



# Financial Crisis, Gender, and Power: An Analytical Framework

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**Summary.** — This paper begins to remedy the neglect of gender aspects of financial crises by exploring a suggestive microfoundational model of unequal gender power and cost-bearing in a borrower household. This model shows that financial-market liberalization can assess women’s access to formal sector employment and encourage the growth of household credit, both for a household enterprise and for the acquisition of labor-saving household assets. The price of these gains, however, is greater household risk because of greater cash-flow dependence and financial fragility. A financial crisis can force the household to bear heavier adjustment costs than would otherwise be felt; and these costs may well be borne disproportionately by women, who become more economically vulnerable as a result. © 2000 Elsevier Science Ltd. All rights reserved.

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## 1. INTRODUCTION

Other than investigations of the informal credit market and microenterprise financing innovations, the intersection of gender and financial processes has received little attention.<sup>1</sup> This neglect may arise because financial models tend to focus exclusively on marketized economic relations—overlooking the interactions between nonmarket and market-based activities emphasized in the literature on gender and development.

This paper addresses the question of what happens to gender relations within the household as an economy goes through financial liberalization and crisis. We draw on recent East Asian experience, particularly that of middle-class households, to explore conceptually processes of decision-making and risk-bearing within the household over the level of household credit in different stylized market environments. Our purpose is to identify some previously invisible gender aspects of financial liberalization and crisis by analyzing household borrowing, asset acquisition and liquidation,

and financial fragility at different stages of the financial cycle.

Our model shows how intrahousehold gender relations are intertwined with credit-market processes and financial structures. An increase in employment opportunities and credit flows during financial liberalization may positively affect women’s bargaining power, while also increasing households’ and firms’ financial vulnerability. Further, women may bear borrowing-related adjustment costs disproportionately during periods of financial stress and crisis.

Drawing heavily on recent East Asian experience, Section 2 first sets out a stylized picture of economic production, credit markets, and household reproduction during financial liber-

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alization and crisis. Section 3 then presents a conceptual framework which explores household decision-making when credit is available to support asset acquisition; this framework emphasizes gender inequality and gendered differences in risk-bearing. Section 4 discusses the effect of financial liberalization and crisis on the framework of Section 3. Section 5 summarizes the paper.

## 2. STAGES OF FINANCIAL GROWTH AND ECONOMIC DEVELOPMENT

We begin with a stylized picture of financial development, with special attention to the East Asian experience: the transition from financial "repression" and interventionist state policies, to financial liberalization and capital-market opening, to financial disruption and economic collapse. This picture constitutes a point of departure for the discussion which follows.

### (a) *Financial repression and liberalization*

Financial liberalization involves the erosion of government controls over financial prices, credit flows, and institutional practices: public oversight is lessened, interest-rate controls are removed, and financial deregulation occurs. In East Asia, in particular, this liberalization has often followed a long period of financial repression, in which governments have reined in financial market forces through interest-rate ceilings, selective credit policies, and high reserve requirements. Whether financial repression policies have been successful in spurring economic growth is a controversial question, which is bypassed here. We simply note that access to the formal credit market is restricted for households and small firms under financial repression.

Smaller economic units can obtain credit for most purposes only from informal credit arrangements. Informal credit institutions include moneylenders and landlord-lenders, and diverse arrangements ranging from curb markets in Taiwan and Korea, to trader-lenders in rural areas of the Philippines, to rotating savings and credit associations ("chit clubs") in Thailand (Lee & Tsai, 1988; Nayar & Somanathan, 1984). These arrangements proliferate among poorer households and smaller enterprises by overcoming the lack of collateral and high transactions costs which prevent the spread of formal credit to these sectors. Infor-

mal credit markets predate financial repression, and often thrive even after liberalization spurs the growth of formal markets.<sup>2</sup>

During financial liberalization, the formal financial sector develops rapidly, and domestic financial processes are often linked with those abroad. Capital widening occurs: more economic units, including households and small and medium firms, gain access to savings and credit instruments in formal financial markets. Financial deepening, a growth in the ratio of financial assets to income, also proceeds: new financial instruments and exchanges emerge and new market participants enter.

The historical record of financial liberalization is varied. In some cases, interest rate and exchange controls have been removed voluntarily; for example, Hong Kong took these steps in the 1960s and 1970s to promote its role as an international financial center (World Bank, 1993); South Korea liberalized in the mid-1990s to support its plans for industrial expansion (Crotty & Dymski, 1998). In other cases, countries have been pushed into liberalization by economic stringency. For example, the Philippines, Indonesia and Thailand dismantled financial controls in the 1980s due to the conditions imposed under International Monetary Fund (IMF) structural adjustment programs; Korea was forced to open its markets by a 1997 IMF program (Lim, 1999).

Financial liberalization usually entails opening domestic capital markets to foreign capital inflows; this is facilitated by the weakening of domestic ownership rules, high domestic real interest rates, and exchange-rate pegging. Large-scale inflows of overseas capital, in turn, often lead to an asset-price boom and to speculative bubbles (Dymski, 1999); this is especially likely in real-estate and equity markets, in which the demand for financial claims can rise faster than the growth of productive assets. Wealthy units increasingly gravitate to the stock market and to real estate, due to these sectors' apparent high yields and liquidity. The rapid growth of asset prices increases inequality. In the case of Korea during the late 1980s and 1990s, for example, skyrocketing land and property prices were paralleled by a declining rate of home ownership.

Financial liberalization is often associated with the liberalization of trade and the expanded use of female wage labor, especially in export processing zones (Singh & Zammit, 1999). As household income increases, market-produced goods and services replace goods and

services previously produced informally by women within the household; and household assets such as washing machines and dishwashers may be acquired. When liberalization is associated with prosperity, as in Korea in the mid-1990s, it gives rise to new formal financial institutions which identify “underserved” markets, especially those populated by middle- and upper-income households. This surge of credit supply feeds the spread of global consumerism: household durables, leisure and consumption goods, even luxury goods.

Financial liberalization often is associated with boom conditions which become unsustainable and lead to busts. In the case of forced liberalization, a boom may occur as overseas capital enters and new industrial capacity is put in place; but a bust may follow if expected returns are not achieved and capital flows reverse. Prosperity-driven liberalizations, in turn, may lead to unsustainable cyclical consumer booms, as middle and upper classes’ debt-fueled demand for consumption goods rises faster than their incomes.

