

## Factor Market Dualism, Small Scale Industry and Labor Absorption

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This paper takes a closer look at the dualistic nature of labor and credit markets in developing countries in so far as their functioning is relevant for labor absorption in small scale industry. The potential for absorption of excess labor from the “informal” urban market in the small scale industry is assessed within the framework of a modified “specific factors” model. The paper concludes that segmentation in labor and credit markets in developing countries is asymmetric in its implications for labor absorption in small scale industry. While the high cost of capital and its unavailability to small scale industry is a serious constraint, the availability of a pool of unemployed labor in the urban informal labor market, and at a significantly lower wage, offers an unexploited opportunity. However, this is conditional on a policy regime that shifts domestic demand towards the output of small scale industry.

### I. Introduction

An understanding of structural distortions in labor and capital markets in developing countries is crucial for assessing the strategic potential of small scale industry in creating productive employment and alleviating poverty. It is well known that *urban* labor markets in developing countries are characterized by segmentation, dualism, and informational asymmetries to a far greater degree than prevalent in developed industrial countries. The dominant feature of this dualism is the large and persistent inter-tier wage differential in excess of what can be accounted for by differences in skills and transfer costs. In an analogous manner, the lesser-known segmentation between formal and informal credit markets, reflected in a fragmented interest rate structure, results in a generally lower allocation of loanable capital to small scale industry and at a higher relative cost.

The distortions in urban labor and capital markets are complex in origin and their sources are difficult to locate precisely. But it is plausible that some of the more obvious distortions are themselves by-products of particular development and industrial policies pursued in many developing countries. The possibility of bringing about a change in such policies means, therefore, that factor market segmentation, however, undesirable on other grounds, can actually be a beachhead for maximizing labor absorption in small scale industry.

In this paper, we take a closer look at the dualistic nature of factor markets in an urban

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setting in so far as their functioning is relevant to labor absorption in small scale industry, and attempt to draw some lessons that may contribute to policy-making. We keep the analytical framework deliberately simple and intuitive in order to highlight the practical application of economic ideas to policy issues. The plan of the paper is as follows. Sections II and III utilize the traditional dual-economy framework for incorporating labor and capital market segmentation. We focus on the asymmetry in formal and informal capital markets and the close link of informal capital markets with small scale industry. Section IV is devoted to assessing the potential for absorption of excess urban labor in small scale industry within the framework of a modified “specific factors” model. The potential of small scale industry in alleviating urban poverty is examined in Section V. Section VI summarizes the main conclusions and draws policy lessons.

## II. Labor Market Segmentation

The factor market segmentation that offers an unexploited opportunity for creating productive employment, on the margin, in small scale industry is the one between the formal and the informal segments of the urban labor market.<sup>1</sup> The formal segment of this market comprises of salaried and wage-earning workers that supply contractual labor to large scale industry, state enterprises, and ancillary occupations. The level of wages and non-wage benefits in this sector bears some direct relationship, however tenuous, to the productivity of those employed.

The informal (or the “unorganized”) component of the urban labor market differs sharply from the formal in wage levels, working conditions, and in conditions of search and entry. One distinctive feature of the informal sector is the importance of family-based enterprises. Since workers in such enterprises are residual claimants to income, their earnings are not fully comparable to wage earners elsewhere. The informal sector is the chief source of supply of labor to the large number of small scale industries that are scattered throughout the labor-intensive end of the manufacturing sector, as well as to the majority of non-traded services. This sector, with few exceptions, has little organized union activity and labor market regulations, such as minimum wage legislation, and contains the lowest earning groups in the non-farm labor market. There are no reliable measures of the formal-informal wage gaps in urban labor markets.<sup>2</sup> The (average) equilibrium wage in this sector is believed to be quite close to (positive) marginal product of the migrating worker from the rural-agricultural sector. In fact, the wage in informal urban employment may even be lower than in alternative rural employment if there is a premium on the probability of eventually

1. Labor market segmentation in developing countries is analyzed in Stiglitz (1974), Mazumdar (1976, 1977, 1981, 1983), Berry and Sabot (1978), Sabot (1977), Bowden and Mazumdar (1982), Kannappan (1985), Little, Mazumdar and Page (1987), Berry (1987), Rosenzweig (1988) and Magnac (1991). In addition, a large “informal” literature exists on informal labor markets.

