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A BRIEF REVIEW OF THE EXISTING LITERATURE

2.1 INTRODUCTION

There exists a vast empirical as well as theoretical literature related to the role of informal sector in a developing economy. At the empirical level the role of informal sector in developing economies have been studied by Papola (1981), Romatet (1983), Das (2000), Banerjee (1985), Fields (1990), Cole and Sanders (1985), Agenor (1996), etc. Papola (1981) has discussed in general the various features of an urban informal sector in a developing economy and has considered the urban informal sector of the city of Ahmedabad in India as a case study. Similarly Romatet (1983) has selected some areas of the city of Calcutta in order to study the features as well as the problems faced by the informal sectors of a developing economy. Das (2000) has tried to study the types of employment existing in the informal sector of a developing economy and has tried to analyze the contribution of informal sectors to the developing economy, by providing employment and income to the migrant laboures. Whereas, Agenor (1996) on the basis of his empirical findings have estimated that more than 50 to 60 percent of labour force of the developing economies usually operate in the non-unionized sectors and often under flexible wage conditions.

On the basis of these empirical findings, a large number of theoretical works have been developed to provide suitable theoretical structures to examine the role of informal sectors in developing economies from different angles. As it is not possible to cover all the attempts related to the field in this brief survey of literature, we would only concentrate on the studies related to some of the important aspects of informal sector in a developing economy. The theoretical literature again consists of both the competitive general equilibrium framework and the partial equilibrium framework with imperfection in the market structure. But, here we would only focus on the studies based on competitive general equilibrium framework. The most popular way to analyze the role of
informal sector in a general equilibrium framework is to consider a Harris- Todaro (1970) framework (hereafter HT framework), where most of the informal sector participants are migrants from the rural sector. Apart from the studies based on HT framework, studies that are based on efficiency wage framework and neo-classical (rigid urban formal sector’s wage) full employment framework are also taken into consideration in this brief survey of literature.

The chapter is organized in the following manner. Section 2.2 is the survey of existing theoretical literature and section 2.3 explains the plan of the present study. Section 2.2 is again subdivided into five parts. The first part of the section concentrates on the theoretical works related to the welfare impact of foreign capital inflow into an economy in the presence of informal sector. The second part of the survey considers various works related to the dualism of informal and formal sectors in the context of capital markets of the developing economies. The third part of the survey deals with the various studies related to the impacts of development policies taken in a developing economy in the presence of informal sector. The fourth part of the survey deals with the impact of trade liberalization on the skilled-unskilled wage gap of the economy, in the presence of an informal sector. Finally, the last part of the survey explains the interlinkage between the informal sector and the environment of the economy.

2.2 REVIEW OF THE LITERATURE

2.2.1 INFLOW OF FOREIGN CAPITAL IN THE PRESENCE OF INFORMAL SECTOR: WELFARE IMPLICATIONS

To consider the works related to foreign capital inflow in a developing economy, one must start from the Brecher Alejandro (1977) proposition. Brecher and Diaz Alejandro (1977) have carried out their analysis on the basis of the works of Bhagwati (1958), Jhonson (1967) and Bhagwati (1973) in a two commodity, two factor full employment model. They proposed that foreign capital inflow, with full repatriation of its earnings, is necessarily immiserizing if the import-competing sector is capital-intensive and is
protected by tariff. However, such an inflow does not affect the level of welfare of the economy in the absence of tariff protection. Khan (1982) has re-examined the proposition in a ‘Generalized Harris-Todaro’\(^{10}\) (GHT model hereafter) framework, in the presence of intersectoral capital mobility and urban unemployment. In the context of such a framework, he has observed that the Brecher-Alejandro proposition is valid provided the urban (manufacturing) sector is more capital intensive than the rural (agricultural) sector in ‘employment adjusted terms’\(^{11}\). Khan (1982) has also examined the validity of the Brecher-Alejandro proposition in a GHT model with sector-specific capital and urban unemployment, where there are three factors of production (two types of sector-specific capital and mobile labour). In context of such an economy, Khan has stated that a tariff-induced inflow of foreign capital with full repatriation is (i) never immiserizing if there are no initial holdings of foreign capital in the export sector, (ii) always immiserizing if there are no initial holdings of foreign capital in the import-competing sector and (iii) immiserizing for certain range of tariff on the import-competing sector if there are no initial holdings of foreign capital in either sector.

