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the Firm Level Decision to Sub-Contract and Its Impact on Labor**

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Why Do Firms Disintegrate? Towards an Understanding of the Firm Level Decision to Sub-Contract and Its Impact on Labor

By

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Introduction

The post cold-war global economy is characterised by the twin phenomena of disintegration of the production process and the integration of the world economy through trade (Feenstra 1998). Although the phenomenon of disintegration of the production process has been observed over the last three decades, it has accelerated with trade and financial sector liberalization in the post cold-war world order. In this context, flexible production systems with vertical and at times horizontal disintegration are seen as increasingly profitable. This is especially true with regard to out-sourcing of production to developing countries. Korzeniewicz and Martin (1994) conceptualize this phenomenon as characterized by a new global division of labour.

Subcontracting is a relationship where a firm externalises part of the production or processing of their product to another separate entity but according to the specifications of the firm that is subcontracting its work (Dickens 1998,230). By subcontracting production outside its legal precincts, firms reduce their labor cost and the transaction cost of monitoring and metering labor. More important is the fact that subcontracting

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enables the firm to externalize part of its capital and operational costs emanating from the regulatory environment. (Appay, 1998, 161-184).¹

The phenomenon of subcontracting raises important questions with regard to its impact on employment, wages, working conditions, gender dynamics and productivity. Ong (1997, 61) argues that since the 1970's the process of accumulation is typified by flexible labour regimes, which in turn, are increasingly based on female and minority workers in the third world and in poor regions of metropolitan countries. Therefore, the spatial dispersion of work has largely been accompanied by a decrease in wages, deterioration of working conditions and increasing feminization of the work force.² Since much of this work has been un-semi skilled, it has drawn in economically and socially oppressed workers, i.e. women, children and illegal migrant workers, who are prepared to work for long hours at low wages (Standing, 1989 and 1999). Dispersion of work has also worked as a labor-disciplining device by capital.³ “This trend is most pronounced in the manufacturing industries in low and middle income countries at the early stages of industrialization.⁴ Feminization is pronounced where gender wage gaps are wide, and there is evidence that as those gaps close, feminization reverses (Berik 2000, Standing 1999) ” (Seguino and Grown, 2002, 12). This decline in formal employment has also

¹ Regulatory costs will include compliance with financial, social and environmental regulation including health and safety related regulations as well as fringe benefits to workers

² The trend toward feminization of employment, that is increased share of women among paid employees, has been hastened as firms compete more intensely to reduce costs, with women's wages universally lower than that of men

³ Segregation of the production process enables firms to evade existing labor legislation and makes it increasingly difficult for workers to organize.

⁴ However, the example of East and South East Asia found that the share of women in employment has fallen in the latter part of the 1990's even before the financial crash of 1997 but particularly after. (Gosh, 2001)

seen an increase and a shift toward more insecure subcontracted small unit based or home-based employment of women workers. (Gosh, 2001)

Alternatively, others have argued that the spatial dispersion of work has an employment and productivity enhancing aspect. This body of work suggests that work that is generally contracted out internationally is low skilled. This therefore implies that there is an increase in demand for high skilled workers in the industrialized countries as well a labor saving technological advancement. There has been some evidence that there has been an increase in productivity in the industrialized countries. The wage gap in the industrialized countries has increased and they suggest that there is possibly an increase in relative wages for high skilled workers in low-income countries. (Feenstra 2000, Lawrence 2000)⁵. Firm level decision to go for labor flexibility is driven by productivity enhancement and therefore, in principle, there should be no negative impact on wages.⁶

The increase in demand for low skilled labor in the third world has not necessarily resulted in an increase in relative wages of workers in these countries. There has, however, been some evidence in a few countries that women workers in subcontracted industries particularly small shop and home based are new entrants to the labor force and therefore their ability to earn wages can be seen as an improvement in their relative status. (Balakrishnan, 2002).

⁵ See essays in Feenstra, Robert (ed.) 2000. The impact of International Trade on Wages Chicago University of Chicago Press.