2. However, if rural wage is taken as a surrogate for urban informal wage, the wage gap is estimated to be a little over 40 per cent (Squire 1981). Also see Taira (1973) and Mazumdar (1981).

obtaining a job in the formal industrial sector.<sup>3</sup> As a result, there usually is a sizable floating population of workers in the informal sector which is continually replenished by migration from the rural sector. The occasional upward mobility toward the formal sector, as modeled in Harris and Todaro (1970), makes no significant difference to the near-permanent state of excess supply of labor in the informal sector.<sup>4</sup>

It would, therefore, be incorrect to conclude that anything but an insignificant proportion of labor in the informal market is transitional (a “queue”) in the process of moving to the formal sector. If that were so, correct policies would call for speeding up the adjustment by shortening the transition.<sup>5</sup> In fact, only an insignificant minority of this queue joins the rank of the employed in the formal sector. For all practical purposes, the informal sector is a stable parallel labor market, continually swelled by workers drawn by the prospect of employment or partial employment *within* the informal sector, rather than a transitional path to the formal sector. The correct set of macroeconomic policies should, therefore, seek to find ways of creating stable employment opportunities *inside* the informal sector.

The labor market dualism is depicted graphically in Figure 1(a), where the horizontal axis measures the total supply of labor in the urban market, both in the organized and the unorganized sectors, and the vertical axes show the wage rates. Employment in the small scale industry (which draws its labor supply exclusively from the informal sector) is measured from the origin OS, and in the large scale industry from the origin OL.<sup>6</sup> Each sector’s labor demand curve, DS and DL for the small and the large scale industry, respectively, is drawn with respect to its origin as a downward-sloping function of the wage rate,  $w_S$  and  $w_L$ . The diminishing returns to labor reflect the short-run “fixity” of capital in each sector. The capital constraints are discussed in the following section.

Initial employment in each sector is given at the intersection of its labor demand curve with the wage rate prevailing in that sector.<sup>7</sup> This occurs at  $OS_1$  at wage rate  $w_{S_1}$  in the small scale industry and at  $OL_1$  with the corresponding wage rate  $w_{L_1}$  in the large scale industry, the initial wage gap being  $w_{L_1} - w_{S_1}$ . For the sake of simplicity,  $w_{S_1}$  may be assumed equal to the (positive) marginal product of labor in alternative rural-agricultural sector, which itself may rise in tandem with the rate of migration out of that sector. In addition, rates of labor participation and cyclical fluctuations in demand for output of small scale industry may also have an influence on  $w_{S_1}$ . The wage rate in the large scale industry,  $w_{L_1}$ , is determined by institutional or other wage-setting behavior, which need not concern us here.

3. This feature of rural to urban migration in developing countries plays a key role in the influential “Harris-Todaro” model. See Harris and Todaro (1970).

4. Berry and Sabot (1984) and Rosenzweig (1988) conclude that urban unemployment and under-employment in developing countries is not only chronic but its rate is increasing.

5. This is what lies behind some versions of the dual economy models, such as Kelley, Williamson and Cheetham (1972), i.e., the output gains associated with resource transfers from traditional low productivity sectors to modern high-productivity sectors.

6. A precise division of the horizontal axis into formal and informal *markets* is not necessary to our analysis.

7. We do not investigate the market-clearing mechanism that may underlie the determination of wages in each sector.



The extent of initial unemployment (or more accurately, disguised unemployment) is the segment  $OS_1OL_1$ .<sup>8</sup> This pool of unemployed or under-employed, whether or not fed by migration from the rural-agricultural sector, is a major challenge to development policy. The growth of large scale industry in the factory-based sector, even if dramatic, is unlikely to cause any diminution in the size of the low-wage labor in the informal sector. The growth of small scale industry by tapping the parallel labor market, without the transitional properties of the kind assumed in the Harris-Todaro model, offers an alternative avenue of labor absorption explored more fully in Section IV. This parallel labor market displays considerable heterogeneity in types of skill, which roughly correspond to technological diversity in the small scale industry, and, by and large, is skilled rather than unskilled.<sup>9</sup> In fact, the skill heterogeneity in the informal sector may even be higher than in the formal sector. Technologies in this sector are diverse, requiring a wide variety of workers and activities.<sup>10</sup> In addition, urban disguised unemployment is predominantly concentrated among the young and the more educated.<sup>11</sup>