In the literature Brecher-Alejandro (1977) proposition has also been reexamined in the presence of an informal sector in a small open HT economy. Grinols (1991) has questioned the validity of the Brecher-Alejandro proposition in a three-sector economy with unemployment. In the model of Grinols (1991) labour is mobile among all the three sectors of the economy while capital is mobile between the urban formal and the rural sectors. Besides, the informal sector also uses a sector specific capital. In other words, Grinols used a Corden-Findlay (1975) model with the informal sector using sector-

\(^{10}\) The ‘Generalized Harris-Todaro’ model is an extension of the traditional HT (1979) and/ or Corden Findlay (1975) models / model. Unlike that of the HT (1970) and Corden- Findlay (1975) models here we consider endogenous determination of the urban (manufacturing) sector wage rate. The GHT model has been used by many authors. See, for example, Khan (1980a, 1980b,1982 ), Grinols (1991), Gupta (1994a) etc.

\(^{11}\) The fact that the urban (manufacturing) sector is more capital intensive than the rural (agricultural) sector in ‘employment adjusted terms’ implies that the capital-labour ratio of the urban area (inclusive of both the employed and unemployed labour force of urban area) is greater than the capital-labour ratio of the rural area. In case of urban informal sector models capital-labour ratio of the urban area implies the ratio of urban capital with respect to total urban formal sector and urban informal sector labour force. For capital intensity in ‘employment adjusted terms’ (sometimes called capital intensity in ‘unemployment adjusted terms’) see Khan (1982).
specific capital. In such a set up, Grinols has shown that inflow of foreign capital, in the presence of a capital intensive and tariff protected import competing sector, not necessarily reduces the level of welfare of the economy, because increase in the return to the sector-specific input may outweigh the increased cost of tariff protection resulting from an expansion of the protected sector. Chandra and Khan (1993) have further re-examined the validity of the Brecher- Alejandro (1977) proposition in a mobile capital HT framework, in the presence of 'flexible wage urban informal sector'. They have considered different concepts of informal sector i.e. informal sector producing internationally traded final good, a non-traded final commodity, a non-traded intermediary for the formal sector in their analysis. In every aspect, the Brecher-Alejandro proposition remains valid provided the average capital intensity of the urban formal sector and of the informal sector is higher than the capital intensity of the rural sector. This special capital intensity condition is known as the Chandra-Khan Capital Intensity Condition (CKCIC). Gupta (1997 b) has challenged this result. He has further extended the first model of Chandra and Khan (1993) by generalizing the migration equilibrium condition of the HT model and also by introducing capital market distortion and land as an agricultural input. Within this framework, Gupta (1997b) has shown that the Brecher- Alejandro (1977) proposition looses its validity under some reasonable conditions

2.2.2 INFORMAL SECTOR AND INFORMAL CAPITAL MARKETS

The dualism of informal and formal sectors in the context of capital markets is well known in the literature. The units operating in the informal sectors usually lack access to formal credit market, and are compelled to depend on informal moneylenders for capital. Datta Chaudhuri (1989) has introduced the idea that capital cost for the informal sector increases with the amount of capital employed. This is a plausible way of formalizing the informal sector's lack of access to the organized credit market. Gupta (1997a) has examined the dichotomy between formal and informal credit markets by assuming that informal capital is a function of interest rate differential between the two capital markets.
Usually the rate of interest in the informal credit market is higher than the same in formal credit market.

Bhaduri (1977), Rudra (1982), Basu (1984, 1988) etc have modelled informal credit markets as monopolies. Again authors like Basu and Bell (1991), Mishra(1994) etc. have modelled informal credit markets as fragmented oligopolies. According to both lines of thinking, lenders in the informal credit markets have significant control over most of the borrowers, especially the small group of borrowers.