⁶ Presumably the argument will be that the loss in terms of foregone non-wage benefits will be compensated by employment generation.

In this paper we seek to specify different conditions that compel previously integrated firms to disintegrate production and the impact that those specific conditions have on wages and working conditions, particularly women workers.

In section 1 of the paper we revisit the literature on the ‘make or buy’ decision of the capitalist firm, primarily because this literature provides important conceptual tools that are needed to specify different conditions in which firms decide to sub-contract.

Revisiting this literature will also provide some clues to changes in economic organisation that has resulted in increasing disintegration of the production process.

In section 2 we present a conceptual framework that explores the relationship between long-run profit maximization and subcontracting. We start with the proposition that the firm maximizes its long run profits essentially through minimizing unit labor costs. A modified unit labor cost equation is introduced which incorporates different transaction costs that are highlighted by the literature on ‘make or buy’ decisions. In section 3, we specify the ex-post decision of the firm in terms of a push and pull towards subcontracting. Based on the theoretical framework developed earlier we specify the productivity enhancing character of subcontracting (the pull mechanism) and the cost reducing motivation (the push mechanism) along with its attendant impact on labor conditions discussed above. Section 4 concludes.

1. Make or Buy? A Brief Literature Review

The decision of a firm to make or buy raises fundamental questions about economic organization in market economies. Coase (1937) posed the question as to why firms exist in a market economy where prices are expected to allocate resources to all factors of production. Coase's answer to this question was that the hierarchical structure of the capitalist firm enhances the efficiency of resource allocation. He characterized this phenomenon as an 'island of conscious power' in the sea of price coordinated market exchange.

Much of the subsequent literature that seeks to answer the question regarding the existence of the capitalist firm does so through two seemingly opposing explanations. Neoclassical economists have followed Coase in explaining the existence of the capitalist firm in terms of enhancing efficiency of the production process.⁷ The (neo)Marxists, on the other hand, have argued that the essential purpose of the capitalist firm is to control the labour process.⁸ Broadly speaking therefore, the debate on the existence of the capitalist firm is couched in terms of its efficiency or control characteristics.

The efficiency argument has been developed by introducing the notion of transaction costs. Transaction costs are most succinctly defined as the cost of exchange that firms have to undertake to buy inputs from the market (Williamson, 1985). The cost of writing, negotiating, policing and enforcing contracts are some transaction costs in this realm.

Transaction costs are, however, also incurred within the firm. Supervision and monitoring

⁷ Principal exponents of this position are Williamson (1975 and 1985), Alchian and Demsetz, (1972) and Jensen and Meckling (1976).

of the labour process is an essential transaction cost (Alchian and Demsetz, 1972). Firms, therefore, integrate the production process if the cost of managing market interactions is less than the monitoring cost. Because of the hierarchical nature of the firm the internal transaction costs are generally deemed to be less than those encountered externally.

Going by the operational use of transaction costs in explaining the integration of economic activity, Eggertson (1990, pp15-16) has shown that these costs can be categorised exclusively as arising out of asymmetric information.

The Marxist conceptualisation of the control function of the firm has its origins in Marx' distinction between the spheres of circulation and production where surplus value is created in the production sphere, i.e. the firm. Without necessarily invoking the surplus value argument, the neo-Marxists demonstrate the process of labour control through de-skilling as the principal basis of the existence of the firm. The work of Braverman (1974) on the Fordist mode of integrated, assembly line, production is taken as the benchmark in much of these analyses.

That the hierarchy within the firm and the freedom of market exchange co-exist in capitalist economic organization is recognised by exponents of both neo-classical and Marxist positions (See Putterman, 1986, 25-29). Both will also agree that regardless of motivations to integrate production, the bottom line in corporate governance remains the maximization of long-run profits.

⁸ Margin (1974), Edwards (1979) and Bowles (1985) have theorized the phenomenon along these lines.