#### (b) *Financial crisis*

A debtor unit (nation, firm or household) experiences a financial crisis when it cannot meet current debt obligations and its creditors demand repayment. Financial crisis can be triggered either by upward shifts in debt obligations, by downward shifts in income and asset values, or by both. But, dramatic collapses such as that in Asia typically have deeper roots. In the Asian case, the deeper causes are these economies’ dependence on foreign capital, especially short-term capital, and bank-financed speculative investments in these countries’ booming real-estate and stock markets. The crisis emerged when several countries’ capacity to repay debt eroded, leaving them able to avoid recession and widespread business failure only via new capital inflows which overseas investors became unwilling to provide.<sup>3</sup>

The insolvency and failure of many firms led to large-scale layoffs, declining real wages, and falling margins in the informal sector. Consequently, many households which had taken on increased debt obligations fell into insolvency. While the immediate effect of unsustainable consumer debt was felt by middle- and upper-class households, lower-income households experienced ripple effects as the demand for their labor services eroded.

Meanwhile, social services were cut and austerity measures were imposed under structural adjustment packages. These changes undercut the coping mechanisms of households and communities. Household survival was threatened by a combination of debt, lost jobs and declining and insecure incomes. Many households survived only because of their savings and their family and community links (World Bank, 1998).

The economic contraction especially aggravated the social and economic vulnerabilities of both poor and middle-class households. The effect of this crisis on the gender nexus differed from place to place. In many countries, this contraction imposed particular pressures and burdens on women. Women have been disproportionately targeted for layoffs in Korea, Thailand, Malaysia and Indonesia. Households with falling incomes have coped by increasing mothers’ workloads and putting school-age children—especially daughters—to work (Singh & Zammit, 1999; World Bank, 1998, pp. 81–82). In the Philippines, more women have sought employment, especially in the service sector, as the burden of layoffs fell more heavily on men (Lim, 1999).

In general, the Asian financial crisis exacerbated gender tensions in every affected country, and increased gender inequality in many affected countries. During the crisis the social need for the reproduction sphere becomes more profound, but strained relations among household members can weaken the integrity of the human bonds that sustain households as functioning units. It is therefore not surprising that the social fabric is torn by increased suicide rates, family abandonment by household heads, and rising domestic and community violence.

### 3. A MODEL OF FINANCIAL DEVELOPMENT AND GENDER RELATIONS

The stylized picture presented in Section 2 is, in the main, well known. Our interest is how this credit dynamic might affect the household, especially the circumstances of women in developing countries. To the extent that the credit story told in Section 2 involves East Asian boom-and-bust growth *per se*—as globalization and marketization are succeeded by collapse and IMF conditionality—this picture has been described at length in the

literature on gender and development.<sup>4</sup> What has not been explored is the specific role of credit boom-and-bust on the household. This section sets out a conceptual exploration of this untold story. The reader is warned that many of the ideas in this section are conjectural; there are no academic studies, and only a few journalistic accounts and interviews, as an empirical anchor for our analysis.

This caveat noted, what story might emerge from the broad outline in Section 2? We might conjecture, first, that pre-existing gender relations in households are patriarchal under financial repression. Many households, particularly low-income households, lack access to formal credit markets. In the main, credit remains available only via savings associations or curb markets (Hsiung, 1996; Cheng & Gereffi, 1994). These informal arrangements often draw on personalistic relations and cultural practices which reinforce pre-existing gender norms, under which women's labor centers on household reproduction.

We conjecture, further, that increased female participation in the formal economy can challenge patriarchal social and gender norms; women's income gains may lead to more bargaining power over some household decisions. These same shifts may also lead to more female access to credit, unless gendered norms and credit-market segmentation prevent it.

So it is logical to suppose that household expenditure decisions are renegotiated as females increasingly gain access to formal sector employment. While many areas of decision-making remain the domain of male authority, women gain increasing authority over the allocation of income to items such as education, food and domestic services. Women will be inclined to address the squeeze on their time brought about by their participation in labor markets and their primary tasks in household reproduction. In particular, women may wish to acquire household assets such as washing machines and microwaves, as well as services such as paid childcare, which reduce their time in household reproduction. Women are not alone, however, in wanting to expand expenditures. Rising income levels in local communities and increases in household earned incomes due to wives' earnings lead many households to invest in real financial assets or to start small and medium enterprises (which are typically male-controlled). Increased formal wage incomes and rising asset values, in turn, lead more and more households to use credit to

meet their expanding expenditure needs—apparently at little risk.

This brings us to the middle-class consumer booms which are often linked to financial liberalization. These booms, which occurred throughout East Asia just before the mid-1997 financial crisis, undoubtedly hasten the substitution of market purchases for goods produced in the household, and the growth of consumer debt to support household expenditures and enterprises.<sup>5</sup> We can postulate that household financial fragility—that is, the increased likelihood that job or income loss will leave households unable to service their debt loads—will often grow systematically.

In sum, financial liberalization may have indirect and direct effects on the gender/finance nexus. The indirect effects arise if liberalization is associated with economic growth.<sup>6</sup> If it is, this growth may increase the demand for female employment, and lead to more female earned income; this in turn can increase both women's influence over some household decisions and women's potential time-squeeze. The direct effect arises because financial liberalization also permits the credit-financed extension of household purchasing power. Increased formal sector earnings, both those currently received and those anticipated in the future, provide a basis for higher levels of household credit just as banks are looking for new loan customers. Household enterprises financed in this way can increase households' current and expected future income and wealth levels; household assets so financed can ease the income/time-squeeze trade-off. This credit-financed expenditure comes at the price of greater household financial fragility and credit risk.

How might these crosscutting impulses during financial liberalization—more women's formal sector income, more credit-financed expenditures, greater financial risk—affect intrahousehold dynamics? How will those dynamics, in turn, be affected when financial crisis occurs? We explore these questions in a simple household model. This exploration is not intended to be definitive; our aim is to open up a new area of gender-related research by suggesting some novel gender-related trade-offs linked to household credit and financial fragility.

The guiding idea of this model is that household financial fragility, female voice, and gendered risk-bearing are all intertwined in household decision-making. The model

encompasses the motivations and behavior of three domestic economic units: a formal sector firm, a banking sector, and a household. The focus is on these units' labor and loan market interactions in a single period. Appendix A contains an exposition of the formal structure of this model; in the text, we describe its central relationships using several diagrams.

The firm in this model is a formal sector establishment which manufactures a tradable good and employs male and female labor. This firm borrows from the domestic banking sector; it may also engage in speculative domestic-asset acquisition if it hopes for capital gains. Prior to liberalization, the extent of this firm's productive and speculative activity is governed by its credit supply, which in turn is limited by its available collateral and by a leverage (loan/collateral) limit. Initially, this leverage limit is set at  $\bar{\delta}_1$ . The domestic financial sector, in turn, includes both formal and informal credit markets. The formal sector bank obtains deposit liabilities from households firms, borrows in the capital markets, and makes loans to firms, money-lenders, and households.

