

## **Wages and Bottlenecks: Home-Based Work and Factory System in İstanbul**

### **Information Structures of Employment and Rigidities Embedded in the Organization of Home-Based Work**

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Analyzing two research projects on the industrial home-based work (HBW) in 2003 and 2006 in İstanbul, Turkey, this paper argues that two forms of rigidities shape the organizational characteristics of the HBW: limited physical mobility of the homeworkers and the in-built pressures within the labor process of the factory system.

On one hand, the rigidities regarding the mobility of homeworkers determine the conditions of the labor process of the HBW. Among some dimensions of the labor process of HBW, mechanisms for the distribution of piecework, the training of homeworkers, or storage of the piecework are directly related with the physical mobility of homeworkers. On the other hand, the co-existence of labor- and capital-intensive processes in the factory system unavoidably creates management bottlenecks, which account for another form of rigidity. HBW appears as the solution for such management problems.

These corresponding rigidities characterize the organizational variety of the HBW. Negative work conditions of the homeworkers such as low piece-wages and precariousness in the employment practices are accounted for by these rigidities.

As much as the low piece-wages generally associated with the HBW in the literature. Thus, investigation of the HBW should go beyond the argument about the low piece-wages and start to analyze the actual conditions of organization resulting in the deteriorating conditions of work for homeworkers.

The literature emphasizes the centrality of the low piece-wages turning this form of labor into an alternative for the factory system. Although the research projects analyzed in this paper verify this consensus, two forms of rigidities motivate both workers and employers to 'get into the HBW-nexus':

Homeworkers shape the organizational arrangements significantly, given that HBW does not pertain to a formal form of employment. Thus, their conditions of physical mobility account for a key element in the organization of HBW. Since the state of mobility by homeworkers is rather one of rigidity than an advantage, their regarding condition should be the focus to understand the mindsets of the homeworkers.

## Introduction

The centrality of information structure of employment is one of the key themes in the literature on the structure of labor markets (Shapiro and Stiglitz, 1984). The analysis of home-based work (HBW) provides in this regard precious insights, because the investigation of the organization of this form of labor reveals significant dynamics of the dissemination of information in the labor market. In this context, this paper will investigate the organizational characteristics of HBW through the analysis of two dimensions.

*First*, most of the homeworkers are women suffering from the social limitations on their physical mobility: HBW signifies this group of workers with limited physical mobility within an informal form of employment. Thus, their attempts to bypass their disadvantages in this sense characterize the organization of the HBW. *Second*, HBW complements or substitutes for the factory system. Inasmuch as market conditions of a particular industry shape the organization of the labor process within the factory, factories in labor- and capital-intensive industries have different relations with the HBW: in the easy-entry sectors, HBW provides advantages related with the product differentiation. Another striking outcome emerges in labor processes of factories combining various activities of differential capital-intensiveness under one roof. The coexistence of these activities yields management bottlenecks. Home-based work appears as a solution for this problem.

In other words, two kinds of rigidities shape motivations on the part of homeworkers and factory managers: *limited physical mobility of homeworkers* yields complex organizational arrangements for the distribution of piecework and for the organization of the respective labor process. *The in-built pressures within the labor process of the factory system*, such as difficulties to organize various processes of differential labor-intensiveness within a single labor process, accounts for another rigidity characterizing the conditions of home-based work.

The argument of this paper is that these two forms of rigidities characterize this segment of the labor market. In other words, in order to have a realistic understanding of the information structure of this form of labor, the motivations related with these rigidities should be investigated. The paper will summarize the research findings of two projects. This author was the research assistant for the project conducted for United Nations Development Program in 2003 (Bugra and Keyder, 2003). In 2006, Esra Sarioglu and this author conducted another research for Social Policy Forum in Istanbul (Balaban and Sarioglu, forthcoming in 2007). The setting for these projects was Istanbul, Turkey.