We, however seek to understand the opposite phenomenon of *Why Firms Disintegrate?*

The purpose of the brief review of the literature on firm integration is helpful in borrowing important conceptual tools used in that literature. Whether firms decide to make or buy is determined by the corporate bottom line of profit maximization. They achieve this bottom line in a milieu where technology and institutions facilitate to reduce transaction costs through disintegrating the production process and/ or increasing capitalist control over labour power.

2. The Conceptual Framework

The long-run objective of the capitalist firm axiomatically is to maximize profits. The decision to make or buy will thus hinge on this bottom line. Profitability can be expressed simply in equation (1) as:

$$P = R - (K_c + UL) \text{ ----- (1)}$$

Where P = profitability, R= total revenue and is the product of price per unit and output, K_c = capital consumption, measured through the rate of depreciation on the given capital stock and UL is the modified unit labour cost equation which takes the form.

$$UL = W L/R + O \text{ ----- (2)}$$

Where W = total labour related costs, L = total labor employed,⁹ R = gross revenue of the firm and O = per unit overhead economic costs such as utilities, taxes, levels of inventory and non-labor regulatory costs (environmental, health, etc.)

The modification in equation (2) from the standard unit labour cost conceptualisation is firstly the inclusion of overheads (O) and second instead of taking W as nominal wages, we take the entire cost on labour as

$$W = w + N_w + S \dots\dots\dots (3)$$

Where w = nominal wages, N_w = non-wage firm level benefits to workers¹⁰ and S = cost of supervision and monitoring, including the pay package of supervisors and managers.

Moreover, since efficiency is essentially gauged by improvements in productivity (Q/L), equation 2 can be re-written as $A=R/L$

$$UL = W/A + O \dots\dots\dots (4)$$

Going back to equation (1), we assume that the cost of capital is given¹¹, the firm is a price taker in both input and output markets and a range of techniques exist which are

⁹ L will embody human capital as well as asset specificity.

¹⁰ Apart from regulation, the existence of unions and their level of effectiveness will influence non-wage benefits.

¹¹ Financial globalization has resulted in increasing convergence of interest rates globally. Coupled with flexible exchange rate regimes and removal of barriers on the flow of financial capital has meant that the

more or less labor (capital) intensive. Firms then seek to minimize their unit labor costs in order to protect or enhance profitability. The decision to sub-contract will be made at the point where long run profits from sub-contracting are greater than those of producing in-house.

2.1. Institutional Characteristics

Specification of conditions in which subcontracting takes place will be determined by the institutional environment in which firms and markets operate. One such important institutional characteristic is the ‘formal- informal’ sector divide. When firms disintegrate production within a country, they typically move production out of the ‘formal’ sector to the ‘informal’ sector. The formal sector is characterised by adherence to the legal structure prevalent in a country. For our purposes, this will translate into adherence of labour laws and the payment of taxes. Labour laws usually refer to the existence of a minimum wage and non-wage benefits. Important non-wage benefits are over-time compensation, a holiday schedule, health benefits,¹² including maternity leave, housing allowances and bonuses. The right to unionise is also typically granted in most countries for registered firms. The ‘cost’ of being formal, therefore is that W in the formal sector is high.¹³ Obviously such constraints do not exist in the informal sector.¹⁴ The formal-

actual cost as well as transaction costs has made national boundaries increasingly irrelevant so far as capital mobility is concerned.

¹² Maternity benefits are particularly important in this context for woman workers.

¹³ In the case where there is no minimum wage and legislated worker benefits are not substantial but the right to unionise exists, union action can increase W by negotiating higher wage demands and non-wage benefits for workers.

