallen as low as at the beginning of the year. President Clinton's first year in office is marked by a near steady month-to-month decline in the rate.

The value of manufacturers' shipments have shown their fair share of ups and downs during the last two years, but this can happen as much for weather and other seasonal reasons as for basic economic reasons. From beginning of year to end of year '92 the numbers show a 10% increase. For 1993 the comparable figure is only 4.7%. Is the Clinton expansion in danger of sputtering out without support from the manufacturing sector?

Clearly, construction spending is at the heart of the upswing in the U.S. economy. From beginning of year 1992 to end of year 1993 expenditures in this area are up a phenomenal 26%. As to all of the factors driving this spending one can only speculate. We must presume that declining interest rates have been a major influence. Here is an important point: only 17 basis points separates the high and low figures for the 3-month T-bill rates for 1993. Furthermore, two of the three highest numbers for the year came in the final two months of the year. Without compelling evidence that rates have some reason to go lower, one suspicions that they have bottomed out. If this is so, then it must be asked whether it is declining rates, as opposed to a low level of rates, that is required to support increasing levels of construction spending. If the prop of construction spending is kicked out from underneath the economy without something to replace it, we might see a slowdown in growth beginning within the next year or two.

ABSTRACT <u>A Solution to the Impact of Probable Health Care</u> <u>Reform: The Case of the North American</u> <u>Pharmaceutical Industry</u>

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In earlier presentations, the authors made the case that a fairly considerable burden might be entailed by the eventual implementation of some of the current proposals that are being explored by the Clinton Task force and Congress. Specifically, we postulated the following two sets of changes:

- 1. That existing tax preferences (the most important of which involve the tax sheltering of Puerto Rican drug manufacturing facilities) would be terminated.
- 2. That a system of domestic (i.e. United States) price controls similar to those which existed for many years in Western Europe, would be instituted by Congress.

More specifically, we used a simple simulation approach which focused on the impact of these projected burdens on a sample of eight large capitalization, domestically domiciled pharmaceutical manufacturing firms.

This paper raises two issues left somewhat unresolved in our former works. They follow:

- 1. There is a considerable possibility that in extreme conditions (e.g. a recession/depression of worldwide scope) the burden may be greater than earlier stated.
- 2. If this situation were to exist, would it threaten existing research programs and stockholder purchasing power and if so is there a method/strategy that the eight might employ to offset or negate these problems.

The results from our research suggest that a program of domestic price ceilings coupled with the abolition of industry tax loopholes would not result in material harm to this market sector.

ABSTRACT Discrimination in the Home Mortgage Market

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For over a quarter century, Congress has recognized the need to monitor and regulate home mortgage lending. A national policy of equal access to housing and home mortgage credit has been established, but this policy has proven difficult to implement. It is widely believed that access to the point of sale market has improved since the time of the seminal legislation, but that access to mortgage loans has not kept pace. Whether racial discrimination continues to exist in this credit market or not has been difficult to determine because of the circumstances of the loan making process itself: it is the legitimate function of the lending institutions to discriminate between high risk and low risk loans, and there exists interaction between loan risk, economic conditions, place of residence, and racial composition. The question then becomes one of distinguishing between economic and racial discrimination in the presence of this interaction.

Regulation of the housing market began in 1968 with the Fair Housing Act, which prohibited discrimination among purchasers. In 1974, the Equal Credit Act prohibited lenders from discriminating against individuals on the basis of race, gender, marital status or religion. These two pieces of legislation formed the foundation upon which later housing regulation was constructed.

The Home Mortgage Disclosure Act (HMDA) of 1975 was passed in response to the concern that housing credit was not equitably distributed among communities. The impetus for this bill was the economic decline of entire geographic areas; much of this decline had been attributed to selective lending practices of depository institutions. The law directed federal agencies to gather data to determine the existence of discriminatory lending, to distribute public funds where needed and to provide households with information on the lending practices of the savings institutions. These financial institutions are required to facilitate the flow of this information by reporting the geographic distribution of home mortgage loans.

In 1977 the Community Reinvestment Act (CRA) further required that depository institutions participate in the economic development of low and moderate income neighborhoods.