The focus of our attention is a traditional two-adult household with dependents, drawn from the middle-class income stratum.<sup>7</sup> The husband and wife are in a situation of cooperative conflict: they care for one another's well-being (that is, leisure time and desires); but both make demands on each other, because they want to raise household living standards. Faced with both time and income constraints, the two adults must work out: who performs household domestic and childcare activities and how much time is allocated to these reproductive activities; who seeks earned income via wage labor or entrepreneurship; and, if the household has access to credit, how much to borrow.

As income increases for both husband and wife, the household accumulates more assets over time. It is useful to imagine that these assets divide into "husband's assets"—capital in the household enterprise and some personal assets—and "wife's assets"—household labor-saving appliances, purchased domestic services, and personal assets. Any household enterprise is assumed to be nominally owned by both partners but effectively controlled by the husband.

The household must contend with uncertainty in making its plans. The household makes decisions about asset acquisition based on a set of expectations about the husband's and wife's wage level and hours, if they are employed in the formal or informal sector, and about the net

revenue of any enterprise the household may operate. These assets consist of capital deployed in the household enterprise, household assets such as dishwashers which reduce the labor required for household reproduction, and personal assets such as cars and jewelry.

The impact of this uncertainty depends on whether the household finances its asset position with cash or credit. Suppose the household uses solely its accumulated savings to purchase assets; then if expectations about household income are disappointed, the household's cash reserves simply fall at the period's end; there is no financial risk *per se*. But, if a household takes on credit to support its asset position, financial risk emerges.

The household becomes financially fragile insofar as its income (wages earned plus enterprise net revenue) may be insufficient to meet its loan repayment obligations.<sup>8</sup> Conflict can arise over what adjustments should be made when household financial fragility is triggered. One option is for household members to compensate for the income shortfall by performing compensatory work. This additional work will be personally burdensome, since it reduces leisure time and most likely involves lower-wage work, often in the informal sector. Another option is to liquidate some portion of household assets: either financial assets held in reserve, or personal assets such as jewelry, or even capital in the household's enterprise. Adjustments under adversity may be eased by the presence a support network on which the wife can draw for extra assistance in reproduction.

Tension can emerge between husband and wife because they may want different asset mixes during the asset-accumulation period—that is, the husband may want a higher proportion of the assets he controls (such as those specific to the household enterprise), while the wife may prefer assets specific to household uses and under her control. Tension can also arise because end-of-period adjustments may not be gender-neutral: either husband or wife, or both, may take on extra work; either husband's or wife's assets, or both, may be liquidated. This makes the borrowing/asset-acquisition decision at the beginning of the period non-gender-neutral as well.

Consequently, the husband and wife may have different attitudes toward risk. For example, if the wife has less say over the asset mix, and must do extra work and/or liquidate her assets if adversity is experienced, she will want to be more conservative in financing

household assets and making household loan commitments; if the husband determines asset mix and faces lower adjustment costs, he will be more aggressive in taking on debt.

The model discussed here, and set out in Appendix A, supposes that women's bargaining power in decision-making—that is, her influence over household decisions, which we capture in the term *female voice*,  $\alpha$ —depends on pre-existing gender norms and on the proportion of total household income for which the wife has accounted in the previous period (which is a lagged endogenous variable).<sup>9</sup> What the wife advocates in terms of asset (and debt) acquisition and asset mix depends in part on her share of cost-bearing whenever disappointed expectations force *ex-post* household adjustments. We depict the wife's share of cost-bearing as  $\beta$ , and assume for simplicity that it too depends on gender norms and relative previous-period income. As noted, this cost-bearing can include asset liquidation, extra work for income, or both; and depending on the presence of a support network for the wife, cost-bearing may also include more labor in household reproduction activities. In effect,  $\beta = \beta(\alpha)$ , with  $\beta$  increasing in value (moving closer to 1) as  $\alpha$  falls (and vice versa).<sup>10</sup>

When the wife lacks power within the household—when female voice is low ( $\alpha$  is small) and female cost-bearing is high ( $\beta$  is large), this household scenario involves a nested moral hazard problem.<sup>11</sup> The household's loan contract creates a moral hazard for the lender, since whether an adverse shock results in loan default depends on the household's willingness to make *ex-post* adjustments. When the husband exerts primary control over the decision to borrow, he will be inclined to take on more debt when he bears little cost-bearing responsibility; for if expectations are disappointed and financial fragility is realized, household adjustments under adversity—extra work and/or asset liquidation—are made primarily by the wife. That these adjustments are made because the household has acquired in the main assets controlled by the husband reflects the extent of unequal intrahousehold power. In effect, adversity due to realized financial fragility as a consequence of unequal household decision-making can expose the extent of unequal household cost-bearing.

This structured conflict underlies the household's beginning-of-period choice of how much to borrow, which here involves the household's choice of  $\delta^H$ —household loan-market leverage,

the ratio of loan amount to earned income. The wife is not risk-averse, in the sense of preferring a lower  $\delta^H$  than her husband, because of innate preferences; her risk aversion stems from her social roles inside and outside the household. When the wife has little access to outside income, little control over household assets, and heavy responsibility for risk-bearing—that is, when  $\alpha$  is small and  $\beta$  is large—the wife will want a low level of household leverage,  $\delta^H$ , all else equal. As the wife gains more access to earned income through employment outside the home, and as her influence over household asset decisions grows, that is, as  $\alpha$  rises, she will be comfortable with a higher  $\delta^H$ , all else equal. Similarly, if the wife has a lower share of responsibility for *ex-post* adjustments under adversity, that is, if  $\beta$  falls, she will be comfortable with a higher  $\delta^H$ .

Figures 1 and 2 provide graphical depictions of the relationship between household credit-market decisions and female voice and risk-bearing. Figure 1 sets out the relationship between female voice and household credit. Each *VL* curve depicts the trade-off at any point in time between female voice,  $\alpha$ , and household loan-market leverage,  $\delta^H$  (this takes advantage of the fact of the simplifying assumption that  $\beta = \beta(\alpha)$ ).