### III. Credit Market Segmentation

The analysis of urban credit markets deserves more attention than it has received. But what is known suggests that dualism in labor markets is matched by an equally sharp dualism in credit markets, although the dichotomy between formal and informal segments is less clear-cut.<sup>12</sup> The rate of interest (or, more accurately, the “price” of capital) is specific to borrower and, hence, varies considerably, depending on tangible collateral, reputation, risk of default, and lender preference. In fact, entrepreneurial attributes of the borrower rather than establishment characteristics seem to play the decisive role (Nabi (1989)). The available evidence suggests that the price of capital to firms with access to bank financing, a vast majority of whom are large and established, is considerably lower than to firms in small scale industry.<sup>13</sup> This is particularly true of the start-up capital for initial investment. This financial dualism encourages excessive borrowing in the large scale manufacturing sector, resulting in a generally high capital-intensity of production, industrial concentration, over-investment, and excess capacity. There is no evidence, however, that this capital crunch has encouraged

8. For problems of measuring unemployment and under-employment in developing countries, see Sen (1975), Sabot (1977), Turnham (1971), and Gregory (1980).

9. Labor and skill heterogeneity in urban informal markets is discussed in Yap (1976, 1977), Papola (1981), and Cole and Sanders (1985).

10. See Maldonado and Sethuraman (1992).

11. See Rosenzweig (1988).

12. Capital market segmentation of relevance to urban sector is discussed in Virmani (1982), Tybout (1983), Stiglitz and Weiss (1983), Little, Mazumdar and Page (1987), Cortes, Berry and Ishaq (1987), and Nabi (1989). Transactions in *rural* credit markets have spawned a large body of literature, which is surveyed in Bell (1988). While issues are substantially different in rural credit markets, some similarities with urban markets exist.

13. There are exceptions to this general pattern. In rare cases, small enterprises in urban manufacturing pay very low rates of interest because of ceiling on maximum nominal rates. For evidence from Africa, see Page (1979).

labor-intensity in small scale firms,<sup>14</sup> which suggests indirectly that capital and labor in this sector are gross complements rather than substitutes.

Institutional finance plays a minor role in capital needs of small scale industry. Self-finance through personal saving, retained earnings, and family loans contribute 50-60 per cent of capital needs of small and medium enterprises in developing countries.<sup>15</sup> Bank financing becomes important as firms grow larger, but their role in financing initial investment remains minimal. The overriding characteristic of the urban credit market is an inelastic supply of loanable funds available to firms in small scale industry, and consequent rationing. On balance, it is not so much the high cost of credit but its inaccessibility that keeps the investment in small scale industry low and precarious.<sup>16</sup> In addition, the need to maintain close contact with borrowers, in order to avoid moral hazard and adverse selection problems, keeps the informal credit market below its full potential.<sup>17</sup>

It is worth noting, however, that the high capital price to firms in small scale industry is not necessarily the result of imperfect foresight or of other informational deficiencies. It could just as well arise from the lack of *ex ante* profitability of investment in small scale industry due to policy biases created elsewhere. The latter could contribute to the inherent riskiness (on static criteria) of loans to firms in small scale industry, and result in a generally high cost of delivery of credit. If so, this phenomenon is not a true market imperfection that requires direct intervention. It is merely a by-product distortion of which the origins lie somewhere else, and needs to be corrected at the source. We discuss this issue further in Section VI.