A 1989 amendment to HMDA requires the collection of pertinent information about the applicants for home loans. Required data include the applicants annual income, loan amount requested, gender, race, and the geographic location of the property. This amendment also required for the first time that credit denials be reported. The Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) extends the reporting requirements to independent mortgage companies.

This is the body of legislation that addresses equal access to home mortgage loans. A national statement of intent was established by the initial sequence of statutes in the late 1960's through the early 1970's. These laws were not sufficient to achieve the goal of making housing equally available to American citizens of all races because of the difficulty inherent in demonstrating a racially based non-economic component of loan applicant selection. The extending legislation of the 1980's required lending institutions to record and report greater detail on loan applicants, approvals and rejections. The Federal Reserve Board was charged with collecting and disseminating the data required by the HMDA.

Early uses of this data were not regarded as conclusive. Studies in Atlanta and Detroit reported that housing loans were more likely granted in neighborhoods that were predominantly white. The Federal Reserve Bank of Boston found that neighborhoods with nonwhite majorities had smaller proportions of loans approved than did areas which had white majorities. However, in none of these instances was data sufficiently strong to support the conclusion that a clear racial component to applicant selection was present. The Boston study concluded that race may have been a criteria for loan approval.

The primary factors in determining minority group loan approval were neighborhood characteristics, applicant income level, and demographic characteristics of the applicant. Within the same income levels, differences still exist between white and minority (Negro and Hispanic) approval rates. Although this finding is suggestive of racial discrimination in lending, additional detail in data collection is required. Further research should center on providing that detail which would allow the determination of a racially based interactive component. These studies can be given an added dimension by focusing on the marketing practices of banking institutions. By careful targeting, a lender can control the composition of applicants; a determination of whether intentional racial selection is accomplished by such target marketing is needed.

ABSTRACT <u>Devaluation Expectations and Credibility:</u> <u>The French Franc before the 1969 Devaluation</u>

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In order to evaluate the credibility of the dollar/French franc (\$/FF) Bretton Woods peg in the period preceding the devaluation of the FF on August 10, 1969, the expected rate of realignment is estimated as in Bertola and Svensson (1993). Expected rates of realignment are commonly measured by the differential between the interest rate on domestic and foreign assets. However, this measure is imprecise as interest on domestic and foreign assets can also diverge due to fluctuations in exchange rates within the exchange rate band. Thus, the expected rate of realignment is evaluated by subtracting from the interest rate differential an estimate of the expected depreciation within the band. The chief finding of this test is that the devaluation of the FF had been anticipated several years before it occurred, thereby undermining the credibility of the franc's ability to adhere to the provisions of the Bretton Woods system.

This method has been empirically implemented by several researchers, but, to my knowledge, it has never been applied to exchange rates of the Bretton Woods era. Its application has been confined to analyses of European exchange rate realignments under various recent regimes, and more particularly the Exchange Rate Mechanism (ERM) of the European Monetary System (EMS).

The Bretton Woods system is usually described as an adjustable peg or a gold exchange standard, because its key currency, the dollar, was convertible to gold at a fixed price. However the system can also be viewed as a target zone system, since member nations were committed to maintaining the parity value of their currencies relative to the dollar within a fixed band (1 percent on either side of par). It is well known that the second half of the Bretton Woods era, from 1958 to 1971, was characterized by a dollar surplus which resulted from a continuing deficit in the U.S. balance of payments. Although the period was characterized by downward pressure on the dollar against the currencies of Japan, Germany and the Netherlands, the sample period used to test the credibility of the franc's peg ended with the devaluation of the franc. The strength of France's currency was undermined by a remarkable series of social and political events. These were the students' revolt of May, 1968, and its exploitation by political parties on de Gaulle's right and left. The effects of the political events on the exchange rate created tensions between the financial markets and the political system. Although de Gaulle was strongly opposed to any devaluation of the FF, the market appears to have anticipated it. Thus the credibility of the franc's ability to adhere to the provisions of the Bretton Woods arrangement was questionable since August 1966, several years before the actual devaluation of the franc and the demise of the entire system.