Figure 2 depicts asset acquisition and liquidation by the household. The loan amount determined by an equilibrium  $(\alpha, \delta^H)$  determines a budget line of potential loan-financed expenditures on husband's assets, primarily enterprise capital, and wife's assets, primarily labor-saving consumer durables and investments in domestic services. The location of any loan budget line is determined by the amount of loan obtained and by the prices of assets in these two categories. The household's location on this line—its allocation of available loan funds between husband's and wife's assets—depends on female voice,  $\alpha$ . Figure 2 shows an initial loan level of  $(A_1^H A_1^W | \alpha_1, \delta_1^H)$  and an asset allocation choice at a point *A*, representing a relatively low level of female voice,  $\alpha_1$ .<sup>12</sup>

#### 4. THE GENDERED ANALYTICS OF FINANCIAL BOOM AND CRISIS

##### (a) *From financial repression to financial liberalization*

Having set up a simple model of household relations with borrowing, we now consider how

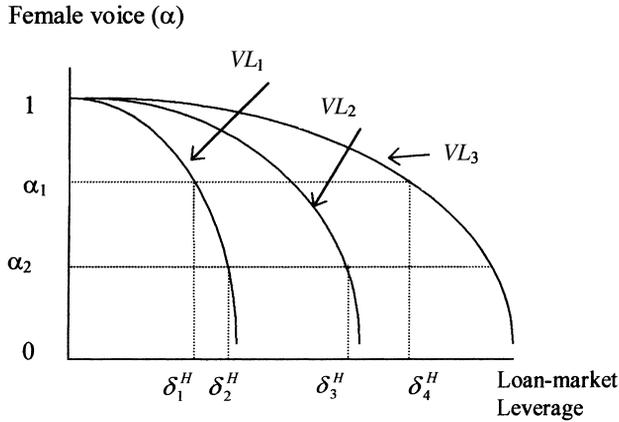


Figure 1. Loan-market leverage and female voice.

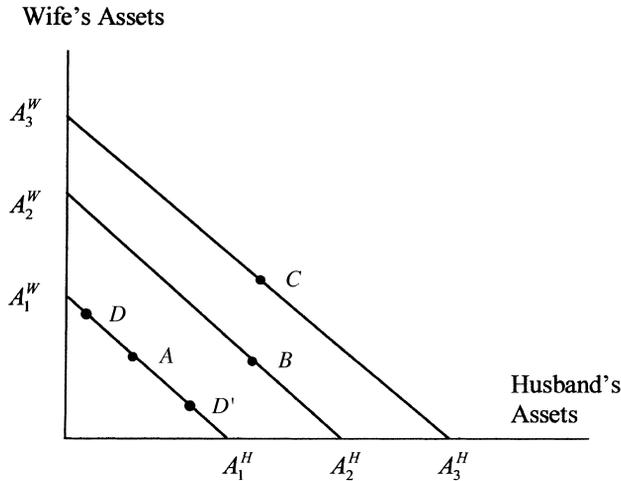


Figure 2. Household asset acquisition and liquidation.

the options, choices and reactions of household members are affected as the economy moves from the repression phase to liberalization, and from that phase to crisis.

During repression, financial sector capacity grows slowly by gradually accruing more domestic savings. Financial liberalization enables formal sector lenders to grow far more quickly than savings growth alone would warrant; the deregulation of formal sector interest rates and the easing of financial regulations increases the flow of funds to lenders, including foreign capital inflows. Flush with lending capacity, banks broaden their lending

criteria and increase permissible loan-leverage ratios. Loan demand also shifts out as some borrowers migrate from the curb to the formal market. Households may also engage in more credit-based consumption.

Financial liberalization can be expected to affect intrahousehold relations in a variety of ways. The formal sector demand for female and male employment may rise differentially; the extent to which household enterprises are expanded through formal sector borrowings may vary considerably; the availability of household assets that can reduce wives' time in household reproduction can differ consider-

ably; and women may or may not have direct access to credit.

Since we are setting out a conceptual story, we will postulate that liberalization has two rounds of effects on the stylized model set out in Section 3. Suppose that in the first round of effects, formal sector lending capacity grows and the formal sector demand for male labor rises. This means first that loan-market leveraging among firms as a whole will rise, from  $\delta_1$  to  $\delta_2$ . Suppose in Figure 1 that prior to liberalization female voice within the household is at the moderate level  $\alpha_1$ , since both the husband's and wife's incomes (the numerator and denominator of  $\alpha$ ) are low in value. The household has a modest amount of loan-market leverage,  $\delta_1^H$ ; so it is located along  $VL_1$ . With low loan-market leverage and low income levels, funds obtained through household credit—probably obtained at expensive curb-market rates—are quickly exhausted. In Figure 2, the household begins, as noted above, at point *A*.

Now suppose that with liberalization, the husband's earned income grows (as more of his labor is hired, at higher wage levels), while the wife's is (assumed to be) constant. This reinforces the tendency toward male domination of household decisions: female voice declines over time—that is,  $\alpha$  falls from  $\alpha_1$  to  $\alpha_2$ . This means that the household shifts downward along  $VL_1$ , increasing its borrowing to  $\delta_2^H$ . At the same time, however, the lender makes more credit available to this household, at rates lower than those to which the household previously had access in the curb market. This shifts the household out to  $VL_2$ , and it achieves a new higher level of borrowing at  $\delta_3^H$ . Given the dominance of the husband in household decisions, this new asset-acquisition power is used to increase the stock of husband's assets—and specifically to build up capital in the household enterprise. In Figure 2, the household's loan-budget line shifts from  $(A_1^H A_1^W | \alpha_1, \delta_1^H)$  to  $(A_2^H A_2^W | \alpha_2, \delta_3^H)$ ; and assets acquired shift from *A* to *B*.

If this initial set of changes in household circumstances remained fixed, the household would move incrementally over time along  $VL_2$  and  $A_2^H A_2^W$ ; since  $\alpha$  would decline as male income continued to grow, these movements would occur in a southeasterly direction. We now take into account, however, a further possible liberalization-related shift. Suppose that the wife herself increases her formal sector income substantially, due to employment

opportunities that arise as the firm expands its production of tradables. The wife is now able to contribute monetarily to the repayment of payment and debt obligations linked to household asset acquisition. Further, greater involvement in income-earning activities outside the home increases the wife's time-squeeze, and the opportunity cost of her time spent in reproduction activities. The possibility of acquiring assets that will reduce household-reproduction time (and otherwise enhance living standards, such as investment in education for children) becomes attractive. If the husband is sympathetic to the use of family purchasing power for such purposes, the wife's tolerance of financial risk may increase. Fortuitously, the wife's increased income increases her voice (by shifting upward the numerator of  $\alpha$ ), providing her with more influence over both household asset level and asset composition.

Suppose the level of female voice shifts back to  $\alpha_1$  from  $\alpha_2$ . This does not imply, as Figure 1 otherwise suggests, a reduction in household loan leverage; for at the same time, the wife is able to shift asset composition in Figure 2 in a northwesterly direction. The wife's shift toward a less risk-averse posture is associated in part with her discounting of the cost of risk-bearing; costly adjustments under adversity seem less likely given the prosperous times, and less costly given her greater income-earning capacity.