The capital market conditions of relevance to labor absorption in small scale industry are depicted in Figure 1(b), where the supply of capital to small scale industry and its price ( $r$ ) are shown on the horizontal and vertical axes, respectively. The supply curve of capital to small scale industry  $SK_1$  has a sharply rising segment beyond the initial investment  $K_1$ , signifying the infinitely high cost of additional capital. A large proportion of capital investment in the sector ( $OK_1$  in the figure) is owner-financed equity and not institutionally-financed credit. The inaccessibility to borrowed capital is, thus, seen as a binding constraint on the labor-demanding potential of small scale industry. The near-vertical segment of  $SK_1$  reflects the distortion transmitted from overall development and industrial policies. We return to the ways of dealing with this distortion in the following sections.

#### IV. Labor Absorption in Small Scale Industry

The employment-creating potential of small scale industry rests essentially on the

14. See Little, Mazumdar and Page (1987) for details.

15. See Davenport (1987) and Cortes, Berry and Ishaq (1987) for details.

16. Maldonado and Sethuraman (1992) cite the non-availability of credit as the most inhibiting factor in the acquisition of machinery and equipment in informal urban sector.

17. The theoretical implications of "interlinking" transactions in credit markets to output markets arising from the necessity of close control is discussed in Bell (1988). Nabi (1989) provides some empirical evidence on moral hazard problems.

presumed labor-intensity of production in this sector relative to that of production in the large scale factory-based manufacturing. Extensive international data suggest, however, that establishment size is a poor indicator both of labor-intensity of production and of capital productivity.<sup>18</sup> Many small enterprises are frequently not the most labor-intensive ones. Furthermore, there appears to be a greater variability of factor proportions and factor productivities among the class of small enterprises than in the class of large enterprises.<sup>19</sup> One practical way to avoid confusion is to keep clear the distinction between a small enterprise and a small scale industry.<sup>20</sup> Now, it is well-established empirically that in aggregate industrial classification the capital intensity rises monotonically with the scale of industry, as measured by the ratio of small to large establishments or their relative frequency, but not necessarily with size of individual establishments.<sup>21</sup> Thus, the group of industries customarily classified as small scale (whether by number of workers or by value of capital invested) are relatively labor-intensive by a wide margin than the large scale industry. In the aggregate, therefore, the labor-demanding potential of small scale industry relative to that of the large is beyond question, even though the small scale industry may contain a number of establishments whose capital-intensity is considerably higher than the average for the group.

A rise in the demand for output of small scale industry (with or without a rise in its price) would ordinarily shift its labor demand curve,  $DS_1$  in Figure 1(a), to the right. In reality, it is prevented from doing so because of inaccessibility of the industry to complementary inputs of capital, as argued in this paper. Given the fixity of capital to this sector, as depicted in Fig. 1(b), a rise in demand for its output would possibly mean an even higher price of capital allocated to small scale industry.<sup>22</sup> The model has a strong presumption for market forces to gradually remove or soften the constraints on capital. But these equilibrium processes will work only in the long run and only if the policy biases that produce or accentuate by-product distortions in factor markets are removed.

If policy biases are dealt with at their source, the capital supply function will assume the more normal shape given by the curve  $SK_2$ . In that case, the higher capital price beyond  $K_1$  represents the opportunity cost of capital transferred to the sector from elsewhere in the economy. But the removal of policy distortions imply that at given capital prices above  $r_1$  the "equilibrium" supply of capital to small scale industry would be higher than in the presence of distortions, as signified by the horizontal distance between  $SK_1$  and  $SK_2$ . Also, the need

18. Comparative data from a number of developing countries and from field surveys are analyzed in Little, Mazumdar and Page (1987). Also see Bautista (1981), Ho (1980), and Ohkawa and Tajima (1976).

19. If one were to include *medium* scale enterprises that straddle the divide between small and large, then almost nothing definite can be said about the relation between labor-intensity and establishment size. For details, see Ahmad (1993).

20. Small enterprises exist in both the large and small scale industries, but their frequency is higher in industries classified as small in aggregate industrial classification.