Reference

Bertola, Giuseppe and Lars E. O. Svensson, "Stochastic Devaluation Risk and the Empirical Fit of Target-Zone Models", *Review of Economic Studies*, 60, (1993), pp. 689-712.

ABSTRACT New Development of Russian Land Privatization

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Recent agricultural reforms in Russia consist of a comprehensive restructuring of agrarian sector on the basis of private ownership of land and other means of production, and the transition from socialist to market agriculture. A key element of agricultural reforms is land reform which is aimed at land privatization to create private farms. The legislative basis for the creation of private farms was laid in 1990 when the Russian Congress of People's Deputies approved a packet of agrarian reform laws, including the laws on the Peasant Household and Land Reform. These laws established the legal right for farmers to hold land, hire labor, and acquire and sell land. Any citizen of the Russian Federation is legally eligible to receive a plot of land free of charge in order to set up a private farm. The local Councils of People's Deputies are in charge of distributing land to applicants. Private farms are exempt from taxes for over 5 years. Farmers may hire labor. A Russian Land Bank was set up to assist in the assessment, purchase, and sale of land. State and collective farm members have the right to withdraw from their collectives and take a plot of land with them. However, according to land legislation, there are restrictions on ownership of the land. A farmer must own land for 10 years before selling it, and can sell or transfer only to the Council or People's deputies. Moreover, if the owner does not farm his land for 1 year, ownership reverts to the Council.

Russian agricultural private sector includes private plots, gardens, orchards, individual private farms, livestock collectives, agricultural cooperatives, and State and collective farms re-registered as associations of private farms. It has grown rapidly in the past few years. The number of private farms in January 1993 had reached 183,700, this is equivalent to approximately 7 private farms per collective enterprise. The land area of private sector was 16.5 million ha., of them about 7.7 million ha. were private farms. Average size of the farms was only 42 ha. The position of private agricultural production out of total production has nearly doubled from 22 to 38 percent since 1989. A quarter to one-half of livestock inventories are now privately owned. On January 1, 1993, 90% of agricultural land was still registered in the collective sector and only 10% was in the private sector, with less than half of this in private farms formed as a result of the new legislation since 1991. Several laws have been enacted related to the ownership and privatization of land in recent years. After Russian President Yeltsin quashed communist hardliners, he signed a decree to destroy one of the last cornerstones of communist rule by lifting virtually all restrictions on buying and selling land on October 27, 1993. The action will lead to the breakup of thousands of State/collective farms and will boost Russia's land privatization.

ABSTRACT

The Client-Customer Controversy: Agency Issues in Residential Real Estate Brokerage

Franklin J. Ingram and Elizabeth J. Guerriero Northeast Louisiana University

For most American households, the home represents the largest share (25% to 33%) of the budget as well as the largest (and often only) source of wealth. This buying and selling of such an asset is of unquestionable consequence to all parties.

It is, therefore, not surprising that approximately 75% of all homeowners turn to the real estate brokerage industry for assistance in sales. However, a 1989 survey regarding real estate brokerage of over 72,000 subscribers to <u>Consumer Reports</u> found a dissatisfaction level twice as high as that of a typical consumer service industry. Moreover, roughly a third of the more than 56,000 panel members who had recently used a real estate broker had encountered at least one serious problem within the transaction process. Among the most frequently cited of these problems was confusion regarding the role, relationships and loyalty of broker/agents.

At the heart of the agency relationship is trust. But, can you trust an agent who represents the other party in the transaction? The rule of law referred to as <u>caveat emptor</u> or "buyer beware" had been the unchallenged standard of the real estate brokerage industry until perhaps the early twentieth century. At about that time an evolution began. From <u>caveat emptor</u> a series of rulings began adding to the brokers' responsibilities to the buyer. The evolutionary path can be outlined as follows:

- 1. <u>Caveat emptor</u>
- 2. Negligent Misrepresentation
- Innocent Misrepresentation/Strict Liability or <u>Caveat Vendor</u>-- "seller beware."