The focus is on the organizational aspects of HBW that assure the control over labor process. The investigation of the organizational arrangements for labor control reveals the characteristics of the target rigidities. The piece wage is in the literature widely regarded as the primary means of labor control of HBW. However, our observations buttressed the argument that organizational means embedded in the HBW are as important as the piece wage in the control of labor.

## **Basic Concerns in the Literature<sup>1</sup>**

The HBW is industrial production, yet the conventional management principles do not hold for this form of industrial labor. The core of the control of the work organization is embedded in the characteristics of the distributive mechanisms. Thus, the conditions of the information dissemination are the key for the organization of the work. Analysis of these distributive mechanisms accounts for an essential part of any investigation of HBW.

The increasing volume of international trade has prioritized this particular form of industrial labor, since the flexibility provided by the HBW is a precious asset for the Turkish firms competing with bigger capitals, always one step ahead in terms of technology and the knowledge of the markets. The organizational dynamics of this particular form of industrial labor determines the chances of the firms located in the middle-income countries such as Turkey in the global markets. Despite the recent significance to the global industrial relations, HBW should not be exclusively associated with the contemporary globalization.

In a historical context, HBW is essentially related with the proto-industrialization: it appeared as one of the predecessors of the modern factory system and assigned an important role to merchants in inchoate modern industry (Mendels, 1972; Kriedte et al., 1981; Coleman, 1983; Berg et al., 1984; Mathias and Davis eds, 1985). In this regard, the analysis of organizational characteristics of Kaufsystem and Verlagsystem in particular and cottage industry in general helps to understand the historical conditions for the particular mode of control usually associated with the factory system (Safley and Rosenband, 1993).

The HBW also played a significant role in the Industrial Revolution of the 19<sup>th</sup> century. The Revolution gave rise to a new boom for industrial production at home: the putting-out system flourished rapidly in the small towns and even villages of England, Continental Europe, and Northern America. In other words, the factory system boosted the putting-out system (Bythell, 1978; Jones, 1971; Scranton, 1984). That is, industrial production at home and other workplaces were not mutually exclusive and, especially in the 19<sup>th</sup> century, complementary.

The HBW with the expansion of the contemporary global commodity chains has been having a new role in the global industrial relations. The HBW in the 19<sup>th</sup> century mostly contributed to the innocuous modern industry. Thus, the factory system cannot be regarded as the ultimately unique form of industrial labor eventually replacing the HBW and other forms of industrial labor. With the increasing importance of informal economic activities since the 1970s, the 'rebirth' of the HBW proved this argument once again: industrial production at home is now the key to understand the characteristics of the vertical structure of the commodity chains (Beneria and Roldan, 1987), the extent of the informal economic activities in the national development (Benton, 1990; Hsiung, 1996; Mehrota and Biggeri, 2002), and the role of 'teleworking' in high-income countries (Pratt, 1984; Coates, 1988).

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<sup>1</sup> For a more detailed review, see Balaban and Sarioglu, forthcoming in 2007.

The HBW in most of the cases pertains to a relatively horizontal form of work organization. Thus, in order to understand the role of the HBW in the vertical industrial coordination, it is necessary to understand the conditions of the mediation between homemaker women and organizers of various sorts (Beneria and Roldan, 1987; Dangler, 1994; Lui, 1994; Hsiung, 1996). Women predominantly constitute the work force of contemporary HBW (Tomei, 2000). Thus, 'household dynamics' characterize the labor process of HBW: these dynamics usually appear to limit the physical mobility of women and deteriorate their work conditions. The current organizations of HBW reflect the efforts of homemaker women to evade these difficulties. Thus, the characteristics of distribution of piecework is the key to decipher the mobility-related problems on the part of homemaker women.