21. Little, Mazumdar and Page (1987) and Ahmad (1993).

22. The short-run fixity of capital in the event of rising demand for output may have a "magnified" effect on returns to capital in small scale industry. Such a magnification without a long run shift in the supply of capital to the sector will further intensify the dualism in capital markets.

for “institutional” reforms of the financial sector, such as regulatory ceilings on rates of interest charged to small scale industry firms, will become unnecessary. Regulatory ceilings without correction of policy biases that keep the profitability of investment in small-scale industry low are doomed to failure, and would lead to further distortions.

In the *short run* our model has only one degree of freedom. If the capital constraint can be overcome by means of subsidized or concessionary finance, additional employment can be created. Additional finance in the amount of  $K_1K_2$  (a rightward displacement of  $SK_1$ ) will be sufficient, other things being equal, to shift the labor demand curve from  $DS_1$  to  $DS_2$ . Moreover, an increase in demand for labor in the short run may not be matched by a rise in wages.<sup>23</sup> The reason is that a potential rise in wages may be offset by an increase in migration from the rural-agricultural sector by the enhanced prospect of employment in small scale industry. But without a basic change in the macroeconomic environment in which small scale industries operate, subsidized credit is unlikely to sustain the long-term growth in labor demand.<sup>24</sup>

The relaxation of capital constraint in Figure 1(b) in the long run is likely to give rise to both a *scale* and a *substitution* effect on employment. In general, these effects are contrary. The scale effect can be represented by an outward shift of the labor demand curve due to the availability of additional (complementary) investment. The substitution effect, by contrast, implies that small scale industry producers will have an incentive to use relatively more capital-intensive methods of production. Accordingly, the labor demand curve may have a tendency to shift back downwards. The net change in employment will depend on the relative strength of the two opposite tendencies.<sup>25</sup>

The empirical magnitudes of the two effects are, in general, not known and can be determined only by means of detailed industry - specific studies. It seems clear, however, that substitution effect is relevant only in industries where a wide range of products is produced in both smaller labor-intensive units as well as in larger capital-intensive units. But many small scale industries produce a large variety of output in small labor-intensive establishments for which large-scale production is unsuitable. Even when labor-intensive and capital-intensive establishments produce the same set of goods generally classified as labor-intensive, capital-intensity in larger establishments rises only slowly (see Ohkawa and Tajima (1976) and Ho (1980)). It is plausible, therefore, that factor-price changes associated with relaxation of capital constraints are unlikely to change capital-labor ratios in small scale industry to any significant degree. Its main impact on employment is likely to be through scale effect, as discussed below.

23. In general, given the presence of specific factors, wages are likely to fall by growth in labor supply and to rise by an increase in the “endowment” of capital specific to the sector, with the result that the net outcome is ambiguous.

24. Small scale industry in a number of developing countries has been assisted by bank loans at subsidized rates of interest, as discussed in Levitsky and Prasad (1987). There is no evidence, however, that such subsidies have led to self-sustaining increases in employment.

25. Clearly, this choice is not relevant for “cottage” manufacturing (less than 5 workers) which is not an insignificant part of small scale industry in many countries.



The empirical magnitude of scale effect on employment cannot be observed directly. It has to be inferred from the estimated elasticities of substitution between labor and capital. To begin with, the role of capital-labor substitution is different in small and large scale industry in significant ways. In large scale industry, the combination of high protected wage with relatively easier access to organized capital markets generates powerful incentive to substitute “cheaper” capital for relatively more expensive labor. Given the dualism in factor markets, labor and capital in the urban manufacturing sector are likely to be gross complements rather than substitutes for each other.

Little, Mazumdar and Page (1987) report on a fairly detailed study of factor intensity and factor substitution by estimating a translog production function for selected small scale industries. Two of their findings are of relevance to our analysis. First, a recurring pattern of factor use in several industries in their sample exhibited a fall in the *skill-intensity* as firm size increased, implying that many small scale industries are intensive in the use of unskilled, rather than skilled, labor. Second, while they find that capital and skilled and unskilled labor are all substitutes in each industry, the partial elasticity of substitution between capital and unskilled labor in all industries is quite low.<sup>26</sup> Moreover, these substitution elasticities do not appear to vary systematically with firm size.