So, the standard has moved from <u>caveat emptor</u> which limits the agents responsibilities to the client (seller) to strict liability which creates agent liability to the customer (buyer) as well. An agent may be liable for providing false information to a buyer, even if the agent thought the representation was true. Thus, even an "honest" mistake can result in agent liability. The evolution in real estate agency has taken on a nearly revolutionary pace of late.

Except in business and investment real estate where agents can argue a "sophisticated buyer" defense, seller's agents are now generally required to manifest "due care" in working with buyers (i.e., both buyers and sellers in the residential market are assumed to be unsophisticated and, thus, deserving of due care from the presumably knowledgeable real estate professional).

The purpose of this research is to update the legal issues relating to broker liability and to empirically test the theory that adding a buyer's agent would bring balance to the market at an affordable price. The empirical study employed both regression analysis and a matched pairs test each of which lead to the preliminary conclusion that buyers can derive some net savings by obtaining their own broker. This solution would also appear to solve many of the legal ambiguities of current practices.

ABSTRACT <u>Human Development for Cyprus and Other</u> <u>Selected Countries: A New Measure</u> <u>for Economic Development</u>

John S. Kaminarides Arkansas State University

Edward Nissan University of Southern Mississippi

A great deal of emphasis has been placed in recent years on the use of socio-economic indicators as measures of economic development and well-being instead of relying purely on gross domestic product per capita (GDP). MacBean and Balasubramanyam (1978), Todaro (1985) and Dasgupta (1988), among many others, have discussed the many shortfalls of GDP, especially for inter-country comparisons. As McGillivray (1991) has pointed out, critics have agreed that development levels should not be measured by income levels alone. Therefore, many measures such as the Physical Quality of Life Index (PQLI) were constructed to observe the social progress or decline of nations by means other than GNP (Morris, 1979). A recent attempt in this direction was made by the United Nations Development Program (UNDP). In a Human Development Report (1991), 160 countries were evaluated for their development using a composite index named the Human Development Index (HDI). The index combines income with two social indicators--adult literacy and life expectancy--to give a composite measure of human progress.

The purpose of this paper is to compare the economic development of Cyprus to sixteen neighboring countries by using twenty-five human resource indicators. The table presents summary information on 17 countries and statistical computation for the 25 indicators among these countries. The table's footnote explains the statistical measures used in this study. The HDI for Cyprus was estimated 912, the fourth highest in the region. Column 8 ranks Cyprus among all countries in the sample. The Z value as shown in column 9 is the number of standard deviations the observation of Cyprus is away from the mean. Column 10 measures C values, that is, a proportion calculated from Chebyshev inequality. The numbers tell the proportion of observations that lie beyond what is observed for Cyprus away from the mean in both directions.

In summary, this paper presented a profile for countries in the geographical proximity of Cyprus, and looked for contrasts between them to see how they fare in relation to each other. The 25 variables and the associated computations provide a rich source of information for the purpose of comparisons.