However, one of the silences in the literature investigating the contemporary conditions of the HBW is about the links organizing the distributive mechanisms (Lui, 1994). Firms and their middlepersons have to develop creative organizational strategies around the prevalent social norms controlling the physical mobility of homemaker women: the locally shaped patriarchal relations characterize the organization of the HBW (Gringeri, 1994). These relations not only shape the conditions of HBW, but also affect the labor process of the related factory system, although as the HBW is the satellite form of labor for the factory system.

The difficulty to theorize the role of the HBW in this context does not only derive from the fact that it represents a form of horizontal industrial coordination in a vertical system of industrial control. It is also related with the attempt to conceptualize organizationally distinct activities as a singular activity ranging from the teleworking in the Global North to the industrial HBW in the Global South.

For the sake of conceptual clarification, Prugl and Tinker derive 'from empirical descriptions four categories of home-based work': industrial homework, crafts production, food producers and vendors, and new homework (or teleworking) (1997, p. 1472-1473). 'Homemaker' is accordingly the dependent employee working at home within an industrial division of labor, while 'home-based worker' covers all those who work at home for pay, including industrial homeworkers, the self-employed, crafts producers, and subsistence homeworkers' (Prugl, 1999, p. 159). In the literature, another tendency is to make a distinction between 'dependent' or 'subcontracted' workers and 'own-account workers' (Pearson, 2004).

These conceptual interventions reveal the multifarious nature of our subject matter: the organizational variety characterizes the working conditions of worker women. In this regard, the HBW should not be taken as a 'satellite' activity only. Although it is an extension of the global value chains and the labor processes of other forms of industrial labor such as factory system are also central to the internal organization of the HBW, it has its own independent dynamics. These independent dynamics produce this organizational variety, which in return bears the need for further attempts for classification. This paper will not elaborate on these conceptual issues about multidimensional nature of the HBW. It rather aims to touch the organizational

ingenuities as the product of the local organizers, homeworker women, and factory managers.

In short, regardless of how it is categorized, the dynamism of the HBW is underestimated: 'the dual-market theory' (e.g. Lui 1994) or 'the global value chain debate' (e.g. Carr et al, 2000) usually fails to theorize the potentiality for change and, hence, causes for variety. One of the concerns to focus on the motivations of homeworkers and management of the factories is to deepen our understanding of the information structure pertaining to this form of industrial labor.

The organizational mediation is not necessarily structured by the firms: homeworker women use their creativity to establish networks and resort to their knowledge of the local. Thus, the conditions leading to the local organizational differences shape the motivations of the firms as well as the conditions of cooperation among homeworker women: the investigation of the factors yielding these differences reveals the conditions of the information dissemination.

### **Conditions of Control: Mobility of Homeworkers and the Characteristics of the Labor Process**

In most of the cases, homeworkers are homeworkers, since they cannot find a better opportunity in the labor market. The vulnerability of homeworkers, as the very reason for the existence of HBW, is reflected on the wage levels of homeworkers: in our sample for the research in 2006 comprising seventy-five homeworkers, only the earnings of three homeworkers catch the minimum wage level (Balaban and Sarioglu, forthcoming in 2007).

Our observations, in this regard, verified the widespread conviction that the relative disadvantage of homeworkers is closely associated with the social conditions restricting their physical mobility such as the gender dynamics and the burden of house chores. In other words, HBW exists in Istanbul as a result of this rigidity in the labor market. Its source is the relative physical immobility of a significant portion of labor force; women.

Thus, this very rigidity accounts for the organizational characteristics of the form of labor perhaps more than any other single factor. However, the same relative immobility of homeworkers also gives rise to significant organizational problems on the part of firms, since the control over the labor process turns out to be a major challenge. Firms in Istanbul use middlepersons for the distribution of the piecework. These middlepersons work with complex networks of HBW.