¹⁴ In countries where such distinct sectors exist, it is legitimate to ask as to why all firms and economic activity does not shift to the informal sector? While there are no theoretical answers to this question, we conjecture that beyond a certain capital and turnover threshold it is difficult to evade legality. More substantively, access to formal sector credit (which tends to be less costly than informal sector credit) is only possible for a legally registered firm.

informal divide has to be seen not only in terms of firms and products but also labor markets. Flexibilization of work in terms of increasingly insecure employment, limited job mobility and few or no benefits has been seen for all workers both men and women, but the share of women greatly exceeds that of men. (Seguino and Grown, 2000) There also exist a gender divide where women dominate the informal sector especially in the third world. This is one important form of labor market segmentation among others. In terms of skill levels, wages, working conditions and collective action, workers in the informal sector are ‘poor cousins’ of their formal sector comrades. The increasing move to the informal sector has also decreased the benefits in the formal sector.

The same intra-country logic can be applied to out-sourcing of work across countries. Apart from the fact that labour is cheaper in developing countries compared to developed countries, labour rights are institutionalised in greater measure in OECD countries compared to developing countries. Most OECD countries have a legislated minimum wage and provide substantive non-wage benefits to workers across the spectrum.¹⁵ Similarly environmental and health related regulations are much tighter in OECD countries compared to developing countries.

This difference in labor legislation has shifted work from the north to the south and has decreased the female share of employment in the north. “Kucera and Milberg (2000), find evidence of declines in females share of manufacturing employment in a number of industrialized economies in response to north-south trade. That is, women employed in the formal manufacturing sector in the north have been displaced in response to increased

¹⁵ There may be small islands of third world like ‘informal sector’ wage and employment conditions, but that is the exception rather than the rule.

trade with southern countries that are more intensively using women in labor-intensive industries.” Seguino and Grown, (2002)

This important institutional characteristic lies at the cornerstone of subcontracting and outsourcing work when profit maximization is threatened by increasing unit labour costs.

3. The Push and Pull Characteristic of Subcontracting

To understand the impact of subcontracting on labor it is important to specify the conditions in which work is sub-contracted. Building on the argument above that in a rapidly integrating global financial infrastructure, minimizing unit labor costs is critical for long-run profit maximization, we now move on to see different impulses which prompt firms to sub-contract work. We distinguish situations in which firms are *pulled* into subcontracting. In this situation unit labor costs are reduced essentially through improving productivity (or A in equation 4). In contrast, firms can be *pushed* into subcontracting. A push into subcontracting is based on unit labor cost minimization solely through cost minimization (W and O) without any attendant productivity improvements. A pull into subcontracting we argue create conditions for improvements in returns to labor over time.¹⁶ A push into subcontracting, on the other hand, is purely exploitative and one cannot envisage any improvements in wages and working conditions for workers involved in this form of subcontracting.

¹⁶ This of course will depend on a number of factors, such as the degree of segmentation in the labor market, the regulatory environment and the future course of technical change.

3.1. Pull into Subcontracting

The simplest pull mechanism towards subcontracting is the principle of expanded reproduction that states that the division of labor is determined by the extent of the market. As demand for a particular industry using inputs increases, the minimum efficient scale of those products used as inputs increases and leads to that product being manufactured independently (*Stigler, 1968*). This form of subcontracting is generally associated with capital-intensive, continuous-flow methods of production and is amenable to production technologies where economies of scale are central. If economies of scale determine a minimum efficient scale of production which is greater than the need of the parent firm, then it will decide to buy rather than produce. The cost of that particular input reduces, which in turn reduces O and has a positive impact on UL .

The above form of subcontracting, however, is different from subcontracting in sectors where technology is generally based on batch production – where production is broken down into distinct and fully contained tasks. Labor- and/or skill-intensive sectors dominate this profile. In these sectors, innovations in the division of labor occur primarily due to technological change where general purpose and divisible machinery is brought together with skilled and trained workers.¹⁷ The flexible specialization paradigm ala Piore and Sabel (1984) illustrates this phenomenon. Divisibility of capital enables the large firm to out-source production and reap the gains from economies of specialization.