2.2.3. INFORMAL SECTOR AND DEVELOPMENT POLICIES

Another aspect on which we would like to focus on this brief survey of literature is the impact of various development policies in a developing economy, in the presence of an informal sector. This aspect has been studied by many authors like Khan (1993), Chandra and Khan (1993), Bandyopadhyay and Gupta (1995), Gupta (1993), Chaudhuri (2000), Yabuuchi and Beladi (2000) etc. Khan (1993) has considered a land scarce economy where there are four factors of production- land, labour and capital as primary factors and an intermediate product and the product is produced by the informal sector of the economy. He has considered a HT setting without inter-sectoral capital mobility. In other words, it can be said that a neoclassical Ricardo-Viner framework has been considered rather than the Heckscher-Ohlin-Samuelson (HOS hereafter) one. In context of such a framework, he has examined the impact of various development policies like anti rural poverty programmes, which include agriculture price support programmes, improvement in the quality of land, technical progress in agriculture etc., anti urban poverty programmes, tariff policies on the level of social welfare of the economy. He has derived that these above programmes can lead to improvement in social welfare under some reasonable and sufficient conditions. He has shown that in such a framework, the urban informal sector plays a crucial role. Bandyopadhyay and Gupta (1995) have carried out their analysis in terms of a three- sector specific factor model with an urban informal sector and standard HT settings. Within this framework they have tried to analyze the welfare effects of various trade and fiscal policies. They have considered the fact that any
trade or fiscal policies of an economy affect the system through change in price of different products. They have derived that any policy measure which causes the price of the rural product to increase, lowers the total factor income provided the reduction in the informal sector's capital income is greater than the increase in total wage income. Again any other policy measure, which causes the price of urban product to increase increases the domestic factor income of the economy, provided the increase in formal sector's capital income is greater than the decrease in total wage income. On the other hand, the impact of policy measure, which causes the price of the informal sector product to rise, on the total factor income of the economy is indeterminate. This is because due to the rise in the price of informal sector product, the wage rate of the rural sector and the rate of return of the capital, which is mobile between the rural and formal sectors, do not change but the rate of return of sector specific informal capital may change in either direction and so does the domestic factor income.

Gupta (1993) has considered the simultaneous existence of informal sector and open unemployment in urban areas in his analysis. Within this framework he has considered the impact of various alternative policies on the level of open unemployment in the urban sector and welfare of the society. Price subsidy to the urban informal sector reduces unemployment and improves the social welfare but capital subsidy to the informal sector enhances unemployment and detoriates the level of social welfare of the economy. A wage subsidy policy to the urban formal sector reduces the level of open unemployment there, but a price or wage subsidy policy to the rural sector aggravates the problem. His findings are just opposite to the policy conclusions available in the standard HT types of model, where it is believed that the urban development programmes cannot mitigate the problem of rising urban unemployment resulting from rural-urban migration, therefore a rural development programme is a possible solution to this problem. Chaudhuri (2000) also has considered the simultaneous existence of urban informal sector and open unemployment in the urban sector in a HT type of model of rural-urban migration, where the aggregate demand plays a crucial role in determining the output and employment in each of the three sectors of the economy, which has been ignored in the work of Gupta (1993). In the context of such an economy, he has shown that a wage or a price subsidy to
the rural sector raises the aggregate income of the workers, which in turn raises the aggregate demand and, therefore, the level of employment in all the three sectors of the economy. Similarly, an export promotion scheme in the manufacturing sector raises the demand in two urban sub sectors, therefore causing their level of employment to expand. Thus, Chaudhuri (2000) has shown that a rural development programme or a demand management policy could be the policy prescriptions to mitigate the problem of urban unemployment. These policy conclusions different from those found in Gupta (1993) model. Yabuuchi and Beladi (2000) have examined the effects of wage subsidies on the level of unemployment and welfare of the economy. Their analysis shows that the effects of wage subsidies to the rural and the informal sectors are welfare improving, while the wage subsidy to the manufacturing sector is immiserizing, under some reasonable conditions. On the other hand, the results on unemployment show sharp contrast to those obtained in the model of pure intermediate informal goods by Gupta (1993). Chaudhuri and Mukhopadhyay (2002) have used an efficiency wage framework to explain the implications of various development policies in the presence of informal sector\textsuperscript{12}. They have considered a three sector general equilibrium model with two informal sectors where there is complete mobility of labour between these two sectors and assumed a positive relationship between wage income and labour’s efficiency. In this context they have shown that reduction of tariff protection may adversely affect the welfare of the economy by affecting the aggregate factor income and the cost of tariff protection of the import competing sector.