By way of illustration, we reproduce below the partial elasticities of substitution between capital and skilled and unskilled labor for four industries and two employment size groups (Little, Mazumdar and Page (1987, Table 10-7, p. 171)).

Industry	Skilled to Unskilled labor	Skilled labor to capital	Unskilled labor to capital
(1)	(2)	(3)	(4)
Printing			
10<N<25	3.17	2.29	0.67
25<N<50	2.83	2.38	0.65
Machine tools			
10<N<25	2.74	1.44	1.04
25<N<50	2.46	1.53	0.96
Shoes			
10<N<25	2.80	2.16	0.42
25<N<50	3.54	3.49	0.27
Metal casting			
10<N<25	3.35	2.20	1.26
25<N<50	3.20	1.80	0.85

The elasticities of substitution between unskilled labor and capital (col. 4) are significantly lower than other elasticities (cols. 2 and 3) for all four industries and for all firm size intervals. Further, a comparison of substitution elasticities between different technological frontiers revealed that elasticities of substitution in the “best practice”

26. This is true both in the factory-process and craft-based enterprises.

technology (Little, Mazumdar and Page (1987, Table 11-4, p. 190)) are much lower than those for average production function, shown in the table above. This was found consistent with the view that best practice frontier represents a subset of available technologies where the scope for factor substitution is considerably less than the average practice for the industry. These regularities led Little, Mazumdar and Page (1987) to conclude that “capital in the manufacturing industries appears to be more complementary with unskilled labor than with skilled labor” (p. 170).

Given this set of indirect evidence, there is a strong presumption that the scale effect is likely to dominate any substitution that may occur. A relaxation of capital constraint will enable new entrants to start production and employ additional workers. Accordingly, the rightward shift in the labor demand curve, and the associated rise in employment in small scale industry, as depicted in Figure 1(a), is to be interpreted as net of factor substitution. It is, in fact, a testable hypothesis, and not an unreasonable assumption to make in preliminary theorizing on informal labor markets.

## V. Alleviation of Poverty

The analysis in previous sections can now be utilized to highlight the role of labor absorption in small scale industry in alleviating poverty. There is indeed a close connection between labor market dualism and perpetuation of poverty. This is related both to static differences in wage levels and levels of unemployment between the formal and the informal sectors of the urban labor market. The dynamic consequences of the initial wage difference between the two sectors and the large number of non-workers (unemployed and under-employed) trapped in the informal sector offer one plausible explanation of the steadily worsening distribution of income in the urban sector in many developing countries. Income inequality is also worsened by the high interest rate differential between the formal and the informal credit markets as a large proportion of income in the informal sector leaks out as payment to credit institutions in the formal sector.<sup>27</sup>

The cumulative worsening of income distribution over time is depicted in Figure 2, where  $YL$  and  $YS_1$  are dynamic paths of wages/earnings in the formal and the informal urban sectors, respectively. While the inequalities that generate time paths such as  $YL$  and  $YS_1$  may have numerous contributory causes, disparities in wages,  $WL_1 - WS_1$  in Figure 1(a), as well as low levels of employment appear to be the most obvious ones. In other words, the informal sector remains locked in poverty both because of low wages and low employment.

There are no simple solutions to the problem of poverty. But it seems clear that an increase in the rate of absorption of the unemployed in productive activities of the economy is an essential ingredient in any attempt to reduce poverty.<sup>28</sup> The functional distribution of income can be improved, or at least prevented from getting worse, by raising the level of employment in the small scale industry which is the major source of labor demand in the

27. See Nabi (1989) for empirical evidence.

28. For evidence that rapid expansion of employment can contribute to a significant reduction in poverty, see Sen (1980), and Chow and Papanek (1981).

informal sector.<sup>29</sup> Thus, the reduction in the pool of urban unemployed (segment  $S_1S_2$  in Figure 1) has as its counterpart the income path  $YS_2$  in Figure 2. The level of employment in the informal urban sector is higher at  $t_2$ . While the absolute difference in earnings between the formal and informal sectors is higher at  $t_2$ , there is less poverty because there are more people with gainful employment in the informal sector. It should also be noted that the capital cost of creating additional employment in small scale industry is likely to be considerably lower than in the large scale factory-based industry.