Software development, computer aided designing, manufacture of automobile parts and

¹⁷ This form of technical change itself may be motivated by institutional and organizational concerns, i.e. labor disciplining and evasion of labor related regulations.

electronics are some examples of such activity. Specifically, in the IT industry in India, women are better represented than in the formal sector as a whole though class and caste segmentation are evident. Most of the workers in the industry are educated, English speaking and urban. Though educated women are benefiting from this type of employment, roughly 61 percent of females above the age of 7 cannot read and write in India. (Gosh 2001)

High skill levels of workers and a change in their contractual arrangement from an input based time wage to an output based piece rate induce this form of subcontracting. In such a situation, skill intensity has a positive impact on A through skill embodied in L . Moreover, W reduces because supervision costs (S) are reduced if the work is subcontracted out on piece-rates.¹⁸ The nominal wage (w) will depend on the human capital endowment of the work force and the relative ease/ difficulty in acquiring skills. If it is easy to impart or acquire requisite skills then (w) may remain depressed or may even decline and vice versa. In the case where (w) increases the only condition is that the increase in (w) should be less than or equal to the reduction in (S). By subcontracting work out (O) also reduces. A combination of reduction in (W) and (O), along with an improvement in (A) will lead to a decline in (UL). Such forms of subcontracting usually takes place *within* the formal sector.

In labour intensive sectors based on batch production and where output can be broken down into distinct and fully contained tasks, the supervision cost is reduced through piece

¹⁸ S is reduced, as instead of continuous monitoring of work effort input, only discrete monitoring of the output has to be undertaken.

rating. But in order to induce workers to perform better, a higher nominal wage (w) is paid.¹⁹ The higher (w) can have an efficiency wage impact and thus improve work effort, thereby improving (A). The impulse to sub-contract work is that it reduces (O) and (S) while N_w is eliminated. Thus even after an increase in w , W as a whole is reduced. This form of subcontracting is most prevalent in lower value-added exports such as garments, footwear and carpets manufacture. *Usually formal sector export firms sub-contract such work out to the informal sector.* The “efficiency wage” effects are also less likely to take place because firms can relocate to lower wage sites as wages increase, even before productivity gains can be captured. (Seguino and Grown, 2002)

The same results will occur if the supply of woman workers in the informal sector occurs at a lower reservation wage than the rest of the economy.²⁰ In industries where ‘nimble’ fingers are assumed to be needed and/or women can be coerced into working long hours at subsistence wages, (A) will improve and at the same time (N_w) and (S) as well as (O) will reduce. However, such improvements in productivity will be short-lived, simply because reproducing labor power at subsistence wages for women who have to bear the double burden of the care economy has its obvious physical limits.²¹ This form of pull subcontracting will thus soon degenerate into a push subcontracting (see below) or will move into an efficiency wage like situation described above. The latter two forms of

¹⁹ Note that this higher nominal wage is paid to workers already in the informal sector. Because they have never become accustomed to N_w , this is an increase in their total real wage.

²⁰ See Standing (1999) where empirically this is seen a frequent feature in developing countries.

²¹ This problem can be ameliorated through constant turn over in the labor force as is evidenced in many export-processing zones where workers are generally kept only for a few years and then substituted with other similarly placed workers. Internationally, firms can move from one country with very low wages to another for this purpose.

subcontracting arrangements can be observed in low-market export industries, such as products sold at Wal-Mart or open market sales in developed countries

This trend can also be seen in buyer-driven commodity chains, which refer to “those industries in which large retailers, brand named merchandisers, and trading companies play the pivotal role in setting up decentralized production networks in exporting countries, typically located in the Third World,” (*Gereffi, 1994, 97*). These industries are not manufacturers as such, but merchandisers who farm out all of the production to different agents around the world (*Gereffi, 1994*).