Various development policies are adopted in developing economies not only to increase the level of welfare of the economy or to reduce the level of urban unemployment of the economy but also to mitigate the other rising problems of developing economies, which are associated with the existence of informal sector of the economy. The workers of the informal sector of the developing economies are mostly the new entrants to the urban sector of the economy, who are unable to find employment in the formal sector of the economy.

\textsuperscript{12} Gupta and Gupta (2001) have studied the effects of various tax policies on the level of unemployment of the economy in a dynamic efficiency wage framework, where a labour -efficiency function varies positively with the stock of knowledge in addition to wage and unemployment. The stock of knowledge, which is produced as a durable public good, accumulates over time. They find that the result effects of various tax policies in the dynamic model are quite different to that obtained in a static model.
economy. As wage rate in the urban informal sector is flexible, the migrants expect their urban income to be higher than their actual family income in the rural sector and so they migrate to the urban sector (sometimes along with their family). The new entrants of the urban sector of the economy, when unable to find a job in the formal sector of the economy, starts doing something or the other in the informal sector of the economy either as self employed, part-time workers, apprentices or full time workers in the informal sector of the economy. In other words, the informal sector of the economy bears the brunt of excess labour supply which tends to lead to a situation of significant underemployment and depressed wages in that sector. Thus, the informal sector workers of an economy earn very meager income, so it would be justified to assume that the workers of this sector send their children to the job market in order to supplement their low income levels from non child labour sources. Therefore it can be concluded that with the expansion of informal sector in the economy, the problem of child labour also gets exaggerated. The rising problem of child labour in the developing economies has caused many academicians to deal with this issue and make various policy prescriptions to mitigate the problem. Eswaran (1996) has suggested that improvement in healthcare services and legislation of compulsory education in the developing economies can reduce the level of child labour in these economies. Basu and Van (1998b) have shown that if child labour and adult labour are substitutes\textsuperscript{13} and if child labour is a luxury commodity\textsuperscript{14} to the poor households, unfavourable adult labour markets are responsible for low adult wage rate and this is the main cause behind the incidence of child labour. They do not consider the fertility decision of the poor households. In such a framework they have shown that labour market interventions could mitigate the problem of child labour by raising the

\textsuperscript{13} It implies that child labour can do what an adult labour can do. Therefore both the labour can substitute each other. This assumption of substitution is termed by Basu and Van (1998b) as ‘substitution axiom’.

\textsuperscript{14} This assumption is termed as “luxury axiom” by Basu and Van (1998b). According to the axiom the workers whose income is less than the minimum subsistence level send their children to the job market, so that their income can supplement their low family income. Thus the income earned by the child labourers is some additional amount of income, which their family can use for a little better living. In other words, we can say that the income of child labour is like a luxury item for their family.
wage rate of adult labour. Dessy (2000) has shown that a compulsory free education policy can eradicate the existence of child labour from these developing economies. He believes that in an underdeveloped economy, rearing cost of children outweighs the benefits of having children, so a policy of free education with no compulsory education laws, may exaggerate the problem. Chaudhuri (2000) has analyzed the implications of a subsidy policy on education and different liberalized trade and investment policies on the incidence of child labour in a general equilibrium framework with endogenous determination of family size and enrolment of children to schools from each poor working family. It shows that if these policies are imposed in unison, these may produce contradictory effects, causing little or no impact on the incidence of child labour. Increase in subsidy on education will raise the supply of child labour but trade reform in manufacturing import-producing sector or trade liberalization policy in agricultural sector reduces the level of child labour of the economy under some reasonable conditions. Thus the combined effect of these policies on the level of child labour is uncertain.