Summary				Cyprus						
Ind.	N (1)	M (2)	S (3)	CV (4)	Min (5)	Max (6)	X (7)	R (8)	Z (9)	C (10)
A. Economic										
X1	17	0.726	0.193	0.26	0.385	0.969	0.912	5	0.96	-
X2	17	6381.118	3931.315	0.62	1934.00	14164.00	9368.00	4	0.76	-
X3	17	34.653	8.375	0.24	23.10	48.10	48.10	1	1.61	0.39
X4	17	25.841	13.328	0.52	4.40	43.10	37.40	4	0.87	-
X5	17	18.571	13.025	0.70	2.50	46.80	13.70	11	-0.37	-
X6	17	20.553	5.563	0.27	10.90	28.90	18.90	12 >	-0.30	-
X7	17	60.882	12.453	0.20	29.40	75.30	67.40	7	0.52	-
X8	17	1.276	0.825	0.65	0.20	2.50	1.30	8	0.03	-
X9	14	11.370	10.230	0.90	0.20	117.10	6.00	12	-0.92	-
X10	16	5.338	3.510	0.66	1.10	12.00	1.40	15	-1.12	0.79
X11	15	0.520	3.471	6.67	-9.90	4.60	4.60	1	1.18	0.72
X12	15	1.727	1.377	0.80	0.00	4.00	1.30	8	-0.31	-
X13	17	63.706	16.015	0.25	34.00	92.00	53.00	12	-0.67	-
B. Population										
X14	17	1.800	1.213	0.67	0.20	4.10	0.70	13	-0.91	-
377 es										
C. Health										
X15	17	69.712	6.056	0.09	60.30	77.00	76.20	3	1.07	0.87
X16	14	915.000	686.03	0.75	230.00	15580.00	1100.00	7	-1.33	0.57
X17	16	26.188	11.726	0.45	10.00	44.00	18.00	11	-0.70	-
X18	16	8.438	1.413	0.17	6.00	10.00	8.00	9	-0.31	-
D. Culture	1									
X19	12	81.667	55.308	0.68	15.00	193.00	125.00	3	0.78	-
X20	16	189.625	130.364	0.69	59.00	423.00	141.00	9	-0.37	-
X21	17	378.294	244.944	0.65	141.00	895.00	141.00	17	-0.97	-
X22	17	78.606	17.158	0.22	48.40	99.00	94.00	5	0.90	-
5										
E. Education										
X23	17	5.465	2.677	0.49	2.10	11.60	7.40	3	0.72	-
X24	11	39.209	32.739	0.83	1.10	83.00	61.10	4	0.67	-
X25	16	36.313	8.195	0.23	22.00	50.00	42.00	4	0.69	-

Summary Description and Statistical Computation

ABSTRACT Determinant of Intercounty Elderly Migration

Mostafa Mehdizadeh Miami University Middletown

This paper presents some empirical results concerning the determinants of countywide net migration of elderly population in Ohio during the intercensal period of 1980-1990 and compares it with the effects of the same variables on migration decision of the younger population. The site-specific amenities/disamenities and quality of life variables, public policy variables, as well as economic opportunity variables are included in a model and the migration decision is considered to be a consumer choice problem involving the choice between varying packages of public goods and services, amenities/disamenities, and economic opportunities that communities would offer. In analysis of flows of older migrants, one needs to recognize the importance of amenities/disamenities and public policy variables which may play stronger roles than conventional economic and demographic variables.

The empirical results of the paper support the contention that tax policies of local governments as well as labor market opportunities are important determinants of migration for both elderly and nonelderly populations. The most striking finding of the paper is the lack of significance of site-specific amenities included in the model. Population density is a significant and negative determinant of net migration rate of the elderly while the unemployment rate is a significant and negative determinant of net migration rate of the younger population. Except for these two variables, the other significant determinants of both the elderly migration rates are the same.

The positive effects of sales tax and negative effects of property tax on net inmigration rates of both elderly and nonelderly populations in empirical findings of the paper may provide additional ammunition to those individuals who are opposed to the choice of property tax as a means of revenue for local governments.

Zero-order correlations among the explanatory variables reveal that some of the explanatory variables included in the model are correlated which lead to downward biased t-statistics in the estimated regressions, which further support the importance of significant variables.

ABSTRACT

<u>The Effect of Branch versus Unit Banking</u> on Rural Small Businesses in Idaho and Montana

Robert J. Tokle and Mark K. McBeth Idaho State University

There is a long running controversy over the relative advantages and disadvantages of branch banking versus unit banking and their effects on rural areas. This paper surveys small businesses in Idaho and Montana to test four hypothesis commonly discussed in the literature.

Arguments and Evidence that Branch Banking is Good

The majority of the theory and evidence seems to suggest that branch banking is helpful, or at least not harmful to rural communities. McCall (1980) found that branch banking increases competition and lowers interest rates charged on loans. Barkley, et al. (1984) and Green (1986) found that branch banking did not decrease loan deposit ratios.

Arguments and Evidence that Branch Banking is Bad

Some of the theory and evidence seems to suggest that branch banking is harmful to rural communities. Struck and Mandell (1983) point out that in unit banking states, the decisions to make loans to customers are local decisions while these decisions tend to be centralized in branch banking states. From their probit results, they concluded that small businesses' credit needs are less likely to be met in branch banking states. A variety of newspaper articles, also, argue against branch-banking in that deposits generated in rural communities are used for loans in metropolitan areas.