The pull into subcontracting is thus dependent on the ability of the firm to forego the supervision and metering cost. The particular mix of skill intensity, demand for the product and increased work effort as a result of the efficiency wage can create a situation where subcontracting work results in a positive-sum outcome. On the one hand, the firm is able to minimise its unit labour cost and thereby maximize profits and on the other hand it creates conditions for the realisation of better wages and/or working conditions for skilled and informal sector workers. Of course the realisation of better wages and working conditions is relative. If production has moved out of developed countries or the formal sector in developing countries, then the comparison is invalid because of different labor market and institutional characteristics. For developing country informal sector workers, productivity enhancement, *ipso facto*, creates labor market dynamics for improvements in wages and working conditions. The same can be said about skill intensity in out-sourcing. As Feenstra (1998) states “... outsourced activities are un-

skilled labor intensive relative to those in the developed economy but skilled labor intensive relative to those in the less developed economy.” Thus skills, as well as skill intensity, should be seen on a spectrum.²²

3.2. Push into Subcontracting

Push subcontracting is characterised always by a move from the formal (internationally or domestically) to the informal, unregulated product and labor markets.

In contrast to the pull towards subcontracting, firms can be *pushed* into out-sourcing in three cases: (i) increase in economic costs (O), (ii) increasing product market competition and (iii) the possibility to circumvent the regulatory environment (both labor and others). Production of consumer non-durables at the lower end of the market segment and much of home-based work are examples of the *push* into subcontracting. The out-sourced work process is usually the least skill-intensive, involving minimal capital outlays, and the labour process is generally repetitive and monotonous. Rather than improving productivity and product quality, reducing costs to survive in the market is the dominant criterion. Much of this push into subcontracting can be explained by technical change and the on-set of neo-liberal economic policies instituted in the developing as well as the developed world. In developing countries these policies have resulted in familiar stabilization and structural adjustment programmes. In the developed world, a more gradual process of de-regulation and dismantling of the welfare state – and thereby social protection – has been observed. De-regulation coupled with technical change has made firms more risk averse in a milieu of increasing competition. As Standing observes:

²² The only defining criterion must be specific training acquired to undertake a specific task.

Stimulated by high unemployment, by new technology, by more aggressive international competition (notably from Japan and the newly industrialized countries), by deregulation and the erosion of union strength, and by the desire to overcome the uncertainty induced by the international economic instability, enterprises every where are devising means of reducing the fixed costs of labor. There is a global trend to reduce the reliance on full –time wage and salary workers earning fixed wages and various fringe benefits. Companies and the public sector enterprises in both the developed and developing economies are increasingly resorting to casual or temporary workers, to part-timers, to subcontracting and to contract workers. (Standing 1989, 1078)

In case (i) firms are pushed into subcontracting as a response to increasing economic costs of production (O). The price of raw materials increase due to a fast deteriorating exchange rate or high interest rates due to a contractionary monetary policy and /or the cost of utilities increases because of structural adjustment/stabilization policy packages. Since the overall increase in production costs is beyond the control of individual entrepreneurs, they resort to reducing labour and overhead costs by out-sourcing those aspects of the production process wherever it is technologically and administratively feasible to do so. Such out-sourcing will not necessarily lead to any productivity enhancement, and the expected impact on wages and working conditions is negative.

In terms of our formulation, an increase in (O) will lead to an increase in (UL). Thus the incentive to reduce labour cost.²³ Such a move also reduces the overheads of the firm in terms of renting space and electricity but the increase in other elements of (O) will be high. It is clear in this situation that (A) is not affected and the (UL) reducing mechanism operates essentially through a reduction in (W).

²³ More specifically to eliminate Nw and reduce w .

The second case of push subcontracting is where firms are subjected to excessive levels of price-based competition. At the lower end of the market spectrum,²⁴ where price rather than quality is the determining criterion for capturing market share, cost reduction takes place through subcontracting work, typically to home-based workers. Removal of domestic entry barriers and deregulation of investment has resulted in increasing the level of domestic competition in many developing countries. As a result push subcontracting is a frequent phenomenon in a number of such industries.