Chaudhuri and Dwibedi (2002) have considered a three-sector general equilibrium model, where a separate sector producing child labour has been introduced for the purpose of analysis. They have found that credit market reform policies, which remove the imperfection in the informal credit market, mitigate the problem of child labour even in the absence of any schooling system. But overall economic expansion through foreign capital inflow intensifies the problem of child labour. They have also found the welfare effects of these policies. Again, Dwibedi and Chaudhuri (2003) have considered a three-sector general equilibrium model, where the child labour produces a non-traded final good. In this framework they have analyzed the impacts of various liberalization policies on the supply of child labour. A reduction in import tariff and/or an increase in the price of the export commodity are likely to put downward pressures on the child labour incidence while an inflow of foreign capital may accentuate the problem.
2.2.4. TRADE LIBERALIZATION AND SKILLED-UNSKILLED WAGE GAP: ROLE OF INFORMAL SECTOR

In recent years, we find some systematic studies have been conducted to explain the impact of liberal trade regime on wage inequality of developing economies. In this context we can refer to the excellent papers by Robbins (1994a, 1994b, 1995a, 1995b, 1996a, 1996b) and Wood (1997). They have carried out their survey in the context of two groups of developing countries, -the East Asian countries like Taiwan, Singapore, and Malaysia and the Latin American countries like Argentina, Chile, Colombia, Mexico, Costa Rica etc and found conflicting results for the two types of countries. They have found that under liberalized trade regime in the East Asian countries there is a reduction in skilled-unskilled wage gap whereas in the Latin American countries there is an increase in skilled-unskilled wage gap.

In order to justify the empirical findings, Feenestra and Hanson (1995) have built a simple trade theoretic framework to explain how increasing foreign investment into Mexico has widened the wage gap between the skilled and the unskilled workers. Increase in foreign investment in Mexico induces greater production of skilled intensive products in Mexico, thus switching demand away from the low skilled labour, which causes the skilled-unskilled wage gap to widen.

If a conventional $2 \times 2$ HOS model is considered to explain the skilled-unskilled wage gap due to foreign capital inflow, through the Stolper –Samuelson (SS hereafter) Theorem, the conclusion will be a reduction of wage gap for developing countries. Greater trade openness in developing economies will boost the demand for unskilled workers (relatively abundant) in expanding export sectors and reducing the demand for skilled workers (relatively scarce) in import competing sectors, which lead to a reduction in wage gap. But Wood (1997) has pointed out that the straightforward application of HOS structure and SS theorem is not very much meaningful to explain the salient features of a developing economy. The implications of a trade and investment regime have to be analyzed in terms of a framework which explicitly takes into account the structural
features of the labour market of the LDCs. The labour markets of the LDCs (as discussed in chapter 1 of the thesis) are segmented and majority of the workers are employed in the informal or the unorganized sector of the economy, which provides voluntary and involuntary employment at the same time. The presence of informal/unorganized sector can affect the trade reform incentives in different ways. It has also been focused in a survey paper by Acharyya and Marjit (2000). In their survey paper, they have pointed out that though there is no systematic study on wage dispersion caused by trade liberalization in India there are enough evidences regarding growing wage inequality in the post reform period. They have established their point on the basis of data on the range of minimum wages for lowest paid unskilled workers in the organized sector. They have also explained the role of non-traded informal sector in the wage inequality analysis. In order to incorporate the salient features of a developing economy, one should consider a specific factors model, so that the change in factor endowments affects the factor prices. Marjit (1998) has constructed a model, which incorporates the salient features of a developing economy. His model is basically a hybrid of HOS and specific factors model. His analysis shows that a liberal trade and investment regime leads to an increase in the skilled-unskilled wage gap. In a different study, the HT framework has been criticized by Marjit, Broll and Sengupta (2000) and they have used a neo-classical full employment model, with a non-traded informal sector to explain wage gap.

2.2.5. INFORMAL SECTOR AND ENVIRONMENT

The literature on the informal sector and the environment is mostly confined to various empirical studies on the role of small and medium scale enterprises (SMEs hereafter) in environmental degeneration. Informal sector is a part of SMEs. Perrings, Bhargava and Gupta (1995) have argued that industrial growth in developing countries is due to growth of SMEs, as the large firms in developing countries subcontract to these SMEs. These SMEs have limited access to Environmentally Sound Technology (EST) and so they use backward technologies, which increase the environment pollution of the economy. In other words, large firms in developing economies subcontract SMEs to undertake a number of tasks and processes that are ‘dirty’ from the environment point of view, as the
SMEs are difficult to control and so they face fewer incentives to prevent pollution. Similarly, Bartone and Benavides (1993) and Kent (1991) have shown that SMEs/informal sector firms can be more pollution intensive than large firms, as they use inputs relatively inefficiently with lack of pollution control equipment and lack of basic sanitation services such as sewers and waste disposals. Moreover, Kent (1991) believes that generally persons operating informal sector have little awareness of health and environment impacts of pollution and it is one of the reasons that make this sector pollution intensive. Blackman and Bannister (1998) and Blackman (2000) have argued that urban clusters of informal firms like brick kilns and leather tanneries can create severe pollution problems. Blackman and Bannister (1998) have examined the implications of various policies related to pollution control for Ciudad Jaurez brickmaker’s project in northern Mexico. Later Blackman (2000) has re-examined the impacts of these policies to control emission from informal brick kilns in context of other cities of northern Mexico apart from Ciudad Jaurez. In the context of both the studies, it is stated that it is very difficult for the government to control pollution from informal sector firms, and private sector should take initiatives to control pollution of informal sector.