This shift on the wife's part may be further reinforced, in this second stage, by a further shift in the bank's loan-making criteria. Prior to liberalization, we can suppose that the bank uses only household property as collateral. During financial liberalization, however, the bank begins to accept expected future earnings as collateral—shifting the criterion for debt load from loan/asset to loan/income ratios. Further, these calculations in loans made to the husband include the expected earnings of the wife, on the basis that the husband can call on his wife's earnings as well as on his own in repaying loan obligations. In effect, the elements are in place for a further outward shift in household financial leveraging, due to the confluence of the wife's greater risk tolerance (her greater expected pay-off from loan-financed asset acquisition) and the bank's broader loan-making criteria. Moreover, the changes in the bank's criteria for loan making imply that working-class households as well as upper-income households are drawn into the credit nexus.

Overall, the implications of this second-stage set of events under liberalization is a shift in Figure 1 from  $VL_2$  to  $VL_3$ , and specifically from  $(\alpha_2, \delta_3^H)$  to  $(\alpha_1, \delta_4^H)$ . In Figure 2, the loan-budget line achieved after the first-round effects of liberalization,  $(A_2^H A_2^W | \alpha_2, \delta_3^H)$ , moves outward to  $(A_3^H A_3^W | \alpha_1, \delta_4^H)$ ; the household in turn moves from point  $B$  to point  $C$ .

The net effect of financial liberalization on the level of household credit depends on whether the first or second shift scenarios are more important—that is, on net changes in female voice, expected cost-bearing, bank policies regarding household collateral and loan leverage, and household asset mix. Whether or not the wife's voice in household decisions increases substantially, household debt loads are likely to rise substantially for at least a portion of the population. Households drawn into the credit nexus become financially fragile. Further, these households' support networks are likely to erode due to migration and urbanization; so these households also become more dependent on monetary income. The higher level of risk and of potential cost-bearing, however, is more than compensated by the increased living standard that debt-financed asset acquisition affords. Increased financial risk seems an empty threat in a period of continuous economic expansion and employment growth; nonetheless, the household may be caught not just in a credit nexus, but possibly in a financial bubble from which extrication is costly in human as well as financial terms.

(b) *From financial liberalization to financial crisis*

Speculative investment—that is, financial or real asset purchases motivated not by prospective earning from production increases but by prospective earnings from higher future rents or asset prices—grows throughout the economy as the boom proceeds. The shift from regulated to deregulated interest rates itself is one reason. Under repression, funds were available at low rates primarily for officially-sanctioned investment projects, with other investments financed at high curb-market rates. With liberalization, rising asset prices induce borrowers and lenders alike to support speculative asset positions with funds borrowed at seemingly low interest rates. Self-reinforcing cycles of rising asset prices and rising financial fragility alike are triggered. The increased demand for loans is not due just to speculation.

The firm's success in penetrating foreign markets encourages it to expand production by increasing its credit-market leverage. In addition as discussed above, financial fragility also rises for the household, as its loan-market leverage rises and is based increasingly on expected income levels, not property assets.

A financial crisis occurs when one or more shocks affect numerous agents and sectors simultaneously, and are correlated across firms and sectors. The onset of financial crisis in our framework forces both the firm and the household to make rapid *ex-post* adjustments, even while making new *ex-ante* plans under radically changed circumstances.

The firm's financial fragility is exposed in the crisis for several reasons: declines in the domestic price at which it can sell its goods; declines in demand for its output; falling currency values; and falling asset values for both productive and speculative assets. Some combination of these factors forces the firm to reduce employment, cutting hours and wages for domestic workers. Operating losses also undercut the firm's financial position. If the firm is forced to sell off assets, it will have to absorb huge capital losses. The Asian crisis, of course, had a profound effect precisely because it entailed all these effects within a compressed period of time.

Financial capital flees the country, and short-term loans made by overseas lenders are not rolled over. Debt deflation sets in, reducing lenders' lending capacity. Firms that have been marginally affected to this point now feel the full force of the crisis due to soaring interest rates and collapsing credit supply. So the production sector contracts, jobs decline in formal labor markets, and incomes fall.

Gender norms may lead to more losses of women's formal sector jobs than of men's, or to shifts in women's jobs from full- to part-time. Whatever the gender character of job losses, however, the downward shifts in formal sector wages and hours along with rising loan rates can throw the household into crisis. The household budget experiences a double squeeze—interest rates rise on loan payments even while earned incomes decline. The net revenues earned by the household enterprise are likely to plunge as the community prosperity on which this enterprise depended is punctured. The husband and wife may be unable to keep up loan repayments.

These events expose the household's financial fragility. One option for the household is to

make rapid *ex-post* adjustments that bolster the cash-flow available to meet current expenditures and repayment demands: savings can perhaps be drawn down, and increased income obtained through increased labor by household members who have the capacity to work more hours and/or to earn additional income.

In our story, the husband's and wife's roles in any such adjustments under adversity are governed by  $\beta$ , which in turn depends on female voice, which itself rests in part on gender norms. If the cost of the required adjustments is manageable, and if it is deemed important to defend the household's asset position, then the financial aspects of the crisis may generate increased household work effort, both inside and outside the home. If the situation is one of nested moral hazard—that is, if  $\alpha$  is low and  $\beta$  high—then this enhanced work effort may involve primarily an increase in female labor, together with an evaporation of female leisure time. The household may still opt to defend its asset position if  $\alpha$  is high and  $\beta$  low; in this event, adjustment costs are shouldered more equally by both husband and wife.<sup>13</sup>

It may not be possible to defend the household's asset position. In this event, the household must liquidate at least a portion of its asset position to survive. It is easiest to see the dilemma this poses with reference to Figure 2. The household's pre-crisis asset position is  $C$ . It may be forced to liquidate assets from loan-budget line  $A_3^H A_3^W$  to the pre-liberalization loan-budget line  $A_1^H A_1^W$ . This asset-shedding permits the household to either pay-off its loans or to default on them. The extreme scenario depicted in Figure 2 suggests that if the household can shed its loan obligations, then in Figure 1 it shifts backward from the loan-leverage position  $(\alpha_1, \delta_4^H)$  to its pre-liberalization position  $(\alpha_1, \delta_1^H)$ . Of course, if loan liquidation does not occur the household must make more adjustments in future periods until its debt is retired.

This asset liquidation process is not gender-neutral. The household can shift to a point such as  $D$ , which entails the liquidation of the household enterprise and the retention of most household assets; alternatively, it can shift to a point such as  $D'$ , which involves the virtual elimination of the wife's assets in order to protect the household enterprise. In this latter case, ironically, the wife ends up controlling fewer assets than before liberalization.