Reduction in tariffs due to trade liberalization policies can also exacerbate price-based competition. Only a small segment of the third world consumer market corresponds to the quality-conscious western consumer, where niche markets for customized products are increasingly ruling the roost. In such markets, healthy 'competition' exists, where quality and design rather than price is the determining factor. Much of the consumerism in the developing world is based on either cheap (read affordable) imitations or 'modern' necessities. As tariff barriers come down, intra-third world competition for imitation Gucci handbags or Levi jeans or simply casual garments or toothbrushes, soaps and slippers intensifies. And since price is the only criterion through which market share is to be captured among these labor-intensive industries, competition ensues between poor countries over whose labor is cheapest. If the Pakistani slipper maker is to survive on the back streets of Karachi selling her product, she has to pay less to her worker than her Chinese or Vietnamese counterpart. The bottom line is thus clearly defined. Niches in this case shift from products to workers. Employers/producers then prowl for women and children of the poorest households, who are usually migrants either from rural areas or

²⁴ These are goods aimed primarily at the lower income end of the domestic market.

from war-ravaged or calamity-hit neighbouring countries. Once such segmentation in the labor market is intensified, and then the wage rate in the labor market as a whole also drops. If the producers are successful in reducing the overall wage level, then in popular parlance they have attained competitiveness.

In terms of unit labour costs, the impact of excessive competition is similar to that of increasing overhead costs. The pressure to decrease the price of the product is paramount with quality (measured through S and A) having little relevance. In this case, work is sub-contracted out to eliminate (Nw) and reduce (w) to the lowest possible level. This form of subcontracting might be done at the level of small sweatshops or home based work, depending on the level of direct monitoring required. Garments, plastic products and other consumer non-durables are good examples of this.

The trend toward small shop and particularly home-based work has been increasing internationally. As Gosh (2001) points out “in the garment industry alone, the percentage of home workers to total workers has been estimated at 38 percent in Thailand, between 25-29 percent in the Philippines, 30 percent in one region in Mexico, between 30-60 percent in Chile and 45 percent in Venezuela (Chen, Sebstad and O’Connell, 1998)” The shift to home based work has a significant impact on the defeminization of formal sector employment in these sectors. The predominance of women in home-based work has possibly contributed to a shift in workers from factories to lower paid subcontracted work. In Thailand there was evidence that although many of the garment factories that closed as a result of the 1997 financial crisis, transferred their production to small shops and at home. (Balakrishnan 2001)

The third condition of a change in labour legislation towards a more pro-labour stance taken by developing country governments. Though rare in the case of developing countries these days, pro-worker labour legislations in the past have resulted in increasing w through a minimum wage legislation and by increasing Nw . Push subcontracting eliminates Nw and minimizes w . The impact on A is at best neutral and may even decline. But given the institutional setting, firms are able to lower their unit labour costs. Unfortunately, in countries where pro-worker, particularly women workers, legislation has taken place there has been a decrease in the employment of women and evidence that the casualisation of work through subcontracting has increased. (Gosh, 2001)

A similar outcome will emerge when firms seek to evade environmental and/or health related regulations or union power prevalent in OECD countries. They will then farm out production to developing countries where such regulations either do not exist or are weakly enforced.

4. Conclusion

In this paper we have sought to conceptually specify different conditions in which firms disperse their production activities. Our primary concern has been the impact that this increasingly prevalent mode of industrial organization has on labor in general and gender dynamics of the labor market in particular. By focusing on the long-run profitability concern of firms, we seek to understand the bottom line benefits of decentralized production at the firm level.

This framework also offers a window into examining subcontracting at the national level inside developing countries. Most of the theoretical literature in the field has focused on multinational firms subcontracting and integrating developing country firms into the production process. The process of subcontracting is also taking place within national industries in the third world for the national market. By focusing on profitability we hoped to capture both the effect of international trade regimes as well as national and international macro economic policy.