Data

Surveys were mailed to 100 small businesses in both Idaho and Montana. A total of 83 surveys were returned for a response rate of 42%.

Results

Our data indicated that overall Idaho banks (branch banking) charged lower interest rates on loans to small businesses. Idaho banks also paid higher interest rates on money market accounts. There was no association between customer satisfaction with their bank's willingness to make loans and the type of bank. Finally, there was no association between the respondent's perception of their bank's knowledge of the local economy and the type of bank.

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ABSTRACT Survey of Consumer Characteristics

Eugene Williams and Ann Spence McMurry University

The purpose of this paper is to examine the demographic characteristics and buying habits of adult consumers in Abilene, Texas. A comparable study of consumer characteristics in Natchitoches, La. is performed annually by Dr. Barry Smiley, Dean of the College of Business at Northwestern State University in Natchitoches. Similar types of studies are often conducted by consumer information companies, chain stores, automobile manufacturers, homebuilders associations, public relations firms, environmental groups, and many others.

In the Spring of 1993, a questionnaire was designed and administered in order to study consumer characteristics of heads of households listed in the City Directory of Abilene, Texas. Abilene has a population of 106,654 and is located on Interstate 20 between El Paso and Dallas. Abilene is the location of Hardin-Simmons University, McMurry University, Abilene Christian University, Cisco Junior College, and Dyess Air Force Base. Cattle, diversified farming and oil are also important to its economy.

The Business Statistics class taught by Ms. Spence conducted telephone interviews with a systematic random sample of 354 respondents who were at least 18 years of age. Each interview lasted about ten minutes.

Once the interviews were completed, the results were tallied and presented in a table. Then the results were cross classified and Chi Square Analysis was used to determine whether items in the rows were independent of the items in the columns. Unless otherwise specified, a 95 percent level of confidence was used to determine whether or not there was significant difference. As a final step in the procedure, profiles of consumers possessing certain characteristics were established.

It should be noted that the results only represent characteristics of consumers in Abilene, Texas; they may or may not describe consumers in other locations. A similar study could be conducted in other cities.

Findings

The statements below provide an overall summary of the findings:

1.

About 62 percent of the respondents described shopping in Abilene as either very good or good.

- 2. There were 65.5 percent of the respondents who had not shopped outside the city of Abilene in the past month. The majority of those who had shopped outside Abilene said they shopped in the Dallas-Ft. Worth Metroplex.
- 3. There were 26.5 percent of the respondents who had bought a car or truck in the past year; over 75 percent of the cars and trucks were purchased in Abilene.
- 4. There were 27.6 percent of the respondents who had bought a major appliance in the last year. Over 90 percent of these appliances were purchased in Abilene.
- 5. There were 70.3 percent of the respondents who had bought at least \$25 worth of clothing in the past month. Slightly over 87 percent of the clothing was bought in Abilene.
- 6. Only 18.9 percent of the respondents had NOT eaten out in the past week; there were 34.6 percent who had eaten out three or more times in the past week.
- 7. Over 76 percent had NOT been to a movie in the past month, and 71.8 percent had NOT played the lottery in the past month.
- 8. Over 80 percent of the respondents said they had read the newspaper at least 3 times a week. Over 90 percent of those read the Abilene Reporter News.
- 9. About 87 percent of the respondents had listened to the radio at least one time a week. The most popular stations were KEAN 105 FM and KACU 89.7 FM.
- 10. The typical respondent had watched 10-14 hours of television each week, and 24.6 percent had watched television for 20 hours or more each week.
- 11. Demographically 38 percent of the respondents were college graduates, 26.2 percent were 65 years or older, 70.1 percent were married, 54.7 percent had no children living at home, 80.2 percent owned their own home, 69.2 percent had lived in the Abilene area over 10 years, 84.1 percent were not in the military and 45.8 percent had a household income of \$25,000-\$50,000.