## VI. Policy Lessons

This paper has argued that segmentation in labor and credit markets in developing countries is asymmetric in its implication for labor absorption in small scale industry. While the high cost of capital and its unavailability to small scale industry is a serious constraint, the significantly lower wage and the presence of unemployed labor in the informal sector offers an unexploited opportunity. The capital constraint arises from policy distortions that

29. This is sort of contrary to the view prevalent in development literature that an improvement in the distribution of income would create additional employment through an increase in the demand for labor-intensive goods consumed by the poor. This of course, begs the question as to how the distribution of income would itself be changed.

inhibit the growth of small scale industry and can only be removed by long-run changes in development policy designed to raise the profitability of production in small scale industry. In the short run, the provision of concessionary finance may permit additional employment, although government subsidized credits to small scale industry have had a poor record of survival and sustainability.

The scale effect of enhanced capital supply on the level of employment in small scale industry is likely to dominate the substitution of labor by capital. An important goal of public policy should be to look for investments that complement labor rather than substitute for it. The creation of additional employment in small scale industry, which recruits primarily in the urban informal labor market, is also likely to be the primary beachhead for reducing urban poverty.

The theoretical insights presented in the paper suggest a potentially important line of empirical research in development policy. The softening of the capital constraint shown in Fig. 1 is a necessary but not a sufficient condition for increasing the rate of labor absorption in small scale industry. The prevailing development policies would need to be nudged in a direction that increases the demand, both for final and intermediate products, for output normally produced in small scale industry. This would require correction, on the margin, of industrial and trade policy regimes that *willy nilly* discriminate against the development and viability of the small scale industry.

In contemplating such a policy correction, our model points to the need for consideration of an important externality in small scale industry. Without a basic regime change, policy instruments such as payroll subsidies, use of shadow prices for labor, and make-work projects in the public sector, are unlikely to have anything but a minor impact. Moreover, such interventions create by-product distortions of their own. Indirect interventions in goals of development policy which raise the profitability of production in small scale industry may reduce lenders' costs and, thus, encourage entry and competition in lending. A pre-commitment to eliminate policy biases against small scale industry would also bring forth a larger self-financed investment in the sector.

Empirical research is needed to determine the magnitude of strategic shifts toward a more labor-demanding pattern of production required for labor absorption. But a caveat is in order. Labor-demanding direction of development and "outward orientation", while desirable for other reasons, may in themselves be not sufficient to direct demand toward small scale industry to any significant degree. These notions are based on particular views of labor-intensity in a north-south context and do not fit the reality of informal labor markets. An increase in exports of labor-intensive goods in line with outward orientation, for example, will likely increase the production in industries which in many developing countries are part of the large scale manufacturing sector, and in all likelihood will touch only the fringes of the informal labor market. What is required is a more massive shift in *domestic* demand toward tradable and non-tradable goods that are produced in small scale industry in the country in question.

There has always been an underlying tension between small and large scale industry in many developing countries. This is due, on the one hand, to an apprehension in some quarters that small scale industry will encroach on the large scale and would grow at the latter's expense, and, on the other hand, by exaggerated claims from proponents of small

scale industry. In reality, this need not be an either-or proposition but rather a question of more or less. Some developing countries that have pursued a policy of large scale industrialization have also put in place well-articulated programs of small scale industry development. China's encouragement of small rural and urban factories ("walking on two legs") is a case in point.<sup>30</sup> In Korea, small scale industry has an increasingly important role in supplying components and semi-finished products to the large scale industry.<sup>31</sup> Moreover, the development of small scale industry was actively fostered *after* Korea had achieved a fairly high level of industrialization, particularly in heavy metal goods industry.

30. This experience is documented in Perkins (1977, 1980).

31. For details, see Kim (1985) and Keo-Gyeong Yun (1988).

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