Generically, control over the labor process of HBW requires the control over urban space. These networks are intended to provide this control. However, to keep the integrity of these networks is a major challenge for their organizers. Many orders require training of homeworkers and the turnover periods are usually short. Thus, HBW organizers need to establish certain mechanisms facilitating constant training for homeworkers, assuring fewest defects on processed materials, and guaranteeing on-schedule returns by

homeworkers. The structural difficulty is to provide the flexibility in order to expand or narrow down the size of HBW network instantly following the size of orders. Thus, HBW organizers keep close relations with homeworkers and intervene in their labor practices.

On the part of HBW networks, two dimensions analytically distinguish between different HBW practices in terms of mechanisms of control: distribution mechanisms and characteristics of tasks.

### Mechanisms of Distribution

There are two mechanisms of distribution of piecework in Istanbul; street networks and HBW-shops:

- i) Street networks are organized as sub-networks of city-wide HBW organizations. The materials are distributed with the motor vehicles of organizers. Each city-wide organization is capable of employing up to 1,000 homeworkers. Though this form generates flexibility, it is not suitable for training. Some orders require processing bulky materials leading to problems of storage. The control is assured mostly through the heads of street-networks operating as 'foremen' of their streets. These networks sometimes organize themselves as gangs strictly complying with the delivery and pick-up times of the orders.
- ii) HBW-shops provide orders for homeworkers in the same neighborhood and operate as both storage and training facilities. Employment capacity of an individual HBW-shop is limited, yet it assures more direct control on homeworkers thanks to the face-to-face relationship between HBW-shop owners and homeworkers. Successful HBW-shop owners open branches in other city-quarters and enlarge their networks. The gist of success in this business is to manage to organize the largest pool of homeworkers possible. This enhances the organizational complexity. Enlargement of the network for this form is usually a slower process than organizations controlling street networks.

### Characteristics of the Tasks

The second dimension determining the conditions of control is the characteristics of tasks. Two categories characterize different HBW orders:

- i) *Tasks related to the increase of market price of finished goods.* Industries experiencing a fierce global competition use the HBW for product differentiation. Especially for the labor-intensive industries with low-entry barriers such as the textile industry, skilled labor of women adds significant value to the final product: embroidery on finished garments is a good example. Tasks under this category cannot be integrated to the conventional factory system, since the very nature of such processes

makes it impossible to turn them into routine acts. That is exactly why HBW gives the firms in such industries enormous competitive advantage as a result of the high pace of product differentiation.

- ii) *Tasks related to the assembly of semi-finished products.* Such tasks are more bound to the location: proximity to the industrial area/factory/sweatshop is certainly an advantage for homeworkers. HBW-practices within this scope appear as 'satellite' activities and extension of the labor process of the factory system: HBW complements the factory system with the motivation to optimize the output within the factory, while the value-added by the HBW-related activities might be low. In other words, HBW is part of the overall organizational arrangements, an extension of the factory system.

These mechanisms of distribution and characteristics of tasks are particularly related with the characteristics of industries and the positions of the firms within those industries.

### **Conditions of Management: Wages or Bottlenecks?**

Certainly, 'the wage factor' accounts for the willingness of the firms controlling factories to use the HBW as an informal form of industrial labor. Our research experience proved this point once again. However, this should not deflect our attention from the organizational motivations of the firms, which extend their operations from their factories under their direct control to the fuzzy zone of HBW; a sphere, where the control is shared with the HBW-shops and street networks.

In order to understand the motivations of the firms to use the HBW despite their decreasing control over the labor process, we should analyze the differences in technical problems between capital- and labor-intensive industries.