As in the discussion above, which option occurs depends on female voice, which in turn shifts downward if the brunt of earned-income

losses is borne by women (and vice versa). It is likely that women's assets will be the ones sacrificed, as men may insist on preserving their assets in the hope that the household enterprise can be a vehicle for reviving family fortunes.

The circumstances of women under asset liquidation and augmented household work may be grim. If the wife's support network has eroded during liberalization, she will no longer have the ability to share household reproduction activities as she did in earlier times.<sup>14</sup> Women may be forced into additional informal sector work. This work may not only be onerous and low-paid, but it may not enhance female voice as much as did formal sector employment under liberalization; further, since it is sporadic and low, it cannot support a formal sector household loan. Female voice may be further eroded by the reassertion of male-biased gender norms.

The situation depicted here is hardly stable. The wife's informal sector work pays decidedly less than the formal sector position lost in the crisis. Several post-crisis working hours may be required to replace the earnings from every pre-crisis labor hour. The quality of household reproduction suffers. Children may be left undersupervised, family members may go with too little food. The female may become exhausted and overstressed due to overwork. Marital relations may deteriorate. One increasing occurrence is the abandonment of the household by the male partner. He may be more mobile and, due to the gender-biased pattern of wealth-shedding noted above, he may have more assets. If he starts afresh, however, the household he leaves behind is more likely to be destined for poverty.

## 5. CONCLUSION

While the gender dimension of the employment and social-welfare effects of financial crisis have been explored elsewhere, this paper has explored new terrain by examining the gender dimensions of household borrowing and credit repayment in the context of financial crisis. Our paper has set out an exploratory model, in the hope that the ideas sketched out here may help define a new research agenda on gender and development.

The tentative ideas set out here can be summarized as follows. Financial liberalization can lead to increased employment for women, and increased lending to households; household

borrowing can facilitate the growth of household enterprises and reduce women's time in household reproduction by increasing the stock of household assets. As financial relations deepen, women's voice may increase, and their risk-aversion decrease. But, credit-financed expenditures make households financially fragile; and women become more vulnerable as their cash-flow dependence increases even as their support networks erode. Financial crisis can expose women's economic vulnerability by reducing women's earned income, the assets they control, and their voice in household decisions, with the result of forcing women to bear a disproportionate share of household adjustment costs.

Our story, if plausible, suggests that much of the social and human cost of financial crisis

may lie beneath the statistical surface: financial crises may alter gender relations through intrahousehold adjustments which have profound implications not just for economic outcomes but for the social reproduction of households in the broadest sense. This possibility is especially important now that countries affected by the Asian crisis have resumed economic growth; for despite economic recovery, the social costs of this crisis may persist, and felt most profoundly at the microfoundational level. If some of the non-gender-neutral household adjustments we have explored are important in the post-crisis period, then studies of financial crises that exclude the gender dimension will overlook significant aspects of these episodes' cost and consequence.

## NOTES

1. See Goetz and Sen Gupta (1996), and Otero and Rhyne (1994). The lack of attention to gender dimensions of the financial aspects of economic development has been reversed lately; see especially the papers collected in *World Development* (Cagatay, Elson & Grown 1995).

2. Urban curb markets have provided a large share of private business finance (Biggs, 1991; Lee & Tsai, 1988) before and after financial liberalization, especially for smaller firms.

3. Detailed expositions of the Asian crisis include Bello (1998), World Bank (1998), Sachs (1998), and Crotty and Dymksi (1998).

4. See Grown, Elson, Cagatay (1995) and the other essays in this issue.

5. Nonetheless, the nonmarket sector remains vital at every stage of economic development, because it encompasses caring and nurturing activities for which market substitutes cannot be found (Himmelweit, 1995). For this reason, nonmarket activities can never be fully commoditized, and demand persists for unpaid tasks that are vital for human reproduction.

6. Financial liberalization is not invariably associated with high growth, nor is repression always linked with low growth; see Singh (1997) and Arestis and Demetriades (1997).

7. We emphasize the husband-wife unit here to dramatize the problems of intrahousehold power distribution. This unit is not "representative": up to a quarter of the households in East Asian countries are female-headed; and in most countries, most households do not fall into the middle stratum of income and wealth. The modeling of other household units is left for future research.

8. This conception of financial fragility is readily recognizable as that originated by Minsky (1975).

9. Since the proportion of female income in household income varies between 0 and 1,  $\alpha$  too varies between 0 and 1.

10. An increase in female voice may lead to a change in the gender division of labor, with the husband doing more household chores, or to the allocation of more expenditures toward purchases of time-saving consumer durables and of assistance with household tasks.

11. Aggarwal (1996) also develops nested moral-hazard models in analyzing debt renegotiation. A second moral-hazard problem would arise if the firm employing the husband and wife borrows from the bank to engage in speculative investment projects. Loan repayment problems will jeopardize not just the lender, but the households' wage incomes; and the firm's options depend in part on its employees' willingness to bear some of the cost. This situation, in which non-gender neutral cost-bearing also figures, is not explored here.

12. The slope of any  $A^W A^H$  line will change as the relative prices of the goods comprising the husband's and wife's asset bundles shift. Here we do not explore such relative-price shifts.

13. According to recent interviews of rural households in the Philippines, some husbands were forced by their wives to cut down their entertainment and drinking expenses in the aftermath of the financial crisis. This was accompanied by increased monitoring

of husbands' discretionary income and expenditures. *Source:* Interviews by Ms. Rebecca Coke, October 1999.

14. Further, the state-provided services which provided education and health services, and may have partially substituted for this safety-net system, are also likely to erode in the wake of the crisis, just when the wife is most in need of assistance with household reproduction activities.

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## APPENDIX A. A MODEL OF FINANCIAL AND GENDER RELATIONS

### A.1. Formal sector firm

The domestic firm maximizes profits by engaging in two distinct activities: producing a tradable good,  $Y$ , and holding an asset,  $S$ , for short-term speculative gain. This firm produces  $Y$  by combining material inputs,  $K$ , and male and female labor, respectively  $h$  and  $\tilde{H}$  via a production function which equals  $Y = f(K, h, \tilde{H})$ . Male and female workers are paid wages of  $w^Y$  and  $W^Y$ , respectively. The firm sells  $\mu Y$  domestically at price  $P$ , with  $0 < \mu < 1$ ; it sells  $(1 - \mu)Y$  overseas at price  $P^F/e$ , where  $e$  equals the exchange rate.