In the literature very few theoretical works are developed covering this aspect of informal sector. Gupta (2002) has considered a three-sector static general equilibrium model, where the informal sector is environmentally unregulated and the nutritional efficiency of labour is a function of the basic wage rate of the economy and the level of aggregate domestic pollution of the economy. Within this framework he has shown that a reduction in the maximum allowable level of pollution for the formal part of the economy reduces the total pollution of the economy, though the pollution emission of the informal part of the economy increases, under some reasonable conditions. But under some special cases, the overall pollution of the economy increases due to high emission from the unregulated informal sector. He has also shown the impact of increase in formal and informal capital on the level of pollution of the economy.
In an interesting article Chaudhuri and Gupta (2004) have examined the impact of foreign capital inflow on domestic environmental pollution in the presence of informal sector. They have shown that such an inflow may lead to transfer of environmentally sound technology (EST), which in turn reduces the emission of pollutants. They have argued that due to environmental regulations the formal manufacturing has to pay a tax generated from the emission of pollutants in both the formal and the informal manufacturing sectors. The tax revenue has been distributed in a lump sum manner as a transfer among the workers and the capitalists. The authors have shown that under some reasonable conditions an inflow of foreign capital raises total domestic pollution, raises national income and also raises national welfare. These results are true both in the presence and in the absence of EST.

Chaudhuri (2005) has considered a three-sector general equilibrium model on informal sector which produces an intermediary for the formal sector, and analyzed the effects of different policies on the environmental standard and welfare of the economy. The paper has tried to examine the trade-off that may exist between the economy’s twin objectives of lowering the level of pollution and improving national welfare.

2.3. PLAN OF THE PRESENT STUDY

The present study attempts to contribute to the existing literature by taking account of the various theoretical aspects of the problem of informal sector in a developing economy. Inspite of quite a bit extensive theoretical literature on the subject issues like skilled-unskilled wage gap, the problem of child labour, environmental pollution etc. in the context of increasing informalization of the economy\textsuperscript{15} are relatively neglected in the literature. These issues are specially important when we consider a liberalized trade regime. The present dissertation is a preliminary attempt to fill up this lacuna. In chapter 1 of the study we have analyzed the various features of the informal sector that we observe in a developing economy. In this study we have made an attempt to construct