- i) *In labor-intensive sectors* such as textile sector, global competition yields a constant tendency of the profit rate to fall. Thus, skilled labor is used for product differentiation. In this case, HBW appears as a phase exogenous to the labor process of the factory. The internal organization of work at the factory is not harmonized with the conditions of the HBW-related processes. Given the labor-intensive nature of the overall supply chain, the labor process of the HBW is not necessarily more labor-intensive than the labor process of the factory.
- ii) *In capital-intensive sectors*, the tendency to use the HBW is related with the reluctance of management to keep processes of different productivity under the same roof: this increases the organizational rigidity in the factory due to time losses for transfer of workers among departments. In such an environment, flexible management strategies are difficult to implement. Under these circumstances, HBW signifies the use of unskilled labor for routine processes. This distinction in the characteristics of tasks impacts the methods of distribution, training, and storage. Since there is a generic difference in skill requirements, the first kind of tasks implies a

closer supervision. Thus, HBW-shops usually organize tasks requiring skilled labor, while street networks fulfill more routine tasks.

These two major motivations appear to account for the increasing use of HBW in various industrial activities in Istanbul, besides the low piece wages paid to the homeworkers. Some repercussions in regard to the organization of the labor market can be summarized as the following:

- i) The organization of HBW is closely associated with the organization of work of the factories using the HBW as a 'satellite' form of labor.
- ii) In labor-intensive industries, HBW signifies the use of skilled labor. Skilled homeworkers suffering from their incapacity of physical mobility turn this situation into a bargaining chip. Their skills cannot be incorporated into the labor process at the factories within such industries. In other words, the labor process of the HBW and the factory system are not integrated.
- iii) In capital-intensive industries, HBW is organically linked to the labor process of the factory. Factories of capital-intensive industries house various processes of differential labor productivity. This variety creates significant management problems: the transfer of products between departments of differential productivity causes bottlenecks in terms of the time management and procurement of the materials. One way of ameliorating this generic problem is to subcontract especially the processes of low productivity. HBW comes into the picture at this point and alleviates the complexity of the factory system.
- iv) In relation with the organization of work at a factory, there is a relationship between the capital-intensiveness of the factory and the organizational characteristics of the HBW. If the HBW is used in order to subcontract the labor-intensive processes out of a factory for the integrity of its internal labor process, the labor processes of the HBW and the factory system are closely connected. One of the reflections of this connection is the physical proximity of the HBW activities to the factories. Throughout the projects in 2003 and 2006, we observed that, almost without any exception, HBW networks processing piecework from capital-intensive factories are close to those factories.

### **HBW and Factory System in One Unitary Supply Chain**

Taking the motivations of and organizational requirements for organizers of HBW and factory managements, it is possible to have a comprehensive picture of the way that information is disseminated and used for the organization of the work. The restrictions on the physical mobility of homeworkers limit the geographical scope of the distribution of the piecework. Thus, the relevant mechanisms of distribution in an industrial district determine the applicability of management strategies relying on the extensive and systematic use of the HBW. Similarly, factories housing processes of differential levels



of variety in terms of capital-intensiveness of those processes resort to the HBW under different circumstances, with different expectations, and through different means.

In the presence of various possibilities of distribution for the factory-owning firms, a few parameters play an important role about which mechanism of distribution is to be chosen.

- i) Difficulty of the task: HBW-shops provide training for homeworkers: in some cases, the shop owner deals with each homeworker individually. In the absence of such a need to train the homeworkers, street networks provide a faster distribution of items and a wider spatial scope for the distribution net.
- ii) The size and weight of the piecework: given the limited physical mobility of homeworkers, bulky and/or heavy piecework cannot be distributed from the HBW-shops. Street networks should be accessed by the motorized distributors organizing both the distribution and the final delivery.
- iii) The storage-related problems: in certain cases, piecework dirties the homes. Thus, homeworkers want to return them as soon as possible. In other cases, the piecework should be immediately returned, since items are easily spoiled. Under these circumstances, HBW-shops provide a safe solution for such problems.
- iv) The value of the piecework: street networks provide a closer supervision for individual homeworkers. Hence, the more valuable the piecework is, the higher the tendency to use the street networks.