The firm's speculative activity involves commercial development on land  $S$  which it purchases or leases at price  $P_{t-1}^S$  at the beginning of period  $t$ , the firm hopes to sell-off  $S$  at the end of period  $t$  at a price  $P^S$  greater than its

financing and other costs. Time subscripts are written only for a time period other than  $t$ . Here the firm merely buys  $S$ , holds it, then resells it when period  $t$  ends; requiring only administrative costs.

The firm can increase its output of  $Y$  and its holdings of  $S$  by obtaining funds in the loan market. Funds may be available either at the formal sector rate  $r$  or at the informal sector rate  $r^i$ . Formal sector credit supply is restricted by a leverage (loan/collateral) limit,  $\bar{\delta}_1$ . This limit varies directly with  $r$  and the level of capital inflow, which in turn depends on  $r$  and on regulatory policy,  $A$ ; so for example,  $\bar{\delta}_1 = \bar{\delta}(r_1, A_1)$ .

### A.2. Domestic firm

Suppose the firm can obtain formal sector loans,  $L^f$ , against its retained earnings  $A_{t-1}$  up to a maximum  $\bar{L}^f$  determined by a leverage ceiling,  $\bar{\delta}_1$ , which implicitly depends on  $r$ ; so  $\bar{L}^f = \bar{\delta}_1(r)A_{t-1}$ . The firm may also borrow  $L^i$  in the informal loan market at  $r^i$ .

Denote the expectation of any variable  $X$  by  $\hat{X}$ , the derivative of  $X$  with respect to  $Z$  by  $X_Z$ , and the partial of  $X$  with respect to its  $i$ th argument by  $X_i$ . Suppose the cost,  $N^S$ , of holding  $S$  varies with  $S$ , such that  $N^S_S > 0$  and  $N^S_{SS} < 0$ . This firm maximizes a profit equation  $\Omega^f$  such that:

$$\begin{aligned} \Omega^2 = & \left( \mu \hat{P} + (1 - \mu) \frac{\hat{P}^F}{\hat{e}} \right) f^Y(K, \tilde{h}, \tilde{H}) \\ & - w^Y \tilde{h} - W^Y \tilde{H} + (\hat{P}^S - P^S_{t-1}) S \\ & - N^S(S) - r \delta A_{t-1} - r^i L^i \end{aligned} \quad (\text{A.1})$$

subject to  $(K + S = \delta A_{t-1} + L^i)$  and  $\delta \leq \bar{\delta}_1$ . Assume the firm is competitive. First suppose  $\delta = \bar{\delta}_1$ —the firm seeks more credit than the formal loan market can supply. The firm's equilibrium is then given by  $\bar{L}^f$  and these first order conditions over choice variables  $\tilde{h}$ ,  $\tilde{H}$ ,  $K$ , and  $S$ :

$$\left( \mu \hat{P} + (1 - \mu) \frac{\hat{P}^F}{\hat{e}} \right) f_{\tilde{h}} = w^Y$$

and

$$\left( \mu \hat{P} + (1 - \mu) \frac{\hat{P}^F}{\hat{e}} \right) f_{\tilde{H}} = W^Y \quad (\text{A.2a})$$

(male, female labor demand),

$$\left( \mu \hat{P} + (1 - \mu) \frac{\hat{P}^F}{\hat{e}} \right) f_K = r^i \quad (\text{capital demand}), \quad (\text{A.2b})$$

$$(\hat{P}^S - P^S_{t-1}) = N^S_S + r^i \quad (\text{speculative asset}). \quad (\text{A.2c})$$

If by contrast  $\delta < \bar{\delta}_1$ , then  $L^i = 0$  and  $r$  replaces  $r^i$  in (A.2b) and (A.2c).

### A.3. Banking sector

There are two representative banking institutions. A formal sector bank issues deposit liabilities in period  $t$ ,  $D$ , stores households' savings from period  $t-1$ ,  $D_{t-1}$ , accepts borrowed funds from the capital markets,  $B$ , and makes one-period loans to firms,  $L^f$ , households,  $L^h$ , and money-lenders,  $L^m$ , respectively, at rates  $r$ ,  $r^h$ , and  $r^m$ . An informal lender obtains loans from the bank,  $L^m$ , and relends these funds on the informal market,  $L^i$ , to households and firms.

The bank's loans to firms are capped at  $\bar{\delta}_1 A_{t-1}$ , and to households at  $\bar{\delta}_1 D_{t-1}$ .  $A_{t-1}$  and  $D_{t-1}$  constitute the bank's collateral on these loans. The bank makes money-lender loans without collateral. Loan rates are related as follows:  $r^m > r^h > r$ . The bank sets prices in its firm and household loan markets. The bank's balance sheet thus equals  $D_{t-1} + L^f + L^h + L^m = D + B$ . Loan-making and deposit-taking are costly, as per the function  $C = C(L^f, L^h, L^m, D)$ . Deposits earn interest of  $d$ , and borrowings  $B$  earn  $b$ , where  $b > d$ . If the bank's maximum loan limits do not bind, its first-order condition over its choice variables  $L^f$ ,  $L^h$ ,  $L^m$ ,  $D$  are:

$$r(1 + \varepsilon_{L^f}^{-1}) = b + C_{L^f} \quad (\text{loan supply to firms}), \quad (\text{A.3a})$$

$$\begin{aligned} r^h(1 + \varepsilon_{L^h}^{-1}) \\ = b + C_{L^h} \end{aligned} \quad (\text{loan supply to households}), \quad (\text{A.3b})$$

$$r^m = b + C_{L^m} \quad (\text{loan supply to money-lenders}), \quad (\text{A.3c})$$

$$b = d + C_D \quad (\text{deposits sold to households}). \quad (\text{A.3d})$$

Here  $\varepsilon_{lf}$  and  $\varepsilon_{lh}$  depict firm and household loan-demand elasticities; and  $B = L^m + D_{t-1} + L^f + L^h - D$ . If the bank's loan limits bind,  $L^f = \bar{\delta}_1 A_{t-1}$  and  $L^h = \bar{\delta}_1 D_{t-1}$  substitute for (A.3a) and (A.3b).

The money-lender's loan supply,  $L^i$ , simply equals  $L^m$ . Assume that  $r^i = \lambda r^m$ , where  $\lambda$  is the money-lender's mark-up.

#### A.4. Household

Household reproduction activities include housework and childcare; these activities require the labor time of the husband,  $h^H$  and wife,  $H^H$ ; the levels of  $h^H$  and  $H^H$  depend largely on gender norms,  $N$ , which here dictate that  $h^H \cong 0$ . The  $H^H$  required for household reproduction falls if the household purchases consumer durables or domestic services,  $V$ , or if the wife receives assistance with reproduction labor (vice versa if she provides assistance). This help can be written as  $\chi$ , where  $(1 + \chi)H^H$ ;  $\chi > 0$  denotes helping others,  $\chi < 0$  denotes being helped. Then household reproduction is given by  $R = R[h^H(N) + (1 + \chi)H^H, V]$ .