\textsuperscript{15} Though independently there exists quite a large number of theoretical works on skilled-unskilled wage gap, child labour and environmental pollution, the works linking the above mentioned problems with that of informal sector are relatively few in the literature.
stylized theoretical models incorporating the various features of informal sector of the developing economies and have tried to analyze the impacts of different liberalization and domestic policies on different aspects of these economies including the welfare implications. In the entire thesis, we have considered that the economy is a small open one so that the world prices of the final traded goods are given. Since, it is not possible to highlight all the features of an informal sector of a developing economy in a single theoretical model, we have constructed various models, in different chapters, highlighting the various aspects of informal sector of a developing economy. The analysis is based on general equilibrium structure either of HOS type or of the HT (1970)/ Corden Findlay (1975) type with urban unemployment. In this study we have broadly divided the economy into the formal and informal parts. The informal part is further divided into agricultural sector and informal sector. The formal part of the economy is the organized sector of the economy, so it is under all types of legislative regulations. It is either an exportable producing sector or an import-competing sector. Within the informal part though the agricultural sector may be under some legislative regulations, the informal sector of the economy, as the name implies, is not under any type of regulations. In this study, we have considered that the capital used by the informal part of the economy is perfectly mobile between the agricultural sector and the informal sector. But, with the development of the banking facilities in the developing economies, the agricultural sector of the economy also has an access to the domestic (formal) capital of the economy. On the other hand, as the informal sector of the economy has still no access to the domestic (formal) capital of the economy, thus, we can say that domestic capital cannot be perfectly mobile between the agricultural and informal sectors. This feature of the developing economies has been taken into consideration in chapter 6 of the study, where the informal capital market faces some imperfection. Labour, the other factor of production, is either perfectly mobile between the sectors (as in the case of HOS full employment framework) or migrates from the rural area to the urban area (as in the case of HT (1970)/ Corden Findlay (1975) framework). In the chapters 3 to 5 we have considered the presence of informal sector in a HOS type neo-classical framework which implies to a full employment situation. But, in developing economies the simultaneous existence of informal sector and urban unemployment is observed. This feature of
developing economies has also been captured in chapter 6 of the thesis, where informal sector is assumed to be situated in the urban sector of the economy. This is in contrast with the earlier chapters where informal sector can be located either in urban area or in the rural area. Thus, urban informal sector has been taken into consideration in chapter 6 of the study. Within these frameworks we have tried to analyze the welfare implications of various liberalization policies and also the impact of these policies on other aspects of developing economies like skilled-unskilled wage gap, level of child labour, extent of urban unemployment and environmental pollution of the economy. Trade liberalization policies include both the foreign capital inflow into the economy as well as reduction of protection of the import-competing sector. Impact of development policies like increase in employment subsidy and reduction of capital market distortion are taken into consideration in chapter 6 of the study. Throughout our analysis we have considered national income (NI hereafter) as a measure of welfare. This is because in a small open economy the indirect welfare function depends on world prices of the commodities and NI. As for small open economy, the world prices are given, an increase in NI raises the level of welfare. So NI can be considered as a good proxy for welfare in our framework.\textsuperscript{16}

The study is organized in the following manner.

Chapter 3 develops a neo classical full employment four sector model, with an informal sector, which produces either a final product or an intermediate product on a subcontracting basis, to explain the impact of trade liberalization, in the form of increase in foreign capital inflow, on the skilled-unskilled wage gap of the economy. The chapter reveals the fact that trade liberalization increases the wage gap and also the level of welfare of the economy, under some reasonable conditions, irrespective of the fact that the informal sector of the economy produces a final traded good or an intermediate good on a subcontracting basis.

\textsuperscript{16} This assumption is widely used in literature. For example Chaudhuri (2001a, 2001b, 2003), Chaudhuri and Mukhopadhyay (2002a, 2002b), Gupta (1994, 1997) etc. have considered NI as a proxy for welfare in their works. One can consider welfare function and can check the impact of policy parameters on welfare. However, Beladi and Marjit (1992). have shown that the results will be same if we consider welfare function instead of NI.
Chapter 4 of the thesis relates informal sector with child labour. It analyses the impact of trade liberalization, either by foreign capital inflow or by reduction of tariff protection, on the level of welfare and the extent of child labour prevailing in the economy in a full employment general equilibrium framework in the presence of informal sector. In this chapter it is assumed that child rearing activity is similar to commodity production, the final product of which is child labour.

Chapter 5 attempts to integrate theoretically the issues of environmental pollution and the expansion of informal sector in a developing economy. It considers a simple general equilibrium framework, where the nutritional efficiency function of a worker is taken into consideration. In the context of such a framework, the chapter deals with the impact of trade liberalization on the level of pollution emitted by the economy and also its level of welfare when the informal sector plays a crucial role in generating pollution.

Chapter 6 considers the simultaneous existence of informal sector and urban unemployment in an economy. For this purpose a HT (1970) framework has been taken into consideration instead of full employment neo-classical framework. Capital market distortion in the informal capital market has also been taken under consideration. Within this framework, we have analyzed the impacts of various development policies like increase in employment subsidy of the formal manufacturing sector and reduction of capital market distortion on the rate of unemployment and the level of welfare of the economy.

Chapter 7 summarizes the main findings of the thesis. The limitations of the thesis and scope for further research on the basis of the present dissertation are also discussed in this chapter.