If the factory uses the HBW in order to oust the labor-intensive tasks out of its labor process, the HBW-tasks usually do not require skills. Similarly, if the factory organizes mostly the labor-intensive tasks, then the HBW is used for product differentiation. Thus, although this mental map gives us some sense of the rationalities of different factory managements with different motivations in their decisions of which distribution mechanism to use, other factors related with the content of the piecework and the related labor process are equally important in this decision.

These technical concerns, however, also reflect the internal organization among homeworkers. There are multiple factors affecting which form of distribution is to be relevant in a particular district and which form of tasks (completion of the assembly of semi finished products *or* addition of value to the completed products) are to be preferred by homeworkers. We do not touch this subject in this paper. However, apparently these organizational choices on the part of the homeworkers are equally important to determine the extent, the scope, and the characteristics of the HBW.

A factory manager trying to oust the labor-intensive processes at her factory through the HBW might find out that she can only utilize the networks within the district of her factory, given multiple problems of logistics and organization. Furthermore, she might be surprised by the fact that the distribution mechanisms in that district are not capable of providing the kind of service, which her factory needs. In such a case, this factory manager has basically two choices: to continue with the conventional labor process at her

factory or to aggressively push on the middlepersons in order to build the intended HBW networks. The second alternative means higher piece wages.

Similarly, a factory manager suffering from the cutthroat competition within his industry needs to find ways to differentiate his products, if the increasing capital-intensiveness is not necessarily to bring about competitive advantage. HBW provides a relatively cheap solution: nice embroidery on a blouse would add tens of dollars to the final value of the product. In this case, the piece wage again might be a secondary concern. Thus, in the absence of an elaborate system of HBW-networks, the primary aim would be the creation of such a workforce with increasing wages.

### **Conclusion: The Tension within the Home-Based Work**

Characteristics of the information dissemination for the HBW reflect the diverse interests of the homeworkers and the factory managements. Once these two sets of interests meet each other, we observe successful HBW networks *substituting for* certain tasks normally associated with the factory system. In other cases, HBW organizations fulfill tasks not suitable to the factory system. In other words, these networks *complement* the factory system.

On the part of the homeworkers, most of whom are women, the limitations on their physical mobility put them in a vulnerable position in the labor market. Thus, they constantly develop strategies in order to turn their disadvantages into bargaining chips: the cooperation among homeworkers within informal networks of HBW is the primary means to have a stronger position vis-à-vis the middlepersons and ultimately vis-à-vis the firms using the HBW as a satellite form of industrial labor. Our research in 2003 and 2006 prioritized two forms of distribution, which emerge as a result of the efforts by homeworkers for networking: HBW-shops and street networks. These networks either finish the assembly of semi-finished products or reprocess the completed products for the sake of product differentiation. The former kind of tasks is usually low-skilled in comparison to the latter.

On the part of the firms operating large-scale places of production such as factories, HBW appears the solution for two distinct problems corresponding to two categories of HBW-tasks: firms in the sectors with low entry barrier need economical ways for product differentiation. They resort to the skilled labor of homeworkers. Other firms in the capital-intensive sectors use the HBW in order to have a 'lean conveyor belt' composed of processes with similar level of capital-intensiveness and, hence, productivity. This alleviates the bottlenecks within the overall labor process, eases the calculation of the externalities, and reduces/minimizes the transaction costs.

The characteristics of the information dissemination are essentially associated with the conditions of how these two dynamics are engaged with each other. This engagement structures the HBW networks. At this juncture, a dilemma characterizes the fuzzy nature of this form of industrial labor: in order for the HBW-networks to function effectively, homeworkers should enjoy a fairly free flow of information about the piece wages and

the content of the operations. That is why homeworkers strive to organize themselves in these quite elaborate organizations. However, by the same token, the very reason why they are homeworkers is that they suffer from a very imbalanced and stratified information structure. This stratification turns them into a malleable source of labor. Thus, as a result of the perfection of the HBW-networks, HBW ceases to be 'the best solution' for the firms operating factories and using the HBW as a satellite form of industrial labor.