Aside from formal sector employment, the household may operate an enterprise. This enterprise produces a nontradable good,  $Y^E$ , using the husband's labor time,  $h^E$ , and material inputs,  $K^E$ . The enterprise production function equals  $Y^E = f^E(K^E, h^E)$ ; the price of this good is denoted  $P^E$ . The wife may also earn money by earning  $W^I H^I$  in the informal sector.

The household enters period  $t$  with its accumulated savings,  $D_{t-1}$ . These savings can be used to purchase  $K^E$  (the "husband's asset" of the text) or  $V$  (the "wife's asset"), in which case the household's asset constraint is  $D_{t-1} \geq K^E + V$ ; the household can also use  $D_{t-1}$  as collateral against a loan,  $L^H = \delta^h D_{t-1}$ , where  $\delta^h < \bar{\delta}_1$ , if it does, its asset constraint is  $\delta^h D_{t-1} = K^E + V$ .

Period- $t$  income is used to repay the household's loan with interest,  $(1 + r^H)\delta^h D_{t-1}$ , to purchase a fixed volume of consumption goods,  $C$ , and/or to accumulate household savings,  $D$ .

The wife and husband have period- $t$  time endowments equal to  $H^*$  and  $h^*$ , respectively. Let the wife's and husband's leisure time equal  $H^L$  and  $h^L$ , respectively. Then:

$$H^* = (1 + \chi)H^H + H^Y + H^E + H^I + H^L \quad (\text{wife's time constraint}), \quad (\text{A.4a})$$

$$h^* = h^Y + h^E + h^L \quad (\text{husband's time constraint}). \quad (\text{A.4b})$$

The husband's and wife's goals, in the main, are the same: they value leisure for themselves and one another, they both value household reproduction (including education and household services), and they value savings accumulation for the future. They differ over what happens if net earnings are lower than anticipated, and end-of-period adjustments are required. A single utility function is used here rather than a bargaining model in the interest of simplicity.

End-of-period disappointment is possible because the household faces two possible end-of-period states of the world, good and bad, with probabilities  $\theta$  and  $(1 - \theta)$ , respectively. In the good state,  $P^E$  takes on a high value,  $\bar{P}^E$ , and both husband and wife can work as many hours as they wish in the formal sector firm. In the bad state,  $P^E$  takes on a low value,  $\underline{P}^E$ , and hours at the formal sector firm are restricted to low levels,  $H^Y$  and  $h^Y$ . That is, the household faces a bad-state income gap. For simplicity, suppose this gap can be closed if the wife works longer hours in the informal sector work; letting  $H^I$  denote the total hours required for this adjustment, then:

$$\underline{H}^I - H^I = (\bar{P}^E - \underline{P}^E)Y^E + W^Y(H^Y - \underline{H}^Y) + w^Y(h^Y - \underline{h}^Y). \quad (\text{A.5})$$

Suppose the husband and wife resolve their differences over (A.5) by agreeing that each partner's weight in decision-making will be determined by his/her relative contribution to period  $t-1$  household financial revenue. We can represent this by a term  $\alpha$ , where

$$\alpha = \left( \frac{W_{t-1}^Y H_{t-1}^Y + W_{t-1}^I H_{t-1}^I}{W_{t-1}^Y H_{t-1}^Y + W_{t-1}^I H_{t-1}^I + w_{t-1}^Y h_{t-1}^Y + P_{t-1}^E Y_{t-1}^E} \right). \quad (\text{A.6})$$

According to (A.6), the larger the wife's contribution to household income, the greater her bargaining power and the more weight her preferences receive in household decisions.

The household's utility function in light of these considerations can be written as

$$U(\hat{h}^L, \hat{H}^L, \hat{R}, \hat{D}, \alpha\theta(\underline{H}^I - H^I)).$$

Suppose the husband and wife choose values for outcomes in the "good" state, taking into

account the effect of these values on bad-state adjustments. Let  $\Omega = \theta/(1 - \theta)$  and let  $U_L$  denote the loss in utility from an incremental increase in the value of (A.5). If the functions described here are continuous, it can be shown that the first-order conditions for an equilibrium over the choice variables ( $h^Y, h^E, H^Y, H^I, H^H, \delta^H, V$ ) consist of (A.5) plus:

$$U_{h^L} = [U_{\bar{D}} + \alpha\Omega U_L]w^Y$$

(husband's good-state formal labor supply),

(A.7a)

$$U_{h^L} = [U_{\bar{D}} + \alpha\theta U_L][(1 - \theta)\bar{P}^E - \theta\underline{P}^E]f_{h^E}^E$$

(husband's time in enterprise),

(A.7b)

$$U_{h^L} = [U_{\bar{D}} + \alpha\Omega U_L]W^Y$$

(wife's good-state formal labor supply),

(A.7c)

$$U_{h^L} = [U_{\bar{D}} + \alpha\Omega U_L]W^I$$

(wife's good-state informal labor supply),

(A.7d)

$$U_{h^L} = U_{\bar{R}}R_{\bar{H}^H}$$

(wife's trade-off between leisure and household labor),

(A.7e)

$$\alpha\theta U_L(\bar{P}^E - \underline{P}^E) = -((1 - \theta)\bar{P}^E - \theta\underline{P}^E)U_{\bar{D}}$$

(household loan-market leverage),

(A.7f)

$$U_{\bar{R}}R_V = U_{\bar{D}}\bar{P}^E f_K^E + \alpha\theta[U_{\bar{D}} + U_L](\bar{P}^E - \underline{P}^E)f_K^E$$

(durables expenditures).

(A.7g)

These equations present one very simple possible scenario: husband and wife make trade-offs between the value of leisure and the value of either income or household labor in Eqns. (A.7a)–(A.7e); optimal household loan-market borrowing occurs at the point where the expected loss in utility from the wife's work in the bad state just equals the expected gain from the income this additional borrowing increment might bring (condition (A.7f)); and they divide borrowed funds among these funds' various uses (conditions (A.7g)).

The outcome of all but one equilibrium condition varies with  $\alpha$ , the variable depicting female voice (per equation (A.6)). Take the extreme case in which female voice is completely disregarded, that is,  $\alpha = 0$ . In this event, the wife's utility loss from additional informal sector work in the bad state is completely disregarded; the bad state does not figure into the household's (husband's) decision-making at all. As  $\alpha$  increases in value, the wife's bad-state extra work effort is taken more into account.