Tables summarizing the overall results of the study and profiles of consumers who purchased specific goods and services are available upon request.

ABSTRACT <u>An Observation on Population Explosion, Economic</u> <u>Development and Population Policy Case of:</u> <u>Galicja, Czech Crownlands, Malaysia,</u> <u>Singapore and Taiwan (Republic of China)</u>

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A population explosion observed in the world over the last two centuries was the subject of numerous theoretical and empirical studies. These studies focused in particular on the phenomenon of rapid natural rate of population growth and economic development and the role of the government population policy. The results are inconclusive in the absence of the general theory and the guideposts for public policy.

From the rich literature of empirical and theoretical works, points of view emerged which may be summarized under the headings: optimistic, pessimistic and neutral. The optimist's view points to cases in which a substantial rise in per capita output is accompanied by continued and substantiative increase in population over a long period of time. This optimism is based on the experience of the leading industrial nations of the world including the US, UK, Canada, France, Germany, Italy and Japan.

By contrast the pessimist point of view - also known as the Malthus-Ricardo-Mill position - is that weak economies which experience rapid population growth may be at greater risk of suffering setbacks in economic development than countries with slower population growth. Consequently, the pessimist's argument is in favor of population control practiced by some less developed countries like India and China.

The neutralist's point of view does not assert that population growth greatly enhances economic development. This view also denies that population growth hinders economic development. More population appears to result in either depression or economic recession.

The empirical evidence collected on the relationship between natural population growth and economic development in this study does not lead to an outright acceptance of any of the three points of view. The development model built on the assertions of any of the three points of view may not provide directives for the less developed nations of the world.

Factors College Students Use Most in Evaluating Their Teachers--A Pilot Study

Jo-Anne Gibson and Patricia Landry Arnold Southeastern Louisiana University

COMMENTS

Mostafa Mehdizadeh Miami University Middletown

It is clear that the authors have embarked a worthwhile and interesting journey. Student surveys that contain useful information and accurate interpretation of the surveys may lead us to a judicious use of the results. I make a few comments and recommendations on the variables and analysis as well as implications of the paper and possibilities for further inquiry.

First, some of the variables used in the analysis seem to be similar or highly correlated with each other, (for example, some of the teachers' characteristics such as "recommended as easy by students" and "gives good grades without requiring much"). Additionally, "doesn't require strict attendance" and "one who dismisses class early" could be attributed to the easy instructors. To test instructor popularity, it may be necessary to develop homogeneous groups of variables. This may be accomplished by applying factor analysis to the raw data. This removes biased cluster information resulted from sources of dependence in the data. The factor loadings could be used for further analysis. To identify whether or not significant differences exist among different groupings, I suggest a stepwise discriminant analysis in the second stage where the discriminating variables are the factor scores obtained in the fist stage of analysis.

Second, out of 162 observations, 151 students were majoring in business and only 11 in the other schools. Thus, classification of students by their college of majors, with a small sample size for non-majors, may not reveal too much information.

Third, one of the conclusions of the paper is that the instructors who give good grades without requiring much are perceived to be good by the students. What is the policy implication of this? Should the departments encourage grade inflation to attract more students to deal with their declining enrollments? This practice contributes to a drift toward lower standards. Critics of grade inflation argue that non-challenging instructors devalue education and make students lazy.

Three relationships would be interesting to explore. First, are these attributes of good teachers reflected in classroom learning? Second, are the significant attributes of teachers related to "lifetime learning?" Third, are attributes measured on the student

evaluation related to perceptions about economics, as measured to be the desire to major in (or otherwise pursue) economics?

The Effect of Earnings on Migration and Job Change

Randall G. Krieg and Alok Bohara University of Northern Iowa

COMMENTS

Eugene Williams McMurry University

There are many factors that affect migration. These include the unemployment rate, employment growth, property taxes, sales taxes, crime rate, number of hospitals, public protection and many others.

The main contribution of the authors, Alok Bohara and Randall Krieg, was their decomposition of the effect of earnings into individual characteristics and unobserved heterogeneity. This serves to clarify the role of earnings in the migration decision. This was an excellent paper and I commend them for their work.