## References

- Balaban, U. and Sarioglu, E. (forthcoming in 2007). Home-Based Work in Istanbul: Varieties of Organization and Patriarchy. Research Paper, Social Policy Forum, Istanbul.
- Beneria L. and Roldan, M. (1987). *Crossroads of Class and Gender*, Chicago: University of Chicago Press.
- Benton, L. (1990). *Invisible Factories: The Informal Economy and Industrial Development in Spain*, Albany: State University of New York Press.
- Berg, M.; Hudson, P.; and Sonenscher M. (1984). *Manufacture in Town and Country, Before the Factory*; New York: Cambridge University Press.
- Bythell, D. (1978). *Sweated Trades: Outwork in Nineteenth Century Britain*, New York: St.Martin's Press.
- Carr, M.; Chen M.A.; and Tate, J. (2000). Globalization and Home-Based Workers. *Feminist Economics*, v. 6, n. 3.
- Coates, V. (1988). Office Automation Technology and Home-Based Work. In Christensen, (Ed). *The New Era of Home-Based Work: Directions and Policies*, Boulder: Westview Press.
- Coleman, D.C. (1983). Proto-Industrialization: A Concept Too Many. *The Economic History Review*, v. 36, n. 3.
- Dangler, J. (1994). *Hidden in the Home: the Role of Waged Homework in the Modern World-Economy*, Albany: SUNY Press.
- Gringeri, C.E. (1994). *Getting By: Women Homeworkers and Rural Economic Development*, Kansas, Lawrence: University of Kansas Press.
- Hsiung, P. (1996). *Living Rooms as Factories: Class, Gender, and the Satellite Factory System in Taiwan*, Philadelphia: Temple University Press.
- Jones, G.S. (1971). *Outcast London: a Study in the Relationship between Classes in Victorian Society*, Oxford: Clarendon Press.
- Kriedte, P., Medick H., and Schlumbohm J. (1981). *Industrialization before Industrialization*, New York: Cambridge University Press.
- Lui, T.L. (1994). *Waged Work at Home*, Hants Avebury, England: Ashgate Publishing Limited.

Mathias, P and Davis J.A. (eds) (1989). *The First Industrial Revolution*, New York: Basil Blackwell.

Mehrota S. and Biggeri M. (2002). Social Protection in the Informal Economy Home Based Women Workers and Outsourced Manufacturing in Asia. *Unicef, Innocenti Working Paper*.

Mendels, F.F. (1972). Proto-Industrialization: The First Phase of the Industrialization Process. *The Journal of Economic History*, v. 32, n. 1.

Pearson, R. (2004). Organizing Home-Based Workers in the Global Economy: an Action-Research Approach. *Development in Practice*, v. 14, n. 1&2, Feb.

Pratt, J. H (1984). Home Teleworking: A study of its Pioneers. *Technological Forecasting and Social Changes*, v. 25, n. 1.

Prugl E. and Tinker I. (1997). Microentrepreneurs and Homeworkers: Convergent Categories. *World Development*, v. 25, n. 9.

Prugl, E. (1999). *The Global Construction of Gender: Home-Based Work in the Political Economy of the 20th Century*. New York: Columbia University Press.

Safley, T.M. and Rosenband L.N. (eds) (1993). *The Workplace before the Factory: Artisans and Proletarians, 1500-1800*. Ithaca: Cornell University Press.

Shapiro, C. and Stiglitz, J. E. (1984). Equilibrium Unemployment as a Worker Discipline Device. *The American Economic Review*, v. 74, n. 3 (Jun), p. 433-444.

Scranton, P. (1984). *Proprietary Capitalism: The Textile Manufacture at Philadelphia, 1800-1885*, New York: Cambridge University Press.

Tomei, M. (2000). Homework in Selected Latin American Countries: A Comparative Overview. *Series on Homeworkers in the Global Economy*, Working Paper No. 1, Geneva: ILO.