The gender implications of this framework we hope will also provide some insight into the relation between the trend toward subcontracting and labor market dynamics. The recent literature that suggests a defeminization of the labor market in manufacturing, particularly in Asia, might be explained by the increase in the feminization of subcontracted workers. The conceptual framework we suggest might offer an explanation of this shift. Seguino 2000 has clearly shown that gender inequality has stimulated growth in Asia, it can be argued that increased profitability is also enhanced with higher levels of gender inequality. The decrease total labor related costs is made possible by the use of women workers as a disposable work force that can be brought in at will. Productivity can be enhanced by keeping a rotating work force, The “male bread winner” argument predominates in subcontracted work as well. Lastly, since women are still primarily responsible for the care economy, they are inhibited in their ability to work in formal sector employment and are therefore a captive market for homebased and small shop production.

This conceptual frame we believe can be extended to other areas of social concern – such as environmental issues, quality control, consumer health and safety, etc. The analysis in this paper is also fairly generic in nature. Applying this framework to more micro-level specification of specific industry level characteristics, the regulatory environment, segmentation of specific labor markets and pressures and opportunities presented by globalisation can enhance the policy relevance of this work much further.

References

- Alchian, A. and Demsetz, H. "Production, Information Costs and Economic Organization," *American Economic Review*, Vol 62, 777-95, 1972.
- Appay, Beatrice "Economic Concentration of the Externalization of labour " in Economic and Industrial Democracy 1998 vol 19 161-184.
- Balakrishnan, R. (ed). *The Hidden Assembly Line: Gender Dynamics of Subcontracted Work in a Global Economy*, Kumarian Press, Bloomfield, Conn. 2002.
- Bowles, S. "The Production Process in a Competitive Economy: Walrasian, Neo-Hobbesian and Marxian Models," *American Economic Review*, Vol 75, 16-36. 1985.
- Braverman, H. *Labor and Monopoly Capital*. Monthly Review Press, NY. 1974.
- Dickens, Peter, 1998. Global Shift: Transforming the World Economy Third Edition Guilford Press, NY.
- Edwards, R. *Contested Terrain: The Transformation of the Work Place in the Twentieth Century*, Basic Books, NY. 1979.
- Feenstra, R. "Integration of Trade and Disintegration of Production in the Global Economy." *Journal of Economic Perspectives*, Vol. 12, No. 4, 1998.
- Feenstra, Robert 2000. The impact of International Trade on Wages Chicago, University of Chicago Press
- Gereffi, Gary. "The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks." In G. Gereffi and M. Korzeniewicz, eds., *Commodity Chains and Global Capitalism*. Westport: Preager, 1994.
- Ghosh, Jayati, Globalisation, Export-Oriented Employment for Women and Social Policy: A Case Study of India, Working Paper 2001
- Jensen, M. and Meckling, W. "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," *Journal of Financial Economics*, Vol 3, 305-60, 1976.
- Korzeniewicz, Roberto and William Martin. "The Global Distribution of Commodity Chains." In G. Gereffi and M. Korzeniewicz, eds., *Commodity Chains and Global Capitalism*. Westport: Preager, 1994.
- Ong Aihwa. "The Gender Labor Politics of Post Modernity" in Lowe and Lloyd eds. The Politics of Culture in the Shadow of Capital. Durham: Duke University Press, 1997.
- Piore, M. and Sabel, C. *The Second Industrial Divide*, Basic Books, NY. 1984

Seguino, Stephanie, “Accounting for Asian Economic Growth: Adding Gender to the Equation” in Feminist Economics November 2000

Seguino, Stephanie and Caren Grown, Gender Equity, Growth, and Trade Policy: Are There Win-Win Options? Working Paper May 2002.

Stigler, G. “The Division of Labour is Limited by the Extent of the Market.” Reprinted in G. Stigler, *The Organisation of Industry*. Homewood, Ill., R. D. Irwin 1968.

Williamson, O. *Markets and Hierarchies: Analysis and Anti-Trust Implications*, Free Press, NY. 1975.

Williamson, O. *The Economic Institutions of Capitalism*, Free Press, NY.

Standing, Guy. “Global Feminization through Flexible Labor” in World Development, Vol. 17, 7 .1989.

Standing, Guy. “Global Feminization Through Flexible Labor: A Theme Revisited,” *World Development*, Vol 27, No. 3. 1999.